

UNITED STATES DEPARTMENT OF THE INTERIOR
Harold L. Ickes, Secretary
GEOLOGICAL SURVEY
W. C. Mendenhall, Director

Water-Supply Paper 870

SUMMARY OF RECORDS OF SURFACE WATERS OF WASHINGTON 1919-35

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Prepared in cooperation with the
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UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1940

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SUMMARY OF RECORDS OF SURFACE WATERS OF WASHINGTON, 1919-35

By G. L. PARKER

INTRODUCTION

Stream-flow records in the State of Washington up to September 30, 1919, representing an aggregate of 1,120 years at 209 gaging stations, are summarized in Water-Supply Paper 492. Similar records for the period October 1, 1919, to September 30, 1935, representing an aggregate of 1,470 years at 203 gaging stations, are summarized in this volume. As the summaries present data abstracted from 48 water-supply papers, a bibliography is included to facilitate reference to more detailed information for each station.

Gaging-station records are published annually in the series of reports on surface water supply of the United States. Occasionally subsequent field work and office analyses make it necessary to revise the original computations. The revised records, which appear in later reports, are often overlooked by the users of the data. The individual summaries given in this volume include all revised records, and the bibliography cites the reports that contain them.

COOPERATION

Since 1909 successive Washington State Legislatures have appropriated funds for cooperating with the Geological Survey in making investigations of water resources. Cooperative agreements are entered into annually providing that, after plans have been formulated and accepted by both parties, the investigation shall be made by the Geological Survey and financed by equal allotments of State and Federal funds. The compiling of the hydrometric data contained herein has been included as a part of the cooperative program in the State of Washington, upon approval by E. F. Banker, Director, State Department of Conservation and Development, and in accordance with arrangements made with Charles J. Bartholet, Supervisor of Hydraulics, representing that department.

ACKNOWLEDGMENTS

The manuscript has been prepared by Agnes P. Martinson, with the assistance of J. W. Allan, Ruth J. Wade, and Marion L. Crosby. Special acknowledgment is due Charles J. Bartholet, State Supervisor of Hydraulics, and D. J. F. Calkins of the Geological Survey, for helpful suggestions.

EXPLANATION OF DATA

The data presented in this water-supply paper are assembled for water years ending September 30. At the end of a calendar year much of the precipitation that fell during the three months preceding is stored in the form of

snow or ice or in ponds, lakes, swamps, and underground passageways. A large percentage of this stored water does not reach the streams until the spring and summer of the next calendar year. At the end of September, however, only a small amount of ground water remains as a part of previous precipitation, and therefore it may be assumed that practically all of the run-off for the year ending September 30 is derived from precipitation within that year. For the convenience of those using the data, mean annual discharge and annual run-off in acre-feet and in inches are given for calendar years as well as for water years ending September 30.

The base data collected at gaging stations consist, primarily, of records of stage and measurements of discharge. Records of stage are obtained either from water-stage recorders or from direct readings on staff or chain gages. A total of 106 water-stage recorders were in operation during 1935. Measurements of discharge are made with a current meter according to methods perfected by the Geological Survey through many years of experience. During the past six years an average of 1,017 measurements a year have been made to determine the relation between stage and discharge at an average of about 125 gaging stations.

Rating tables for each gaging station, indicating the discharge at any stage, are prepared from rating curves which show graphically the relation between stage and discharge. Daily discharge, from which the maximum, minimum, monthly mean, and yearly mean discharges are computed, is determined by applying daily mean gage heights to the rating tables, or, for days having considerable fluctuation in stage, by averaging the discharge for intervals of the day. For streams that are subject to rapid diurnal fluctuation in stage the mean daily discharge is obtained by the use of a discharge integrator, an instrument that operates on the principle of a planimeter but contains as an essential element the rating curve for the station.

In the tables of monthly discharge the column headed "Maximum" gives the highest mean discharge for a single day during the month or year specified. As the crest discharge of a flood covers a period much shorter than a day, the extreme maximum discharge is always somewhat higher than the maximum given in the tables. Likewise, the column headed "Minimum" gives the lowest mean discharge for a single day. For most of the gaging stations the extreme maximum and minimum discharges for the period of record are given in the description preceding the tables for each gaging station. The column headed "Mean" gives the average flow for the month. This average flow forms the basis for computing the results shown in the remaining columns. The monthly means for any gaging station represent the actual flow passing the gage, but discharge per square mile and run-off in inches as computed from the monthly means do not reflect natural characteristics if the flow is regulated, if water is

diverted past the gage, or if the flow has been depleted by irrigation. The "discharge in second-feet per square mile" and "run-off in inches" have not been computed if they do not approximate natural values. They have been omitted also for any gaging station at which the average annual run-off is less than 10 inches. Corrections are made for storage, diversion, and depletion if sufficient information is available to compute the probable natural flow. The flow at some gaging stations is controlled by regulation in reservoirs to such a degree as to produce marked changes from the natural monthly flow but not material change in natural yearly flow; for those stations "discharge in second-feet per square mile" and "run-off in inches" are omitted for individual months but are computed for full years.

Yearly summary tables follow the tables of monthly discharge that contain records for five or more years. The results are given both for water years ending September 30 and for calendar years.

BIBLIOGRAPHY

The data in this report consist of records of monthly and yearly discharge in a form available for ready reference. For records of daily discharge and other detailed information, the publications listed in the following bibliography should be consulted.

Bibliography of hydrometric data in the State of Washington

An asterisk (*) indicates that the results have been revised in later publications. A dagger (†) indicates that results do not include monthly discharge.

Gaging station	Year	Water-Supply Paper
Ahtanum Creek, North Fork, near Tampico.	1907-19	Summarized, 492, pp. 8, 270
	1920	512, p. 229
	1921	532, p. 201
	1922	552, p. 188
	1923	572, p. 176
	1924	592, p. 165
	1931-32	737, p. 173
	1933	752, p. 174
	1934	767, p. 164
	1935	792, p. 160
Ahtanum Creek, South Fork, at Conrad ranch, near Tampico (formerly near Tampico).	1908-19	Summarized, 492, pp. 9, 275
	1920	512, p. 231
	1921	532, p. 202
	1922	552, p. 189
	1923	572, p. 178
	1924	592, p. 166
	1931	722, p. 182
	1932	737, p. 175
	1933	752, p. 175
	1934	767, p. 165
	1935	792, p. 161
Asotin Creek near Asotin.....	1904-7, 1910-12	Summarized, 492, pp. 9, 303
	1928-29	693, p. 169
	1930	708, p. 174
	1931	723, p. 188
	1932	738, p. 182
	1933	753, p. 183
	1934	768, p. 183
	1935	793, p. 180
Baker River below Anderson Creek, near Concrete.	1911-19	Summarized, 492, pp. 9, 110
	1920	512, p. 99
	1921	532, p. 72
	1922	552, p. 79
	1923	572, p. 57
	1924	592, p. 70
	1925-26	612, p. 68

Bibliography of hydrometric data in the State of Washington--Continued

Gaging station	Year	Water-Supply Paper
Baker River below Anderson Creek, near Concrete--(Continued)	1928-29	692, p. 79
	1930	707, p. 81
	1931-32	722, p. 79
Beckler River near Skykomish.....	1929-30	707, p. 47
	1931	722, p. 46
	1932	737, p. 41
	1933	752, p. 43
Big Creek below Skookum Meadow.....	1927-28	674, p. 91
	1929	694, p. 99
	1930	709, p. 101
	1931	724, p. 102
Big Quilcene River near Quilcene.....	1926-27	652, p. 23
Bonaparte Creek near Anglin.....	1921	532, p. 163
Bumping River near Nile.....	1903-19	Summarized, 492, pp. 9, 257
	1920	512, p. 220
	1921	532, p. 196
	1922	552, p. 182
	1923	572, p. 171
	1924	592, p. 159
	1925	612, p. 145
	1926	632, p. 140
	1927	652, p. 101
	1928	672, p. 127
	1929	692, p. 181
	1930	707, p. 186
	1931	722, p. 179
	1932	737, p. 170
	1933	752, p. 171
	1934	767, p. 161
	1935	792, p. 157
Canyon Creek near Amboy.....	1922	*554, p. 135; 754, p. 98
	1923	*574, p. 134; 754, p. 98
	1924	*594, p. 142; 754, p. 98
	1925	*614, p. 131; 754, p. 98
	1926	*634, p. 152; 754, p. 98
	1927	*654, p. 90; 754, p. 98
	1928	*674, p. 97; 754, p. 98
	1929	*694, p. 106; 754, p. 98
	1930	*709, p. 108; 754, p. 98
	1931	*724, p. 107; 754, p. 98
	1932	*739, p. 101; 754, p. 98
	1933	754, p. 98
	1934	769, p. 104
Canyon Creek near Granite Falls.....	1929	692, p. 62
	1930	707, p. 66
	1931	722, p. 63
	1932	737, p. 53
Carbon River near Fairfax. (Formerly at Fairfax.)	1911-12	Summarized, 492, pp. 9, 46
	1929	692, p. 36
	1930	707, p. 37
	1931	722, p. 34
	1932	737, p. 33
	1933	752, p. 32
	1934	767, p. 29
	1935	792, p. 34
Cascade River at Marblemount.....	1928-29	*692, p. 72; 737, p. 61
	1930	*707, p. 76; 737, p. 61
	1931	*722, p. 74; 737, p. 61
	1932	737, p. 61
	1933	752, p. 65
	1934	767, p. 55
	1935	792, p. 62
Cedar River at Cedar Falls.....	1914-19	Summarized, 492, pp. 10, 54
	1920	512, p. 43
	1921	532, p. 37
	1922	552, p. 37
	1923	572, p. 29
	1924	592, p. 44
	1925	612, p. 42
	1926	632, p. 43
	1927	652, p. 36
	1928	672, p. 32
	1929	692, p. 40
	1930	*707, p. 41; 722, p. 38
	1931	722, p. 38
	1932	737, p. 37
	1933	752, p. 39
	1934	767, p. 33
	1935	792, p. 38
Cedar River near Landsberg.....	1895-1912,	Summarized, 492, pp. 10, 56
	1914-19	
	1920	512, p. 46
	1921	532, p. 39
	1922	552, p. 40
	1923	572, p. 30

Bibliography of hydrometric data in the State of Washington--Continued

Gaging station	Year	Water-Supply Paper
Cedar River near Landsberg--Continued...	1924	592, p. 46
	1925	612, p. 44
	1926	632, p. 45
	1927	652, p. 37
	1928	672, p. 33
	1929	692, p. 41
	1930	707, p. 42
	1931	722, p. 40
	1932	737, p. 38
	1933	752, p. 40
	1934	767, p. 34
	1935	792, p. 39
	1929	692, p. 14
	1930	707, p. 13
	1931	722, p. 14
Chehalis River near Chehalis.....	1929	692, p. 15
	1930	707, p. 14
	1931	722, p. 15
	1932	737, p. 14
	1933	752, p. 14
Chehalis River near Grand Mound.....	1934	767, p. 13
	1935	792, p. 18
	1929	692, p. 15
	1930	707, p. 14
	1931	722, p. 15
Chelan River at Chelan.....	1924	592, p. 151
	1925	*592, p. 139; 612, p. 127
	1926	612, p. 127
	1927	632, p. 124
	1928	652, p. 88
	1929	672, p. 115
	1930	692, p. 171
	1931	707, p. 176
	1932	722, p. 170
	1933	737, p. 159
	1934	752, p. 157
	1935	767, p. 150
	1929	692, p. 142
	1930	707, p. 143
	1931	722, p. 149
Chewack Creek below Boulder Creek, near Winthrop.	1921	532, p. 169
	1911-12	Summarized, 492, pp. 10, 356
	1929-30	709, p. 114
	1931	724, p. 115
	1932	739, p. 109
Cispus River near Randle.....	1933	754, p. 113
	1934	*769, p. 113; 794, p. 117
	1935	794, p. 117
	1903-19	Summarized, 492, pp. 11, 128
	1908-21	532, p. 92
Clark Fork at Priest River, Idaho..... (Formerly at Newport, Wash.)	1922-29	692, p. 125
	1930	707, p. 130
	1931	722, p. 121
	1932	737, p. 110
	1933	752, p. 111
	1934	767, p. 106
	1935	792, p. 99
	1913-19	Summarized, 492, pp. 10, 133
	1920	512, p. 118
	1921	532, p. 104
(Note.- Clark Fork is known as Pend Oreille River below the outlet of Pend Oreille Lake, by decision of the U. S. Board on Geographical Names, 1938.)	1922	552, p. 95
	1923	572, p. 83
	1924	592, p. 83
	1925	612, p. 79
	1926	632, p. 79
	1927	652, p. 65
	1928	672, p. 75
	1929	692, p. 128
	1930	707, p. 132
	1931	722, p. 122
	1932	737, p. 111
	1933	752, p. 112
	1934	767, p. 107
	1935	792, p. 100
	1932	737, p. 20
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	1921	532, p. 191
	1922	552, p. 177
	1923	572, p. 166
	1924	592, p. 154
	1925	612, p. 140
	1926	632, p. 135
	1927	652, p. 98
	1928	672, p. 124
	1929	692, p. 180
	1930	707, p. 185
	1931	722, p. 178
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	1921	532, p. 191
	1922	552, p. 177
	1923	572, p. 166
	1924	592, p. 154
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	1926	632, p. 135
	1927	652, p. 98
	1928	672, p. 124
	1929	692, p. 180
	1930	707, p. 185
	1931	722, p. 178

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	1924-29	692, p. 82
	1930	707, p. 84
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	1925	612, p. 71
	1926	632, p. 71
	1927	652, p. 47
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	1929	692, p. 81
	1930	707, p. 83
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	1928	674, p. 12
	1929	694, p. 11
	1930	709, p. 11
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	1933	754, p. 11
	1934	769, p. 11
	1935	794, p. 15
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	1930	707, p. 82
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	1929	692, p. 85
	1930	707, p. 86
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	1930	707, p. 158
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	1932-33	752, p. 139
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	1928	674, p. 99
	1929	694, p. 108
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	1931	724, p. 111
	1932	739, p. 104
	1933	*754, p. 109; 769, p. 107
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	1935	794, p. 112
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	1933	754, p. 108
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	1933	752, p. 136
	1934	767, p. 130
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	1933	752, p. 135
	1934	767, p. 129
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	1932	737, p. 138
	1933	752, p. 137
	1934	767, p. 131
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	1931	724, p. 54
	1932	739, p. 53
	1933	754, p. 51
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	1922	554, p. 88
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	1926	634, p. 91
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	1933	754, p. 92
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	1934	*767, p. 12; 792, p. 16
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	1933	752, p. 151
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	1927	652, p. 14
	1928	672, p. 14
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	1930	707, p. 20
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	1921	532, p. 214
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	1930	707, p. 77
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	1932	*737, p. 65; 752, p. 66
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	1930	707, p. 172
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	1927	652, p. 83
	1928	672, p. 110
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White River at Buckley.....	1899-1902, 1910-19 1920 1921 1922 1923 1924 1925 1926 1929 1930 1931 1932 1933 1934 1935	} Summarized, 492, pp. 23, 47 512, p. 36 532, p. 33 552, p. 33 572, p. 25 592, p. 41 612, p. 40 632, p. 41 692, p. 37 707, p. 38 722, p. 35 737, p. 34 752, p. 33 767, p. 30 792, p. 35
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Whitechuck River near Darrington.....	1910-19	Summarized, 492, pp. 23, 327
White Salmon River at Husum.....	1930 1931 1932 1933 1934 1935	709, p. 57 724, p. 59 739, p. 58 754, p. 56 769, p. 58 794, p. 65
White Salmon River near Trout Lake..... (Formerly near Guler.)	1918 1929 1930 1931	Summarized, 492, pp. 23, 325 694, p. 56 709, p. 56 724, p. 58
White Salmon River near Underwood.....	1913, 1915-19 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1935	} Summarized, 492, pp. 23, 329 514, p. 106 534, p. 100 554, p. 98 574, p. 98 594, p. 108 614, p. 96 634, p. 100 654, p. 55 674, p. 55 694, p. 57 709, p. 58 794, p. 66
Wind River near Carson.....	1925-26	632, p. 10
Wynoochee River at Oxbow, near Aberdeen.	1927 1928 1929 1930 1931 1932 1933 1934 1935	652, p. 12 672, p. 12 692, p. 19 707, p. 18 722, p. 20 737, p. 16 752, p. 16 767, p. 15 792, p. 20

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Gaging station	Year	Water-Supply Paper
Wynoochee River near Montesano.....	1923-24 1925 1926 1927 1928 1929 1930	592, p. 10 612, p. 11 632, p. 12 652, p. 13 672, p. 13 692, p. 20 707, p. 19
Yakima River at Cle Elum.....	1906-19 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935	Summarized, 492, pp. 23, 208 512, p. 197 532, p. 180 552, p. 169 572, p. 160 592, p. 148 612, p. 135 632, p. 130 652, p. 95 672, p. 121 692, p. 177 707, p. 181 722, p. 175 737, p. 165 752, p. 164 767, p. 156 792, p. 152
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Yakima River at Umtanum.....	1906-19 1920 1921	Summarized, 492, pp. 24, 212 512, p. 200 532, p. 182
Yakima River near Martin.....	1922-35 1904-19 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935	Not previously published; p. 335 Summarized, 492, pp. 24, 201 512, p. 195 532, p. 178 552, p. 167 572, p. 158 592, p. 146 612, p. 133 632, p. 129 652, p. 93 672, p. 119 692, p. 176 707, p. 180 722, p. 174 737, p. 164 752, p. 163 767, p. 155 792, p. 151
Yakima River near Parker..... (Comparable with records at Union Gap.)	1906-19 1920 1921 1922-31 1932 1933 1934 1935	Summarized, 492, pp. 24, 215, 222 512, p. 202 532, p. 183 Not previously published; p. 338 737, p. 166 752, p. 165 767, p. 157 792, p. 153
Yakima River near Prosser.....	1904-07, 1913-19 1920 1921 1922 1923-26 1927 1928 1929 1930 1931 1932 1933	{ Summarized, 492, pp. 24, 225 } 512, p. 205 532, p. 185 552, p. 171 Not previously published; p. 342 652, p. 96 672, p. 122 692, p. 178 707, p. 183 722, p. 176 737, p. 167 752, p. 167

GAGING-STATION RECORDS

Basins between Columbia River and Puget Sound

NASALLE RIVER BASIN

Naselle River near Naselle, Wash.

Location.- Staff gage, lat. $46^{\circ}22'$, long. $123^{\circ}44'$, in SW $\frac{1}{4}$ sec. 1, T. 10 N., R. 9 W., $\frac{1}{2}$ miles above Salmon Creek and $3\frac{1}{2}$ miles east of Naselle.

Drainage area.- 66 square miles.

Records available.- May 1929 to September 1935.

Extremes.- Maximum discharge recorded, 10,400 second-feet Jan. 22, 1935 (gage height determined from floodmarks); minimum, 22 second-feet Oct. 6, 7, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Naselle River near Naselle

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
May 10-31.....	209	97	145	2.20	1.80	6,330
June.....	719	79	209	3.17	3.54	12,400
July.....	138	49	82.2	1.25	1.44	5,050
August.....	49	32	40.7	.617	.71	2,500
September.....	37	27	30.0	.455	.51	1,790
The period.....	-	-	-	-	-	28,100
1929-30						
October.....	73	22	33.0	.500	.58	2,030
November.....	85	25	37.6	.570	.64	2,240
December.....	1,910	32	476	7.21	8.31	29,300
January.....	1,070	122	360	5.45	6.28	22,100
February.....	1,850	468	1,040	15.8	16.45	57,800
March.....	1,670	160	458	6.94	8.00	28,200
April.....	765	160	315	4.77	5.32	18,700
May.....	718	114	220	3.33	3.84	13,500
June.....	235	94	143	2.17	2.42	8,510
July.....	97	44	62.9	.953	1.10	3,870
August.....	44	26	32.9	.498	.57	2,020
September.....	99	25	40.4	.612	.68	2,400
The year.....	1,910	22	264	4.00	54.19	191,000
1930-31						
October.....	293	33	111	1.68	1.94	6,820
November.....	900	95	342	5.18	5.78	20,400
December.....	660	172	344	5.21	6.01	21,200
January.....	2,790	235	901	13.7	15.79	55,400
February.....	2,140	160	486	7.36	7.66	27,000
March.....	2,660	249	822	12.5	14.41	60,500
April.....	2,340	160	626	9.48	10.58	37,200
May.....	149	62	99.9	1.51	1.74	6,140
June.....	1,820	50	235	3.56	3.97	14,000
July.....	278	58	115	1.74	2.01	7,070
August.....	56	30	41.5	.629	.73	2,550
September.....	340	26	127	1.92	2.14	7,560
The year.....	2,790	26	353	5.35	72.76	256,000
1931-32						
October.....	2,790	90	563	8.53	9.83	34,600
November.....	2,860	293	863	13.1	14.62	51,400
December.....	2,990	263	1,040	15.8	18.22	64,000
January.....	4,330	293	1,030	15.6	17.99	63,300
February.....	4,490	222	1,020	15.5	16.72	58,700
March.....	4,330	263	1,070	16.2	18.68	65,800
April.....	2,080	235	689	10.4	11.60	41,000
May.....	222	86	131	1.98	2.28	8,060
June.....	114	41	67.6	1.02	1.14	4,020
July.....	138	41	72.9	1.10	1.27	4,480
August.....	160	38	75.2	1.15	1.33	4,690
September.....	128	36	50.8	.770	.86	3,020
The year.....	4,490	36	556	8.42	114.54	403,000

Monthly discharge of Naselle River near Naselle--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	540	29	135	2.05	2.36	8,300
November.....	4,760	373	1,340	20.3	22.65	79,700
December.....	5,280	209	1,220	18.5	21.33	75,000
January.....	3,800	293	1,050	15.9	15.33	64,600
February.....	3,320	278	871	15.2	15.75	48,400
March.....	2,280	501	1,080	16.4	18.91	66,400
April.....	1,180	149	331	5.02	5.60	19,700
May.....	660	196	354	5.36	6.18	21,800
June.....	705	102	211	3.20	3.57	12,600
July.....	114	48	67.1	1.02	1.18	4,130
August.....	59	35	42.3	.641	.74	2,600
September.....	620	34	198	3.00	3.35	11,800
The year.....	5,280	29	573	8.68	117.95	415,000
1933-34						
October.....	1,860	97	508	7.70	8.88	31,240
November.....	2,280	184	516	7.82	8.72	30,700
December.....	5,280	235	2,530	38.3	44.16	155,600
January.....	4,920	501	1,350	20.5	23.63	83,020
February.....	540	138	294	4.45	4.63	16,360
March.....	2,280	128	539	8.17	9.42	33,120
April.....	905	109	241	3.65	4.07	14,330
May.....	705	109	213	3.23	3.72	13,090
June.....	110	61	78.5	1.19	1.33	4,670
July.....	263	44	73.2	1.11	1.28	4,500
August.....	71	41	51.3	.777	.90	3,150
September.....	117	41	57.9	.877	.98	3,450
The year.....	5,280	41	543	8.23	111.72	393,200
1934-35						
October.....	4,430	45	584	8.85	10.20	35,880
November.....	2,650	444	1,033	15.7	17.62	61,490
December.....	2,650	280	999	15.1	17.41	61,450
January.....	10,400	237	1,608	24.4	28.13	98,890
February.....	2,650	164	544	8.24	8.68	30,230
March.....	2,930	294	766	11.6	13.37	47,080
April.....	426	142	243	3.68	4.11	14,440
May.....	199	78	114	1.73	1.99	6,980
June.....	134	56	73.1	1.11	1.24	4,350
July.....	121	48	63.1	.956	1.10	3,880
August.....	70	38	44.4	.673	.78	2,730
September.....	373	36	87.5	1.33	1.48	5,200
The year.....	10,400	36	515	7.80	105.91	372,600

Yearly discharge of Naselle River near Naselle

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	264	4.00	54.19	191,000	284	4.30	58.39	206,000
1931.....	353	5.35	72.76	256,000	494	7.48	101.70	357,000
1932.....	556	8.42	114.54	403,000	574	8.70	118.21	416,000
1933.....	573	8.68	117.95	415,000	649	9.82	133.37	470,000
1934.....	545	8.23	111.72	393,200	462	7.00	95.09	334,500
1935.....	515	7.80	105.91	372,600	-	-	-	-

NORTH RIVER BASIN

North River near Raymond, Wash.

Location.- Water-stage recorder, lat. $46^{\circ}49'$, long. $123^{\circ}51'$, in sec. 6, T. 15 N., R. 9 W., $1\frac{1}{4}$ miles above Salmon Creek and 10 miles northwest of Raymond.

Records available.- August 1927 to September 1935.

Extremes.- Maximum discharge, 35,000 second-feet at 6 p.m. Dec. 10, 1933 (gauge height determined from floodmarks); minimum daily discharge, 28 second-feet Aug. 17, 1928, Sept. 25, 1930, result of regulation.

Remarks.- Splash dam 800 feet above gauge operated at irregular intervals until destroyed by flood of December 1933.

Monthly discharge of North River near Raymond

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1927				
August.....	84	65	74.0	4,550
September.....	533	117	243	14,500
The period.....	-	-	-	19,000
1927-28				
October.....	2,690	350	987	60,700
November.....	8,170	766	2,740	163,000
December.....	3,600	396	1,610	99,000
January.....	5,260	787	1,970	121,000
February.....	2,230	213	965	55,500
March.....	4,130	364	1,850	114,000
April.....	4,600	891	1,670	99,400
May.....	1,850	274	671	41,300
June.....	315	138	191	11,400
July.....	189	62	113	6,950
August.....	78	28	59.9	3,680
September.....	144	33	62.2	3,700
The year.....	8,170	28	1,070	780,000
1928-29				
October.....	1,200	56	455	28,000
November.....	1,910	202	774	46,100
December.....	2,910	395	1,060	66,200
January.....	2,490	391	906	55,700
February.....	1,850	360	749	41,600
March.....	4,880	608	1,330	81,800
April.....	3,860	686	1,430	85,100
May.....	1,560	234	482	29,600
June.....	768	191	316	18,800
July.....	202	91	135	8,300
August.....	100	69	84.6	5,200
September.....	74	46	61.5	3,660
The year.....	4,880	46	648	469,000
1929-30				
October.....	110	53	74.9	4,610
November.....	104	56	74.1	4,410
December.....	4,210	66	935	57,500
January.....	2,790	314	868	53,400
February.....	3,800	1,130	2,500	139,000
March.....	3,530	378	1,040	64,000
April.....	2,000	484	829	49,300
May.....	1,040	249	436	26,800
June.....	483	149	251	14,900
July.....	166	57	107	6,580
August.....	77	54	65.0	4,000
September.....	271	28	83.8	4,990
The year.....	4,210	28	594	429,000
1930-31				
October.....	528	51	216	13,300
November.....	1,470	151	574	34,200
December.....	1,160	297	640	39,400
January.....	4,900	471	1,840	113,000
February.....	4,710	438	1,260	70,000
March.....	4,160	648	1,680	103,000
April.....	6,280	446	2,110	126,000
May.....	422	153	273	16,800
June.....	1,760	112	393	23,400
July.....	570	99	214	13,200
August.....	102	69	84.8	5,210
September.....	941	59	227	13,500
The year.....	6,280	51	789	571,000

Monthly discharge of North River near Raymond--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1931-32				
October.....	6,480	175	1,470	90,400
November.....	4,520	672	1,880	112,000
December.....	7,660	550	2,220	136,000
January.....	6,080	1,010	2,400	148,000
February.....	9,800	732	2,780	160,000
March.....	7,530	1,010	2,630	162,000
April.....	3,180	662	1,560	92,800
May.....	1,040	120	376	23,100
June.....	773	64	175	10,400
July.....	270	69	115	7,070
August.....	796	72	112	6,890
September.....	908	42	98.4	5,860
The year.....	9,800	42	1,310	955,000
1932-33				
October.....	-	64	238	14,600
November.....	5,620	818	2,610	155,000
December.....	6,320	915	2,920	180,000
January.....	6,850	920	3,000	184,000
February.....	4,700	595	1,710	95,000
March.....	3,830	873	2,090	129,000
April.....	2,930	322	724	43,100
May.....	1,470	180	591	36,300
June.....	1,090	199	381	22,700
July.....	221	93	135	8,300
August.....	111	54	77.5	4,770
September.....	1,170	59	334	19,900
The year.....	6,850	54	1,230	893,000
1933-34				
October.....	3,650	172	1,046	64,330
November.....	6,590	456	1,356	80,690
December.....	25,500	546	9,450	581,100
January.....	10,500	1,490	3,542	217,800
February.....	1,440	408	833	46,270
March.....	4,120	366	1,351	83,040
April.....	1,840	279	611	36,370
May.....	1,310	236	445	27,370
June.....	245	118	163	9,720
July.....	380	88	125	7,660
August.....	122	56	77.4	4,760
September.....	324	54	114	6,790
The year.....	25,500	54	1,610	1,166,000
1934-35				
October.....	6,800	-	1,070	65,800
November.....	7,360	925	2,321	138,100
December.....	5,220	780	*2,412	148,300
January.....	22,000	900	4,088	251,400
February.....	3,530	551	1,256	69,740
March.....	5,890	705	1,942	119,400
April.....	1,130	375	597	35,500
May.....	434	181	265	16,280
June.....	219	110	151	8,970
July.....	200	66	104	6,360
August.....	77	46	58.0	3,560
September.....	519	41	118	7,040
The year.....	22,000	41	1,202	870,400

*Estimated.

Yearly discharge of North River near Raymond

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1928.....	1,070	-	-	780,000	821	-	-	596,000
1929.....	648	-	-	488,000	547	-	-	396,000
1930.....	594	-	-	429,000	621	-	-	450,000
1931.....	789	-	-	571,000	1,140	-	-	823,000
1932.....	1,310	-	-	955,000	1,330	-	-	968,000
1933.....	1,230	-	-	893,000	1,750	-	-	1,270,000
1934.....	1,610	-	-	1,166,000	1,094	-	-	792,000
1935.....	1,202	-	-	870,400				

CHEHALIS RIVER BASIN

Chehalis River near Chehalis, Wash.

Location.- Chain gage, lat. $46^{\circ}39'$, long. $123^{\circ}00'$, on line between secs. 1 and 2, T. 13 N., R. 3 W., at highway bridge $1\frac{1}{2}$ miles above Newaukum River and $1\frac{1}{2}$ miles south-west of Chehalis.

Drainage area.- 465 square miles.

Records available.- February 1929 to September 1931.

Extremes.- Maximum discharge observed, 11,200 second-feet Apr. 1, 1931; minimum, 54 second-feet Oct. 1, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Chehalis River near Chehalis

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
February 28, 1929.....	-	-	-	-	-	3,550
March.....	7,010	920	2,040	4.39	5.06	125,000
April.....	7,630	1,160	2,580	5.55	6.19	154,000
May.....	1,180	402	662	1.42	1.64	40,700
June.....	1,850	302	561	1.21	1.35	33,400
July.....	292	142	208	.447	.52	12,800
August.....	138	82	107	.230	.27	6,580
September.....	132	60	82.3	.177	.20	4,900
The period.....	-	-	-	-	-	381,000
October 1929.....	181	54	103	.222	.26	6,330
November.....	138	71	99.2	.213	.24	5,900
December.....	7,580	88	1,750	3.76	4.34	108,000
January 1930.....	3,520	532	1,200	2.58	2.97	73,800
February.....	6,130	1,850	3,830	8.24	8.58	213,000
March.....	5,050	554	1,610	3.46	3.99	99,000
April.....	1,370	532	829	1.78	1.99	49,300
May.....	1,950	345	649	1.40	1.61	39,900
June.....	532	217	324	.697	.78	19,300
July.....	208	101	140	.301	.35	8,610
August.....	101	69	87.4	.188	.22	5,370
September.....	217	60	85.8	.180	.20	4,990
Water year 1929-30.....	7,580	54	874	1.88	25.53	634,000
October 1930.....	445	79	174	.374	.43	10,700
November.....	2,120	120	674	1.45	1.62	40,100
December.....	1,340	270	667	1.43	1.65	41,000
Calendar year 1930.....	6,130	60	836	1.80	24.39	605,000
January 1931.....	9,400	510	3,230	6.95	8.01	199,000
February.....	10,500	565	2,250	4.84	5.04	125,000
March.....	7,150	950	2,620	5.63	6.49	161,000
April.....	11,200	615	3,110	6.69	7.46	185,000
May.....	565	215	375	.806	.93	23,100
June.....	1,760	127	458	.986	1.10	27,300
July.....	640	117	237	.510	.59	14,600
August.....	127	88	102	.219	.25	6,270
September.....	480	84	158	.340	.38	9,400
Water year 1930-31.....	11,200	79	1,160	2.49	33.95	842,000

Chehalis River near Grand Mound, Wash.

Location.— Water-stage recorder, lat. $46^{\circ}47'$, long. $123^{\circ}02'$, in NE $\frac{1}{4}$ sec. 22, T. 15 N., R. 3 W., at Meadow, $1\frac{1}{2}$ miles southwest of Grand Mound. Prior to Oct. 3, 1934, staff gage across river at datum 3.00 feet higher.

Drainage area.— 928 square miles.

Records available.— October 1928 to September 1935.

Extremes.— Maximum discharge observed, 45,000 second-feet Dec. 21, 1933; minimum, 126 second-feet Aug. 29, 1935.

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

Monthly discharge of Chehalis River near Grand Mound

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	1,660	284	549	0.592	0.68	33,800
November.....	3,690	260	1,100	1.19	1.33	65,500
December.....	10,800	665	2,740	2.95	3.40	168,000
January.....	7,860	950	2,800	3.02	3.48	172,000
February.....	5,310	840	2,300	2.48	2.58	128,000
March.....	13,500	1,870	5,940	4.25	4.90	242,000
April.....	13,200	1,870	4,390	4.73	5.28	261,000
May.....	2,160	650	1,240	1.34	1.54	76,200
June.....	2,540	500	900	.970	1.08	53,600
July.....	690	224	405	.456	.50	24,900
August.....	240	170	193	.208	.24	11,900
September.....	248	170	197	.212	.24	11,700
The year.....	13,500	170	1,730	1.86	25.25	1,250,000
1929-30						
October.....	391	182	272	.293	.34	16,700
November.....	448	270	326	.351	.39	19,400
December.....	9,690	300	2,890	3.11	3.58	178,000
January.....	6,700	735	2,070	2.23	2.57	127,000
February.....	12,000	3,130	6,830	7.35	7.66	379,000
March.....	10,400	840	3,100	3.34	3.65	191,000
April.....	2,310	1,010	1,570	1.69	1.89	93,400
May.....	3,480	610	1,200	1.29	1.49	73,800
June.....	1,190	515	710	.765	.85	42,200
July.....	515	168	287	.309	.36	17,600
August.....	168	147	155	.167	.19	9,530
September.....	368	149	189	.204	.23	11,200
The year.....	12,000	147	1,600	1.72	23.40	1,160,000
1930-31						
October.....	670	225	350	.377	.43	21,500
November.....	3,850	285	1,200	1.29	1.44	71,400
December.....	2,490	500	1,230	1.33	1.53	75,600
January.....	14,800	885	5,650	6.09	7.02	347,000
February.....	16,600	885	5,860	4.16	4.33	214,000
March.....	13,600	1,490	4,710	5.08	5.86	290,000
April.....	19,400	885	5,180	5.58	6.23	308,000
May.....	1,080	565	709	.764	.88	43,600
June.....	3,150	440	885	.954	1.06	52,700
July.....	1,030	270	409	.441	.51	25,100
August.....	270	212	235	.253	.29	14,400
September.....	670	212	314	.338	.38	18,700
The year.....	19,400	212	2,050	2.21	29.96	1,480,000
1931-32						
October.....	7,150	320	1,470	1.58	1.82	90,400
November.....	12,500	1,030	4,120	4.44	4.95	245,000
December.....	13,200	1,310	5,610	6.05	6.98	345,000
January.....	15,800	2,180	6,030	6.50	7.49	371,000
February.....	21,800	1,490	6,650	7.17	7.73	385,000
March.....	19,700	2,730	7,340	7.91	9.12	451,000
April.....	8,710	1,780	4,320	4.66	5.20	257,000
May.....	2,440	680	1,110	1.20	1.38	69,200
June.....	810	420	568	.634	.71	35,000
July.....	680	265	399	.430	.50	24,500
August.....	340	209	252	.272	.31	15,500
September.....	340	212	242	.261	.29	14,400
The year.....	21,800	209	3,170	3.42	46.48	2,300,000

Monthly discharge of Chehalis River near Grand Mound--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	1,110	248	532	0.573	0.66	32,700
November.....	21,500	1,680	7,540	8.12	9.08	449,000
December.....	22,600	1,610	9,150	9.86	11.37	563,000
January.....	20,700	2,640	8,260	8.90	10.28	508,000
February.....	13,600	1,610	4,370	4.71	4.90	243,000
March.....	13,100	3,060	6,930	4.77	8.61	426,000
April.....	7,650	1,440	2,380	2.56	2.66	142,000
May.....	2,370	1,380	1,760	1.90	2.19	108,000
June.....	3,200	660	1,120	1.21	1.36	66,600
July.....	700	310	436	.470	.54	26,600
August.....	585	212	295	.318	.37	18,100
September.....	1,850	244	650	.700	.78	36,700
The year.....	22,600	212	3,620	3.90	52.95	2,620,000
1933-34						
October.....	8,020	450	1,790	1.93	2.22	110,000
November.....	14,000	1,110	2,792	3.01	3.36	166,100
December.....	45,000	1,320	19,280	20.8	23.98	1,186,000
January.....	24,900	3,810	9,445	10.2	11.76	580,700
February.....	3,500	960	2,020	2.18	2.27	112,200
March.....	12,800	870	3,453	3.72	4.29	212,300
April.....	5,760	675	1,565	1.69	1.89	93,140
May.....	2,920	460	891	.960	1.11	54,770
June.....	460	284	353	.380	.42	21,000
July.....	365	206	243	.262	.30	14,970
August.....	264	146	189	.204	.24	11,600
September.....	608	131	229	.247	.28	13,620
The year.....	45,000	131	3,558	3.83	52.12	2,576,000
1934-35						
October.....	17,500	188	2,457	2.65	3.06	151,100
November.....	31,100	2,510	9,192	9.91	11.06	547,000
December.....	16,000	2,080	7,475	8.05	9.28	459,600
January.....	36,300	1,940	9,647	10.4	11.99	593,200
February.....	7,920	1,650	3,946	4.25	4.43	219,100
March.....	12,200	1,940	5,127	5.52	6.36	315,300
April.....	3,540	1,350	2,038	2.20	2.46	121,300
May.....	1,260	503	745	.803	.93	45,800
June.....	496	307	414	.446	.50	24,650
July.....	448	185	262	.282	.33	16,130
August.....	217	131	171	.184	.21	10,500
September.....	1,150	134	283	.305	.34	16,810
The year.....	36,300	131	3,482	3.75	50.95	2,520,000

Yearly discharge of Chehalis River near Grand Mound

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	1,730	1.86	25.25	1,250,000	1,650	1.78	24.15	1,200,000
1930.....	1,600	1.72	23.40	1,160,000	1,540	1.66	22.49	1,110,000
1931.....	2,050	2.21	29.96	1,480,000	2,750	2.96	40.31	1,990,000
1932.....	3,170	3.42	46.48	2,300,000	3,670	3.95	53.82	2,660,000
1933.....	3,620	3.90	52.95	2,620,000	4,200	4.53	61.42	3,040,000
1934.....	3,558	3.83	52.12	2,576,000	3,138	3.38	45.96	2,272,000
1935.....	3,482	3.75	50.95	2,520,000	-	-	-	-

Newaukum River near Chehalis, Wash.

Location.- Staff gage, lat. $46^{\circ}37'10''$, long. $122^{\circ}56'45''$, on line between secs. 9 and 16, T. 13 N., R. 2 W., 3 miles above mouth and 3 miles southeast of Chehalis.

Drainage area.- 158 square miles.

Records available.- March 1929 to September 1931.

Extremes.- Maximum discharge observed, 5,240 second-feet at 6:40 a.m. Apr. 1, 1931; minimum, 27 second-feet Sept. 23, 1930.

Remarks.- Cities of Chehalis and Centralia divert up to a maximum of 15 second-feet for municipal use. No regulation.

Monthly discharge of Newaukum River near Chehalis

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
March 1929.....	2,420	405	781	48,000
April.....	1,760	405	696	41,400
May.....	405	120	246	15,100
June.....	405	83	160	9,520
July.....	80	44	59.1	3,630
August.....	56	35	39.0	2,400
September.....	56	32	35.8	2,130
The period.....	-	-	-	122,000
October 1929.....	76	33	41.3	2,540
November.....	106	37	47.6	2,830
December.....	1,900	39	513	31,600
January 1930.....	1,380	155	437	26,900
February.....	2,300	537	1,130	62,800
March.....	2,670	157	604	37,100
April.....	483	208	302	18,000
May.....	593	134	273	16,800
June.....	266	96	145	8,630
July.....	89	40	57.4	3,530
August.....	41	30	35.0	2,150
September.....	89	27	37.2	2,210
Water year 1929-30.....	2,670	27	297	215,000
October 1930.....	290	31	69.1	4,250
November.....	861	49	262	15,600
December.....	619	117	298	18,300
Calendar year 1930.....	2,670	27	290	216,000
January 1931.....	2,000	231	914	56,200
February.....	2,960	197	624	34,700
March.....	4,110	302	771	47,400
April.....	4,600	190	949	50,500
May.....	302	81	151	9,280
June.....	647	67	169	10,100
July.....	164	45	73.0	4,490
August.....	47	34	39.0	2,400
September.....	145	33	54.7	3,250
Water year 1930-31.....	4,600	31	354	256,000

Skookumchuck River near Centralia, Wash.

Location.- Staff gage, lat. $46^{\circ}47'20''$, long. $122^{\circ}43'30''$, in NE $\frac{1}{4}$ sec. 18 (discharge measurements made in sec. 16), T. 15 N., R. 1 E., about 15 miles northeast of Centralia.

Drainage area.- 60 square miles.

Records available.- April 1929 to September 1931.

Extremes.- Maximum discharge observed, 3,240 second-feet at 6 p.m. Mar. 31, 1931; minimum, 21 second-feet Sept. 23, 24, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Skookumchuck River near Centralia

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
April 1929.....	970	203	333	5.55	6.19	19,800
May.....	230	83	152	2.53	2.92	9,350
June.....	290	59	104	1.73	1.93	6,190
July.....	65	35	45.9	.765	.88	2,820
August.....	36	26	30.1	.502	.58	1,850
September.....	35	22	24.8	.413	.46	1,480
The period.....	-	-	-	-	-	41,500

Monthly discharge of Skookumchuck River near Centralia--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1929.....	57	22	26.8	.447	.52	1,650
November.....	38	22	25.7	.428	.48	1,530
December.....	1,300	22	273	4.55	5.25	16,800
January 1930.....	470	=	155	2.58	2.97	9,530
February.....	970	221	551	9.18	9.56	30,600
March.....	1,760	86	309	5.15	5.94	19,000
April.....	212	99	151	2.52	2.81	8,980
May.....	470	66	134	2.23	2.57	8,240
June.....	145	52	77.4	1.29	1.44	4,610
July.....	50	31	38.0	.633	.73	2,340
August.....	50	23	26.5	.442	.51	1,630
September.....	30	21	23.7	.395	.44	1,410
Water year 1929-30.....	1,760	21	147	2.45	33.22	106,000
October 1930.....	92	22	36.1	.602	.69	2,220
November.....	315	26	107	1.78	1.99	6,370
December.....	315	48	115	1.92	2.21	7,070
Calendar year 1930.....	1,760	21	141	2.35	31.86	102,000
January 1931.....	1,370	86	441	7.35	8.47	27,100
February.....	1,840	92	296	4.93	5.13	16,400
March.....	2,380	137	392	6.53	7.53	24,100
April.....	1,760	111	411	6.85	7.64	24,500
May.....	180	61	91.6	1.53	1.76	5,630
June.....	470	50	98.1	1.64	1.83	5,840
July.....	104	39	56.1	.935	1.08	3,450
August.....	39	29	33.2	.553	.64	2,040
September.....	126	29	42.1	.702	.78	2,510
Water year 1930-31.....	2,380	22	176	2.93	39.75	127,000

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 1935.

Extremes.- Maximum discharge recorded, 52,500 second-feet Jan. 22, 1935 (gage height determined from floodmarks); minimum, 203 second-feet Sept. 21, 22, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Satsop River near Satsop

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 7-31, 1929.....	7,890	1,100	2,300	7.30	6.79	114,000
April.....	8,870	1,330	2,490	7.90	8.81	148,000
May.....	1,820	615	992	3.15	3.63	61,000
June.....	2,170	460	794	2.52	2.81	47,200
July.....	560	322	413	1.31	1.51	25,400
August.....	358	245	284	.902	1.04	17,500
September.....	260	220	227	.721	.80	13,500
The period.....	-	-	-	-	-	427,000
1929-30						
October.....	560	220	314	.997	1.15	19,300
November.....	560	232	280	.889	.99	16,700
December.....	9,270	245	2,030	6.44	7.42	125,000
January.....	4,070	690	1,540	4.89	5.94	94,700
February.....	9,870	2,190	4,850	15.4	16.04	269,000
March.....	5,470	860	1,890	6.00	6.92	116,000
April.....	7,700	1,070	2,050	6.51	7.26	122,000
May.....	1,690	690	894	2.84	3.27	55,000
June.....	830	445	556	1.77	1.98	33,100
July.....	445	284	342	1.09	1.26	21,000
August.....	284	228	250	.794	.92	15,400
September.....	1,150	203	296	.940	1.05	17,600
The year.....	9,870	203	1,250	3.97	53.90	905,000

Monthly discharge of Satsop River near Satsop--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	1,990	255	678	2.15	2.48	41,700
November.....	2,390	560	1,340	4.25	4.74	79,700
December.....	2,990	830	1,410	4.48	5.16	86,700
January.....	16,600	1,000	4,740	15.0	17.29	291,000
February.....	11,300	1,240	2,820	8.95	9.32	157,000
March.....	8,510	1,620	3,650	11.6	13.57	224,000
April.....	8,150	1,030	3,170	10.1	11.27	189,000
May.....	990	480	674	2.14	2.47	41,400
June.....	5,140	420	1,390	4.41	4.92	82,700
July.....	1,240	400	587	1.86	2.14	36,100
August.....	400	270	321	1.02	1.18	19,700
September.....	3,000	270	590	1.87	2.09	35,100
The year.....	16,600	255	1,770	5.62	76.43	1,280,000
1931-32						
October.....	6,810	480	1,990	6.32	7.29	122,000
November.....	11,300	1,420	3,750	11.9	13.28	223,000
December.....	20,600	1,330	4,970	15.8	18.22	306,000
January.....	18,100	1,720	4,690	14.9	17.18	288,000
February.....	27,000	1,330	4,750	15.1	16.29	273,000
March.....	14,400	2,450	4,960	15.7	18.10	305,000
April.....	6,930	1,490	3,180	10.1	11.27	189,000
May.....	1,490	635	888	2.82	3.25	54,600
June.....	610	385	488	1.55	1.73	29,000
July.....	535	362	422	1.34	1.54	25,900
August.....	510	300	372	1.18	1.36	22,900
September.....	320	242	273	.867	.97	16,200
The year.....	27,000	242	2,560	8.13	110.48	1,850,000
1932-33						
October.....	2,810	242	523	1.66	1.91	32,200
November.....	11,600	1,390	3,700	11.7	13.05	220,000
December.....	8,560	922	4,030	12.8	14.76	248,000
January.....	13,900	1,980	4,510	14.3	16.49	277,000
February.....	12,000	1,070	2,800	8.89	9.26	156,000
March.....	7,640	2,320	4,130	13.1	15.10	254,000
April.....	4,320	1,250	1,820	5.78	6.45	108,000
May.....	2,320	1,200	1,640	5.21	6.01	101,000
June.....	1,350	555	870	2.76	3.08	51,800
July.....	648	330	445	1.41	1.63	27,400
August.....	372	262	293	.930	1.07	18,000
September.....	3,800	242	809	2.57	2.87	48,100
The year.....	13,900	242	2,130	6.76	91.68	1,540,000
1933-34						
October.....	9,200	420	2,062	6.55	7.55	126,800
November.....	11,200	945	2,481	7.88	8.79	147,600
December.....	21,200	1,160	9,296	29.5	34.01	571,600
January.....	16,500	3,400	6,413	20.4	23.52	394,300
February.....	4,020	1,100	2,269	7.20	7.50	126,000
March.....	8,820	890	2,787	8.85	10.20	171,400
April.....	3,400	640	1,187	3.77	4.21	70,630
May.....	2,480	585	976	3.10	3.57	60,030
June.....	560	360	420	1.33	1.48	24,980
July.....	2,480	312	462	1.47	1.70	28,400
August.....	430	259	314	.997	1.15	19,330
September.....	670	248	327	1.04	1.16	19,440
The year.....	21,200	248	2,432	7.72	104.84	1,760,000
1934-35						
October.....	12,500	259	1,808	5.74	6.62	111,200
November.....	12,000	2,170	4,200	13.3	14.84	249,900
December.....	10,000	1,710	3,513	12.4	14.50	240,600
January.....	45,900	2,070	9,002	28.6	32.97	553,500
February.....	10,100	1,820	2,986	9.48	9.57	165,900
March.....	13,800	1,050	3,166	10.1	11.64	194,700
April.....	2,200	1,140	1,508	4.79	5.34	85,750
May.....	1,230	570	830	2.63	3.03	51,040
June.....	682	397	501	1.59	1.77	29,790
July.....	425	264	329	1.04	1.20	20,200
August.....	300	215	242	.768	.89	14,900
September.....	1,720	205	451	1.43	1.60	26,820
The year.....	45,900	205	2,415	7.67	104.07	1,748,000

Yearly discharge of Satsop River near Satsop

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	1,250	3.97	53.90	905,000	1,310	4.16	56.72	952,000
1931.....	1,770	5.62	76.43	1,280,000	2,390	7.59	102.84	1,730,000
1932.....	2,560	8.13	110.48	1,850,000	2,350	7.46	101.41	1,700,000
1933.....	2,130	6.76	91.68	1,540,000	2,610	8.29	112.31	1,890,000
1934.....	2,432	7.72	104.84	1,760,000	2,094	6.65	90.25	1,516,000
1935.....	2,415	7.67	104.07	1,748,000	-	-	-	-

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. Prior to Nov. 7, 1925, staff gage 1 mile upstream. Discharge measurements made $1\frac{1}{2}$ miles above site used prior to Nov. 7, 1925.

Drainage area.- 55 square miles (uncertain because of inadequate maps).

Records available.- May 1925 to September 1935.

Extremes.- Maximum discharge, 18,000 second-feet Jan. 22, 1935 (stage determined from floodmarks); minimum, 76 second-feet Sept. 23, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Wynoochee River at Oxbow, near Aberdeen

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1925				
May 19-31.....	1,020	345	481	12,400
June.....	920	246	425	25,300
July.....	300	138	191	11,700
August.....	138	107	119	7,320
September.....	138	95	105	6,250
The period.....	-	-	-	63,000
1925-26				
October.....	222	85	103	6,330
November.....	2,360	95	747	44,400
December.....	5,680	750	2,040	125,000
January.....	-	-	*1,140	70,100
February.....	-	-	*1,390	77,200
March.....	935	396	560	34,400
April.....	693	291	384	22,800
May.....	1,030	282	551	33,900
June.....	416	162	254	15,100
July.....	162	122	136	8,360
August.....	260	115	130	7,990
September.....	433	113	145	8,630
The year.....	5,680	85	*628	454,000
1926-27				
October.....	4,990	273	1,160	71,300
November.....	3,540	338	1,260	75,000
December.....	4,860	534	1,270	78,100
January.....	3,700	674	1,530	94,100
February.....	3,480	444	1,330	73,900
March.....	1,700	496	822	50,500
April.....	850	444	572	34,000
May.....	1,880	464	894	55,000
June.....	849	387	536	31,900
July.....	360	177	268	15,900
August.....	368	132	160	9,220
September.....	1,710	161	394	23,400
The year.....	4,990	132	846	612,000

*Estimated.

Monthly discharge of Wynocchee River at Oxbow, near Aberdeen--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1927-28				
October.....	2,860	269	791	48,600
November.....	4,210	576	1,620	96,400
December.....	2,000	454	771	47,400
January.....	6,940	552	1,910	117,000
February.....	1,430	360	688	39,600
March.....	2,960	326	1,270	78,100
April.....	1,430	645	954	56,800
May.....	1,340	454	710	43,700
June.....	573	227	334	19,900
July.....	294	149	187	11,500
August.....	149	120	132	8,120
September.....	567	114	151	8,980
The year.....	6,940	114	794	576,000
1928-29				
October.....	-	-	747	45,900
November.....	3,110	250	955	56,800
December.....	2,420	338	880	54,100
January.....	1,350	257	514	31,600
February.....	450	183	247	13,700
March.....	3,470	312	708	43,500
April.....	2,340	439	796	47,400
May.....	1,030	360	*590	36,300
June.....	1,250	320	*590	35,100
July.....	350	159	228	14,000
August.....	173	111	133	8,180
September.....	113	87	96.7	5,750
The year.....	-	87	542	392,000
1929-30				
October.....	454	87	187	11,500
November.....	357	105	137	8,150
December.....	3,980	108	1,010	62,100
January.....	1,190	234	469	25,800
February.....	3,830	715	1,720	95,500
March.....	1,510	329	667	41,000
April.....	4,720	450	969	57,700
May.....	890	295	408	25,100
June.....	387	186	271	16,100
July.....	242	112	153	9,410
August.....	110	88	97.1	5,970
September.....	1,030	78	155	9,220
The year.....	4,720	78	512	371,000
1930-31				
October.....	1,130	123	392	24,100
November.....	1,220	272	590	35,100
December.....	1,430	367	608	37,400
January.....	7,060	450	2,080	128,000
February.....	5,700	418	983	54,600
March.....	3,840	535	1,320	81,200
April.....	4,220	546	1,210	72,000
May.....	558	287	386	23,700
June.....	2,260	234	550	32,700
July.....	492	159	256	15,700
August.....	155	106	127	7,810
September.....	1,310	104	299	17,800
The year.....	7,060	104	732	530,000
1931-32				
October.....	2,010	212	719	44,200
November.....	5,630	473	1,320	78,600
December.....	8,290	433	1,670	103,000
January.....	5,610	504	1,260	77,500
February.....	10,600	348	1,550	89,200
March.....	3,640	786	1,520	93,500
April.....	2,400	760	1,240	73,800
May.....	838	473	612	37,600
June.....	620	386	475	28,500
July.....	704	272	372	22,900
August.....	376	160	235	14,400
September.....	204	123	140	8,330
The year.....	10,600	123	923	671,000

*Estimated.

Monthly discharge of Wynooche River at Oxbow, near Aberdeen--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1932-33				
October.....	1,410	113	343	21,120
November.....	4,550	635	1,684	100,200
December.....	3,930	411	1,321	81,250
January.....	5,350	560	1,465	90,090
February.....	3,420	354	722	40,070
March.....	2,800	760	1,274	78,340
April.....	1,390	610	836	49,780
May.....	1,330	710	979	60,180
June.....	1,060	572	764	45,450
July.....	685	315	485	29,800
August.....	306	149	212	13,040
September.....	2,050	139	551	32,760
The year.....	5,350	113	887	642,100
1933-34				
October.....	3,400	248	946	58,150
November.....	5,620	364	960	57,100
December.....	10,200	460	3,472	213,500
January.....	6,600	1,240	2,529	155,500
February.....	1,650	376	878	48,740
March.....	4,720	387	1,132	69,620
April.....	1,450	324	537	31,950
May.....	1,590	280	529	32,530
June.....	263	139	183	10,910
July.....	2,290	114	263	16,190
August.....	522	121	188	11,550
September.....	334	107	146	8,710
The year.....	10,200	107	987	714,400
1934-35				
October.....	3,930	100	910	55,940
November.....	8,290	885	2,049	121,900
December.....	4,540	622	1,388	85,320
January.....	16,000	485	3,473	213,500
February.....	3,720	800	1,303	72,390
March.....	5,140	715	1,214	74,660
April.....	990	416	614	36,550
May.....	665	405	511	31,450
June.....	659	276	404	24,050
July.....	308	170	226	13,870
August.....	170	122	150	9,240
September.....	1,990	97	369	21,930
The year.....	16,000	97	1,051	760,800

Yearly discharge of Wynoochee River at Oxbow, near Aberdeen

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1926.....	628	454,000	695	503,000
1927.....	846	612,000	802	580,000
1928.....	794	576,000	745	540,000
1929.....	542	392,000	438	317,000
1930.....	512	371,000	532	395,000
1931.....	732	530,000	911	659,000
1932.....	923	671,000	892	648,000
1933.....	887	642,100	1,061	768,300
1934.....	987	714,400	896	648,900
1935.....	1,051	760,800	-	-
Highest.....	1,051	760,800	1,061	768,300
Average.....	790	572,000	775	561,000
Lowest.....	512	371,000	438	317,000

Wynoochee River near Montesano, Wash.

Location.- Staff gage, lat. 47°11', long. 123°38', in sec. 36, T. 20 N., R. 8 W., at Waters ranch, 3 miles below Shafer Creek and 14 miles north of Montesano.

Drainage area.- 105 square miles.

Records available.- February 1923 to September 1930.

Extremes.- Maximum discharge observed, about 25,000 second-feet at 6 p.m. Feb. 11, 1924; minimum discharge, 96 second-feet Oct. 1-3, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Wynoochee River near Montesano

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1923				
February.....	1,010	210	417	23,200
March.....	2,000	342	1,000	61,500
April.....	1,500	866	1,060	63,100
May.....	1,080	555	806	49,600
June.....	866	393	549	32,700
July.....	446	250	330	20,300
August.....	250	174	208	12,800
September.....	342	143	177	10,500
The period.....	-	-	-	274,000
1923-24				
October.....	1,500	174	427	26,300
November.....	3,940	250	777	46,200
December.....	12,600	733	3,200	197,000
January.....	14,600	1,500	2,720	167,000
February.....	19,600	1,430	4,100	236,000
March.....	1,740	470	730	44,900
April.....	1,170	360	540	32,100
May.....	470	-	337	20,700
June.....	310	-	*200	11,900
July.....	-	-	*159	9,780
August.....	470	-	150	9,220
September.....	4,340	106	639	38,000
The year.....	19,600	106	1,160	839,000
1924-25				
October.....	7,040	560	2,350	144,000
November.....	6,250	530	2,390	142,000
December.....	6,100	715	1,790	110,000
January.....	6,400	1,090	2,680	165,000
February.....	9,670	820	2,970	165,000
March.....	1,630	490	872	53,600
April.....	1,090	468	656	39,000
May.....	930	423	617	37,900
June.....	1,170	318	517	30,800
July.....	338	180	244	15,000
August.....	177	135	155	9,530
September.....	163	123	139	8,270
The year.....	9,670	123	1,270	920,000
1925-26				
October.....	264	109	135	8,300
November.....	3,190	127	1,020	60,700
December.....	8,590	890	2,930	180,000
January.....	5,350	690	1,520	93,500
February.....	3,190	1,110	1,930	107,000
March.....	1,110	505	728	44,800
April.....	855	355	464	27,600
May.....	1,350	355	729	44,800
June.....	655	222	332	19,800
July.....	222	161	187	11,500
August.....	315	140	171	10,500
September.....	505	140	177	10,500
The year.....	8,500	109	855	619,000
1926-27				
October.....	6,240	355	1,420	87,300
November.....	5,130	415	1,660	98,800
December.....	8,230	755	1,800	111,000
January.....	6,240	960	2,270	140,000
February.....	4,980	568	1,930	107,000
March.....	2,310	628	1,170	71,900
April.....	1,030	568	717	42,700
May.....	2,310	568	1,220	75,000
June.....	960	462	624	37,100
July.....	415	216	303	18,600
August.....	394	166	186	11,400
September.....	2,310	202	525	31,200
The year.....	8,230	166	1,150	832,000

*Estimated.

Monthly discharge of Wynoochee River near Montesano--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1927-28				
October.....	4,100	332	1,080	66,400
November.....	6,720	820	2,280	136,000
December.....	3,010	690	1,190	73,200
January.....	11,100	820	2,660	164,000
February.....	2,100	462	980	56,400
March.....	3,820	414	1,810	111,000
April.....	2,530	870	1,400	83,300
May.....	2,000	514	914	56,200
June.....	665	255	388	23,100
July.....	346	172	221	13,600
August.....	172	122	143	8,790
September.....	698	118	171	10,200
The year.....	11,100	118	1,100	802,000
1928-29				
October.....	4,100	145	907	55,800
November.....	3,820	349	1,280	76,200
December.....	3,820	440	1,310	80,600
January.....	2,540	370	800	49,200
February.....	888	250	384	21,300
March.....	5,280	490	1,020	62,700
April.....	3,960	670	1,180	70,200
May.....	1,320	440	715	44,000
June.....	2,540	370	714	42,500
July.....	415	197	277	17,000
August.....	207	132	160	9,840
September.....	132	100	110	6,550
The year.....	5,280	100	740	536,000
1929-30				
October.....	415	96	208	12,800
November.....	415	118	164	9,760
December.....	5,130	132	1,310	80,600
January.....	1,930	328	702	43,200
February.....	4,980	1,080	2,500	139,000
March.....	2,320	465	974	59,900
April.....	6,240	605	1,320	78,600
May.....	1,240	392	545	33,500
June.....	545	269	356	21,200
July.....	308	161	210	12,900
August.....	158	118	135	8,300
September.....	1,240	104	206	12,300
The year.....	6,240	96	707	512,000

Yearly discharge of Wynoochee River near Montesano

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1924.....	1,160	839,000	1,330	966,000
1925.....	1,270	920,000	1,070	773,000
1926.....	855	619,000	921	667,000
1927.....	1,150	832,000	1,120	810,000
1928.....	1,100	802,000	1,020	739,000
1929.....	740	536,000	589	426,000
1930.....	707	512,000	-	-

HUMPTULIPS RIVER BASIN

Humptulips River near Humptulips, Wash.

Location.- Water-stage recorder, lat. 47°13'45", long. 123°56'30", in NE¼ sec. 17, T. 20 N., R. 10 W., at highway bridge 1 mile southeast of Humptulips.

Drainage area.- 125 square miles.

Records available.- May 1933 to January 1935.

Extremes.- Maximum discharge, 21,200 second-feet Jan. 22, 1935 (stage determined from floodmarks); minimum, 147 second-feet July 12, 1934.

Remarks.- No diversion or regulation.

Monthly discharge of Humptulips River near Humptulips

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
May 1933.....	-	1,060	*1,340	10.7	12.34	82,400
June.....	1,390	472	769	6.15	6.86	45,800
July.....	656	245	367	2.94	3.39	22,600
August.....	259	171	204	1.63	1.88	12,500
September.....	2,980	162	766	6.13	6.84	45,600
The period.....	-	-	-	-	-	209,000
October.....	5,500	291	*1,290	10.3	11.87	79,300
November.....	6,800	512	1,573	12.6	14.06	93,620
December.....	10,600	750	5,246	42.0	48.42	322,600
January 1934.....	9,600	1,950	3,903	31.2	35.97	240,000
February.....	3,000	472	1,436	11.5	11.98	79,760
March.....	7,030	401	1,904	15.2	17.52	117,100
April.....	2,780	326	779	6.23	6.95	46,340
May.....	2,540	359	745	5.96	6.87	45,840
June.....	345	180	232	1.86	2.08	13,790
July.....	3,140	150	405	3.24	3.74	24,880
August.....	788	196	301	2.41	2.78	18,500
September.....	671	183	264	2.11	2.35	15,720
Water year 1933-34.....	10,600	150	1,516	12.1	164.59	1,097,000
October 1934.....	7,120	199	1,485	11.9	13.72	91,280
November.....	8,960	1,350	3,027	24.2	27.00	180,100
December.....	-	956	*2,172	17.4	20.06	133,500
Calendar year 1934.....	9,600	150	1,391	11.1	151.02	1,007,000
January 1935.....	-	-	*3,968	31.7	36.55	244,000

*Estimated.

QUINAUT RIVER BASIN

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. Oct. 1, 1916, to May 2, 1935, water-stage recorder 400 feet downstream at different datum.

Prior to Oct. 1, 1916, staff gage at two different locations on the lake.

Drainage area.- 264 square miles.

Records available.- October 1911 to September 1935.

Extremes.- Maximum discharge, 37,000 second-feet at 5 p.m. Dec. 12, 1921; minimum, 285 second-feet Sept. 20, 1924.

Remarks.- No diversion above station. Slight regulation caused by natural storage in lake.

Monthly discharge of Quinault River at Quinault Lake

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	697	432	506	1.92	2.21	31,100
November.....	19,600	691	4,090	15.5	17.29	243,000
December.....	16,400	855	4,640	17.6	20.29	285,000
January.....	13,100	1,520	4,580	17.3	19.94	282,000
February.....	5,980	895	2,310	8.75	9.44	133,000
March.....	7,360	831	2,210	8.37	9.65	136,000
April.....	1,990	1,150	1,490	5.64	6.29	88,700
May.....	2,050	1,260	1,650	6.17	7.11	100,000
June.....	-	1,870	2,890	10.9	12.16	172,000
July.....	1,930	691	1,200	4.55	5.25	73,800
August.....	847	499	600	2.27	2.62	36,900
September.....	8,900	540	3,570	13.5	15.06	212,000
The year.....	19,600	432	2,470	9.36	127.31	1,790,000
1920-21						
October.....	14,600	2,350	5,640	21.4	24.67	347,000
November.....	8,900	1,100	3,470	13.1	14.62	206,000
December.....	9,600	2,350	4,340	16.4	18.91	267,000
January.....	11,600	2,350	4,960	18.8	21.67	305,000
February.....	17,000	2,160	4,410	16.7	17.39	245,000
March.....	4,460	1,620	2,640	10.0	11.53	162,000
April.....	3,110	1,240	1,950	7.39	8.24	116,000
May.....	4,030	1,910	2,890	10.9	12.57	177,000
June.....	5,770	3,400	4,420	16.7	18.63	263,000
July.....	4,820	1,870	2,760	10.5	12.11	170,000
August.....	2,420	1,040	1,550	5.80	6.69	94,100
September.....	7,780	779	2,410	9.13	10.19	143,000
The year.....	17,000	779	3,450	13.1	177.22	2,500,000
1921-22						
October.....	32,300	1,200	6,700	25.4	29.28	412,000
November.....	18,000	2,090	5,530	20.9	23.32	329,000
December.....	31,500	1,460	6,710	25.4	29.28	413,000
January.....	1,850	942	1,350	5.11	5.89	85,000
February.....	2,900	966	1,610	6.10	6.35	89,400
March.....	1,790	966	1,280	4.73	5.45	76,900
April.....	2,090	1,310	1,680	6.56	7.10	100,000
May.....	5,390	1,680	3,240	12.3	14.18	199,000
June.....	5,960	2,620	3,610	13.7	15.29	215,000
July.....	2,690	870	1,810	6.10	7.03	99,000
August.....	1,170	610	804	3.05	3.52	49,400
September.....	3,480	565	1,100	4.17	4.65	65,500
The year.....	32,300	565	2,940	11.1	151.34	2,130,000
1922-23						
October.....	9,130	688	2,190	8.30	9.57	135,000
November.....	2,900	1,180	1,770	6.70	7.48	105,000
December.....	-	-	5,100	19.3	22.25	314,000
January.....	-	-	7,200	27.3	31.47	443,000
February.....	-	-	2,000	7.58	7.89	111,000
March.....	-	-	1,800	6.82	7.86	111,000
April.....	-	-	2,300	8.71	9.72	137,000
May.....	-	-	2,400	9.09	10.48	148,000
June.....	-	-	2,300	8.71	9.72	137,000
July.....	-	-	1,500	5.68	6.55	92,200
August.....	-	-	480	1.82	2.10	29,500
September.....	-	-	750	2.84	3.17	44,600
The year.....	-	-	2,500	9.47	128.26	1,810,000
1923-24						
October.....	-	-	1,100	4.17	4.81	67,600
November.....	-	-	1,500	5.68	6.34	89,300
December.....	-	-	4,700	17.8	20.52	289,000
January.....	-	-	4,200	15.9	18.33	258,000
February.....	-	-	8,300	31.4	35.87	477,000
March.....	-	-	1,900	7.20	8.30	117,000
April.....	-	-	1,100	4.17	4.65	65,500
May.....	-	-	1,700	6.44	7.42	105,000
June.....	-	-	1,100	4.17	4.65	65,500
July.....	-	-	640	2.42	2.79	39,400
August.....	606	390	452	1.71	1.97	27,800
September.....	7,570	289	1,300	4.92	5.49	77,400
The year.....	-	-	2,310	8.75	119.14	1,680,000

*Estimated on basis of records for North Fork of Skokomish River near Hoodsport.

Monthly discharge of Quinault River at Quinault Lake--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	13,700	1,460	5,220	19.8	22.83	321,000
November.....	-	-	*5,600	21.2	23.65	333,000
December.....	-	-	*3,600	13.6	15.68	221,000
January.....	-	-	*3,900	14.8	17.06	240,000
February.....	-	-	*6,500	24.6	25.62	361,000
March.....	-	-	*2,200	8.33	9.60	135,000
April.....	-	-	*2,700	10.2	11.38	161,000
May.....	-	-	*3,200	12.1	13.95	197,000
June.....	-	-	*2,500	9.47	10.57	149,000
July.....	-	-	*1,700	6.44	7.42	105,000
August.....	-	-	*550	2.08	2.40	33,800
September.....	-	-	*610	2.31	2.58	36,300
The year.....	-	-	3,170	12.0	162.74	2,290,000
1925-26						
October.....	726	290	376	1.42	1.64	23,100
November.....	5,010	427	2,120	8.03	8.96	126,000
December.....	14,000	2,480	6,460	24.5	28.25	397,000
January.....	7,150	1,790	3,100	11.7	13.49	191,000
February.....	6,950	2,350	4,130	15.6	16.24	229,000
March.....	2,760	1,410	1,900	7.20	8.30	117,000
April.....	2,420	1,240	1,690	6.36	7.10	100,000
May.....	2,760	1,620	2,210	8.37	9.65	136,000
June.....	1,850	851	1,250	4.73	5.28	74,400
July.....	803	440	585	2.22	2.56	36,000
August.....	681	333	502	1.90	2.19	30,900
September.....	949	369	467	1.77	1.98	27,800
The year.....	14,000	290	2,060	7.80	105.64	1,490,000
1926-27						
October.....	13,100	1,000	3,970	15.0	17.29	244,000
November.....	9,130	1,240	3,670	13.9	15.51	218,000
December.....	13,300	1,910	4,150	15.7	18.10	255,000
January.....	13,400	1,850	4,650	17.6	20.29	286,000
February.....	7,570	1,310	3,620	13.7	14.27	201,000
March.....	3,790	1,460	2,310	8.75	10.09	142,000
April.....	3,180	1,360	1,740	6.59	7.35	104,000
May.....	5,200	2,090	3,440	13.0	14.99	212,000
June.....	5,390	2,220	3,520	13.3	14.84	209,000
July.....	2,760	1,410	2,000	7.58	8.74	123,000
August.....	1,310	601	860	3.26	3.76	52,900
September.....	4,640	703	1,660	6.29	7.02	98,800
The year.....	13,400	601	2,960	11.2	152.25	2,150,000
1927-28						
October.....	9,840	1,220	3,150	11.9	13.72	194,000
November.....	12,100	2,090	5,410	20.5	22.87	322,000
December.....	6,550	1,620	2,760	10.5	12.11	170,000
January.....	15,100	1,680	5,800	22.0	25.36	357,000
February.....	3,560	1,030	2,120	8.03	8.66	122,000
March.....	9,360	867	3,650	13.8	15.91	224,000
April.....	4,550	1,850	2,800	10.6	11.83	167,000
May.....	4,820	2,690	3,260	12.3	14.18	200,000
June.....	3,400	1,460	2,010	7.61	8.49	120,000
July.....	1,560	697	1,050	3.98	4.59	64,600
August.....	668	371	475	1.80	2.08	29,200
September.....	908	318	465	1.76	1.96	27,700
The year.....	15,100	318	2,750	10.4	141.76	2,000,000
1928-29						
October.....	9,360	394	2,410	9.13	10.53	148,000
November.....	9,600	949	3,090	11.7	13.05	184,000
December.....	5,200	1,070	2,430	9.20	10.61	149,000
January.....	4,030	783	1,600	6.06	6.99	98,400
February.....	924	535	673	2.55	2.66	37,400
March.....	8,000	887	1,980	7.50	8.65	122,000
April.....	3,630	1,410	2,300	8.71	9.72	137,000
May.....	4,110	2,090	2,830	10.7	12.34	174,000
June.....	7,780	1,970	3,280	12.4	13.83	195,000
July.....	2,350	1,080	1,560	5.91	6.81	95,900
August.....	1,050	552	723	2.74	3.16	44,500
September.....	568	309	417	1.58	1.76	24,800
The year.....	9,600	309	1,950	7.39	100.11	1,410,000

*Estimated on basis of records for North Fork of Skokomish River near Hoodsport.

Monthly discharge of Quinault River at Quinault Lake--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	1,050	301	656	2.48	2.86	40,300
November.....	668	371	484	1.83	2.04	28,800
December.....	9,600	404	2,960	11.2	12.91	182,000
January.....	3,330	732	1,530	5.80	6.69	94,100
February.....	11,100	2,560	5,420	20.5	21.35	301,000
March.....	4,670	992	2,140	8.11	9.35	132,000
April.....	8,540	2,010	3,410	12.9	14.39	203,000
May.....	2,430	1,330	1,760	6.67	7.69	108,000
June.....	2,010	1,150	1,570	5.95	6.64	93,400
July.....	1,310	547	855	3.24	3.74	52,600
August.....	541	335	428	1.62	1.87	26,300
September.....	2,070	301	519	1.97	2.20	30,900
The year.....	11,100	301	1,780	6.74	91.73	1,290,000
1930-31						
October.....	4,500	589	1,740	6.59	7.60	107,000
November.....	3,800	1,250	2,240	8.48	9.46	133,000
December.....	4,170	1,330	2,190	8.30	9.57	135,000
January.....	19,700	1,330	5,890	22.3	25.71	362,000
February.....	9,130	1,360	3,090	11.7	12.18	172,000
March.....	10,100	1,850	3,860	14.6	16.83	237,000
April.....	10,300	1,970	3,690	14.0	15.62	220,000
May.....	3,260	1,910	2,440	9.24	10.65	150,000
June.....	-	1,910	2,900	11.0	12.27	173,000
July.....	-	732	1,370	5.19	5.98	84,200
August.....	726	-	539	2.04	2.35	33,100
September.....	-	-	†841	3.19	3.56	50,000
The year.....	19,700	-	2,560	9.70	131.78	1,860,000
1931-32						
October.....	-	732	†1,960	7.42	8.55	121,000
November.....	-	-	†3,560	13.5	15.06	212,000
December.....	-	-	†4,010	15.2	17.52	247,000
January.....	-	1,510	†3,640	13.8	15.91	224,000
February.....	27,200	1,060	4,250	16.1	17.36	244,000
March.....	7,360	2,280	4,350	16.5	19.02	267,000
April.....	5,390	2,550	3,720	14.1	15.73	221,000
May.....	3,400	2,090	2,610	9.89	11.40	160,000
June.....	4,370	2,030	3,020	11.4	12.72	180,000
July.....	3,110	1,620	2,250	8.52	9.82	138,000
August.....	1,510	817	1,180	4.47	5.15	72,800
September.....	803	541	657	2.49	2.78	36,100
The year.....	27,200	541	2,930	11.1	151.02	2,130,000
1932-33						
October.....	2,420	414	1,110	4.20	4.84	66,200
November.....	13,200	-	5,270	20.00	22.31	314,000
December.....	-	-	†3,650	13.8	15.91	224,000
January.....	-	-	†3,600	13.6	15.68	221,000
February.....	-	-	†1,500	5.68	5.92	83,300
March.....	-	-	†3,200	12.1	13.95	197,000
April.....	-	-	†2,400	9.09	10.14	143,000
May.....	4,370	-	†2,980	11.2	12.91	182,000
June.....	5,200	3,040	3,690	14.0	15.62	220,000
July.....	4,280	2,480	3,340	12.7	14.64	205,000
August.....	2,350	924	1,650	6.25	7.21	101,000
September.....	-	720	1,370	5.19	5.79	81,500
The year.....	-	414	2,820	10.7	144.92	2,040,000
1933-34						
October.....	9,000	1,040	3,205	12.1	13.95	197,100
November.....	28,000	1,410	4,056	15.4	17.18	241,300
December.....	33,000	1,620	†13,170	49.9	57.53	809,600
January.....	18,000	4,110	7,246	27.4	31.59	445,500
February.....	5,440	1,300	3,072	11.6	12.08	170,600
March.....	11,600	1,310	3,670	13.9	16.03	225,700
April.....	5,270	1,730	2,432	9.21	10.28	144,700
May.....	5,610	1,620	2,419	9.16	10.56	148,700
June.....	1,620	800	1,116	4.23	4.72	66,410
July.....	14,000	600	†1,561	5.91	6.81	95,890
August.....	1,510	580	876	3.32	3.83	53,880
September.....	1,310	504	689	2.61	2.91	41,020
The year.....	33,000	504	3,647	13.8	187.47	2,640,000

*Estimated on basis of records for North Fork of Skokomish River near Hoodspport.

†Partly estimated on basis of records for Queets River near Clearwater.

‡Partly estimated.

Monthly discharge of Quinault River at Quinault Lake--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
October.....	14,600	456	2,963	11.2	12.91	182,200
November.....	23,500	3,000	16,269	23.7	26.44	373,000
December.....	10,300	2,380	4,315	16.3	18.79	265,300
January.....	32,900	1,560	9,285	35.2	40.56	570,900
February.....	7,690	2,640	4,189	15.9	16.58	232,600
March.....	9,740	1,620	3,111	11.8	13.60	191,300
April.....	2,380	1,110	1,706	6.46	7.21	101,500
May.....	2,710	2,020	2,310	8.75	10.09	142,000
June.....	3,390	1,900	2,511	9.89	11.03	155,300
July.....	2,320	1,070	1,754	6.64	7.66	107,800
August.....	1,030	581	742	2.81	3.24	45,630
September.....	6,120	490	1,452	5.50	6.14	86,410
The year.....	32,900	456	3,390	12.8	174.25	2,454,000

†Partly estimated.

Yearly discharge of Quinault River at Quinault Lake

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1912.....	2,260	9.56	116.31	1,640,000	2,490	9.43	128.35	1,810,000
1913.....	2,640	10.8	145.85	2,050,000	2,960	10.8	147.46	2,070,000
1914.....	3,130	11.9	161.27	2,270,000	3,100	11.7	159.53	2,250,000
1915.....	2,460	9.32	126.38	1,780,000	2,530	9.58	129.93	1,830,000
1916.....	3,230	12.2	166.46	2,340,000	2,700	10.2	139.45	1,960,000
1917.....	2,030	7.69	104.48	1,470,000	2,640	10.0	135.65	1,910,000
1918.....	2,940	11.1	151.12	2,130,000	2,910	11.0	149.39	2,100,000
1919.....	3,210	12.2	165.15	2,320,000	2,940	11.1	151.38	2,130,000
1920.....	2,470	9.36	127.31	1,790,000	2,830	10.7	145.72	2,050,000
1921.....	3,450	13.1	177.22	2,500,000	3,910	14.8	200.90	2,830,000
1922.....	2,940	11.1	151.34	2,130,000	2,120	7.99	108.76	1,530,000
1923.....	2,500	9.47	128.26	1,810,000	2,350	8.90	120.63	1,700,000
1924.....	2,310	8.75	119.14	1,680,000	2,900	11.0	149.63	2,110,000
1925.....	3,170	12.0	162.74	2,290,000	2,710	10.3	139.43	1,960,000
1926.....	2,060	7.80	105.64	1,490,000	2,290	8.67	117.69	1,660,000
1927.....	2,960	11.2	152.25	2,150,000	2,920	11.1	150.05	2,110,000
1928.....	2,750	10.4	141.76	2,000,000	2,470	9.36	127.25	1,790,000
1929.....	1,950	7.39	100.11	1,410,000	1,630	6.17	83.73	1,180,000
1930.....	1,780	6.74	91.73	1,290,000	1,960	7.42	100.55	1,420,000
1931.....	2,560	9.70	131.78	1,860,000	2,850	10.8	146.28	2,060,000
1932.....	2,930	11.1	151.02	2,130,000	2,960	11.2	152.95	2,150,000
1933.....	2,820	10.7	144.92	2,040,000	3,700	14.0	190.52	2,680,000
1934.....	3,647	13.8	187.47	2,640,000	3,057	11.6	156.95	2,213,000
1935.....	3,390	12.8	174.25	2,454,000	-	-	-	-
Highest....	3,647	13.8	187.47	2,640,000	3,910	14.8	200.90	2,830,000
Average....	2,740	10.4	141.00	1,990,000	2,730	10.3	140.53	1,980,000
Lowest....	1,780	6.74	91.73	1,290,000	1,630	6.17	83.73	1,180,000

QUEETS RIVER BASIN

Queets River near Clearwater, Wash.

Location.- Water-stage recorder, lat. 47°32', long. 124°19', in SW¹/₄ sec. 36, T. 24 N., R. 13 W., on Quinault Indian Reservation, 4 miles southwest of Clearwater. Station destroyed by flood Jan. 22, 1935. Staff gage used Aug. 24 to Sept. 30, 1935; datum 4 feet lower.

Drainage area.- 454 square miles.

Records available.- September 1930 to September 1935.

Extremes.- Maximum discharge, about 100,000 second-feet Jan. 22, 1935 (stage determined from floodmarks); minimum, 420 second-feet Aug. 23, 24, 1931.

Remarks.- No diversion or regulation.

Monthly discharge of Queets River near Clearwater

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930						
September 15-30.....	14,600	490	2,540	5.59	3.33	80,600
1930-31						
October.....	16,300	860	3,460	7.62	8.78	213,000
November.....	7,380	1,570	3,720	8.19	9.14	221,000
December.....	8,250	1,710	3,800	8.37	9.65	234,000
January.....	34,000	2,020	9,800	21.6	24.90	603,000
February.....	27,800	1,570	4,930	10.9	11.35	274,000
March.....	17,000	2,540	6,560	14.4	16.80	403,000
April.....	21,500	2,560	6,540	14.0	15.82	377,000
May.....	2,750	1,320	1,770	3.90	4.50	109,000
June.....	10,800	1,210	3,030	6.87	7.44	180,000
July.....	2,640	810	1,280	2.82	3.25	79,700
August.....	810	455	571	1.26	1.45	35,100
September.....	5,610	455	1,500	3.50	3.68	89,300
The year.....	34,000	455	3,890	8.57	116.36	2,820,000
1931-32						
October.....	10,200	960	3,710	8.17	9.42	228,000
November.....	33,900	1,940	7,470	16.5	18.41	444,000
December.....	35,500	1,840	7,610	16.8	19.37	468,000
January.....	32,800	2,540	6,730	14.8	17.06	414,000
February.....	59,200	1,800	9,520	21.0	22.65	548,000
March.....	23,700	3,480	8,350	18.4	21.21	513,000
April.....	13,400	2,900	6,220	13.7	15.29	370,000
May.....	3,280	1,510	2,110	4.65	5.36	130,000
June.....	4,850	1,440	2,310	4.69	5.23	127,000
July.....	5,890	-	2,450	5.40	6.23	151,000
August.....	2,050	899	1,290	2.84	3.27	79,300
September.....	1,750	646	834	1.84	2.05	49,600
The year.....	59,200	646	4,850	10.7	145.55	3,520,000
1932-33						
October.....	13,500	548	2,310	5.09	5.87	142,000
November.....	25,100	3,400	9,400	20.7	23.09	559,000
December.....	35,000	1,840	8,270	18.2	20.98	508,000
January.....	30,100	2,820	8,410	18.5	21.33	517,000
February.....	24,600	1,360	4,970	10.9	11.55	276,000
March.....	14,300	3,400	6,710	14.8	17.06	413,000
April.....	6,350	1,910	2,960	6.52	7.27	176,000
May.....	5,910	2,740	3,660	8.06	9.29	225,000
June.....	4,680	2,120	2,910	6.41	7.15	173,000
July.....	3,060	-	2,090	4.60	5.30	129,000
August.....	1,520	917	1,230	2.71	3.12	75,600
September.....	12,000	674	3,570	7.86	8.77	212,000
The year.....	35,000	548	4,710	10.4	140.58	3,410,000
1933-34						
October.....	10,000	1,260	*3,874	8.53	9.83	238,200
November.....	29,000	1,510	5,229	11.5	12.83	311,100
December.....	35,300	2,120	15,750	34.7	40.01	968,300
January.....	28,900	5,420	11,920	26.3	30.32	732,900
February.....	9,890	1,500	4,411	9.72	10.12	245,000
March.....	22,400	1,270	5,572	12.3	14.18	342,600
April.....	9,130	1,600	2,833	6.24	6.96	168,600
May.....	9,680	1,540	2,921	6.43	7.41	179,600
June.....	1,580	743	1,042	2.30	2.57	62,020
July.....	13,900	608	1,612	3.55	4.09	99,150
August.....	4,700	615	1,230	2.71	3.12	75,610
September.....	2,710	530	849	1.87	2.09	50,530
The year.....	35,300	530	4,798	10.6	143.53	3,474,000
1934-35						
October.....	16,700	466	4,255	9.37	10.80	261,600
November.....	43,800	4,480	10,460	23.0	25.66	622,700
December.....	20,900	2,620	7,726	17.0	19.60	475,100
January.....	-	-	†23,600	51.8	59.72	1,445,000
February.....	-	-	†8,700	19.2	19.99	483,200
March.....	-	-	†6,300	11.7	13.49	325,900
April.....	-	-	†2,600	5.73	6.39	154,700
May.....	-	-	†3,200	7.05	8.13	196,800
June.....	-	-	†3,400	7.49	8.36	202,500
July.....	-	-	†2,100	4.63	5.34	129,100
August.....	-	614	†816	1.80	2.08	50,190
September.....	18,600	480	2,344	5.16	5.76	139,500
The year.....	-	466	6,196	13.6	185.32	4,486,000

*Estimated. †Estimated on basis of records for Quinalt River.

Yearly discharge of Queets River near Clearwater

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1931.....	3,890	8.57	116.36	2,820,000	4,540	10.0	135.99	3,290,000
1932.....	4,850	10.7	146.55	3,520,000	4,950	10.9	148.29	3,590,000
1933.....	4,710	10.4	140.58	3,410,000	5,130	11.3	153.31	3,710,000
1934.....	4,798	10.6	143.53	3,474,000	4,579	10.1	136.92	3,315,000
1935.....	4,579	10.1	136.92	3,315,000	-	-	-	-

Clearwater River near Clearwater, Wash.

Location.- Staff gage, lat. 47°36', long. 124°18', in NW¼ sec. 18, T. 24 N., R. 12 W., 1½ miles north of Clearwater and 3 miles above mouth.

Drainage area.- 142 square miles.

Records available.- October 1931 to September 1932.

Extremes.- Maximum discharge observed, about 21,000 second-feet at 2 p.m. Feb. 26, 1932; minimum, 130 second-feet Sept. 17, 1932.

Remarks.- No diversion or regulation.

Monthly discharge of Clearwater River near Clearwater

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	3,200	271	1,200	8.45	9.74	73,800
November.....	7,080	745	2,220	15.6	17.40	132,000
December.....	12,100	655	2,310	16.3	18.79	142,000
January.....	9,730	735	2,060	14.5	16.72	127,000
February.....	20,400	520	2,890	20.4	22.00	166,000
March.....	5,270	960	2,240	15.8	18.22	138,000
April.....	3,560	610	1,700	12.0	13.39	101,000
May.....	580	230	357	2.51	2.89	22,000
June.....	735	150	227	1.60	1.78	13,500
July.....	1,530	150	500	3.52	4.06	30,700
August.....	550	194	300	2.11	2.43	18,400
September.....	1,080	130	228	1.61	1.80	13,600
The year.....	20,400	130	1,350	9.51	129.22	978,000

HOH RIVER BASIN

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 1935.

Extremes.- Maximum discharge, about 40,000 second-feet Nov. 5, 1934 (stage determined from high-water mark in gage structure); minimum, 247 second-feet Nov. 14, 15, 1929.

Remarks.- No diversion or regulation. Stream subject to large diurnal fluctuation caused by melting of glaciers.

Monthly discharge of Hoh River near Spruce

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926						
August.....	1,880	866	1,110	5.75	6.63	68,200
September.....	1,570	382	713	3.69	4.12	42,400
The period	-	-	-	-	-	111,000

Monthly discharge of Hoh River near Spruce--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acres-feet
1926-27						
October.....	11,000	825	2,670	13.8	15.91	164,000
November.....	5,950	1,010	2,490	12.9	14.39	148,000
December.....	9,980	1,700	3,180	16.5	19.02	196,000
January.....	8,700	1,390	2,870	14.9	17.18	176,000
February.....	5,200	985	2,460	12.7	13.22	137,000
March.....	2,970	1,300	1,790	9.27	10.69	110,000
April.....	-	892	1,260	6.53	7.29	75,000
May.....	3,950	1,480	2,320	12.0	13.83	143,000
June.....	3,690	1,740	2,400	12.4	13.83	143,000
July.....	2,210	1,420	1,740	9.02	10.40	107,000
August.....	2,430	825	1,540	6.94	8.00	82,400
September.....	5,580	802	1,720	8.91	9.94	102,000
The year.....	11,000	802	2,190	11.3	153.70	1,580,000
1927-28						
October.....	8,320	1,010	2,960	15.3	17.64	182,000
November.....	8,780	1,600	3,800	19.7	21.98	226,000
December.....	5,950	1,060	2,180	11.3	13.03	134,000
January.....	12,800	1,160	4,080	21.1	24.53	251,000
February.....	2,190	735	1,270	6.58	7.10	73,000
March.....	8,080	626	2,560	13.3	15.33	157,000
April.....	3,110	1,300	1,980	9.74	10.87	112,000
May.....	3,440	1,740	2,170	11.2	12.91	133,000
June.....	1,890	1,180	1,540	7.98	8.90	91,600
July.....	1,970	1,040	1,400	7.25	8.36	86,100
August.....	1,300	780	930	4.82	5.56	57,200
September.....	2,380	514	790	4.09	4.56	47,000
The year.....	12,800	514	2,140	11.1	150.57	1,550,000
1928-29						
October.....	7,310	813	1,900	9.84	11.34	117,000
November.....	6,500	772	2,050	10.6	11.83	122,000
December.....	4,140	676	1,590	8.24	9.50	97,800
January.....	2,960	598	1,060	5.49	6.33	65,200
February.....	1,060	476	612	3.17	3.30	34,000
March.....	5,590	759	1,630	7.46	8.50	88,500
April.....	3,140	1,000	1,630	8.45	9.43	97,000
May.....	1,340	1,340	1,950	10.1	11.64	120,000
June.....	4,960	1,270	2,360	12.2	13.61	140,000
July.....	2,160	1,200	1,580	8.19	9.44	97,200
August.....	1,480	954	1,160	6.01	6.93	71,300
September.....	1,110	434	772	4.00	4.46	45,900
The year.....	7,310	434	1,510	7.82	106.41	1,100,000
1929-30						
October.....	1,800	446	910	4.72	5.44	56,000
November.....	1,480	250	503	2.61	2.91	29,900
December.....	6,830	389	2,010	10.4	11.99	124,000
January.....	2,580	553	1,110	5.75	6.63	68,200
February.....	8,960	1,740	4,050	21.0	21.87	225,000
March.....	4,020	819	1,760	9.12	10.51	108,000
April.....	6,680	1,400	2,330	12.1	13.50	139,000
May.....	2,020	938	1,250	6.48	7.47	76,900
June.....	2,740	1,170	1,490	7.72	8.61	88,700
July.....	1,640	912	1,180	6.11	7.04	72,600
August.....	1,260	776	999	5.18	5.97	61,400
September.....	4,140	492	1,030	5.34	5.96	61,300
The year.....	8,960	250	1,530	7.93	107.90	1,110,000
1930-31						
October.....	5,000	505	1,540	7.98	9.20	94,700
November.....	3,160	912	1,490	7.72	8.61	88,700
December.....	3,520	850	1,450	7.51	8.66	89,200
January.....	13,000	999	3,600	18.7	21.56	221,000
February.....	8,450	803	1,930	10.0	10.41	107,000
March.....	6,100	1,170	2,360	12.2	14.07	145,000
April.....	6,700	1,290	2,410	12.5	13.95	143,000
May.....	2,350	1,230	1,710	8.86	10.22	105,000
June.....	6,620	1,410	2,440	12.6	14.06	145,000
July.....	2,020	1,050	1,500	7.77	8.96	92,200
August.....	1,350	736	926	4.80	5.53	56,900
September.....	3,760	632	1,080	5.60	6.25	64,300
The year.....	13,000	505	1,870	9.69	131.48	1,350,000

Monthly discharge of Hoh River near Spruce--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	3,060	592	1,370	7.10	8.19	84,200
November.....	9,850	1,110	2,990	15.5	17.29	178,000
December.....	9,280	875	2,470	12.8	14.76	152,000
January.....	9,110	1,020	2,230	11.6	13.37	137,000
February.....	19,900	740	2,960	15.3	16.50	170,000
March.....	5,890	1,810	2,880	14.9	17.18	177,000
April.....	3,600	1,560	2,370	12.3	13.72	141,000
May.....	2,440	1,140	1,610	8.34	9.62	99,000
June.....	4,800	1,220	2,150	11.1	12.58	128,000
July.....	2,790	1,250	1,840	9.53	10.99	113,000
August.....	1,640	950	1,250	6.48	7.47	76,900
September.....	1,140	685	859	4.45	4.96	51,100
The year.....	19,900	592	2,080	10.8	146.43	1,510,000
1932-33						
October.....	3,700	560	1,250	6.48	7.47	76,900
November.....	10,300	1,760	4,170	21.6	24.10	248,000
December.....	12,000	1,250	3,290	17.0	19.60	202,000
January.....	9,320	1,020	2,840	14.7	16.95	175,000
February.....	5,560	686	1,510	6.79	7.07	72,800
March.....	4,010	1,330	2,100	10.9	12.57	129,000
April.....	2,260	1,040	1,450	7.67	8.56	88,100
May.....	3,190	1,300	1,790	9.27	10.69	110,000
June.....	3,400	1,780	2,390	12.4	13.83	142,000
July.....	2,990	1,720	2,320	12.0	13.83	143,000
August.....	1,960	1,100	1,600	8.29	9.56	95,400
September.....	5,170	846	2,040	10.6	11.83	121,000
The year.....	12,000	560	2,220	11.5	156.06	1,610,000
1933-34						
October.....	7,340	970	2,887	15.0	17.29	177,500
November.....	11,100	992	2,518	12.0	13.39	137,900
December.....	12,500	1,080	*5,437	28.2	32.51	334,300
January.....	10,500	2,710	4,305	24.9	28.71	295,500
February.....	3,650	948	1,970	10.2	10.62	109,400
March.....	6,810	886	2,406	12.5	14.41	148,000
April.....	3,420	1,250	1,730	8.96	10.00	102,900
May.....	4,850	1,150	1,801	9.33	10.76	110,800
June.....	1,680	1,080	1,218	6.31	7.04	72,480
July.....	5,780	992	1,594	7.22	8.52	85,690
August.....	2,200	927	1,205	6.24	7.19	74,120
September.....	1,510	516	867	4.49	5.01	51,580
The year.....	12,500	516	2,348	12.2	165.25	1,700,000
1934-35						
October.....	7,280	530	2,120	11.0	12.68	130,300
November.....	25,000	2,000	*4,502	24.9	27.78	285,700
December.....	8,150	1,390	2,920	15.1	17.41	179,500
January.....	22,500	1,100	6,443	33.4	38.51	396,200
February.....	6,710	1,670	2,938	15.2	15.83	163,200
March.....	6,440	1,160	1,959	10.2	11.76	120,500
April.....	1,730	900	1,237	6.41	7.15	73,630
May.....	1,700	1,100	1,358	7.04	8.12	83,500
June.....	2,510	1,160	1,769	9.17	10.23	105,200
July.....	2,330	1,130	1,550	8.03	9.28	95,330
August.....	1,380	783	997	5.17	5.96	61,320
September.....	5,000	713	1,595	7.23	8.07	82,980
The year.....	25,000	530	2,455	12.7	172.76	1,777,000

*Estimated.

Yearly discharge of Hoh River near Spruce

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-foot		Run-off		Discharge in second-foot		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1927.....	2,190	11.3	153.70	1,580,000	2,230	11.6	157.03	1,620,000
1928.....	2,140	11.1	150.57	1,550,000	1,850	9.59	130.59	1,340,000
1929.....	1,510	7.82	106.41	1,100,000	1,340	6.94	94.08	969,000
1930.....	1,530	7.93	107.90	1,110,000	1,620	8.39	114.03	1,170,000
1931.....	1,870	9.69	131.48	1,350,000	2,060	10.7	145.25	1,490,000
1932.....	2,080	10.8	146.43	1,510,000	2,230	11.6	157.36	1,620,000
1933.....	2,220	11.5	156.06	1,610,000	2,390	12.4	168.08	1,730,000
1934.....	2,348	12.2	165.25	1,700,000	2,274	11.8	159.93	1,646,000
1935.....	2,455	12.7	172.76	1,777,000	-	-	-	-

QUILLAYUTE RIVER BASIN

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 1935.

Extremes.- Maximum discharge recorded, 24,300 second-feet at 3 p.m. Dec. 21, 1933; minimum, 58 second-feet Sept. 29, Oct. 2, 3, 1918.

Remarks.- No diversion or regulation.

Monthly discharge of Soleduck River near Fairholm

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	153	75	89.9	1.14	1.31	5,530
November.....	6,960	141	822	10.4	11.60	48,900
December.....	4,100	-	929	11.8	13.60	57,100
January.....	4,040	293	1,000	12.7	14.64	61,500
February.....	921	190	449	5.68	6.13	25,800
March.....	2,400	175	461	5.84	6.73	28,500
April.....	428	252	312	3.95	4.41	18,600
May.....	854	259	363	4.59	5.29	22,300
June.....	848	326	512	6.48	7.23	30,500
July.....	390	125	217	2.75	3.17	13,500
August.....	310	84	112	1.42	1.64	6,890
September.....	2,010	84	617	7.81	8.71	36,700
The year.....	6,960	75	490	6.20	84.46	355,000
1920-21						
October.....	4,830	436	1,130	14.3	16.49	69,500
November.....	1,860	230	729	9.23	10.30	43,400
December.....	3,220	468	969	12.3	14.18	59,600
January.....	4,530	527	1,140	14.4	16.60	70,100
February.....	8,700	472	1,320	16.7	17.39	73,300
March.....	1,260	392	655	8.29	9.56	40,500
April.....	772	309	495	6.27	7.00	29,500
May.....	1,070	436	738	9.34	10.77	45,400
June.....	1,260	645	892	11.3	12.61	53,100
July.....	742	350	480	6.08	7.01	29,500
August.....	-	159	*244	3.09	3.55	15,000
September.....	3,630	142	528	6.68	7.45	31,400
The year.....	8,700	142	774	9.80	132.92	560,000
1933-34						
October.....	2,430	208	732	9.27	10.69	45,020
November.....	3,200	296	702	8.89	9.92	41,770
December.....	12,800	336	2,587	32.7	37.70	169,000
January.....	4,700	915	1,747	22.1	25.48	107,400
February.....	1,190	308	652	8.25	8.59	36,180
March.....	3,170	276	882	11.2	12.91	54,250
April.....	1,050	338	520	6.58	7.34	30,920
May.....	1,700	315	570	7.22	8.32	35,020
June.....	381	168	254	3.22	3.59	15,090
July.....	714	112	171	2.16	2.49	10,490
August.....	203	78	108	1.37	1.58	6,870
September.....	342	75	107	1.35	1.51	6,590
The year.....	12,800	75	757	9.58	130.12	548,200

*Estimated.

Monthly discharge of Soleduck River near Fairholm--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
October.....	2,520	72	463	5.86	6.76	28,450
November.....	12,500	625	1,555	19.7	21.98	92,550
December.....	3,930	501	1,019	12.9	14.37	62,660
January.....	14,200	375	2,868	36.3	41.85	176,400
February.....	2,780	600	1,129	14.3	14.89	62,690
March.....	2,460	338	637	8.06	9.29	39,160
April.....	605	256	414	5.24	5.85	24,820
May.....	726	412	516	6.53	7.53	31,700
June.....	878	372	561	7.10	7.92	33,580
July.....	515	218	349	4.41	5.08	21,420
August.....	212	104	145	1.84	2.12	8,910
September.....	1,310	71	231	2.67	2.98	12,550
The year.....	14,200	71	821	10.4	141.12	594,500

Yearly discharge of Soleduck River near Fairholm

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1918.....	703	8.90	120.89	509,000	695	8.80	119.49	503,000
1919.....	764	9.67	131.41	553,000	657	8.32	113.09	476,000
1920.....	490	6.20	84.46	355,000	574	7.27	98.92	416,000
1921.....	774	9.80	132.92	560,000	-	-	-	-
1934.....	757	9.58	130.12	548,200	671	8.49	115.42	486,100
1935.....	821	10.4	141.12	594,500	-	-	-	-

Soleduck River at Snider ranger station, near Beaver, Wash.

Location.- Staff gage, lat. 48°04'00", long. 124°07'00", in sec. 28, T. 30 N., R. 11 W., at Snider ranger station, 9 miles below South Fork and 11 miles above Beaver.

Drainage area.- 111 square miles.

Records available.- November 1921 to October 1928.

Extremes.- Maximum discharge observed, 23,500 second-feet at noon Dec. 12, 1921; minimum, 28 second-feet Sept. 14, 1926.

Remarks.- No diversion or regulation.

Monthly discharge of Soleduck River at Snider ranger station, near Beaver

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
November 13-30, 1921.....	5,870	340	1,730	15.6	10.44	61,800
December 1-16.....	18,200	780	3,330	30.0	17.85	106,000
February 5-28, 1922.....	840	198	385	3.47	3.10	18,300
March.....	253	186	210	1.89	2.18	12,900
April.....	570	238	376	3.39	3.78	22,400
May.....	2,180	520	1,080	9.73	11.22	66,400
June.....	1,860	520	876	7.89	8.80	52,100
July.....	545	153	292	2.63	3.03	18,000
August.....	162	83	120	1.08	1.24	7,380
September.....	425	72	158	1.24	1.38	8,210
October 1-7, 1922.....	253	126	166	1.50	.39	2,300
December 19-31.....	9,840	900	3,430	30.9	14.94	88,400
January 1923.....	7,230	360	2,140	19.3	22.25	132,000
February.....	1,960	-	547	4.93	5.13	30,400
March.....	840	285	444	4.00	4.61	27,300
April.....	780	448	554	4.99	5.57	33,000
May.....	960	402	602	5.42	6.25	37,000
June.....	840	380	523	4.71	5.26	31,100
July.....	545	162	319	2.87	3.31	19,600
August.....	157	75	114	1.03	1.19	7,010
September.....	238	54	85	.766	.85	5,060

Monthly discharge of Soleduck River at Snider ranger station, near Beaver--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1923.....	1,100	60	196	1.77	2.04	12,100
November.....	3,470	117	513	4.62	5.16	30,500
December.....	12,800	425	1,850	16.7	19.25	114,000
Calendar year 1923.....	12,800	54	662	5.96	80.87	479,000
January 1924.....	15,300	-	1,310	11.8	13.60	80,600
February.....	11,600	780	2,110	19.0	20.49	121,000
March.....	1,100	205	420	3.78	4.36	25,800
April.....	1,410	220	343	3.09	3.45	20,400
May.....	470	235	340	3.06	3.53	20,900
June.....	-	146	211	1.90	2.12	12,600
July.....	151	72	107	.964	1.11	6,580
August.....	114	43	60.1	.541	.62	3,700
September.....	2,620	34	300	2.70	3.01	17,900
Water year 1923-24.....	15,300	34	643	5.79	78.74	466,000
October 1924.....	2,620	333	1,080	9.73	11.22	66,400
November.....	4,480	633	1,370	12.3	13.72	81,500
December.....	4,170	439	1,390	12.5	14.41	85,500
Calendar year 1924.....	15,300	34	748	6.74	91.64	543,000
January 1925.....	4,170	462	1,280	11.5	13.26	78,700
February.....	6,440	608	2,150	19.4	20.20	119,000
March.....	1,580	333	580	5.23	6.03	35,700
April.....	1,110	294	544	4.90	5.47	32,400
May.....	1,410	485	669	6.03	6.95	41,100
June.....	583	417	496	4.47	4.99	29,500
July.....	395	144	266	2.40	2.77	16,400
August.....	140	77	108	.973	1.12	6,640
September.....	77	44	55.9	.504	.56	3,330
Water year 1924-25.....	6,440	44	824	7.42	100.70	596,000
October 1-20, 1925.....	48	38	41.6	.375	.28	1,650
May 1926.....	633	313	418	3.77	4.35	25,700
June.....	353	121	204	1.84	2.05	12,100
July.....	117	59	83.4	.751	.87	5,130
August.....	67	40	50.8	.458	.53	3,120
September.....	353	28	64.4	.580	.65	3,830
October 1-14, 1926.....	1,410	96	492	4.43	2.31	13,700
April 1927.....	1,250	333	524	4.72	5.27	31,200
May.....	1,410	509	850	7.66	8.83	52,300
June.....	1,330	509	745	6.71	7.49	44,300
July.....	485	209	355	3.20	3.69	21,800
August.....	353	94	136	1.23	1.42	8,360
September.....	1,330	130	313	2.62	3.15	18,600
October 1927.....	2,850	276	735	6.62	7.63	45,200
November.....	3,600	417	1,380	12.4	13.83	82,100
December.....	2,100	353	698	6.29	7.25	42,900
January 1928.....	5,500	445	1,690	15.2	17.52	104,000
February.....	740	260	454	4.09	4.41	26,100
March.....	3,880	223	979	8.82	10.17	60,200
April.....	1,960	489	756	6.81	7.60	45,000
May.....	1,250	583	743	6.69	7.71	45,700
June.....	633	293	411	3.70	4.13	24,500
July.....	276	115	188	1.69	1.95	11,600
August.....	113	55	79.5	.716	.83	4,890
September.....	200	45	60.5	.545	.61	3,600
Water year 1927-28.....	5,500	45	683	6.15	83.64	496,000

LYRE RIVER BASIN

Lyre River at Piedmont, Wash.

Location.-- Water-stage recorder, lat. 48°05'50", long. 123°48'30", in NE¼ sec. 15, T. 30 N., R. 9 W., a quarter of a mile below Crescent Lake and half a mile west of Piedmont. Oct. 17, 1922, to Sept. 30, 1923, and subsequent to Dec. 16, 1925, Crescent Lake gage readings were used.

Drainage area.-- 49.5 square miles.

Records available.-- October 1917 to September 1927.

Extremes.-- Maximum discharge observed, 1,180 second-feet Jan. 10, 11, 1923; minimum, 18 second-feet Sept. 19, 1924.

Remarks.-- No diversion. Flow is very uniform because of natural storage in Crescent Lake.

Monthly discharge of Lyre River at Piedmont

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	51	28	37.4	0.756	0.87	2,300
November.....	172	36	102	2.06	2.30	6,070
December.....	292	83	163	3.29	3.79	10,000
January.....	320	207	258	5.21	6.01	15,900
February.....	320	189	261	5.27	5.68	15,000
March.....	220	166	192	3.88	4.47	11,800
April.....	166	130	157	3.17	3.54	9,340
May.....	143	110	126	2.55	2.94	7,750
June.....	155	76	135	2.73	3.05	8,030
July.....	121	21	64.1	1.29	1.49	3,940
August.....	68	37	53.8	1.09	1.26	3,310
September.....	126	57	96.0	1.94	2.16	5,710
The year.....	320	21	137	2.77	37.56	99,200
1920-21						
October.....	258	128	232	4.69	5.41	14,300
November.....	292	172	204	4.12	4.60	12,100
December.....	364	278	311	6.28	7.24	19,100
January.....	580	379	485	8.80	11.30	29,800
February.....	696	364	509	10.3	10.73	28,300
March.....	511	268	377	7.62	8.78	23,200
April.....	268	209	228	4.61	5.14	13,600
May.....	254	197	227	4.59	5.29	14,000
June.....	282	242	262	5.29	5.90	15,600
July.....	248	127	181	3.66	4.22	11,100
August.....	125	76	94.2	1.90	2.19	5,790
September.....	117	49	76.7	1.55	1.73	4,560
The year.....	696	49	264	5.33	72.53	191,000
1921-22						
October.....	511	102	201	4.06	4.68	12,400
November.....	593	289	408	8.24	9.19	24,300
December.....	974	479	675	13.6	15.88	41,500
January.....	463	248	328	6.63	7.64	20,200
February.....	289	199	238	4.81	5.01	13,200
March.....	223	175	198	4.00	4.61	12,200
April.....	187	153	169	3.41	3.80	10,100
May.....	289	158	230	4.65	5.36	14,100
June.....	317	217	272	5.49	6.12	16,200
July.....	217	33	137	2.77	3.19	8,420
August.....	211	56	139	2.81	3.24	8,550
September.....	110	51	83.1	1.68	1.87	4,940
The year.....	974	33	257	5.19	70.39	186,000
1922-23						
October.....	113	44	70.9	1.43	1.65	4,360
November.....	105	74	88.3	1.78	1.99	5,250
December.....	874	70	230	4.65	5.36	14,100
January.....	1,180	464	850	17.2	19.83	52,300
February.....	426	257	342	6.91	7.20	19,000
March.....	320	198	272	5.49	6.33	16,700
April.....	227	198	208	4.20	4.69	12,400
May.....	227	198	209	4.22	4.86	12,900
June.....	212	157	184	3.72	4.15	10,900
July.....	162	79	126	2.55	2.94	7,750
August.....	79	57	64.5	1.30	1.50	3,970
September.....	60	39	50.9	1.03	1.15	3,030
The year.....	1,180	39	225	4.55	61.65	163,000
1923-24						
October.....	84	49	63.8	1.29	1.49	3,920
November.....	131	58	77.0	1.56	1.74	4,580
December.....	485	110	330	6.67	7.69	20,300
January.....	455	198	243	4.91	5.66	14,900
February.....	860	470	634	12.8	13.80	36,500
March.....	455	178	286	5.78	6.66	17,600
April.....	184	142	163	3.29	3.67	9,700
May.....	142	106	127	2.57	2.96	7,810
June.....	106	72	92.1	1.86	2.08	5,480
July.....	70	44	55.7	1.13	1.30	3,420
August.....	41	28	35.2	0.711	0.82	2,160
September.....	146	20	53.8	1.09	1.22	3,200
The year.....	860	20	179	3.62	49.09	130,000

Monthly discharge of Lyre River at Piedmont--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	430	114	177	3.58	4.13	10,900
November.....	530	336	456	8.81	9.83	25,900
December.....	419	258	323	6.53	7.53	19,900
January.....	520	258	364	7.35	8.47	22,400
February.....	804	439	608	12.3	12.81	33,800
March.....	429	226	316	6.38	7.36	19,400
April.....	242	182	208	4.20	4.69	12,400
May.....	226	188	203	4.10	4.73	12,500
June.....	210	130	167	3.37	3.76	9,940
July.....	124	61	89.5	1.81	2.09	5,500
August.....	60	41	47.6	.962	1.11	2,930
September.....	42	30	35.9	.725	.81	2,140
The year.....	804	30	245	4.95	67.32	178,000
1925-26						
October.....	36	26	28.6	.578	.67	1,760
November.....	73	32	56.4	1.14	1.27	3,360
December.....	293	89	202	4.08	4.70	12,400
January.....	359	203	291	5.88	6.78	17,900
February.....	376	232	321	6.48	6.75	17,800
March.....	309	176	216	4.36	5.03	13,300
April.....	176	127	154	3.11	3.47	9,160
May.....	171	118	141	2.85	3.29	8,670
June.....	118	72	86.5	1.75	1.95	5,150
July.....	72	40	55.4	1.12	1.29	3,410
August.....	44	36	38.5	.778	.90	2,370
September.....	40	26	33.1	.669	.75	1,970
The year.....	376	26	134	2.71	36.85	97,200
1926-27						
October.....	171	39	113	2.28	2.63	6,950
November.....	208	148	161	3.25	3.63	9,580
December.....	363	208	267	5.39	6.21	16,400
January.....	560	295	405	8.18	9.43	24,900
February.....	420	264	352	7.11	7.40	19,500
March.....	400	280	324	6.55	7.55	19,900
April.....	280	183	238	4.81	5.37	14,200
May.....	295	235	268	5.41	6.24	16,500
June.....	264	235	252	5.09	5.68	15,000
July.....	96	96	158	3.19	3.68	9,720
August.....	96	59	72.9	1.47	1.70	4,480
September.....	70	59	60.7	1.23	1.37	3,610
The year.....	560	39	222	4.48	60.89	161,000

Yearly discharge of Lyre River at Piedmont

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1918	235	4.75	64.59	170,000	265	5.35	72.83	192,000
1919	277	5.60	75.96	200,000	228	4.61	62.50	165,000
1920	137	2.77	37.54	99,200	174	3.52	47.85	126,000
1921	264	5.33	72.53	191,000	310	6.26	84.83	224,000
1922	257	5.19	70.39	186,000	192	3.68	49.84	132,000
1923	225	4.55	61.65	163,000	232	4.69	63.57	168,000
1924	179	3.62	49.09	130,000	217	4.38	59.66	157,000
1925	245	4.95	67.32	178,000	191	3.86	52.47	139,000
1926	134	2.71	36.85	97,200	156	3.15	42.68	113,000
1927	222	4.48	60.89	161,000	-	-	-	-
Highest.....	277	5.60	75.96	200,000	310	6.26	84.83	224,000
Average.....	218	4.40	59.68	158,000	217	4.39	59.58	157,000
Lowest.....	134	2.71	36.85	97,200	156	3.15	42.68	113,000

ELWHA RIVER BASIN

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

Location.- Water-stage recorder, lat. 48°03'20", long. 123°34'55", in NE 1/4 sec. 33, T. 30 N., R. 7 W., at McDonald Bridge, 8 miles southwest of Port Angeles. Wire gage prior to Jan. 1, 1902.

Drainage area.- 262 square miles.

Records available.- October 1897 to December 1901, October 1918 to September 1935.

Extremes.- Maximum discharge recorded, 26,700 second-feet 5:15 to 8 p.m. Dec. 21, 1933 (stage determined from floodmarks); minimum daily discharge, 11 second-feet Sept. 18, 26, 1932; result of regulation.

Remarks.- Flow regulated for power since Apr. 1, 1927, by operation of Glines Canyon Reservoir (capacity, 38,650 acre-feet at elevation 610 feet). Diversion for power returned to river above gage.

Monthly discharge of Elwha River at McDonald Bridge, near Port Angeles

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	558	321	381	1.45	1.67	23,400
November.....	6,500	319	*1,140	4.35	4.85	67,800
December.....	4,200	250	1,440	5.50	6.34	88,500
January.....	5,660	621	1,690	6.45	7.44	104,000
February.....	2,340	672	1,230	4.69	5.06	70,800
March.....	2,540	632	864	3.30	3.80	53,100
April.....	922	635	689	2.63	2.93	41,000
May.....	1,210	751	962	3.67	4.23	59,200
June.....	2,230	809	1,540	5.88	6.56	91,600
July.....	1,880	777	1,220	4.66	5.37	75,000
August.....	939	591	720	2.75	3.17	44,300
September.....	2,920	548	1,330	5.08	5.67	79,100
The year.....	6,500	250	1,100	4.20	57.09	798,000
1920-21						
October.....	6,550	1,450	2,770	10.6	12.22	170,000
November.....	4,000	843	1,880	7.18	8.01	112,000
December.....	3,590	1,080	1,860	7.10	8.19	114,000
January.....	4,300	1,300	2,160	8.24	9.50	133,000
February.....	7,580	1,020	2,320	8.85	9.22	129,000
March.....	2,550	992	1,490	5.69	6.56	91,600
April.....	1,500	829	1,120	4.27	4.76	66,600
May.....	-	952	2,010	7.67	8.84	124,000
June.....	5,480	2,690	3,670	14.0	15.62	218,000
July.....	3,290	1,760	2,290	8.74	10.08	141,000
August.....	1,790	829	1,300	4.96	5.72	79,900
September.....	3,450	646	1,110	4.24	4.73	66,000
The year.....	7,580	646	2,000	7.63	103.45	1,450,000
1921-22						
October.....	10,500	802	2,710	10.3	11.87	167,000
November.....	6,680	1,040	2,600	9.92	11.07	155,000
December.....	13,300	1,210	3,550	13.5	15.56	218,000
January.....	1,340	744	919	3.51	4.05	56,500
February.....	1,080	702	765	2.92	3.04	42,500
March.....	708	458	559	2.13	2.46	34,400
April.....	968	499	691	2.64	2.94	41,100
May.....	4,180	952	2,000	7.63	8.80	123,000
June.....	4,770	2,100	2,990	11.4	12.72	178,000
July.....	2,280	952	1,400	5.34	6.16	86,100
August.....	984	600	726	2.77	3.19	44,600
September.....	864	486	594	2.27	2.53	35,300
The year.....	13,300	458	1,630	6.22	84.39	1,180,000
1922-23						
October.....	3,280	401	695	2.65	3.06	42,700
November.....	1,010	478	596	2.27	2.53	35,500
December.....	7,330	374	1,670	6.37	7.34	103,000
January.....	6,200	900	2,820	10.8	12.45	173,000
February.....	2,340	652	1,100	4.20	4.37	61,100
March.....	1,500	690	884	3.37	3.88	54,400
April.....	1,660	1,000	1,210	4.62	5.16	72,000
May.....	3,140	1,040	2,070	7.90	9.11	127,000
June.....	3,520	1,660	2,280	8.70	9.71	136,000
July.....	2,760	970	1,610	6.15	7.09	99,000
August.....	898	622	752	2.87	3.31	46,200
September.....	933	390	505	1.93	2.15	30,000
The year.....	7,330	374	1,350	5.15	70.16	980,000

*Estimated.

Monthly discharge of Elwha River at McDonald Bridge, near Port Angeles--Continued

Month		Discharge in second-feet				Run-off	
		Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24							
October.....	1,120	344	494	1.89	2.18	30,400	
November.....	2,460	376	673	2.57	2.87	40,000	
December.....	6,710	680	2,310	8.82	10.17	142,000	
January.....	12,000	786	1,660	6.34	7.31	102,000	
February.....	10,200	1,640	3,830	14.6	15.75	220,000	
March.....	1,960	654	992	3.79	4.37	61,000	
April.....	1,300	568	751	2.87	3.20	44,700	
May.....	2,810	752	1,770	6.76	7.78	109,000	
June.....	2,870	986	1,360	5.19	5.79	80,900	
July.....	1,370	627	840	3.21	3.70	61,600	
August.....	668	380	562	2.15	2.48	34,600	
September.....	3,680	310	739	2.82	3.15	44,000	
The year.....	12,000	310	1,320	5.04	68.76	960,000	
1924-25							
October.....	5,520	696	2,070	7.90	9.11	127,000	
November.....	6,810	1,420	2,610	9.96	11.11	155,000	
December.....	4,480	1,080	2,020	7.71	8.89	124,000	
January.....	3,120	763	1,470	5.61	6.47	90,400	
February.....	6,070	1,090	2,350	8.97	9.34	131,000	
March.....	1,670	731	1,000	3.82	4.40	61,500	
April.....	3,350	715	1,570	5.99	6.68	93,400	
May.....	4,220	1,410	2,600	9.92	11.44	160,000	
June.....	2,980	1,670	2,180	8.32	9.28	130,000	
July.....	2,100	1,020	1,550	5.92	6.82	95,300	
August.....	1,040	510	751	2.87	3.31	46,200	
September.....	579	350	454	1.73	1.93	27,000	
The year.....	6,810	350	1,710	6.53	88.78	1,240,000	
1925-26							
October.....	517	265	313	1.19	1.37	19,200	
November.....	715	254	409	1.56	1.74	24,300	
December.....	4,700	715	1,860	7.10	8.19	114,000	
January.....	4,160	917	1,440	5.50	6.34	88,500	
February.....	3,200	926	1,680	6.41	6.68	93,300	
March.....	1,500	850	1,060	4.05	4.67	65,200	
April.....	1,660	834	1,170	4.47	4.99	69,600	
May.....	1,660	890	1,140	4.35	5.02	70,100	
June.....	1,300	746	922	3.52	3.93	54,900	
July.....	826	430	595	2.27	2.62	36,600	
August.....	632	360	444	1.69	1.95	27,300	
September.....	552	258	330	1.26	1.41	19,600	
The year.....	4,700	254	943	3.60	48.91	683,000	

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	
1926-27									
October..	4,620	355	1,160	71,300	0	71,300	1,160	4.43	5.11
November..	3,350	559	1,340	79,700	0	79,700	1,340	5.11	5.70
December..	5,890	926	1,920	118,000	0	118,000	1,920	7.33	8.45
January..	4,990	989	1,810	111,000	0	111,000	1,810	6.91	7.97
February..	2,840	762	1,460	81,100	0	81,100	1,460	5.57	5.80
March....	1,720	890	1,140	70,100	0	70,100	1,140	4.35	5.02
April.....	1,320	203	727	43,300	+20,100	63,400	1,070	4.08	4.55
May.....	2,420	-	1,660	102,000	+15,200	117,000	1,900	7.25	8.36
June.....	-	-	2,970	177,000	+252	177,000	2,970	11.3	12.61
July.....	2,700	1,340	1,800	117,000	+1,090	118,000	1,920	7.33	8.45
August....	1,490	648	932	57,300	+168	57,500	935	3.57	4.12
September	-	566	828	49,300	-210	49,100	825	3.15	3.51
The year	5,890	203	1,490	1,080,000	36,600	1,110,000	1,540	5.88	79.65

Monthly discharge of Elwha River at McDonald Bridge, near Port Angeles--Continued

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	
1927-28									
October..	3,930	548	1,300	79,900	+1,220	81,100	1,320	5.04	5.81
November.	4,650	-	2,120	126,000	-294	126,000	2,120	8.09	9.03
December.	3,250	373	1,300	79,900	-1,260	78,600	1,280	4.89	5.64
January..	7,100	762	2,750	169,000	+2,160	171,000	2,780	10.6	12.22
February.	1,720	484	1,140	65,600	-1,650	64,000	1,110	4.24	4.57
March....	3,940	426	1,500	92,200	+1,780	94,000	1,530	5.84	6.73
April.....	1,890	938	1,360	80,900	-86	80,800	1,360	5.19	5.79
May.....	3,350	1,380	2,330	143,000	+86	143,000	2,330	8.89	10.25
June.....	2,060	1,250	1,670	99,400	-129	99,300	1,670	6.37	7.11
July.....	1,470	673	1,050	64,600	-2,580	62,000	1,010	3.85	4.44
August....	751	522	620	38,100	-4,190	33,900	551	2.10	2.42
September	660	38	434	25,800	-520	25,300	425	1.62	1.81
The year	7,100	38	1,470	1,060,000	-5,460	1,060,000	1,460	5.57	75.82
1928-29									
October..	4,010	36	830	51,000	+3,790	54,800	891	3.40	3.92
November.	3,320	478	1,080	64,300	+2,220	66,500	1,120	4.27	4.76
December.	2,270	272	1,000	61,500	+462	62,000	1,010	3.85	4.44
January..	1,340	-	813	50,000	-5,220	44,800	729	2.78	3.20
February.	-	-	476	26,400	-5,290	23,100	416	1.59	1.66
March....	1,260	204	511	31,400	+8,380	39,800	647	2.47	2.85
April.....	1,340	653	900	53,600	-840	52,800	887	3.39	3.78
May.....	3,040	1,070	1,790	110,000	+1,430	111,000	1,810	6.91	7.97
June.....	2,660	1,550	2,140	127,000	+43	127,000	2,140	8.17	9.12
July.....	2,180	918	1,390	85,500	+258	85,800	1,400	5.34	6.16
August....	1,000	560	753	46,300	-2,700	43,600	709	2.71	3.12
September	566	33	424	25,200	-1,360	23,800	400	1.53	1.71
The year	4,010	33	1,010	732,000	+3,170	735,000	1,020	3.89	52.69
1929-30									
October..	644	286	485	29,800	-6,480	23,300	379	1.45	1.67
November.	488	155	328	19,500	-2,110	17,400	292	1.11	1.24
December.	2,690	31	642	39,500	+12,520	52,000	846	3.23	3.72
January..	1,000	341	609	37,400	-3,650	33,800	550	2.10	2.42
February.	4,980	582	2,200	122,000	+4,100	126,000	2,270	8.66	9.02
March....	2,490	643	1,190	73,200	+40	73,200	1,190	4.54	5.23
April.....	3,680	1,380	2,040	121,000	-6,300	115,000	1,930	7.37	8.22
May.....	1,720	771	1,240	76,200	+5,610	81,800	1,330	5.08	5.86
June.....	2,480	1,050	1,490	88,700	+90	88,800	1,490	5.69	6.35
July.....	1,660	378	996	61,200	-1,860	59,300	964	3.68	4.24
August....	804	30	550	33,800	-1,380	32,400	527	2.01	2.32
September	622	29	423	25,200	+1,710	26,900	452	1.73	1.93
The year	4,980	29	1,010	728,000	+2,300	730,000	1,010	3.85	52.22
1930-31									
October..	1,380	194	638	39,200	+1,830	41,000	667	2.55	2.94
November.	1,220	-	717	42,700	+250	43,000	723	2.76	3.08
December.	1,670	46	780	48,000	-860	47,100	766	2.92	3.37
January..	7,080	218	1,920	118,000	+480	118,000	1,920	7.33	8.45
February.	4,200	368	1,560	86,600	+300	86,900	1,560	5.95	6.20
March....	3,380	770	1,550	95,300	-50	95,200	1,550	5.92	6.82
April.....	3,470	544	1,460	86,900	+130	87,000	1,460	5.57	6.21
May.....	2,790	1,420	1,930	119,000	-90	119,000	1,940	7.40	8.53
June.....	3,920	1,300	1,950	116,000	-130	116,000	1,950	7.44	8.30
July.....	1,970	396	1,160	71,300	-2,330	69,000	1,120	4.27	4.92
August....	1,100	92	508	31,200	+1,940	33,100	538	2.05	2.36
September	896	87	532	31,700	-1,020	30,700	516	1.97	2.20
The year	7,080	-	1,220	886,000	+630	886,000	1,220	4.66	63.38
1931-32									
October..	1,690	116	608	37,400	+1,190	38,600	628	2.40	2.77
November.	5,530	92	1,580	94,000	+410	94,400	1,590	6.07	6.77
December.	4,950	68	1,470	90,400	-1,140	89,300	1,450	5.53	6.38
January..	3,810	330	1,350	83,000	+580	83,600	1,360	5.19	5.98
February.	9,590	90	1,720	98,900	+410	99,300	1,730	6.60	7.12
March....	3,580	1,390	1,980	122,000	+190	122,000	1,980	7.56	8.72
April.....	2,220	1,440	1,760	105,000	-1,580	103,000	1,730	6.60	7.36
May.....	2,780	1,230	2,040	125,000	+1,560	127,000	2,070	7.90	9.11
June.....	4,970	1,560	2,840	169,000	-150	169,000	2,840	10.8	12.05
July.....	2,700	668	1,710	105,000	-3,790	101,000	1,640	6.26	7.22
August....	1,600	116	828	50,900	+310	51,200	833	3.18	3.67
September	1,090	11	495	29,500	+330	29,800	501	1.91	2.13
The year	9,590	11	1,530	1,110,000	-1,680	1,110,000	1,530	5.84	79.28

Monthly discharge of Elwha River at McDonald Bridge, near Port Angeles--Continued

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	
1932-33									
October..	2,170	27	706	43,400	+590	44,000	716	2.73	3.15
November..	5,820	870	2,470	147,000	+2,100	149,000	2,500	9.54	10.64
December..	5,640	768	1,930	119,000	+610	120,000	1,950	7.44	8.58
January...	4,840	318	1,700	105,000	-180	105,000	1,710	6.55	7.53
February...	1,770	126	770	42,800	0	42,800	771	2.94	3.06
March....	1,580	510	1,100	67,600	-3,040	64,600	1,050	4.01	4.62
April.....	1,680	54	1,050	62,500	+3,040	65,500	1,100	4.20	4.69
May.....	2,780	683	1,720	106,000	-170	106,000	1,720	6.56	7.56
June.....	4,330	2,090	3,000	179,000	+170	179,000	3,010	11.5	12.93
July.....	3,620	1,960	2,820	173,000	+90	173,000	2,810	10.7	12.34
August....	1,990	90	1,530	94,100	-1,360	92,700	1,510	5.76	6.64
September	2,860	111	1,050	62,500	+1,360	63,900	1,070	4.08	4.55
The year	5,820	27	1,660	1,200,000	+3,210	1,210,000	1,660	6.34	86.19
1933-34									
October..	3,730	377	1,424	87,580	+110	87,690	1,426	5.44	6.27
November..	7,360	664	1,738	103,400	-2,210	101,200	1,701	6.49	7.24
December..	16,000	522	4,713	289,800	+1,800	291,600	4,742	18.1	20.87
January...	5,800	2,200	3,445	211,800	+260	212,100	3,449	13.2	15.22
February...	3,870	922	1,923	106,800	-130	106,700	1,921	7.33	7.63
March....	5,030	653	2,234	137,300	+170	137,500	2,236	8.53	9.83
April.....	2,960	1,590	2,065	122,900	-40	122,900	2,065	7.88	8.79
May.....	3,860	1,330	1,898	116,700	+40	116,700	1,898	7.24	8.35
June.....	1,940	802	1,362	81,040	-1,970	79,070	1,329	5.07	5.66
July.....	1,860	245	917	56,380	+290	56,670	922	3.52	4.06
August....	904	203	635	39,020	+250	39,270	639	2.44	2.81
September	880	75	503	29,960	-2,200	27,760	467	1.78	1.99
The year	16,000	75	1,910	1,383,000	-3,630	1,379,000	1,905	7.27	98.72
1934-35									
October..	4,130	216	1,005	61,790	+3,760	65,550	1,066	4.07	4.69
November..	16,000	1,020	3,105	184,800	-3,570	181,200	3,045	11.6	12.94
December..	4,160	436	1,487	91,450	+3,630	95,080	1,546	5.90	6.80
January...	14,200	804	3,613	216,000	-2,650	213,400	3,471	13.2	15.22
February...	5,290	1,660	2,792	155,100	+2,550	157,600	2,838	10.8	11.25
March....	3,300	1,010	1,671	102,700	-4,210	98,490	1,602	6.11	7.04
April.....	1,470	226	1,028	61,160	-1,540	59,620	1,002	3.82	4.26
May.....	2,410	1,140	1,610	99,000	+5,750	104,800	1,704	6.50	7.49
June.....	3,310	1,640	2,249	133,800	-70	133,700	2,247	8.58	9.57
July.....	2,390	1,080	1,575	96,870	-300	96,570	1,571	6.00	6.92
August....	1,280	431	863	53,040	-1,400	51,640	840	3.21	3.70
September	2,220	180	829	49,330	-1,130	48,200	810	3.09	3.45
The year	16,000	180	1,803	1,305,000	+820	1,306,000	1,804	6.89	93.33

Yearly discharge of Elwha River at McDonald Bridge, near Port Angeles

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1898.....	1,530	5.84	79.41	1,110,000	1,440	5.50	74.60	1,040,000
1899.....	1,210	4.62	62.51	873,000	1,490	5.69	77.11	1,080,000
1900.....	1,850	7.06	96.07	1,340,000	1,900	7.25	98.86	1,380,000
1901.....	1,820	6.95	94.04	1,310,000	1,800	6.87	93.09	1,300,000
1919.....	1,810	6.91	93.76	1,310,000	1,520	5.80	78.86	1,100,000
1920.....	1,100	4.20	57.09	798,000	1,400	5.34	72.65	1,010,000
1921.....	2,000	7.63	103.45	1,460,000	2,190	8.36	113.53	1,590,000
1922.....	1,630	6.22	84.39	1,180,000	1,140	4.35	58.82	823,000
1923.....	1,350	5.15	70.16	980,000	1,400	5.34	72.45	1,010,000
1924.....	1,320	5.04	68.76	960,000	1,590	6.07	82.65	1,150,000
1925.....	1,710	6.53	88.78	1,240,000	1,370	5.23	70.97	992,000
1926.....	943	3.60	48.91	683,000	1,100	4.20	56.87	794,000
1927.....	1,540	5.88	79.65	1,110,000	1,560	5.95	80.87	1,130,000
1928.....	1,460	5.57	75.82	1,060,000	1,320	5.04	68.46	957,000
1929.....	1,020	3.89	52.69	735,000	890	3.40	46.20	644,000
1930.....	1,010	3.85	52.22	730,000	1,060	4.05	54.98	768,000
1931.....	1,220	4.66	63.38	886,000	1,350	5.15	69.91	977,000
1932.....	1,530	5.84	79.28	1,110,000	1,650	6.30	85.73	1,200,000
1933.....	1,680	6.34	86.19	1,210,000	1,900	7.25	98.20	1,370,000
1934.....	1,905	7.27	98.72	1,379,000	1,713	6.54	88.77	1,240,000
1935.....	1,804	6.89	93.33	1,306,000	-	-	-	-

Monthly discharge of Elwha River at McDonald Bridge, near Port Angeles--Continued

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
Highest.....	2,000	7.63	103.45	1,450,000	2,190	8.36	113.53	1,590,000
Average.....	1,500	5.71	77.55	1,080,000	1,490	5.68	77.18	1,080,000
Lowest.....	943	3.60	48.91	683,000	890	3.40	46.20	644,000

DUNGENESS RIVER BASIN

Dungeness River near Sequim, Wash.

Location.-- Staff gage, lat. 48°01', long. 123°08', in sec. 12, T. 29 N., R. 4 W., half a mile above State fish hatchery and $4\frac{1}{2}$ miles southwest of Sequim. Prior to July 29, 1898, wire gage $1\frac{1}{2}$ miles downstream.

Drainage area.-- 150 square miles.

Records available.-- July 1897 to July 1898, June 1923 to September 1930.

Extremes.-- Maximum discharge observed, 5,140 second-feet Feb. 12, 1924; minimum, 77 second-feet Sept. 10, 1928.

Remarks.-- No diversion or regulation.

Monthly discharge of Dungeness River near Sequim

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923						
June.....	-	-	733	4.89	5.46	43,600
July.....	-	-	553	3.69	4.25	34,000
August.....	-	-	341	2.27	2.62	21,000
September.....	-	-	210	1.40	1.56	12,500
The year.....	-	-	-	-	-	111,000
1923-24						
October.....	344	141	178	1.19	1.37	10,900
November.....	452	125	169	1.13	1.26	10,100
December.....	2,080	158	392	2.61	3.01	24,100
January.....	4,820	158	368	2.45	2.82	22,600
February.....	5,140	325	1,040	6.93	7.47	59,800
March.....	387	165	233	1.65	1.79	14,300
April.....	298	148	210	1.40	1.56	12,500
May.....	790	248	490	3.27	3.77	30,100
June.....	556	312	390	2.60	2.90	23,200
July.....	438	216	291	1.94	2.24	17,900
August.....	205	119	176	1.17	1.35	10,800
September.....	413	90	167	1.11	1.24	9,940
The year.....	5,140	90	340	2.27	30.78	246,000
1924-25						
October.....	1,200	154	379	2.53	2.92	23,300
November.....	2,400	295	636	4.24	4.73	37,800
December.....	1,380	295	470	3.13	3.61	28,900
January.....	675	222	344	2.29	2.64	21,200
February.....	1,470	257	473	3.15	3.28	26,300
March.....	338	211	263	1.69	1.95	15,500
April.....	1,080	258	519	3.46	3.86	30,900
May.....	1,500	425	800	5.33	6.14	49,200
June.....	1,120	425	626	4.17	4.65	37,200
July.....	650	357	487	3.25	3.75	29,900
August.....	357	164	266	1.77	2.04	16,400
September.....	222	140	172	1.15	1.28	10,200
The year.....	2,400	140	452	3.01	40.85	327,000

Monthly discharge of Dungeness River near Sequim--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1925-26						
October.....	147	118	125	0.833	0.96	7,690
November.....	192	112	148	.987	1.10	8,810
December.....	740	182	293	1.95	2.25	18,000
January.....	408	173	224	1.49	1.72	13,800
February.....	425	156	243	1.62	1.69	13,500
March.....	258	156	197	1.31	1.51	12,100
April.....	425	201	279	1.86	2.08	16,600
May.....	478	212	307	2.05	2.36	18,900
June.....	425	222	289	1.93	2.15	17,200
July.....	245	132	179	1.19	1.37	11,000
August.....	201	112	134	.893	1.03	8,240
September.....	132	82	105	.700	.78	6,260
The year.....	740	82	210	1.40	19.00	152,000
1926-27						
October.....	1,080	99	262	1.75	2.02	16,100
November.....	1,040	140	301	2.01	2.24	17,900
December.....	2,150	270	515	3.43	3.95	31,700
January.....	1,710	258	449	2.99	3.45	27,800
February.....	740	258	402	2.68	2.79	22,300
March.....	408	270	306	2.04	2.35	18,800
April.....	650	234	331	2.21	2.47	19,700
May.....	1,000	357	517	3.45	3.98	31,800
June.....	1,710	550	978	6.52	7.27	58,200
July.....	710	495	624	4.16	4.80	38,400
August.....	512	201	334	2.23	2.57	20,500
September.....	442	147	223	1.49	1.66	13,300
The year.....	2,150	99	437	2.91	39.55	316,000
1927-28						
October.....	595	156	243	1.62	1.87	14,900
November.....	620	182	333	2.22	2.48	19,800
December.....	650	125	264	1.76	2.03	16,200
January.....	1,400	147	609	4.06	4.68	37,400
February.....	326	212	268	1.79	1.93	15,400
March.....	650	192	284	1.89	2.18	17,500
April.....	442	245	314	2.09	2.33	18,700
May.....	920	312	561	3.74	4.31	34,500
June.....	530	326	438	2.92	3.26	26,100
July.....	374	201	292	1.95	2.25	18,000
August.....	192	99	143	.953	1.10	8,790
September.....	164	77	93.8	.625	.70	5,680
The year.....	1,400	77	321	2.14	29.12	233,000
1928-29						
October.....	595	82	185	1.23	1.42	11,400
November.....	390	164	206	1.37	1.53	12,300
December.....	478	132	186	1.24	1.43	11,400
January.....	192	112	133	.887	1.02	8,180
February.....	112	99	106	.707	.74	5,890
March.....	164	105	134	.893	1.03	8,240
April.....	326	118	201	1.34	1.50	12,000
May.....	845	297	525	3.50	4.04	32,300
June.....	1,000	478	666	4.44	4.95	39,600
July.....	650	312	447	2.98	3.44	27,500
August.....	326	173	228	1.52	1.75	14,000
September.....	164	93	129	.860	.96	7,680
The year.....	1,000	82	263	1.75	23.81	190,000
1929-30						
October.....	132	82	96.7	.645	.74	5,950
November.....	132	77	86.6	.577	.64	5,150
December.....	740	77	187	1.25	1.44	11,500
January.....	147	-	105	.70	.81	6,460
February.....	920	125	297	1.98	2.06	16,500
March.....	374	125	211	1.41	1.63	13,000
April.....	495	297	374	2.49	2.78	22,300
May.....	460	312	361	2.41	2.78	22,200
June.....	880	390	486	3.24	3.62	28,900
July.....	390	201	284	1.89	2.18	17,500
August.....	201	132	169	1.13	1.30	10,400
September.....	164	118	134	.893	1.00	7,970
The year.....	920	-	232	1.55	20.98	168,000

Yearly discharge of Dungeness River Near Sequim

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1924.....	340	2.27	30.78	246,000	401	2.67	36.40	291,000
1925.....	452	3.01	40.85	327,000	375	2.50	33.90	271,000
1926.....	210	1.40	19.00	152,000	253	1.69	22.90	183,000
1927.....	437	2.91	39.55	316,000	416	2.77	37.72	302,000
1928.....	321	2.14	29.12	233,000	299	1.99	27.12	217,000
1929.....	263	1.75	23.81	190,000	246	1.64	22.25	178,000
1930.....	232	1.55	20.98	168,000	-	-	-	-

PUGET SOUND BASINS

LITTLE QUILCENE RIVER BASIN

Little Quilcene River near Quilcene, Wash.

Location.- Staff gage, lat. 47°50', long. 122°53', in sec. 14, T. 27 N., R. 2 W., at Olympic Highway crossing $1\frac{1}{4}$ miles north of Quilcene and $1\frac{1}{2}$ miles above mouth.

Drainage area.- 27 square miles.

Records available.- August 1926 to October 1927.

Remarks.- Considerable percentage of low-water flow above station diverted for irrigation.

Monthly discharge of Little Quilcene River near Quilcene

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1926				
August 25-31.....	28	4.3	11.0	153
September.....	29	4.1	7.48	445
The period.....	-	-	-	598
1926-27				
October.....	66	5.7	27.7	1,700
November.....	120	9.8	41.2	2,450
December.....	211	31	74.8	4,600
January.....	259	47	90.4	5,560
February.....	115	43	76.2	4,230
March.....	100	45	60.0	3,690
June 4-30.....	57	24	38.3	2,050
July.....	23	13	20.2	1,240
August.....	33	10	13.0	799
September.....	23	11	17.5	1,040

BIG QUILCENE RIVER BASIN

Big Quilcene River near Quilcene, Wash.

Location.- Staff gage, lat. 47°49', long. 122°55', in NE $\frac{1}{4}$ sec. 27, T. 27 N., R. 2 W., at Olympic Highway crossing, $1\frac{1}{2}$ miles southwest of Quilcene and $2\frac{1}{2}$ miles above mouth.

Drainage area.- 59 square miles.

Records available.- August 1926 to September 1927.

Extremes.- Maximum discharge observed, 1,620 second-feet at 2 a.m. Dec. 2, 1926; minimum, 24 second-feet Sept. 27, 1926.

Remarks.- No diversion.

Monthly discharge of Big Quilcene River near Quilcene

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926						
August 24-31.....	64	37	44.2	0.749	0.22	701
September.....	43	26	34.3	.581	.65	2,040
The period.....	-	-	-	-	-	2,740

Monthly discharge of Big Quilcene River near Quilcene--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926-27						
October.....	730	33	182	3.08	3.55	11,200
November.....	940	64	260	4.41	4.92	15,500
December.....	1,270	117	301	5.10	5.88	18,500
January.....	1,270	149	356	6.03	6.95	21,900
February.....	600	120	284	4.81	5.01	15,800
March.....	307	129	167	2.83	3.26	10,300
April.....	350	106	161	2.73	3.05	9,580
May.....	420	198	262	4.44	5.12	16,100
June.....	469	201	280	4.75	5.30	16,700
July.....	188	124	156	2.64	3.04	9,590
August.....	124	66	91.2	1.55	1.79	5,610
September.....	90	58	68.3	1.16	1.29	4,060
The year.....	1,270	33	214	3.63	49.16	155,000

DOSEWALLIPS RIVER BASIN

Dosewallips River near Brinnon, Wash.

Location.- Water-stage recorder, lat. 47°43', long. 123°00', in SW $\frac{1}{4}$ sec. 24, T. 26 N., R. 3 W., half a mile above Corrigenda ranger station and $\frac{5}{8}$ miles northwest of Brinnon.

Drainage area.- 94 square miles (revised).

Records available.- October 1930 to September 1935.

Extremes.- Maximum discharge recorded, 10,900 second-feet Nov. 5, 1934; minimum, 88 second-feet Oct. 16, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Dosewallips River near Brinnon

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	436	91	167	1.78	2.05	10,300
November.....	456	112	189	2.01	2.24	11,200
December.....	425	120	171	1.82	2.10	10,500
January.....	3,360	140	662	7.04	8.12	40,700
February.....	1,130	250	424	4.51	4.70	23,500
March.....	-	268	359	3.82	4.40	22,100
April.....	1,020	250	401	4.27	4.76	23,900
May.....	1,020	468	676	7.19	8.29	41,600
June.....	1,560	422	664	7.06	7.88	39,500
July.....	535	-	368	3.91	4.51	22,600
August.....	260	150	182	1.94	2.24	11,200
September.....	950	130	200	2.13	2.38	11,900
The year.....	3,360	91	372	3.96	53.67	269,000
1931-32						
October.....	400	106	172	1.83	2.11	10,600
November.....	1,030	185	395	4.20	4.69	23,500
December.....	1,690	172	426	4.53	5.22	26,200
January.....	-	200	371	3.95	4.55	22,800
February.....	3,960	140	558	5.94	6.41	32,100
March.....	910	383	520	5.53	6.38	32,000
April.....	686	402	521	5.54	6.18	31,000
May.....	1,100	514	732	7.79	8.98	45,000
June.....	1,760	585	981	10.4	11.60	58,400
July.....	847	337	535	5.69	6.56	32,900
August.....	387	195	278	2.96	3.41	17,100
September.....	200	118	154	1.64	1.83	9,160
The year.....	3,960	106	469	4.99	67.92	341,000

Monthly discharge of Dosewallips River near Brinnon--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	456	107	161	1.71	1.97	9,900
November.....	2,180	222	630	6.70	7.48	37,500
December.....	1,050	-	*383	4.07	4.69	23,600
January.....	974	177	354	3.77	4.35	21,800
February.....	348	128	158	1.68	1.75	8,780
March.....	489	206	280	2.98	3.44	17,200
April.....	833	222	369	3.93	4.38	22,000
May.....	1,100	432	632	6.72	7.75	38,900
June.....	2,060	734	1,190	12.7	14.17	70,800
July.....	1,490	656	1,080	11.5	13.26	66,400
August.....	656	275	482	5.13	5.91	29,600
September.....	933	203	315	3.35	3.74	18,700
The year.....	2,180	107	504	5.36	72.89	365,000
1933-34						
October.....	875	180	385	4.10	4.73	23,670
November.....	2,660	224	479	5.10	5.69	28,500
December.....	3,700	219	1,203	12.8	14.76	73,950
January.....	1,890	504	811	8.63	9.95	49,860
February.....	806	306	480	5.11	5.32	26,680
March.....	1,300	377	583	6.20	7.15	35,820
April.....	1,070	417	648	6.89	7.69	38,550
May.....	1,430	425	637	6.78	7.82	39,170
June.....	695	317	467	4.97	5.54	27,790
July.....	814	221	316	3.36	3.87	19,440
August.....	273	143	189	2.01	2.32	11,630
September.....	191	106	132	1.40	1.56	7,640
The year.....	3,700	106	529	5.63	76.40	382,900
1934-35						
October.....	1,900	101	409	4.35	5.02	25,170
November.....	5,510	515	1,080	11.5	12.83	64,280
December.....	1,130	391	543	5.78	6.66	33,410
January.....	4,880	233	1,091	11.6	13.37	67,060
February.....	1,680	436	692	7.36	7.66	38,410
March.....	850	305	422	4.49	5.18	25,920
April.....	454	236	326	3.47	3.87	19,410
May.....	910	441	625	6.65	7.67	38,460
June.....	1,150	535	760	8.09	9.03	45,240
July.....	760	349	519	5.52	6.36	31,920
August.....	361	206	265	2.82	3.25	16,270
September.....	621	161	248	2.64	2.94	14,780
The year.....	5,510	101	581	6.18	83.84	420,300

*Estimated.

Yearly discharge of Dosewallips River near Brinnon

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1931.....	372	3.95	53.67	269,000	411	4.37	59.30	297,000
1932.....	469	4.99	67.92	341,000	484	5.15	70.04	351,000
1933.....	504	5.36	72.89	365,000	581	6.18	83.93	420,000
1934.....	529	5.36	76.40	382,900	524	5.57	75.73	379,600
1935.....	581	6.18	83.84	420,300	-	-	-	-

Dosewallips River at Brinnon, Wash.

Location.- Staff gage, lat. 47°41', long. 122°54', in sec. 2, T. 25 N., R. 2 W., at old highway bridge half a mile above mouth at Brinnon.

Drainage area.- 130 square miles.

Records available.- October 1910 to October 1911, July 1924 to December 1925, July 1928 to September 1930.

Extremes.- Maximum discharge observed, 4,920 second-feet Nov. 20, 1910; minimum observed, 19 second-feet Aug. 24, 1925 (result of regulation).

Remarks.- A flash dam 4 miles above used occasionally during low-water periods to aid logging operations.

Monthly discharge of Dosewallips River at Brinnon

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
July 14-31, 1924.....	272	211	240	1.85	1.24	8,570
August.....	241	135	182	1.40	1.61	11,200
September.....	830	88	195	1.50	1.67	11,600
The period.....	-	-	-	-	-	31,400
October 1924.....	2,620	-	789	6.07	7.00	48,500
November.....	2,620	457	924	7.11	7.93	55,000
December.....	1,590	339	636	4.89	5.64	39,100
January 1925.....	1,120	128	431	3.32	3.83	28,500
February.....	1,860	318	796	6.12	6.37	44,200
March.....	500	183	277	2.13	2.46	17,000
April.....	1,610	183	629	4.84	5.40	37,400
May.....	1,860	566	1,080	8.31	9.58	66,400
June.....	1,020	670	812	6.25	6.97	48,300
July.....	780	345	564	4.34	5.00	34,700
August.....	370	157	264	2.03	2.34	16,200
September.....	211	113	148	1.14	1.27	8,810
Water year 1924-25.....	2,620	113	610	4.69	63.79	442,000
October 1925.....	121	109	116	.892	1.03	7,130
November.....	1,530	113	218	1.68	1.87	13,000
December.....	2,100	226	662	5.09	5.87	40,700
Calendar year 1925.....	2,100	109	498	3.83	51.99	360,000
July 20-31, 1928.....	320	245	291	2.24	1.00	6,930
August.....	278	124	177	1.36	1.57	10,900
September.....	345	88	126	.969	1.08	7,500
The period.....	-	-	-	-	-	25,300
October 1928.....	400	94	177	1.36	1.57	10,900
November.....	2,200	109	412	3.17	3.54	24,500
December.....	1,030	161	391	3.01	3.47	24,000
January 1929.....	500	104	226	1.74	2.01	13,900
February.....	122	73	84.4	1.649	.68	4,690
March.....	610	86	215	1.65	1.90	13,200
April.....	820	161	343	2.64	2.94	20,400
May.....	1,030	400	653	5.02	5.79	40,200
June.....	1,150	535	748	5.75	6.42	44,500
July.....	690	345	502	3.66	4.45	30,900
August.....	370	161	237	1.82	2.10	14,600
September.....	144	75	109	.838	.94	6,490
Water year 1928-29.....	2,200	73	343	2.64	35.81	248,000
October 1929.....	237	68	107	.823	.95	6,580
November.....	151	52	84.6	.497	.55	3,840
December.....	1,390	50	258	1.98	2.28	15,900
Calendar year 1929.....	1,390	50	297	2.28	31.01	215,000
January 1930.....	187	40	82.9	.638	.74	5,100
February.....	2,350	198	629	4.84	5.04	34,900
March.....	750	181	339	2.61	3.01	20,800
April.....	980	460	615	4.73	5.28	36,600
May.....	710	400	495	3.81	4.39	30,400
June.....	750	430	524	4.01	4.47	31,000
July.....	460	220	346	2.66	3.07	21,300
August.....	220	129	174	1.34	1.54	10,700
September.....	490	84	138	1.06	1.18	8,210
Water year 1929-30.....	2,350	40	311	2.39	32.50	225,000

HAMMA HAMMA RIVER BASIN

Hamma Hamma River near Hoodsport, Wash.

Location.- Staff gage, lat. 47°33', long. 123°03', in NW $\frac{1}{4}$ sec. 27, T. 24 N., R. 3 W., three-quarters of a mile above mouth and 11 miles northeast of Hoodsport.

Drainage area.- 84 square miles (revised).

Records available.- February 1926 to September 1930.

Extremes.- Maximum discharge observed, 5,080 second-feet Dec. 2, 1926; minimum observed, 23 second-feet Sept. 28, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Hamma Hamma River near Hoodsport

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acres-feet
February 24-28, 1926.....	695	480	587	6.99	1.30	1,160
March.....	452	264	318	3.79	4.37	19,600
April.....	399	212	285	3.39	3.78	17,000
May.....	628	230	330	3.93	4.53	20,300
June.....	222	121	172	2.05	2.29	10,200
July.....	117	54	81.7	.973	1.12	5,020
August.....	54	43	45.8	.545	.63	2,820
September.....	91	31	39.9	.475	5.30	2,370
The period.....	-	-	-	-	-	78,500
October 1926.....	4,200	126	871	10.4	11.99	53,600
November.....	4,640	244	1,290	15.4	17.18	76,800
December.....	5,080	276	1,050	12.5	14.41	64,600
January 1927.....	3,540	356	1,050	12.5	14.41	64,600
February.....	2,140	268	765	9.11	9.49	42,500
March.....	1,120	286	443	5.27	6.08	27,200
April.....	750	255	378	4.50	5.02	22,500
May.....	928	510	669	7.96	9.18	41,100
June.....	1,190	595	791	9.42	10.51	47,100
July.....	538	308	401	4.77	5.50	24,700
August.....	290	95	164	1.95	2.25	10,100
September.....	406	84	175	2.08	2.32	10,400
Water year 1926-27.....	5,080	84	670	7.98	108.34	485,000
October 1927.....	550	148	300	3.57	4.12	18,400
November.....	2,090	318	880	10.5	11.71	52,400
December.....	1,250	226	460	5.48	6.32	28,300
Calendar year 1927.....	3,540	84	538	6.40	86.91	389,000
January 1928.....	3,840	211	1,060	12.6	14.53	65,200
February.....	900	179	484	5.76	6.21	27,800
March.....	1,570	157	646	7.69	8.87	39,700
April.....	970	347	523	6.23	6.95	31,100
May.....	970	520	639	7.61	8.77	39,300
June.....	580	248	346	4.12	4.60	20,600
July.....	233	112	162	1.93	2.22	9,960
August.....	108	53	75.6	.900	1.04	4,650
September.....	71	36	49.3	.587	.65	2,930
Water year 1927-28.....	3,840	36	469	5.58	75.99	340,000
October 1928.....	610	35	195	2.32	2.68	12,000
November.....	3,750	91	826	9.83	10.97	49,200
December.....	1,590	310	716	8.52	9.82	44,000
Calendar year 1928.....	3,840	35	477	5.68	77.31	346,000
January 1929.....	845	113	297	3.54	4.08	18,300
February.....	113	74	95.5	1.14	1.19	5,300
March.....	1,050	108	370	4.40	5.07	22,800
April.....	1,590	185	505	6.01	6.70	30,000
May.....	845	334	566	6.74	7.77	34,800
June.....	1,120	310	561	6.68	7.45	33,400
July.....	386	135	241	2.87	3.31	14,800
August.....	135	38	83.2	.990	1.14	5,120
September.....	80	23	46.0	.548	.61	2,740
Water year 1928-29.....	3,750	23	376	4.48	60.79	272,000

Monthly discharge of Hamma Hamma River near Hoodsport--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1929.....	72	35	46.1	0.549	0.63	2,830
November.....	40	26	30.6	.564	.41	1,820
December.....	2,600	27	681	8.11	9.35	41,900
Calendar year 1929.....	2,600	23	295	3.51	47.71	214,000
January 1930.....	656	55	179	2.13	2.46	11,000
February.....	3,420	178	1,310	15.6	16.24	72,800
March.....	594	159	348	4.14	4.77	21,400
April.....	1,190	413	670	7.98	8.90	39,900
May.....	518	280	346	4.12	4.75	21,500
June.....	280	165	237	2.82	3.15	14,100
July.....	163	85	116	1.58	1.59	7,130
August.....	85	44	64.6	.769	.89	3,970
September.....	44	37	38.8	.462	.52	2,310
Water year 1929-30.....	3,420	26	332	3.95	53.66	240,000

SKOKOMISH RIVER BASIN

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

Location.- Staff gage, lat. 47°31', long. 123°20', in NW $\frac{1}{4}$ sec. 4,* T. 23 N., R. 5 W., 2 miles above Dry Creek and 11 $\frac{1}{2}$ miles northwest of Hoodsport. Water-stage recorder prior to Nov. 1, 1934.

Drainage area.- 60 square miles.

Records available.- July 1924 to September 1935.

Extremes.- Maximum discharge recorded, 23,300 second-feet Nov. 5, 1934 (stage determined from floodmarks); minimum discharge, 16 second-feet Sept. 23, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of North Fork of Skokomish River below Staircase Rapids, near Hoodsport

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924						
August.....	128	43	63.6	1.06	1.22	3,910
September.....	-	-	122	2.03	2.26	7,260
1924-25						
October.....	3,340	203	1,020	17.0	19.60	62,700
November.....	2,550	380	916	15.3	17.07	54,500
December.....	1,650	224	598	9.97	11.49	36,800
January.....	2,160	237	669	11.2	12.91	41,100
February.....	3,800	360	1,030	17.2	17.91	57,200
March.....	630	237	337	5.62	6.48	20,700
April.....	1,550	237	565	9.42	10.51	33,600
May.....	1,550	452	770	12.8	14.76	47,300
June.....	708	409	541	9.02	10.06	32,200
July.....	400	171	289	4.82	5.56	17,800
August.....	171	71	110	1.83	2.11	6,760
September.....	120	49	69.2	1.15	1.28	4,120
The year.....	3,800	49	573	9.55	129.74	415,000
1925-26						
October.....	109	35	47.5	.792	.91	2,920
November.....	1,450	35	396	6.60	7.38	25,800
December.....	2,520	448	1,000	16.7	19.25	61,500
January.....	1,830	300	547	9.12	10.51	35,800
February.....	1,520	364	743	12.4	12.91	41,500
March.....	493	266	372	6.20	7.15	22,900
April.....	685	253	362	6.37	7.11	22,700
May.....	605	283	402	6.70	7.72	24,700
June.....	297	134	211	3.52	3.93	12,600
July.....	132	58	88.5	1.48	1.71	5,440
August.....	120	40	54.9	.915	1.05	3,380
September.....	198	28	50.2	.837	.93	2,990
The year.....	2,520	28	356	5.93	80.54	258,000

*Erroneous description in some earlier water-supply papers.

Monthly discharge of North Fork of Skokomish River below Staircase Rapids,
near Hoodsport--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926-27						
October.....	3,230	103	792	13.0	14.99	49,100
November.....	2,800	215	930	15.5	17.23	55,300
December.....	3,310	280	795	13.2	15.22	48,900
January.....	2,680	294	704	11.7	13.49	43,300
February.....	1,110	210	508	8.47	9.82	28,200
March.....	536	238	310	5.17	5.95	19,100
April.....	830	213	344	5.73	6.39	20,500
May.....	1,130	425	606	10.1	11.64	37,300
June.....	1,420	620	848	14.1	15.73	50,500
July.....	590	256	*404	6.73	7.76	24,800
August.....	250	105	163	2.72	3.14	10,000
September.....	826	93	210	3.50	3.90	12,500
The year.....	3,310	93	550	9.17	124.33	398,000
1927-28						
October.....	2,040	154	449	7.48	8.62	27,600
November.....	1,980	291	792	13.2	14.73	47,100
December.....	1,070	187	354	5.90	6.80	21,800
January.....	3,100	197	968	16.1	18.56	59,500
February.....	922	257	470	7.83	8.44	27,000
March.....	2,410	242	642	10.7	12.34	39,500
April.....	854	277	412	6.87	7.66	24,500
May.....	1,240	418	688	11.5	13.26	42,300
June.....	572	262	403	6.72	7.50	24,000
July.....	278	99	172	2.87	3.31	10,600
August.....	95	50	69.1	1.15	1.53	4,250
September.....	196	38	54.8	.913	1.02	3,260
The year.....	3,100	38	457	7.62	103.57	331,000
1928-29						
October.....	939	107	268	4.47	5.15	16,500
November.....	1,960	105	544	9.07	10.12	32,400
December.....	1,250	170	363	6.05	6.98	22,300
January.....	390	120	194	3.23	3.72	11,900
February.....	120	91	111	1.85	1.93	6,160
March.....	1,300	98	306	5.10	5.88	18,800
April.....	555	156	294	4.90	5.47	17,500
May.....	960	319	601	10.0	11.53	37,000
June.....	1,480	352	598	9.97	11.12	35,600
July.....	363	180	258	4.30	4.96	15,900
August.....	174	78	112	1.87	2.16	6,890
September.....	77	47	58.4	.973	1.09	3,480
The year.....	1,960	47	310	5.17	70.11	224,000
1929-30						
October.....	202	45	75.5	1.26	1.45	4,640
November.....	109	35	48.9	.815	.91	2,910
December.....	2,220	31	396	6.60	7.61	24,300
January.....	266	-	150	2.50	2.88	9,220
February.....	1,870	292	686	11.4	11.87	38,100
March.....	743	160	331	5.52	6.36	20,400
April.....	1,840	359	585	9.75	10.88	34,800
May.....	550	257	333	5.55	6.40	20,500
June.....	313	-	*242	4.03	4.50	14,400
July.....	-	85	135	2.25	2.59	8,300
August.....	84	44	64.2	1.07	1.23	3,950
September.....	471	17	60.1	1.00	1.12	3,580
The year.....	2,220	17	256	4.27	57.80	185,000
1930-31						
October.....	527	31	154	2.57	2.96	9,470
November.....	717	105	240	4.00	4.46	14,300
December.....	759	138	255	4.25	4.90	15,700
January.....	4,270	178	922	15.4	17.75	56,700
February.....	2,160	235	475	7.92	8.25	29,400
March.....	1,640	320	593	9.72	11.21	35,900
April.....	1,900	364	611	10.2	11.38	36,400
May.....	820	400	539	8.98	10.35	33,100
June.....	1,500	330	518	8.65	9.63	30,900
July.....	400	119	216	3.60	4.15	13,300
August.....	114	48	70.8	1.18	1.56	4,550
September.....	374	46	113	1.88	2.10	6,720
The year.....	4,270	31	391	6.52	88.50	283,000

*Estimated.

Monthly discharge of North Fork of Skokomish River below Staircase Rapids,
near Hoodsport--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	536	60	207	3.45	3.98	12,700
November.....	-	54	*489	8.15	9.09	29,100
December.....	3,930	199	585	9.75	11.24	36,000
January.....	1,490	216	420	7.00	8.07	25,800
February.....	4,310	119	566	9.43	10.17	32,600
March.....	1,150	384	661	11.0	12.68	40,600
April.....	885	479	682	11.4	12.72	40,600
May.....	1,260	538	768	12.8	14.76	47,100
June.....	1,320	543	835	13.9	15.51	49,700
July.....	704	240	427	7.12	8.21	26,300
August.....	246	116	185	3.08	3.55	11,400
September.....	116	60	85.3	1.42	1.58	5,080
The year.....	4,310	54	492	8.20	111.56	357,000
1932-33						
October.....	677	42	155	2.58	2.97	9,530
November.....	2,100	362	926	15.4	17.18	55,100
December.....	2,230	267	535	8.92	10.28	32,900
January.....	1,760	183	480	8.00	9.22	29,500
February.....	685	112	186	3.10	3.23	10,300
March.....	656	212	366	6.10	7.03	22,500
April.....	925	258	433	7.22	8.06	25,800
May.....	1,060	478	699	11.6	13.37	43,000
June.....	1,570	674	984	16.4	18.30	58,600
July.....	1,170	461	817	13.6	15.68	50,200
August.....	465	161	308	5.13	5.91	18,900
September.....	1,250	138	380	6.33	7.06	22,600
The year.....	2,230	42	524	8.73	118.29	379,000
1933-34						
October.....	1,880	157	494	8.23	9.49	30,350
November.....	3,010	167	464	7.73	8.62	27,640
December.....	6,100	162	1,778	29.6	34.13	109,300
January.....	2,480	636	1,204	20.1	23.17	74,060
February.....	1,170	233	571	9.52	9.91	31,740
March.....	2,020	251	661	11.0	12.68	40,660
April.....	717	274	419	6.98	7.79	24,930
May.....	1,640	248	438	7.30	8.42	26,910
June.....	239	134	184	3.07	3.42	10,950
July.....	1,440	99	188	3.13	3.61	11,570
August.....	252	73	109	1.82	2.10	6,720
September.....	256	58	86.1	1.44	1.61	5,120
The year.....	6,100	58	552	9.20	124.95	400,000
1934-35						
October.....	-	53	*673	11.2	12.91	41,380
November.....	15,000	528	2,300	38.3	42.73	136,900
December.....	2,750	321	665	11.1	12.80	40,860
January.....	6,830	177	1,235	20.6	23.75	75,950
February.....	2,010	342	744	12.4	12.91	41,330
March.....	1,640	248	431	7.18	8.28	26,520
April.....	475	202	358	5.63	6.28	20,090
May.....	810	450	610	10.2	11.76	37,480
June.....	960	405	604	10.1	11.27	35,960
July.....	555	202	334	5.57	6.42	20,520
August.....	187	106	140	2.33	2.69	8,630
September.....	845	75	187	3.28	3.66	11,710
The year.....	15,000	53	687	11.4	155.46	497,300

*Estimated.

Yearly discharge of North Fork of Skokomish River below Staircase Rapids, near Hoodsport

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1925.....	573	9.55	129.74	415,000	482	8.03	109.10	349,000
1926.....	356	5.93	80.54	258,000	445	7.42	100.52	322,000
1927.....	550	9.17	124.33	398,000	473	7.88	106.98	343,000
1928.....	457	7.62	103.57	331,000	422	7.03	95.67	306,000
1929.....	310	5.17	70.11	224,000	256	4.27	57.83	185,000
1930.....	256	4.27	57.80	185,000	266	4.43	60.15	193,000
1931.....	391	6.52	88.50	283,000	444	7.40	100.49	321,000
1932.....	492	8.20	111.56	357,000	519	8.65	117.68	377,000
1933.....	524	8.73	118.29	379,000	619	10.3	140.10	448,000
1934.....	552	9.20	124.95	400,000	624	10.4	141.15	451,800
1935.....	687	11.4	155.46	497,300	-	-	-	-
Highest	687	11.4	155.46	497,300	624	10.4	141.15	451,800
Average	468	7.80	105.90	359,000	455	7.58	102.97	330,000
Lowest	256	4.27	57.80	185,000	256	4.27	57.83	185,000

North Fork of Skokomish River near Hoodsport, Wash.

Location.- Water-stage recorder, lat. 47°25', long. 123°12', in NE¼ sec. 8, T. 22 N., R. 4 W., 1 mile below Lake Cushman dam and 3½ miles west of Hoodsport. Prior to Oct. 1, 1923, water-stage recorder 1 mile upstream.

Drainage area.- 92 square miles (91 square miles at site used prior to Oct. 1, 1923).

Records available.- August 1910 to September 1911 (fragmentary gage heights), October 1912 to November 1930, December 1930 to September 1935 (yearly mean discharge only).

Extremes.- Maximum discharge, 14,000 second-feet (estimated) Jan. 6, 1914; practically no flow during late summer of 1930 when gates in dam and at power house were closed.

Remarks.- No diversions that are not returned to river above gage. Flow controlled by storage in Lake Cushman and release for power purposes. Gaging station drowned out in December 1930 by the city of Tacoma's dam No. 2.

Monthly discharge of North Fork of Skokomish River near Hoodsport

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	232	111	133	1.46	1.68	8,180
November.....	4,790	156	812	8.92	9.95	48,300
December.....	5,600	217	1,310	14.4	16.60	80,600
January.....	-	481	1,060	11.6	13.37	65,200
February.....	1,280	280	569	6.25	6.74	32,700
March.....	-	260	556	6.11	7.04	34,200
April.....	439	249	338	3.71	4.14	20,100
May.....	495	306	365	4.01	4.62	22,400
June.....	1,370	373	661	7.26	8.10	39,300
July.....	399	175	263	2.89	3.33	16,200
August.....	325	124	163	1.79	2.06	10,000
September.....	3,220	133	821	9.02	10.06	48,900
The year.....	5,600	111	587	6.45	87.69	426,000
1920-21						
October.....	4,440	713	1,640	18.0	20.75	101,000
November.....	3,810	386	1,290	14.2	15.84	76,800
December.....	2,620	765	1,290	14.2	16.37	79,300
January.....	3,080	679	1,210	13.3	15.33	74,400
February.....	4,050	613	1,120	12.3	12.81	62,200
March.....	1,410	524	805	8.85	10.20	49,500
April.....	902	390	610	6.70	7.48	36,300
May.....	1,500	613	961	10.6	12.22	59,100
June.....	1,740	996	1,310	14.4	16.07	78,000
July.....	1,240	524	741	8.14	9.38	45,600
August.....	613	254	378	4.15	4.78	23,200
September.....	1,600	176	467	5.13	5.72	27,800
The year.....	4,440	176	984	10.8	146.95	713,000

Monthly discharge of North Fork of Skokomish River near Hoodsport--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1921-22						
October.....	8,150	260	1,850	20.3	23.40	114,000
November.....	5,970	532	1,560	17.1	19.08	92,800
December.....	9,450	496	1,810	19.9	22.94	111,000
January.....	510	278	380	4.18	4.82	23,400
February.....	848	249	397	4.36	4.54	22,000
March.....	558	260	339	3.75	4.30	20,800
April.....	644	328	490	5.58	6.00	29,200
May.....	1,920	482	973	10.7	12.34	59,800
June.....	1,870	730	1,080	11.9	13.28	64,300
July.....	696	238	405	4.45	5.13	24,900
August.....	353	162	210	2.31	2.66	12,900
September.....	868	128	220	2.42	2.70	13,100
The year.....	9,450	128	813	8.93	121.19	588,000
1922-23						
October.....	2,870	149	486	5.34	6.16	29,900
November.....	553	287	393	4.32	4.62	23,400
December.....	6,610	180	1,500	14.5	16.49	79,900
January.....	4,290	495	1,840	20.2	23.29	113,000
February.....	-	313	549	6.03	6.28	30,500
March.....	854	373	493	5.48	6.32	30,700
April.....	872	553	690	7.58	8.46	41,100
May.....	-	-	622	7.49	8.64	41,900
June.....	980	443	624	6.86	7.65	37,100
July.....	600	228	372	4.09	4.72	22,900
August.....	218	132	168	1.85	2.13	10,300
September.....	412	105	168	1.85	2.06	10,000
The year.....	6,610	105	651	7.15	97.02	471,000
1923-24						
October.....	1,260	128	268	2.91	3.36	16,500
November.....	1,750	133	410	4.46	4.98	24,400
December.....	3,200	363	1,220	13.3	15.33	75,000
January.....	10,300	322	1,060	11.7	13.49	66,400
February.....	7,730	1,020	2,270	24.7	26.64	131,000
March.....	1,140	285	521	5.66	6.52	32,000
April.....	432	258	312	3.39	3.78	18,600
May.....	796	312	489	5.32	6.13	30,100
June.....	432	197	287	3.12	3.48	17,100
July.....	204	124	157	1.71	1.97	9,650
August.....	154	97	115	1.25	1.44	7,070
September.....	3,250	79	428	4.65	5.19	25,500
The year.....	10,300	79	623	6.77	92.31	453,000
1924-25						
October.....	4,580	258	1,490	16.2	18.68	91,600
November.....	3,380	715	1,570	17.1	19.08	93,400
December.....	2,170	468	929	10.1	11.64	57,100
January.....	2,950	444	992	10.8	12.45	61,000
February.....	5,020	699	1,790	19.5	20.31	99,400
March.....	1,060	408	613	6.66	7.68	37,700
April.....	1,720	385	786	8.54	9.53	46,800
May.....	1,410	652	910	9.89	11.40	56,000
June.....	803	581	691	7.51	8.38	41,100
July.....	546	258	410	4.46	5.14	25,200
August.....	258	143	191	2.08	2.40	11,700
September.....	171	121	138	1.50	1.67	8,210
The year.....	5,020	121	870	9.46	128.36	629,000

Monthly discharge of North Fork of Skokomish River near Hoodsport--Continued

Month	Observed				Gain or loss in storage in Lake Cushman (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	
1925-26									
October..	138	0	72.2	4,440	+2,000	6,440	105	1.14	1.31
November..	-	-	*10	595	+34,500	35,100	590	6.41	7.15
December..	-	-	*10	615	+90,500	91,100	1,480	16.1	18.66
January..	-	-	*10	615	+53,000	53,600	872	9.48	10.93
February..	28	-	14.1	783	+67,000	67,800	1,220	13.3	15.85
March.....	192	2	54.9	3,380	+30,500	33,900	551	5.99	6.91
April.....	305	2	80.0	4,760	+25,500	30,300	509	5.53	6.17
May.....	440	3	106	6,520	+26,000	32,500	529	5.75	6.63
June.....	666	2	128	7,620	+9,500	17,100	287	3.12	3.48
July.....	365	2	127	7,810	0	7,810	127	1.38	1.59
August....	362	3	209	12,900	-5,000	7,900	128	1.39	1.60
September	1,510	3	824	49,000	-40,500	8,500	143	1.65	1.73
The year	1,510	0	137	99,000	+293,000	392,000	541	5.88	79.91
1926-27									
October..	2,410	420	1,540	94,700	-22,500	72,200	1,170	12.7	14.64
November..	2,360	-	1,310	78,000	+7,750	85,800	81,440	15.7	17.52
December..	-	452	1,630	100,000	-25,100	74,900	1,220	13.3	15.33
January..	-	-	*1,380	84,800	-5,240	79,600	*1,290	14.0	16.14
February..	1,000	131	552	30,700	+30,600	61,300	1,100	12.0	12.50
March.....	483	53	326	20,000	+19,300	39,300	639	6.95	8.01
April.....	385	99	235	14,000	+23,400	37,400	629	6.84	7.63
May.....	529	50	196	12,100	+50,200	62,300	1,010	11.0	12.68
June.....	284	47	143	8,510	+59,200	67,700	1,140	12.4	13.83
July.....	614	47	463	28,500	+5,050	33,600	546	5.93	6.84
August....	692	53	452	27,800	-14,800	13,000	211	2.29	2.64
September	469	63	324	19,300	+2,240	21,500	361	3.92	4.37
The year	-	47	716	518,000	+130,000	648,000	896	9.74	132.13
1927-28									
October..	832	143	436	26,800	+17,400	44,200	719	7.82	9.02
November..	2,800	350	1,750	104,000	-29,500	74,500	1,250	13.6	15.17
December..	2,410	227	1,240	76,200	-39,500	36,700	597	6.49	7.48
January..	1,460	432	1,190	73,200	+19,500	92,700	1,510	16.4	18.91
February..	1,290	194	834	48,000	-9,840	38,200	664	7.22	7.79
March.....	1,270	150	751	46,200	+23,300	69,500	1,130	12.3	14.18
April.....	1,300	39	562	33,400	+14,000	47,400	797	8.66	9.66
May.....	1,090	218	857	52,700	+6,120	58,800	956	10.4	11.99
June.....	1,070	194	524	31,200	-1,880	29,300	492	5.35	5.97
July.....	769	3	215	13,200	+1,080	14,300	233	2.53	2.92
August....	585	2	263	16,200	-10,500	5,700	92.7	1.01	1.16
September	1,050	22	618	36,800	-30,100	6,700	113	1.23	1.37
The year	2,800	2	768	558,000	-39,900	518,000	713	7.75	105.62
1928-29									
October..	1,310	38	651	40,000	-14,200	25,800	420	4.57	5.27
November..	1,500	96	922	54,900	+430	55,300	929	10.1	11.27
December..	1,640	138	1,040	64,000	-16,900	47,100	766	8.33	9.60
January..	1,850	492	1,420	87,300	-63,600	23,700	385	4.18	4.82
February..	1,880	289	1,450	80,500	-69,400	11,100	200	2.17	2.26
March.....	1,030	106	624	38,400	-2,750	35,600	579	6.29	7.25
April.....	782	59	526	31,300	+7,130	38,400	645	7.01	7.82
May.....	234	8	96.4	5,930	+42,900	48,800	794	8.63	9.95
June.....	152	5	48.3	2,870	+46,700	49,600	834	9.07	10.12
July.....	1,000	3	218	13,400	+8,360	21,800	355	3.86	4.45
August....	1,100	34	511	31,400	-20,900	10,500	171	1.86	2.14
September	1,280	11	730	43,400	-35,700	7,700	129	1.40	1.56
The year	1,880	3	681	493,000	-118,000	375,000	518	5.63	76.51
1929-30									
October..	1,220	27	721	44,300	-35,900	8,400	137	1.49	1.72
November..	1,270	232	978	58,200	-51,600	6,600	111	1.21	1.35
December..	986	-	265	16,300	+30,200	46,500	756	8.22	9.48
January..	1,190	6	405	24,900	-5,860	19,000	309	3.36	3.87
February..	401	18	95.6	5,310	+65,000	70,300	1,270	13.8	14.37
March.....	164	11	66.6	4,100	+32,000	36,100	587	6.38	7.36
April.....	112	9	32.9	1,960	+55,700	57,700	970	10.5	11.71
May.....	177	6	42.4	2,610	+27,100	29,700	483	5.25	6.05
June.....	364	8	155	9,220	+10,500	19,700	331	3.60	4.02
July.....	334	11	114	7,010	+3,100	10,100	164	1.78	2.05
August....	261	4	69.8	4,290	+1,220	5,510	89.6	.974	1.12
September	1,010	2	507	30,200	-22,900	7,300	123	1.34	1.50
The year	1,270	2	288	208,000	+109,000	317,000	438	4.76	64.60

*Estimated.

Yearly discharge of North Fork of Skokomish River near Hoodsport

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1912.....	628	6.90	93.92	456,000	*674	7.41	100.86	489,000
1913.....	*793	8.71	118.24	574,000	*816	8.97	121.76	591,000
1914.....	948	10.4	141.47	686,000	971	10.7	145.09	703,000
1915.....	771	8.47	115.23	559,000	738	8.11	110.13	535,000
1916.....	934	10.3	139.57	678,000	806	8.86	120.60	585,000
1917.....	596	6.55	88.81	431,000	727	7.99	108.46	526,000
1918.....	744	8.18	110.92	539,000	744	8.18	110.93	538,000
1919.....	864	9.49	129.05	626,000	804	8.84	119.97	582,000
1920.....	587	6.45	87.69	426,000	752	8.26	112.42	546,000
1921.....	924	10.8	146.95	713,000	1,070	11.3	159.41	774,000
1922.....	613	6.93	121.19	568,000	557	6.12	83.24	404,000
1923.....	651	7.15	97.02	471,000	626	6.88	93.22	453,000
1924.....	623	6.77	92.31	451,000	798	8.67	118.04	580,000
1925.....	870	9.46	128.36	628,000	718	7.80	105.98	520,000
1926.....	541	5.88	79.91	392,000	680	7.39	100.38	492,000
1927.....	896	9.74	132.13	649,000	789	8.58	116.31	571,000
1928.....	713	7.75	105.62	518,000	676	7.35	100.09	491,000
1929.....	518	5.63	76.51	375,000	426	4.63	62.92	309,000
1930.....	438	4.76	64.60	317,000	455	4.95	67.15	330,000
1931.....	+634	6.89	93.49	459,000	+761	8.27	112.35	551,000
1932.....	+769	8.36	113.61	558,000	+763	8.29	112.66	554,000
1933.....	+804	8.74	118.77	582,000	+928	10.1	137.13	672,000
1934.....	+810	8.80	119.50	586,500	+813	8.84	119.82	588,300
1935.....	+942	10.2	138.85	681,700	-	-	-	-
Highest.....	984	10.8	146.95	713,000	1,070	11.3	159.41	774,000
Average.....	745	8.14	110.57	539,000	743	8.13	110.39	538,000
Lowest.....	438	4.76	64.60	317,000	426	4.63	62.92	309,000

*Discharge for October 1912 to January 1913 estimated on basis of records for Quinault River at Quinault Lake.

+Yearly mean discharge computed from records of operation of Lake Cushman reservoir and power plant.

South Fork of Skokomish River near Potlatch, Wash.

Location.- Water-stage recorder, lat. 47°24', long. 123°18', in SW¼ sec. 15 (corrected in this report), T. 22 N., R. 5 W., at head of canyon, 2 miles below Brown Creek and 7½ miles west of Potlatch.

Drainage area.- 68 square miles.

Records available.- October 1923 to September 1932.

Extremes.- Maximum discharge, about 11,500 second-feet about Feb. 26, 1932 (stage determined from floodmarks); minimum, 38 second-feet Sept. 15, 1926.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Skokomish River near Potlatch

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24						
October.....	1,190	-	189	2.78	3.20	11,600
November.....	1,800	123	366	5.38	6.00	21,800
December.....	3,150	341	1,020	15.0	17.29	62,700
January.....	7,150	271	853	12.5	14.41	52,400
February.....	-	-	*1,820	26.8	28.90	105,000
March.....	-	243	422	6.21	7.16	25,900
April.....	530	193	247	3.63	4.05	14,700
May.....	245	116	178	2.62	3.02	10,900
June.....	121	80	97.7	1.44	1.61	5,810
July.....	-	-	68.7	1.01	1.16	4,220
August.....	121	-	62.1	.913	1.05	3,820
September.....	2,420	44	317	4.66	5.20	18,900
The year.....	7,150	44	465	6.84	93.05	338,000

*Estimated.

Monthly discharge of South Fork of Skokomish River near Potlatch--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	3,370	249	1,230	18.1	20.87	75,600
November.....	3,190	538	1,330	19.6	21.87	79,100
December.....	2,160	312	804	11.8	13.60	49,400
January.....	2,920	342	1,110	16.3	18.79	68,200
February.....	5,040	503	1,480	21.8	22.70	82,200
March.....	788	273	457	6.72	7.75	28,100
April.....	898	262	*445	6.54	7.30	26,500
May.....	656	287	*419	6.16	7.10	25,800
June.....	503	180	296	4.35	4.85	17,600
July.....	174	105	137	2.01	2.32	8,420
August.....	104	76	86.9	1.28	1.48	5,340
September.....	92	65	74.6	1.10	1.23	4,440
The year.....	5,040	65	651	9.57	129.86	471,000
1925-26						
October.....	90	58	66.1	.972	1.12	4,060
November.....	1,860	58	542	7.97	8.89	32,300
December.....	3,270	490	1,350	19.9	22.94	83,000
January.....	2,050	378	760	11.2	12.91	46,700
February.....	1,860	594	1,080	15.9	16.56	60,000
March.....	635	288	407	5.99	6.91	25,000
April.....	476	208	269	3.96	4.42	16,000
May.....	744	198	346	5.09	5.87	21,300
June.....	234	90	155	2.28	2.54	9,220
July.....	88	51	64.8	.953	1.10	3,980
August.....	78	45	51.2	.753	.87	3,150
September.....	208	39	65.5	.934	1.04	3,780
The year.....	3,270	39	426	6.26	85.17	308,000
1926-27						
October.....	3,280	140	812	11.9	13.72	49,900
November.....	3,080	212	1,020	15.0	16.74	60,700
December.....	3,220	418	1,020	15.0	17.29	62,700
January.....	3,720	556	1,320	19.4	22.37	81,200
February.....	2,500	391	1,050	15.4	16.04	58,300
March.....	1,210	378	598	8.79	10.13	36,800
April.....	832	328	465	6.84	7.63	27,700
May.....	1,300	391	725	10.7	12.34	44,600
June.....	766	316	471	6.93	7.73	28,000
July.....	293	141	203	2.99	3.45	12,500
August.....	139	95	109	1.60	1.84	6,700
September.....	977	112	236	3.47	3.87	14,000
The year.....	3,720	95	668	9.82	133.15	483,000
1927-28						
October.....	2,120	160	551	8.10	9.34	33,900
November.....	2,460	418	1,150	16.9	18.86	68,400
December.....	1,330	340	544	8.00	9.22	33,400
January.....	3,840	365	1,280	18.8	21.67	78,700
February.....	1,450	238	569	8.37	9.03	32,700
March.....	2,450	214	1,040	15.3	17.64	64,000
April.....	1,140	490	731	10.8	12.05	43,500
May.....	1,180	365	549	8.07	9.30	33,800
June.....	505	117	276	4.06	4.53	16,400
July.....	185	95	132	1.94	2.24	8,120
August.....	95	73	82.2	1.21	1.40	5,050
September.....	338	73	92.1	1.35	1.51	5,480
The year.....	3,840	73	583	8.57	116.79	423,000
1928-29						
October.....	1,460	88	371	5.46	6.30	22,800
November.....	2,400	137	745	11.0	12.27	44,300
December.....	-	-	*588	8.65	9.97	36,200
January.....	1,110	216	384	5.65	6.51	23,600
February.....	245	168	200	2.94	3.06	11,100
March.....	2,220	214	510	7.50	8.65	31,400
April.....	1,350	293	570	8.38	9.35	33,900
May.....	736	340	477	7.01	80.8	29,300
June.....	1,520	282	463	6.81	7.60	27,600
July.....	270	137	179	2.63	3.03	11,000
August.....	135	87	114	1.68	1.94	7,010
September.....	91	67	77.1	1.13	1.26	4,590
The year.....	2,400	67	391	5.75	78.02	283,000

*Estimated.

Monthly discharge of South Fork of Skokomish River near Potlatch--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	212	67	103	1.51	1.74	6,330
November.....	146	66	77.1	1.13	1.26	4,590
December.....	2,540	66	694	10.2	11.76	42,700
January.....	678	-	302	4.44	5.12	18,600
February.....	2,740	522	1,160	17.1	17.81	64,400
March.....	856	282	437	6.43	7.41	26,900
April.....	2,080	234	546	8.03	8.96	32,500
May.....	522	223	283	4.16	4.80	17,400
June.....	245	150	189	2.78	3.10	11,200
July.....	141	82	106	1.56	1.80	6,520
August.....	82	62	71.8	1.06	1.22	4,410
September.....	480	53	89.3	1.31	1.46	5,310
The year.....	2,740	53	333	4.90	66.44	241,000
1930-31						
October.....	700	98	251	3.69	4.25	15,400
November.....	929	158	403	5.93	6.62	24,000
December.....	1,360	268	453	6.66	7.68	27,900
January.....	5,220	314	1,480	21.8	25.13	91,000
February.....	3,990	304	716	10.5	10.93	39,800
March.....	2,320	400	950	14.0	16.14	58,400
April.....	2,670	414	815	12.0	13.39	48,500
May.....	473	212	301	4.43	5.11	18,500
June.....	1,570	176	369	5.43	6.06	22,000
July.....	338	107	177	2.60	3.00	10,900
August.....	106	67	82.7	1.22	1.41	5,080
September.....	740	66	159	2.34	2.61	9,460
The year.....	5,220	66	513	7.54	102.33	371,000
1931-32						
October.....	1,480	118	496	7.29	8.40	30,500
November.....	3,320	296	808	11.9	13.28	48,100
December.....	6,060	296	1,080	15.9	18.33	66,400
January.....	2,460	372	841	12.4	14.30	51,700
February.....	-	-	*1,010	14.9	16.07	58,100
March.....	-	-	*1,150	16.9	19.48	70,700
April.....	-	-	*1,000	14.7	16.40	59,500
May.....	-	-	*500	7.35	8.47	30,700
June.....	536	285	389	5.72	6.38	23,100
July.....	374	177	240	3.53	4.07	14,800
August.....	210	112	148	2.18	2.61	9,100
September.....	115	72	88.3	1.30	1.45	6,250
The year.....	-	72	644	9.47	129.14	468,000

*Estimated.

Yearly discharge of South Fork of Skokomish River near Potlatch

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1924.....	465	6.84	93.05	338,000	614	9.03	122.90	446,000
1925.....	651	9.57	129.86	471,000	533	7.84	106.47	386,000
1926.....	426	6.26	85.17	308,000	501	7.37	99.97	362,000
1927.....	668	9.82	133.15	483,000	615	9.04	122.82	446,000
1928.....	583	8.57	116.79	423,000	539	7.93	107.91	391,000
1929.....	391	5.75	78.02	283,000	322	4.74	64.24	233,000
1930.....	333	4.90	66.44	241,000	352	5.18	70.23	255,000
1931.....	513	7.54	102.33	371,000	620	9.12	123.79	449,000
1932.....	644	9.47	129.14	468,000	-	-	-	-

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 1935.

Extremes.- Maximum discharge recorded, 17,000 second-feet at 6:10 a.m. Jan. 22, 1935;

minimum recorded, 71 second-feet Oct. 11, 1932.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Skokomish River near Union

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931						
August.....	-	94	109	1.35	1.56	6,700
September.....	841	94	190	2.35	2.62	11,500
The period.....	-	-	-	-	-	18,000
October 1931.....	-	-	*584	7.21	8.31	35,900
November.....	-	360	*915	11.3	12.61	54,400
December.....	6,840	360	1,250	15.4	17.75	76,900
January 1932.....	3,420	439	1,030	12.7	14.64	63,500
February.....	9,260	-	1,230	15.2	16.39	70,800
March.....	2,630	780	1,530	16.4	18.91	81,800
April.....	2,260	739	1,110	13.7	15.29	66,000
May.....	800	422	588	7.26	8.37	36,200
June.....	540	316	407	5.02	5.60	24,200
July.....	382	195	260	3.21	3.70	16,000
August.....	232	130	163	2.01	2.32	10,000
September.....	137	90	107	1.32	1.47	6,370
Water year 1931-32.....	9,260	90	747	9.22	125.36	542,000
October 1932.....	910	74	209	2.58	2.97	12,900
November.....	4,000	544	1,410	17.4	19.41	89,300
December.....	2,760	350	1,020	12.6	14.53	62,700
Calendar year 1932.....	9,260	74	736	9.09	123.60	534,000
January 1933.....	4,120	368	1,120	13.8	15.91	68,900
February.....	3,090	235	523	6.46	6.73	29,000
March.....	2,410	679	1,110	13.7	15.79	68,200
April.....	1,240	580	830	10.2	11.38	49,400
May.....	1,510	679	937	11.6	13.37	57,600
June.....	970	535	716	8.84	9.86	42,600
July.....	589	265	421	5.20	6.00	25,900
August.....	260	134	185	2.28	2.63	11,400
September.....	1,720	120	446	5.51	6.15	26,500
Water year 1932-33.....	4,120	74	744	9.19	124.73	539,000
October 1933.....	2,600	260	807	9.96	11.48	49,610
November.....	4,460	272	697	8.60	9.60	41,480
December.....	10,500	257	2,998	37.0	42.66	164,400
Calendar year 1933.....	10,500	120	904	11.2	151.56	655,000
January 1934.....	5,420	1,010	2,112	26.1	30.09	129,900
February.....	1,380	347	739	9.12	9.50	41,030
March.....	3,100	305	845	10.4	11.99	51,980
April.....	1,040	238	371	4.58	5.11	22,060
May.....	1,360	232	415	5.12	5.90	25,510
June.....	227	130	161	1.99	2.22	9,560
July.....	1,310	114	205	2.53	2.92	12,630
August.....	254	100	141	1.74	2.01	8,660
September.....	243	89	117	1.44	1.61	6,970
Water year 1933-34.....	10,500	89	806	9.95	135.09	583,800

*Estimated.

Monthly discharge of South Fork of Skokomish River near Union--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1934.....	2,950	89	680	8.40	9.68	41,810
November.....	8,990	810	1,912	23.6	26.33	113,700
December.....	3,440	532	1,082	13.4	15.45	66,510
Calendar year 1934.....	8,990	89	733	9.05	122.81	530,300
January 1935.....	14,300	436	2,888	35.7	41.16	177,600
February.....	3,060	728	1,115	13.8	14.37	61,920
March.....	3,230	512	842	10.4	11.99	51,790
April.....	857	405	584	7.21	8.04	34,760
May.....	675	430	532	6.57	7.57	32,720
June.....	518	244	361	4.46	4.98	21,470
July.....	244	127	180	2.22	2.56	11,080
August.....	127	94	108	1.33	1.53	6,620
September.....	1,180	83	242	2.99	3.34	14,380
Water year 1934-35.....	14,300	83	876	10.8	147.00	634,400

NISQUALLY RIVER BASIN

Nisqually River near Alder, Wash.

Location.- Water-stage recorder, lat. 46°46'05", long. 122°16'05", in SW $\frac{1}{4}$ sec. 23, T. 15 N., R. 4 E., 2 $\frac{1}{2}$ miles southeast of Alder.

Drainage area.- 250 square miles.

Records available.- August 1931 to September 1935.

Extremes.- Maximum discharge recorded, 25,000 second-feet about 12:30 a.m. Dec. 22, 1933 (stage determined from high-water marks); minimum recorded, 182 second-feet Oct. 19, 1935.

Remarks.- No diversion or regulation.

Monthly discharge of Nisqually River near Alder

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
August 24-31, 1931.....	500	401	455	1.82	0.54	7,220
September.....	590	293	399	1.60	1.78	23,700
The period.....	-	-	-	-	-	30,900
October 1931.....	2,940	285	756	3.02	3.48	46,500
November.....	2,020	630	1,210	4.84	5.40	72,000
December.....	5,550	580	1,410	5.64	6.50	86,700
January.....	3,680	736	1,430	5.72	6.60	87,900
February.....	11,500	491	1,640	6.56	7.08	94,300
March.....	4,290	1,120	2,400	9.60	11.07	148,000
April.....	3,580	1,320	1,980	7.92	8.84	118,000
May.....	2,130	1,120	1,700	6.80	7.84	105,000
June.....	2,440	1,040	1,600	6.40	7.14	95,200
July.....	1,840	635	1,050	4.20	4.84	64,600
August.....	841	401	631	2.52	2.90	38,800
September.....	-	305	447	1.79	2.00	26,600
Water year 1931-32.....	11,500	285	1,350	5.40	73.69	984,000
October 1932.....	939	285	549	2.20	2.54	33,800
November.....	9,740	1,080	3,200	12.8	14.28	190,000
December.....	5,880	712	1,860	7.44	8.58	114,000
Calendar year 1932.....	11,500	285	1,540	6.16	83.71	1,120,000
January 1933.....	7,530	665	1,930	7.72	8.90	119,000
February.....	1,410	421	643	2.57	2.68	35,700
March.....	3,160	855	1,530	6.12	7.06	94,100
April.....	2,070	802	1,180	4.72	5.27	70,200
May.....	3,080	1,040	1,640	6.56	7.56	101,000
June.....	4,570	1,650	2,460	9.84	10.98	146,000
July.....	1,900	1,000	1,410	5.64	6.50	86,700
August.....	1,330	595	849	3.40	3.92	52,200
September.....	1,380	450	731	2.92	3.26	43,500
Water year 1932-33.....	9,740	285	1,500	6.00	81.53	1,090,000

Monthly discharge of Nisqually River near Alder--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1933.....	4,580	450	1,502	6.01	6.93	92,320
November.....	6,840	700	1,546	6.18	6.90	92,000
December.....	22,200	675	6,512	26.0	29.98	400,400
Calendar year 1933.....	22,200	421	1,840	7.36	99.94	1,330,000
January 1934.....	10,400	1,800	3,404	13.6	15.68	209,300
February.....	1,960	610	1,052	4.21	4.38	58,440
March.....	3,710	688	1,524	6.50	7.49	99,840
April.....	2,580	828	1,201	4.80	5.36	71,480
May.....	1,800	658	946	3.78	4.36	58,190
June.....	892	452	634	2.54	2.83	37,720
July.....	892	376	605	2.42	2.79	37,220
August.....	712	400	552	2.21	2.55	33,960
September.....	658	200	393	1.57	1.75	23,400
Water year 1933-34.....	22,200	200	1,677	6.71	91.00	1,214,000
October 1934.....	12,000	190	1,357	5.43	6.26	83,450
November.....	9,500	1,080	2,678	10.7	11.94	159,400
December.....	4,880	1,080	1,803	7.21	8.31	110,800
Calendar year 1934.....	12,000	190	1,358	5.43	73.70	983,200
January 1935.....	7,180	568	2,282	9.13	10.53	140,300
February.....	2,790	900	1,511	6.04	6.29	83,940
March.....	2,190	574	991	3.96	4.56	60,940
April.....	1,250	609	975	3.90	4.35	57,990
May.....	1,700	1,040	1,306	5.22	6.02	80,310
June.....	1,800	765	1,203	4.81	5.37	71,590
July.....	1,320	574	817	3.27	3.77	50,220
August.....	753	389	537	2.15	2.48	33,050
September.....	620	333	462	1.85	2.06	27,460
Water year 1934-35.....	12,000	190	1,325	5.30	71.94	959,400

Nisqually River near La Grande, Wash.

Location.- Water-stage recorder, lat. 46°48'10", long. 122°18'20", in sec. 9, T. 15 N., R. 4 E., 1,200 feet below diversion dam of Tacoma municipal power plant and 2 1/2 miles southeast of La Grande; also water-stage recorder on power conduit just below intake. Prior to Jan. 1, 1912, staff gages.

Drainage area.- 287 square miles.

Records available.- September 1906 to December 1911 (fragmentary), October 1919 to September 1931.

Extremes.- Maximum combined discharge of river and power conduit, 19,500 second-feet Dec. 12, 1921; practically no flow at times when conduit gates are closed.

Remarks.- Records include flow diverted through Tacoma power conduit.

Monthly discharge of Nisqually River and Tacoma power conduit near La Grande

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	-	-	418	1.46	1.68	25,700
November.....	-	-	*1,290	4.49	5.01	76,800
December.....	-	-	*1,800	6.27	7.23	111,000
January.....	-	598	1,950	6.79	7.83	120,000
February.....	-	-	1,050	3.66	3.95	60,400
March.....	3,260	-	904	3.15	3.63	56,600
April.....	2,890	787	1,300	4.53	5.05	77,400
May.....	2,280	908	1,360	4.74	5.46	83,600
June.....	2,030	734	1,510	4.56	5.09	78,000
July.....	1,220	588	889	3.10	3.57	54,700
August.....	858	418	661	2.30	2.65	40,600
September.....	2,860	420	1,280	4.46	4.98	76,200
The year.....	-	-	1,180	4.11	56.13	860,000

*Estimated.

Monthly discharge of Nisqually River and Tacoma power conduit near La Grande--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920-21						
October.....	6,260	1,020	2,160	7.53	8.68	133,000
November.....	3,870	526	1,510	5.61	6.26	96,800
December.....	10,900	1,070	2,220	7.74	8.92	136,000
January.....	7,860	902	2,560	9.23	10.54	163,000
February.....	9,170	1,430	3,100	10.8	11.25	172,000
March.....	8,530	-	2,500	8.71	10.04	154,000
April.....	4,320	885	1,700	5.92	6.60	101,000
May.....	2,690	1,320	1,980	6.55	7.55	116,000
June.....	2,990	1,200	1,830	6.38	7.12	109,000
July.....	1,790	800	1,020	3.55	4.09	62,700
August.....	-	-	650	2.26	2.61	40,000
September.....	-	-	456	1.59	1.77	27,200
The year.....	10,900	-	1,810	6.31	85.53	1,310,000
1921-22						
October.....	2,650	-	729	2.54	2.93	44,800
November.....	7,130	-	*1,700	5.92	6.60	101,000
December.....	16,700	-	3,250	11.3	13.03	200,000
January.....	-	-	598	2.08	2.40	36,800
February.....	-	-	575	2.00	2.08	31,900
March.....	2,040	-	739	2.57	2.96	45,400
April.....	1,980	745	1,170	4.08	4.55	69,600
May.....	3,750	1,220	2,150	7.49	8.64	132,000
June.....	3,280	1,060	1,740	6.06	6.76	104,000
July.....	1,280	559	780	2.72	3.14	48,000
August.....	848	446	636	2.22	2.56	39,100
September.....	732	-	547	1.91	2.13	32,500
The year.....	16,700	-	1,220	4.25	57.78	885,000
1922-23						
October.....	1,500	-	514	1.79	2.06	31,600
November.....	822	-	514	1.79	2.00	30,600
December.....	7,750	-	*1,720	5.99	6.91	106,000
January.....	15,900	800	3,870	13.5	15.56	238,000
February.....	1,550	-	835	2.91	3.03	46,400
March.....	2,090	709	984	3.43	3.95	60,500
April.....	1,930	1,110	1,470	5.12	5.71	87,500
May.....	3,010	964	1,560	5.44	6.27	95,900
June.....	2,150	850	1,330	4.63	5.17	79,100
July.....	1,560	714	998	3.48	4.01	61,400
August.....	1,240	532	732	2.55	2.94	45,000
September.....	-	-	497	1.73	1.93	29,600
The year.....	13,900	-	1,260	4.39	59.54	912,000
1923-24						
October.....	2,840	-	602	2.10	2.42	37,000
November.....	3,050	-	654	2.28	2.54	39,900
December.....	7,210	755	1,670	5.82	6.71	103,000
January.....	8,320	823	1,470	5.12	5.90	90,400
February.....	10,300	1,380	3,150	11.0	11.86	181,000
March.....	1,470	-	734	2.56	2.95	45,100
April.....	1,140	544	823	2.87	3.20	49,000
May.....	2,050	700	1,120	3.90	4.50	68,900
June.....	1,250	503	752	2.62	2.92	44,700
July.....	1,120	-	691	2.41	2.78	42,500
August.....	-	-	565	1.97	2.27	34,700
September.....	-	-	445	1.55	1.73	25,600
The year.....	10,300	-	1,050	3.66	49.78	762,000
1924-25						
October.....	2,480	-	812	2.83	3.26	49,900
November.....	4,920	1,030	2,180	7.60	8.48	130,000
December.....	5,180	954	1,860	6.48	7.47	114,000
January.....	6,950	948	2,470	8.61	9.83	152,000
February.....	8,550	1,400	3,040	10.6	11.04	169,000
March.....	1,350	666	993	3.46	3.99	61,100
April.....	2,690	968	1,530	5.33	5.95	91,000
May.....	2,300	940	1,620	5.64	6.50	99,600
June.....	1,440	772	1,010	3.52	3.93	60,100
July.....	917	671	794	2.77	3.19	48,800
August.....	825	-	556	1.94	2.24	34,200
September.....	-	-	383	1.33	1.48	22,800
The year.....	8,550	-	1,430	4.98	67.46	1,030,000

*Estimated.

Monthly discharge of Nisqually River and Tacoma power conduit near La Grande--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1925-26						
October.....	729	215	311	1.08	1.24	19,100
November.....	779	184	467	1.63	1.82	27,800
December.....	5,490	876	2,010	7.00	8.07	124,000
January.....	2,980	803	1,340	4.67	5.38	82,400
February.....	3,680	1,010	1,910	6.66	6.94	106,000
March.....	1,540	694	1,060	3.69	4.25	65,200
April.....	1,020	552	762	2.66	2.97	45,300
May.....	1,210	592	898	3.13	3.61	55,200
June.....	966	518	699	2.44	2.72	41,600
July.....	1,000	414	650	2.26	2.61	40,000
August.....	750	420	543	1.89	2.18	33,400
September.....	700	306	446	1.55	1.73	26,500
The year.....	5,490	184	920	3.21	43.52	666,000
1926-27						
October.....	4,590	403	1,130	3.94	4.54	69,500
November.....	3,790	-	*1,370	4.77	5.32	81,500
December.....	4,800	941	1,830	6.38	7.36	113,000
January.....	8,100	-	2,170	7.56	8.72	133,000
February.....	4,800	-	2,090	7.28	7.58	116,000
March.....	-	-	*1,390	4.84	5.58	85,500
April.....	2,810	-	*1,210	4.22	4.71	72,000
May.....	3,460	1,300	1,860	6.48	7.47	114,000
June.....	3,540	972	1,770	6.17	6.88	105,000
July.....	1,420	598	1,000	3.48	4.01	61,500
August.....	-	-	*588	2.05	2.36	36,200
September.....	1,570	-	*716	2.49	2.78	42,600
The year.....	8,100	403	1,420	4.95	67.31	1,030,000
1927-28						
October.....	5,130	776	1,590	5.54	6.39	97,800
November.....	11,300	1,140	3,220	11.2	12.50	192,000
December.....	4,220	-	1,520	5.30	6.11	93,500
January.....	6,350	772	2,440	8.50	9.80	150,000
February.....	1,160	-	*757	2.64	2.85	43,500
March.....	4,700	480	1,900	6.62	7.63	117,000
April.....	3,180	1,060	1,720	5.99	6.68	102,000
May.....	3,470	973	1,790	6.24	7.19	110,000
June.....	1,200	672	860	3.00	3.35	51,200
July.....	1,160	674	861	3.00	3.46	52,900
August.....	668	448	553	1.93	2.22	34,000
September.....	609	322	450	1.57	1.75	26,800
The year.....	11,300	322	1,470	5.12	69.93	1,070,000
1928-29						
October.....	1,670	364	742	2.59	2.99	45,600
November.....	2,110	-	747	2.60	2.90	44,400
December.....	3,500	351	963	3.36	3.87	59,200
January.....	1,950	380	738	2.57	2.96	45,400
February.....	-	-	*440	1.53	1.59	24,400
March.....	3,070	-	1,290	4.49	5.18	79,300
April.....	2,440	778	1,420	4.95	5.52	84,500
May.....	2,880	1,360	2,080	7.25	8.36	128,000
June.....	2,460	1,290	1,720	5.99	6.68	102,000
July.....	1,280	447	874	3.05	3.52	53,700
August.....	893	316	633	2.21	2.55	38,900
September.....	595	186	404	1.41	1.57	24,000
The year.....	3,500	186	1,010	3.52	47.69	729,000
1929-30						
October.....	434	176	290	1.01	1.16	17,800
November.....	274	115	207	*.721	.80	12,300
December.....	5,000	184	1,270	4.43	5.11	78,100
January.....	1,390	400	656	2.29	2.64	40,300
February.....	3,880	1,140	2,400	8.36	8.70	133,000
March.....	3,000	500	1,240	4.32	4.98	76,200
April.....	1,680	1,000	1,280	4.46	4.98	76,200
May.....	2,520	592	1,080	3.76	4.34	66,400
June.....	1,130	467	785	2.74	3.06	46,700
July.....	989	508	677	2.36	2.72	41,600
August.....	759	370	544	1.90	2.19	33,400
September.....	667	187	404	1.41	1.57	24,000
The year.....	5,000	115	893	3.11	42.25	646,000

*Estimated.

Monthly discharge of Nisqually River and Tacoma power conduit near La Grande--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	1,510	250	427	1.49	1.72	26,300
November.....	723	249	*469	1.63	1.82	27,900
December.....	-	-	*547	1.91	2.20	33,600
January.....	4,540	-	1,890	6.59	7.60	116,000
February.....	5,240	-	*1,390	4.84	5.04	77,200
March.....	6,580	-	1,750	6.10	7.03	108,000
April.....	7,210	928	2,050	7.14	7.97	122,000
May.....	2,290	733	1,200	4.18	4.82	73,800
June.....	3,320	607	1,160	4.04	4.51	69,400
July.....	1,120	714	865	3.01	3.47	53,200
August.....	862	412	646	2.25	2.59	39,700
September.....	800	-	*502	1.75	1.95	29,900
The year.....	7,210	249	1,070	3.73	50.72	777,000

*Estimated.

Yearly discharge of Nisqually River and Tacoma power conduit near La Grande

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1907.....	1,730	6.03	81.59	1,250,000	1,310	4.56	61.88	949,000
1908.....	1,440	5.02	68.35	1,050,000	1,380	4.81	65.64	1,000,000
1910.....	1,570	5.47	74.24	1,140,000	1,580	5.51	74.89	1,150,000
1920.....	1,180	4.11	56.13	860,000	1,390	4.84	66.07	1,010,000
1921.....	1,810	6.31	85.53	1,310,000	1,780	6.20	84.23	1,290,000
1922.....	1,220	4.25	57.78	885,000	977	3.40	46.19	708,000
1923.....	1,260	4.39	59.54	912,000	1,270	4.43	60.24	922,000
1924.....	1,050	3.66	49.78	762,000	1,210	4.22	57.32	877,000
1925.....	1,430	4.93	67.46	1,030,000	1,260	4.39	59.36	910,000
1926.....	920	3.21	43.52	666,000	1,050	3.66	49.61	760,000
1927.....	1,420	4.95	67.31	1,030,000	1,590	5.54	75.09	1,150,000
1928.....	1,470	5.12	69.93	1,070,000	1,150	4.01	54.69	837,000
1929.....	1,010	3.52	47.69	729,000	951	3.31	45.00	688,000
1930.....	893	3.11	42.25	646,000	864	3.01	40.92	626,000
1931.....	1,070	3.73	50.72	777,000	-	-	-	-
Highest.....	1,810	6.31	85.53	1,310,000	1,780	6.20	84.23	1,290,000
Average.....	1,300	4.52	61.45	941,000	1,270	4.42	60.08	920,000
Lowest.....	893	3.11	42.25	646,000	864	3.01	40.92	626,000

East Creek near Elbe, Wash.

Location.- Staff gage, lat. 46°44'35", long. 122°12'15", in NW $\frac{1}{4}$ sec. 32, T. 15 N., R. 5 E., at Lutkens ranch, $\frac{1}{2}$ miles above mouth and $\frac{1}{2}$ miles southwest of Elbe.

Drainage area.- 11.5 square miles.

Records available.- August 1918 to September 1922.

Extremes.- Maximum discharge observed, 1,430 second-feet at 3 p.m. Jan. 22, 1919; minimum observed, 1.6 second-feet Sept. 15-29, 1918.

Remarks.- No diversion or regulation.

Monthly discharge of East Creek near Elbe

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1919.....	36	3.3	8.06	496
November.....	390	19.0	54.9	3,270
December 1920.....	886	-	119	7,320
January.....	482	13.0	73.8	4,540
February.....	102	11.6	33.5	1,930
March.....	570	11.0	58.0	3,570
April.....	95	34	56.1	3,340
May.....	49	19.5	29.8	1,830
June.....	48	11.6	26.5	1,580
July.....	14.8	4.6	7.92	487
August.....	22	3.2	4.93	303
September.....	212	4.6	54.0	3,210
Water year 1919-20.....	886	3.2	43.9	31,900
October 1920.....	540	35	115	7,070
November.....	300	17	79.1	4,710
December.....	582	65	132	8,120
Calendar year 1920.....	582	3.2	56.1	40,700
January 1921.....	431	43	135	8,300
February.....	431	55	127	7,050
March.....	722	39	129	7,930
April.....	197	28	67.1	3,990
May.....	107	32	55.8	3,430
June.....	42	15	26.9	1,600
July.....	15	4.0	7.81	480
August.....	11	2.8	3.94	242
September.....	31	2.6	7.78	463
Water year 1920-21.....	722	2.6	73.8	53,400
October 1921.....	272	5.1	39.5	2,430
November.....	457	20	113	6,720
December.....	624	22	133	8,180
Calendar year 1921.....	722	2.6	70.2	50,800
January 1922.....	44	18	28.4	1,750
February.....	65	19	30.9	1,720
March.....	181	20	48.6	2,990
April.....	156	38	65.7	3,910
May.....	286	54	107	6,580
June.....	107	7.5	37.0	2,200
July.....	6.9	3.3	4.30	264
August.....	5.0	3.0	3.58	220
September.....	5.8	3.0	3.64	217
Water year 1921-22.....	624	3.0	51.3	37,200

Little Nisqually River near Alder, Wash.

Location.- Water-stage recorder, lat. $46^{\circ}47'20''$, long. $122^{\circ}18'45''$, in NW $\frac{1}{4}$ 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 $1\frac{1}{2}$ miles southwest of Alder.

Drainage area.- 27.2 square miles (revised).

Records available.- August 1920 to September 1935.

Extremes.- Maximum discharge recorded, 2,430 second-feet at 8 p.m. Dec. 20 and at 7 p.m. Dec. 21, 1933; minimum discharge, 0.9 second-foot July 17, 1926.

Remarks.- No diversion or regulation.

Monthly discharge of Little Nisqually River near Alder

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920						
August.....	83	12	17.1	0.629	0.73	1,050
September.....	-	14	*124	4.56	5.09	7,380
1920-21						
October.....	1,200	48	224	6.24	9.50	13,800
November.....	588	27	137	6.88	7.68	11,100
December.....	1,920	104	305	11.2	12.91	18,800
January.....	1,130	71	274	10.1	11.64	16,800
February.....	1,130	104	308	11.3	11.77	17,100
March.....	1,870	52	277	10.2	11.78	17,000
April.....	509	57	161	5.92	6.60	9,580
May.....	224	72	130	4.78	5.51	7,990
June.....	-	32	60.0	2.21	2.47	3,570
July.....	50	12	22.8	.838	.97	1,400
August.....	20	9.0	11.3	.415	.48	695
September.....	71	8.2	20.0	.735	.82	1,190
The year.....	1,920	8.2	164	6.03	82.11	119,000
1921-22						
October.....	548	15	86.6	3.18	3.67	5,320
November.....	1,120	43	260	9.56	10.67	15,500
December.....	1,520	42	308	11.3	13.03	18,900
January.....	107	-	56.7	2.08	2.40	3,490
February.....	170	41	71.5	2.63	2.74	3,970
March.....	-	-	*99.5	3.66	4.22	6,120
April.....	349	79	166	6.10	6.81	9,880
May.....	672	129	255	9.38	10.81	15,700
June.....	280	32	92.2	3.39	3.78	5,490
July.....	26	12	17.6	.647	.75	1,080
August.....	20	9	11.8	.434	.50	728
September.....	34	10	14.2	.522	.58	845
The year.....	1,520	9	120	4.41	59.96	87,000
1922-23						
October.....	252	12	48.3	1.78	2.05	2,970
November.....	99	20	41.6	1.53	1.71	2,480
December.....	1,220	-	237	8.71	10.04	14,600
January.....	1,800	60	502	18.5	21.33	30,900
February.....	249	41	93.9	3.45	3.59	5,210
March.....	275	62	102	3.75	4.32	6,270
April.....	224	78	136	5.00	5.58	8,090
May.....	179	56	95.8	3.52	4.06	5,890
June.....	113	24	57.6	2.12	2.36	3,430
July.....	49	12	20.8	.765	.88	1,280
August.....	50	9	14.7	.540	.62	904
September.....	22	8	10.7	.393	.44	637
The year.....	1,800	8	114	4.19	56.98	82,700
1923-24						
October.....	556	10	67.6	2.49	2.87	4,160
November.....	441	14	60.0	2.21	2.47	3,570
December.....	1,160	50	212	7.79	8.98	13,000
January.....	1,140	59	170	6.25	7.21	10,500
February.....	1,200	107	324	11.9	12.83	18,600
March.....	130	30	53.8	1.98	2.28	3,310
April.....	103	36	58.9	2.17	2.42	3,500
May.....	45	15	28.1	1.03	1.19	1,730
June.....	15	8.8	10.6	.390	.44	631
July.....	8.0	6.8	7.29	.268	.31	448
August.....	11	5.5	7.03	.258	.30	432
September.....	30	5.2	9.25	.340	.38	550
The year.....	1,200	5.2	83.2	3.06	41.68	60,400

*Estimated.

Monthly discharge of Little Nisqually River near Alder--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	865	15	146	5.37	6.19	8,980
November.....	1,140	90	327	12.0	13.39	19,500
December.....	484	-	*149	5.48	6.32	9,160
January.....	990	78	358	13.2	15.22	22,000
February.....	1,090	87	336	12.4	12.61	18,700
March.....	160	54	85.0	3.12	3.60	5,230
April.....	227	50	123	4.62	5.04	7,520
May.....	137	39	75.9	2.79	3.22	4,670
June.....	128	17	45.2	1.66	1.85	2,690
July.....	16	9.2	13.2	.485	.56	812
August.....	15	7.6	10.9	.401	.46	670
September.....	14	3.5	6.54	.240	.27	389
The year.....	1,140	3.5	138	5.07	69.03	100,000
1925-26						
October.....	7.9	4.1	5.44	.200	.23	334
November.....	217	4.6	56.0	2.06	2.30	3,330
December.....	810	60	223	8.20	9.45	13,700
January.....	323	53	135	4.96	5.72	8,300
February.....	694	94	247	9.08	9.46	13,700
March.....	180	34	77.7	2.86	3.30	4,780
April.....	39	21	31.2	1.15	1.28	1,860
May.....	77	20	50.3	1.85	2.13	3,090
June.....	38	5.0	17.9	.658	.73	1,070
July.....	7.8	3.5	5.70	.210	.24	350
August.....	11	3.4	6.66	.245	.28	410
September.....	84	5.0	17.1	.629	.70	1,020
The year.....	810	3.4	71.8	2.64	35.82	51,900
1926-27						
October.....	690	21	103	3.79	4.37	6,330
November.....	759	30	177	6.51	7.26	10,500
December.....	854	84	252	9.26	10.68	15,500
January.....	1,460	75	320	11.8	13.60	19,700
February.....	942	72	334	12.3	12.81	18,500
March.....	340	84	163	5.99	6.91	10,000
April.....	306	80	141	5.18	5.78	8,390
May.....	374	89	187	6.88	7.93	11,500
June.....	163	27	74.9	2.75	3.07	4,460
July.....	29	13	21.6	.794	.92	1,330
August.....	15	9.2	10.8	.597	.46	664
September.....	197	15	37.5	1.38	1.54	2,230
The year.....	1,460	9.2	151	5.55	75.33	109,000
1927-28						
October.....	615	57	125	4.60	5.30	7,690
November.....	1,210	82	381	14.0	15.62	22,700
December.....	309	58	115	4.23	4.88	7,070
January.....	1,110	50	262	9.63	11.10	16,100
February.....	118	28	63.7	2.54	2.62	3,660
March.....	769	25	265	9.74	11.23	16,300
April.....	463	108	217	7.98	8.90	12,900
May.....	459	32	118	4.34	5.00	7,260
June.....	42	21	28.1	1.03	1.15	1,670
July.....	48	12	23.1	.849	.98	1,420
August.....	18	5	9.71	.357	.41	597
September.....	13	5	9.43	.347	.39	561
The year.....	1,210	5	135	4.96	67.48	97,900
1928-29						
October.....	306	14	61.3	2.25	2.59	3,770
November.....	423	17	97.0	3.57	3.98	5,770
December.....	901	36	163	5.99	6.91	10,000
January.....	452	-	108	3.97	4.58	6,640
February.....	75	-	40.0	1.47	1.53	2,220
March.....	677	60	194	7.13	8.22	11,900
April.....	603	68	213	7.83	8.74	12,700
May.....	238	66	153	5.62	6.48	9,410
June.....	275	40	84.5	3.11	3.47	5,030
July.....	38	15	22.9	.842	.97	1,410
August.....	15	8.5	11.7	.430	.50	719
September.....	9.1	6.2	7.84	.288	.32	467
The year.....	901	6.2	96.7	3.56	48.29	70,000

Monthly discharge of Little Nisqually River near Alder--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	13	3.4	6.51	.239	.28	400
November.....	8.5	3.1	5.71	.210	.23	340
December.....	998	4.9	187	6.88	7.93	11,500
January.....	168	-	65.5	2.41	2.78	4,030
February.....	628	98	325	12.0	12.50	18,100
March.....	585	39	136	5.00	5.76	8,360
April.....	150	52	84.8	3.12	3.48	5,050
May.....	363	27	76.1	2.80	3.23	4,680
June.....	52	22	31.6	1.16	1.29	1,880
July.....	22	10	14.1	.518	.60	867
August.....	11	7.8	9.21	.339	.39	566
September.....	10	6.9	8.38	.308	.34	499
The year.....	998	3.1	77.7	2.86	38.81	56,300
1930-31						
October.....	27	5.9	11.7	.430	.50	719
November.....	71	10	37.6	1.38	1.54	2,240
December.....	147	24	49.2	1.81	2.09	3,030
January.....	855	40	250	9.19	10.60	15,400
February.....	1,180	40	161	5.92	6.16	8,940
March.....	1,160	70	228	8.38	9.66	14,000
April.....	763	62	220	8.09	9.03	13,100
May.....	65	22	36.7	1.35	1.56	2,260
June.....	599	16	72.4	2.66	2.97	4,310
July.....	65	10	23.1	.849	.98	1,420
August.....	9.8	5.0	7.27	.267	.31	447
September.....	22	5.0	8.99	.331	.37	535
The year.....	1,180	5.0	91.6	3.37	45.77	66,400
1931-32						
October.....	398	6.4	80.1	2.94	3.39	4,930
November.....	338	51	151	5.55	6.19	8,980
December.....	1,270	49	245	9.01	10.39	15,100
January.....	940	64	236	8.68	10.01	14,500
February.....	1,950	36	224	8.24	8.89	12,900
March.....	761	110	358	13.2	15.22	22,000
April.....	690	137	231	8.49	9.47	13,700
May.....	195	62	104	3.82	4.40	6,400
June.....	83	24	52.4	1.93	2.15	3,120
July.....	48	13	29.5	1.08	1.24	1,810
August.....	16	7.5	12.8	.471	.54	787
September.....	14	6.2	7.56	.278	.31	450
The year.....	1,950	6.2	144	5.29	72.20	105,000
1932-33						
October.....	80	5.7	22.8	.838	.97	1,400
November.....	1,100	89	321	11.8	13.17	19,100
December.....	870	50	266	9.78	11.28	16,400
January.....	1,000	54	248	9.12	10.51	15,200
February.....	254	36	78.1	2.87	2.99	4,340
March.....	848	124	293	10.8	12.45	18,000
April.....	282	93	165	6.07	6.77	9,820
May.....	384	135	197	7.24	8.35	12,100
June.....	550	74	183	6.73	7.51	10,900
July.....	71	19	40.6	1.49	1.72	2,500
August.....	45	8.4	16.3	.599	.69	1,000
September.....	242	9.2	58.9	2.17	2.42	3,500
The year.....	1,100	5.7	158	5.81	78.83	114,000
1933-34						
October.....	615	25	133	4.89	5.64	8,200
November.....	739	36	120	4.41	4.92	7,110
December.....	1,950	35	825	50.3	34.93	50,750
January.....	1,200	179	473	17.4	20.06	29,060
February.....	166	45	96.2	3.54	3.69	5,340
March.....	690	41	176	6.54	7.54	10,940
April.....	342	36	81.4	2.99	3.34	4,840
May.....	337	36	85.6	3.15	3.63	5,260
June.....	33	14	20.7	.761	.85	1,230
July.....	26	8.2	12.2	.449	.52	747
August.....	12	4.0	6.14	.226	.26	378
September.....	40	3.3	10.8	.597	.44	641
The year.....	1,950	3.3	172	6.32	85.82	124,500

Monthly discharge of Little Nisqually River near Alder--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
October.....	1,320	5.9	158	5.81	6.70	9,720
November.....	1,170	96	375	13.8	15.40	22,500
December.....	763	79	216	7.94	9.15	13,290
January.....	1,650	65	362	13.3	15.33	22,270
February.....	540	80	191	7.02	7.31	10,610
March.....	540	49	121	4.45	5.13	7,440
April.....	194	53	122	4.49	5.01	7,290
May.....	144	67	100	3.68	4.24	6,150
June.....	73	23	43.4	1.60	1.78	2,580
July.....	35	10	18.9	.695	.80	1,160
August.....	12	5.6	7.74	.285	.33	476
September.....	65	4.4	13.9	.511	.57	825
The year.....	1,650	4.4	144	5.29	71.75	104,100

Yearly discharge of Little Nisqually River near Alder

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1921.....	164	6.03	82.11	119,000	159	5.85	79.39	115,000
1922.....	120	4.41	59.96	87,000	93.0	3.42	46.39	67,400
1923.....	114	4.19	56.98	82,700	115	4.23	57.50	83,300
1924.....	83.2	3.06	41.68	60,400	107	3.93	53.26	77,300
1925.....	138	5.07	69.03	100,000	110	4.04	55.11	79,800
1926.....	71.8	2.64	35.82	51,900	92.4	3.40	46.15	66,900
1927.....	151	5.55	75.33	109,000	158	5.81	78.82	114,000
1928.....	135	4.96	67.48	97,900	110	4.04	55.16	80,000
1929.....	96.7	3.56	48.29	70,000	86.7	3.19	43.25	62,700
1930.....	77.7	2.86	38.81	56,300	69.1	2.54	34.50	50,000
1931.....	91.6	3.37	45.77	66,400	124	4.56	61.61	89,400
1932.....	144	5.29	72.20	105,000	155	5.70	77.65	113,000
1933.....	158	5.81	78.83	114,000	198	7.28	98.90	143,000
1934.....	172	6.32	85.82	124,500	143	5.26	71.58	103,700
1935.....	144	5.29	71.75	104,100	-	-	-	-
Highest.....	172	6.32	85.82	124,500	198	7.28	98.90	143,000
Average.....	124	4.56	61.99	89,900	123	4.52	61.38	89,000
Lowest.....	71.8	2.64	35.82	51,900	69.1	2.54	34.50	50,000

Chop Creek near Eatonville, Wash.

Location.-- Water-stage recorder, lat. 46°53'00", long. 122°16'35', in SE¼ sec. 10, T. 16 N., R. 4 E., 400 feet below mouth of Lynch Creek, 600 feet below outlet of Chop Lake, and 1½ miles northwest of Eatonville.

Records available.-- June 1927 to September 1932.

Extremes.-- Maximum discharge, 732 second-feet at 8:15 p.m. Mar. 5, 1932; minimum, 4.0 second-feet Aug. 28, 1930.

Remarks.-- Flow regulated by natural storage in Chop Lake. No diversion.

Monthly discharge of Chop Creek near Eatonville

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1927				
June.....	57	18	32.7	1,950
July.....	16	8.9	11.3	695
August.....	23	6.3	8.13	500
September.....	175	11	35.4	2,110
The year.....	-	-	-	5,260

Monthly discharge of Chop Creek near Eatonville--Continued

Monthly discharge of deep creek from Lawrenceville, Georgia				Run-off in acre-feet
Month	Discharge in second-feet			
	Maximum	Minimum	Mean	
1927-28				
October.....	381	35	90.8	5,580
November.....	472	43	191	11,400
December.....	250	46	99.7	6,150
January.....	459	50	169	10,400
February.....	60	29	39.9	2,300
March.....	350	27	135	8,300
April.....	272	84	141	8,390
May.....	192	26	59.9	3,680
June.....	30	18	22.2	1,320
July.....	46	9.6	18.1	1,110
August.....	9.6	7.4	8.25	507
September.....	11	7.0	8.51	506
The year.....	472	7.0	82.1	59,600
1928-29				
October.....	105	12	30.6	1,880
November.....	44	15	24.8	1,480
December.....	172	17	52.7	3,240
January.....	143	25	58.7	3,610
February.....	107	27	52.0	2,890
March.....	251	74	127	7,810
April.....	160	72	104	6,190
May.....	193	37	81.5	5,010
June.....	86	27	53.6	3,190
July.....	25	9.0	14.6	898
August.....	10	6.1	7.49	461
September.....	14	5.5	6.67	397
The year.....	251	5.5	51.2	37,100
1929-30				
October.....	10	6.5	7.69	473
November.....	17	7.0	11.0	655
December.....	194	11	69.4	4,270
January.....	121	21	39.4	2,420
February.....	332	59	153	8,500
March.....	365	26	85.7	5,270
April.....	68	32	44.3	2,640
May.....	81	21	36.0	2,210
June.....	60	14	22.7	1,350
July.....	13	6.5	8.52	524
August.....	7.0	4.0	5.31	326
September.....	8.0	4.3	6.08	362
The year.....	365	4.0	40.1	29,000
1930-31				
October.....	37	5.6	12.4	762
November.....	104	10	41.3	2,460
December.....	45	18	27.4	1,680
January.....	156	21	87.4	5,370
February.....	112	38	64.2	3,570
March.....	416	39	70.3	4,320
April.....	569	28	121	7,200
May.....	77	18	29.9	1,840
June.....	158	15	61.3	3,650
July.....	61	9.7	21.3	1,310
August.....	9.7	6.0	7.51	462
September.....	22	6.0	10.3	613
The year.....	569	5.6	45.9	33,200
1931-32				
October.....	221	8.9	49.0	3,010
November.....	136	34	73.7	4,390
December.....	96	31	56.5	3,470
January.....	225	40	86.4	5,310
February.....	426	51	111	6,380
March.....	586	96	191	11,700
April.....	170	48	98.6	5,870
May.....	95	18	32.4	1,990
June.....	22	-	12.2	728
July.....	-	-	20.1	1,240
August.....	8.4	4.3	5.86	360
September.....	16	-	9.69	577
The year.....	586	4.3	62.0	45,000

Yearly discharge of Chop Creek near Eatonville

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1928.....	82.1	59,600	59.4	43,100
1929.....	51.2	37,100	49.5	35,900
1930.....	40.1	29,000	39.4	28,500
1931.....	45.9	33,200	54.2	39,200
1932.....	62.0	45,000	-	-

PUYALLUP RIVER BASIN

Puyallup River near Electron, Wash.

Location.- Water-stage recorder, lat. 46°54'10", long. 122°02'00", in NE¼NW¼ sec. 3, T. 18 N., R. 6 E., 1,000 feet above intake of Puget Sound Power & Light Co.'s flume, a quarter of a mile below Mowich River, and 10 miles southeast of Electron.

Drainage area.- 91 square miles.

Records available.- October 1908 to September 1926.

Extremes.- Maximum discharge, 4,800 second-feet (estimated), at noon Dec. 18, 1917; minimum, 100 second-feet (estimated) Dec. 12, 1922, when stage-discharge relation was affected by ice.

Remarks.- No diversion or regulation.

Monthly discharge of Puyallup River near Electron

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	315	136	205	2.25	2.59	12,600
November.....	1,300	244	546	6.00	6.69	32,500
December.....	1,210	-	466	5.12	5.90	28,700
January.....	1,300	195	554	6.09	7.02	34,100
February.....	578	154	269	2.96	3.19	15,500
March.....	838	147	254	2.79	3.22	15,600
April.....	686	192	316	3.47	3.87	18,800
May.....	893	272	451	4.96	5.72	27,700
June.....	978	353	637	7.00	7.81	37,900
July.....	843	480	665	7.31	8.43	40,900
August.....	730	345	567	6.23	7.18	34,900
September.....	990	345	589	6.47	7.22	35,000
The year.....	1,300	136	460	5.05	68.84	334,000
1920-21						
October.....	1,580	342	591	6.49	7.48	36,300
November.....	866	202	391	4.30	4.80	23,300
December.....	2,050	253	456	5.01	5.78	28,000
January.....	2,010	247	574	6.31	7.28	35,300
February.....	1,920	216	669	7.35	7.65	37,200
March.....	1,290	262	504	5.54	6.39	31,000
April.....	1,220	241	421	4.63	5.17	25,100
May.....	841	343	559	6.14	7.08	34,400
June.....	1,450	555	871	9.57	10.68	51,800
July.....	933	551	661	7.26	8.37	40,600
August.....	803	325	548	6.02	6.94	33,700
September.....	671	180	325	3.57	3.98	19,500
The year.....	2,050	180	547	6.01	81.60	396,000
1921-22						
October.....	637	202	341	3.75	4.32	21,000
November.....	2,870	192	478	5.25	5.86	28,400
December.....	4,020	231	882	9.69	11.17	54,200
January.....	530	140	203	2.23	2.57	12,500
February.....	253	126	154	1.69	1.76	8,550
March.....	205	120	146	1.60	1.84	8,980
April.....	384	183	265	2.91	3.25	15,800
May.....	1,350	303	625	6.87	7.92	38,400
June.....	1,550	664	953	10.5	11.71	56,700
July.....	1,030	415	653	7.18	8.28	40,200
August.....	855	342	574	6.31	7.28	35,500
September.....	630	245	438	4.81	5.37	26,100
The year.....	4,020	120	478	5.25	71.33	346,000

Monthly discharge of Puyallup River near Electron--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1922-23						
October.....	960	178	290	3.19	3.68	17,800
November.....	444	157	233	2.56	2.86	13,900
December.....	2,130	-	431	4.74	5.46	26,500
January.....	3,650	212	867	9.53	10.99	53,300
February.....	442	-	230	2.53	2.64	12,800
March.....	615	180	248	2.73	3.15	15,200
April.....	540	296	394	4.33	4.83	23,400
May.....	1,380	278	593	6.52	7.52	36,500
June.....	1,380	410	759	8.34	9.30	45,200
July.....	1,220	510	830	9.12	10.51	51,000
August.....	861	383	586	6.44	7.42	36,000
September.....	663	226	417	4.58	5.11	24,800
The year.....	3,650	-	492	5.41	73.47	356,000
1923-24						
October.....	1,180	214	361	5.97	4.58	22,200
November.....	898	158	275	3.02	3.37	16,400
December.....	1,230	287	421	4.63	5.34	25,900
January.....	2,100	264	450	4.95	5.71	27,700
February.....	2,100	343	709	7.79	8.40	40,800
March.....	382	162	221	2.43	2.80	13,600
April.....	417	169	272	2.99	3.34	16,200
May.....	1,320	308	646	7.10	8.19	39,700
June.....	826	354	487	5.35	5.97	29,000
July.....	1,100	339	593	6.52	7.52	36,500
August.....	693	343	536	5.89	6.79	33,000
September.....	686	158	373	4.10	4.57	22,200
The year.....	2,100	158	445	4.89	66.58	323,000
1924-25						
October.....	1,100	176	347	3.81	4.39	21,300
November.....	1,500	296	596	6.55	7.31	35,500
December.....	2,560	380	707	7.77	8.96	43,500
January.....	1,180	237	489	5.37	6.19	30,100
February.....	1,750	276	576	6.33	6.59	32,000
March.....	426	216	299	3.29	3.79	18,400
April.....	1,060	264	488	5.36	5.98	29,000
May.....	1,460	478	789	8.67	10.00	48,500
June.....	1,220	366	658	7.23	8.07	39,200
July.....	988	627	775	8.52	9.82	47,700
August.....	950	317	580	6.37	7.34	35,700
September.....	550	192	386	4.24	4.73	23,000
The year.....	2,560	176	558	6.13	83.17	404,000
1925-26						
October.....	744	169	260	2.86	3.30	16,000
November.....	504	199	291	3.20	3.57	17,300
December.....	2,110	370	843	9.26	10.66	51,800
January.....	1,370	316	468	5.14	5.93	28,800
February.....	823	330	488	5.36	5.58	27,100
March.....	808	256	431	4.74	5.47	26,500
April.....	568	262	386	4.24	4.73	23,000
May.....	772	326	465	5.11	5.89	28,600
June.....	801	323	508	5.58	6.23	30,200
July.....	1,110	398	639	7.02	8.09	39,300
August.....	851	269	556	6.11	7.04	34,200
September.....	651	201	340	3.74	4.17	20,200
The year.....	2,110	169	474	5.21	70.68	343,000

Yearly discharge of Puyallup River near Electron

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1909.....	372	4.09	55.53	269,000	425	4.67	63.48	308,000
1910.....	453	4.98	67.66	328,000	486	5.34	72.45	352,000
1911.....	484	5.32	72.18	350,000	426	4.68	63.55	308,000
1912.....	538	5.91	80.47	391,000	552	6.07	82.45	400,000
1913.....	526	5.78	78.38	380,000	503	5.53	74.99	364,000
1914.....	474	5.21	70.70	343,000	488	5.36	72.87	354,000
1915.....	409	4.49	61.01	296,000	441	4.85	65.85	320,000
1916.....	601	6.60	89.88	436,000	539	5.92	80.60	391,000
1917.....	541	5.95	80.74	392,000	628	6.90	93.60	454,000
1918.....	608	6.68	90.81	440,000	555	6.10	82.75	402,000
1919.....	485	5.33	72.34	351,000	477	5.24	71.14	345,000
1920.....	460	5.05	68.84	334,000	479	5.26	71.72	348,000
1921.....	547	6.01	81.60	396,000	569	6.25	84.89	412,000
1922.....	478	5.25	71.33	346,000	415	4.56	61.98	301,000
1923.....	492	5.41	73.47	356,000	501	5.51	74.76	363,000
1924.....	445	4.89	66.58	323,000	495	5.44	73.95	359,000
1925.....	558	6.13	83.17	404,000	537	5.90	80.06	389,000
1926.....	474	5.21	70.68	343,000	-	-	-	-
Highest.....	608	6.68	90.81	440,000	628	6.90	93.60	454,000
Average.....	497	5.46	74.19	360,000	501	5.50	74.77	363,000
Lowest.....	372	4.09	55.53	269,000	415	4.56	61.98	301,000

Puyallup River near Orting, Wash.

Location.- Water-stage recorder, lat. 47°02'30", long. 122°12'20", in SW $\frac{1}{4}$ 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 1935.

Extremes.- Maximum discharge, not determined, occurred Dec. 9 or 10, 1933; minimum, 86 second-feet Oct. 19, 1934.

Remarks.- Flow diverted for Electron plant of Puget Sound Power & Light Co. returned to river above gage. Slight regulation caused by pondage in connection with operation of Electron power plant.

Monthly discharge of Puyallup River near Orting

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
September 1931.....	-	168	303	1.78	1.99	18,000
October 1931.....	3,030	164	471	2.77	3.19	29,000
November.....	1,100	298	588	3.46	3.86	35,000
December.....	1,400	268	494	2.91	3.36	30,400
January 1932.....	2,080	305	696	4.09	4.72	42,800
February.....	5,180	337	893	5.25	5.66	51,400
March.....	3,220	686	1,270	7.47	8.61	78,100
April.....	1,360	618	868	5.05	5.63	51,100
May.....	1,020	468	743	4.37	5.04	45,700
June.....	1,470	547	965	5.68	6.34	57,400
July.....	1,400	424	745	4.38	5.05	45,800
August.....	735	310	504	2.96	3.41	31,000
September.....	532	226	362	2.13	2.38	21,500
Water year 1931-32.....	5,160	164	715	4.21	57.25	519,000
October 1932.....	936	198	462	2.72	3.14	28,400
November.....	7,670	808	1,850	10.9	12.16	110,000
December.....	3,410	482	1,000	5.88	6.78	61,500
Calendar year 1932.....	7,670	198	861	5.06	68.92	625,000
January 1933.....	5,000	377	1,060	6.24	7.19	65,200
February.....	637	229	354	2.08	2.17	19,700
March.....	1,100	443	644	3.79	4.37	39,600
April.....	945	385	540	3.18	3.55	32,100
May.....	1,370	630	790	4.65	5.36	48,600
June.....	2,140	703	1,270	7.47	8.33	75,600
July.....	-	-	*1,240	7.29	8.40	76,200
August.....	-	482	724	4.26	4.91	44,500
September.....	789	182	439	2.58	2.88	26,100
Water year 1932-33.....	7,670	182	866	5.09	69.24	628,000

*Estimated.

Monthly discharge of Puyallup River near Orting--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1933.....	2,650	290	1,038	6.11	7.04	63,800
November.....	3,600	390	1,046	6.15	6.86	62,240
December.....	12,000	420	2,925	17.2	19.83	179,900
Calendar year 1933.....	12,000	182	1,010	5.94	80.89	734,000
January 1934.....	3,980	1,370	2,314	13.6	15.68	142,300
February.....	1,370	330	635	3.74	3.90	35,250
March.....	2,370	366	794	4.67	5.38	48,840
April.....	1,050	477	645	3.79	4.23	38,380
May.....	1,290	347	530	3.12	3.60	32,590
June.....	443	188	311	1.83	2.04	18,490
July.....	893	343	546	3.21	3.70	33,560
August.....	804	260	532	3.13	3.61	32,690
September.....	515	191	330	1.94	2.16	19,650
Water year 1933-34.....	12,000	188	977	5.75	78.03	707,700
October 1934.....	5,360	171	752	4.42	5.10	46,250
November.....	5,460	620	1,346	7.92	8.84	80,120
December.....	2,460	540	1,002	5.89	6.79	61,640
Calendar year 1934.....	5,460	171	815	4.79	65.03	589,800
January 1935.....	3,370	399	1,170	6.88	7.93	71,950
February.....	1,280	428	649	3.82	3.98	36,050
March.....	1,390	385	556	3.27	3.77	34,190
April.....	516	357	453	2.66	2.97	26,960
May.....	716	446	556	3.27	3.77	34,210
June.....	1,040	656	833	4.90	5.47	49,570
July.....	1,180	516	693	4.08	4.70	42,630
August.....	740	275	483	2.84	3.27	29,730
September.....	632	238	371	2.18	2.43	22,080
Water year 1934-35.....	5,460	171	739	4.35	59.02	535,400

Puyallup River at Alderton, Wash.

Location.- Chain and staff gages, lat. 47°11'00", long. 122°13'40", at highway bridge on line between sec. 25, T. 20 N., R. 4 E., and sec. 30, T. 20 N., R. 5 E., 1 mile north of Alderton.

Drainage area.- 438 square miles (revised).

Records available.- October 1914 to February 1927.

Extremes.- Maximum discharge observed, 21,200 second-feet at 11 a.m. Dec. 12, 1921; minimum observed, 228 second-feet Sept. 22, 1924.

Remarks.- All diversions returned to river above gage. Operation of Puget Sound Power & Light Co.'s plant at Electron does not materially affect the natural flow, as the pondage utilized is small.

Revisions.- Revised figures of discharge for the water year 1918-19, superseding those published in Water-Supply Paper 492 are given herein.

Monthly discharge of Puyallup River at Alderton

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1918-19						
October.....	2,830	528	941	2.15	2.48	57,900
November.....	2,110	678	1,080	2.47	2.76	64,500
December.....	8,070	765	2,180	4.98	5.74	134,000
January.....	12,200	550	2,250	5.14	5.93	139,000
February.....	2,110	1,110	1,500	3.42	3.56	83,300
March.....	2,000	1,040	1,440	3.29	3.79	89,500
April.....	3,240	1,520	2,040	4.66	5.20	121,000
May.....	3,650	1,260	1,860	4.25	4.90	114,000
June.....	1,800	1,180	1,520	3.47	3.87	90,400
July.....	2,000	965	1,400	3.20	3.69	86,100
August.....	1,260	798	1,030	2.35	2.71	63,300
September.....	2,230	407	781	1.78	1.99	46,500
The year.....	12,200	407	1,500	3.42	46.62	1,090,000

Monthly discharge of Puyallup River at Alderton--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	1,170	342	562	1.28	1.48	34,600
November.....	4,280	690	1,740	3.97	4.43	104,000
December.....	3,970	428	1,420	3.24	3.74	87,300
January.....	8,360	540	2,390	5.46	6.30	147,000
February.....	2,780	610	1,100	2.51	2.71	63,300
March.....	2,360	442	1,110	2.53	2.92	68,200
April.....	5,720	910	1,530	3.49	3.89	91,000
May.....	2,360	770	1,200	2.74	3.16	73,800
June.....	3,520	1,060	1,810	4.13	4.61	108,000
July.....	2,360	960	1,640	3.74	4.31	101,000
August.....	1,500	690	1,120	2.56	2.95	68,900
September.....	3,520	540	1,610	3.45	3.85	89,800
The year.....	8,360	342	1,430	3.26	44.35	1,040,000
1920-21						
October.....	6,740	1,120	2,330	5.32	6.13	143,000
November.....	3,070	505	1,320	3.01	3.36	78,600
December.....	11,000	815	2,030	4.63	5.34	125,000
January.....	9,950	1,060	2,790	6.37	7.34	172,000
February.....	7,530	885	2,710	6.19	6.45	151,000
March.....	6,770	1,060	2,040	4.66	5.37	125,000
April.....	4,960	640	1,340	3.06	3.41	79,700
May.....	2,780	1,060	1,710	3.90	4.50	105,000
June.....	3,950	1,400	2,210	5.05	5.63	132,000
July.....	2,910	1,300	1,690	3.63	4.18	97,800
August.....	1,600	680	1,140	2.60	3.00	70,100
September.....	1,400	460	794	1.81	2.02	47,200
The year.....	11,000	460	1,830	4.18	56.73	1,330,000
1921-22						
October.....	1,600	530	737	1.68	1.94	45,300
November.....	8,320	565	1,630	3.72	4.15	97,000
December.....	18,400	825	3,710	8.47	9.76	228,000
January.....	1,120	638	824	1.88	2.17	50,700
February.....	1,220	638	831	1.90	1.98	46,200
March.....	1,370	600	813	1.86	2.14	50,000
April.....	2,160	905	1,210	2.76	3.08	72,000
May.....	4,580	1,120	2,050	4.68	5.40	126,000
June.....	3,570	1,470	2,180	4.98	5.56	130,000
July.....	1,920	788	1,260	2.88	3.32	77,600
August.....	1,270	675	1,000	2.28	2.63	61,600
September.....	1,270	495	847	1.93	2.15	50,400
The year.....	18,400	495	1,430	3.26	44.28	1,030,000
1922-23						
October.....	2,420	362	741	1.69	1.95	45,600
November.....	1,800	495	869	1.98	2.21	51,700
December.....	9,160	460	1,660	3.79	4.37	102,000
January.....	16,000	1,470	4,240	9.68	11.16	261,000
February.....	2,970	905	1,490	3.40	3.54	82,800
March.....	2,160	1,120	1,510	3.45	3.98	92,800
April.....	1,920	1,120	1,610	3.68	4.11	95,800
May.....	2,830	1,270	1,920	4.38	5.05	115,000
June.....	2,290	1,270	2,030	4.63	5.17	121,000
July.....	2,290	990	1,790	4.09	4.72	110,000
August.....	1,220	825	1,080	2.47	2.85	66,400
September.....	1,080	395	807	1.84	2.05	48,000
The year.....	15,000	362	1,650	3.77	51.16	1,200,000
1923-24						
October.....	3,730	428	988	2.26	2.61	60,800
November.....	3,570	343	857	1.96	2.19	51,000
December.....	4,760	905	1,830	4.18	4.82	113,000
January.....	3,570	825	1,600	3.65	4.21	98,400
February.....	10,200	1,270	3,130	7.15	7.71	180,000
March.....	1,580	565	817	1.86	2.14	50,200
April.....	1,800	712	1,010	2.31	2.58	60,100
May.....	2,970	750	1,430	3.26	3.76	87,900
June.....	1,470	825	1,040	2.37	2.64	61,900
July.....	1,690	750	1,070	2.44	2.81	65,800
August.....	1,270	638	919	2.10	2.42	56,500
September.....	865	228	636	1.45	1.62	37,800
The year.....	10,200	228	1,270	2.90	39.51	923,000

Monthly discharge of Puyallup River at Alderton--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	2,460	415	830	1.89	2.18	51,000
November.....	4,140	845	2,010	4.59	5.12	120,000
December.....	8,380	935	2,750	6.28	7.24	169,000
January.....	4,480	890	2,000	4.57	5.27	123,000
February.....	5,200	845	2,030	4.63	4.82	113,000
March.....	1,940	682	1,070	2.44	2.81	65,800
April.....	3,330	720	1,400	3.20	3.57	85,300
May.....	2,880	1,080	1,790	4.09	4.72	110,000
June.....	2,320	682	1,370	3.13	3.49	81,500
July.....	1,710	1,080	1,310	2.99	3.45	80,600
August.....	1,230	510	893	2.04	2.35	54,900
September.....	845	478	640	1.46	1.63	38,100
The year.....	8,380	415	1,510	3.45	46.65	1,090,000
1925-26						
October.....	1,820	270	550	1.26	1.45	33,800
November.....	1,230	325	526	1.43	1.60	37,200
December.....	6,730	1,030	2,680	6.12	7.06	165,000
January.....	4,650	800	1,560	3.56	4.10	95,900
February.....	2,600	1,030	1,550	3.77	3.93	91,600
March.....	1,820	720	1,130	2.58	2.97	69,500
April.....	1,490	682	974	2.22	2.48	58,000
May.....	2,060	682	1,260	2.88	3.32	77,500
June.....	1,600	720	1,100	2.51	2.80	65,500
July.....	1,940	610	1,120	2.56	2.95	68,900
August.....	1,490	760	1,010	2.31	2.66	62,100
September.....	2,320	478	854	1.95	2.18	50,800
The year.....	6,730	270	1,210	2.76	37.50	876,000
1926-27						
October.....	5,770	575	1,420	3.24	3.74	87,500
November.....	2,740	510	1,310	2.99	3.34	78,000
December.....	4,140	1,080	1,770	4.04	4.66	109,000
January.....	4,480	890	1,810	4.13	4.76	111,000
The period.....	-	-	-	-	-	385,000

Yearly discharge of Puyallup River at Alderton

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1915.....	1,190	2.72	37.02	865,000	1,330	3.04	41.09	961,000
1916.....	1,960	4.47	60.95	1,430,000	1,700	3.88	52.69	1,230,000
1917.....	1,700	3.88	52.61	1,230,000	2,040	4.66	63.19	1,480,000
1918.....	1,920	4.38	59.39	1,390,000	1,660	3.79	51.52	1,200,000
1919.....	1,500	3.42	46.62	1,090,000	1,460	3.33	45.29	1,060,000
1920.....	1,430	3.26	44.35	1,040,000	1,590	3.63	49.53	1,160,000
1921.....	1,830	4.18	56.73	1,330,000	1,860	4.25	57.75	1,350,000
1922.....	1,430	3.26	44.28	1,030,000	1,190	2.72	36.96	864,000
1923.....	1,650	3.77	51.16	1,200,000	1,690	3.86	52.25	1,220,000
1924.....	1,270	2.90	39.51	923,000	1,430	3.26	44.43	1,040,000
1925.....	1,510	3.45	46.65	1,090,000	1,360	3.11	42.22	988,000
1926.....	1,210	2.76	37.50	876,000	1,260	2.88	39.13	914,000
Highest.....	1,960	4.47	60.95	1,430,000	2,040	4.66	63.19	1,480,000
Average.....	1,550	3.54	48.06	1,120,000	1,550	3.53	48.00	1,120,000
Lowest.....	1,190	2.72	37.02	865,000	1,190	2.72	36.96	864,000

Puyallup River at Puyallup, Wash.

Location.- Water-stage recorder, lat. 47°12'20", long. 122°19'30", in NE¹ sec. 20, T. 20 N., R. 4 E., 1 mile northwest of Puyallup. May 1, 1914 to Nov. 15, 1919, water-stage recorder about 1 $\frac{1}{4}$ miles upstream, at different datum. July 24, 1918 to Dec. 3, 1919, water-stage recorder on left bank about 400 feet upstream at datum approximately 10 feet lower than present datum.

Drainage area.- 948 square miles (revised).

Records available.- May 1914 to September 1935.

Extremes.- Maximum discharge, about 57,000 second-feet at 2:30 a.m. Dec. 10, 1933, minimum, probably below 350 second-feet Nov. 24, 28, Dec. 1, 3-5, 1929, result of regulation.

Remarks.- All diversions returned to river above gage. Large part of flow of White River, a tributary, regulated by Lake Tapps reservoir. Some ponds on upper Puyallup River and other tributaries. Figures of monthly discharge in second-feet per square mile and run-off in inches not computed owing to regulation. Yearly figures closely represent natural flow.

Monthly discharge of Puyallup River at Puyallup

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	2,040	-	1,540	-	-	94,700
November.....	5,400	1,500	2,790	-	-	166,000
December.....	5,300	1,850	3,010	-	-	185,000
January.....	16,500	1,660	4,880	-	-	300,000
February.....	5,970	1,630	2,900	-	-	167,000
March.....	4,430	1,570	2,160	-	-	133,000
April.....	8,530	1,820	3,450	-	-	205,000
May.....	6,660	1,750	3,260	-	-	200,000
June.....	7,350	2,530	3,920	-	-	233,000
July.....	3,700	2,030	2,970	-	-	183,000
August.....	2,720	1,750	2,230	-	-	137,000
September.....	4,030	1,630	2,460	-	-	146,000
The year.....	16,500	-	2,960	3.12	42.47	2,150,000
1920-21						
October.....	12,200	2,270	3,830	-	-	236,000
November.....	5,530	1,690	2,980	-	-	177,000
December.....	20,200	2,030	4,000	-	-	246,000
January.....	16,000	2,820	5,560	-	-	342,000
February.....	17,800	2,720	6,870	-	-	382,000
March.....	14,200	2,820	4,940	-	-	304,000
April.....	12,200	2,030	3,600	-	-	214,000
May.....	7,120	2,620	4,530	-	-	279,000
June.....	10,200	4,220	6,150	-	-	366,000
July.....	7,580	2,720	3,860	-	-	237,000
August.....	3,160	1,680	2,320	-	-	143,000
September.....	2,100	1,470	1,750	-	-	104,000
The year.....	20,200	1,470	4,180	4.41	59.86	3,030,000
1921-22						
October.....	2,530	1,550	1,730	-	-	106,000
November.....	15,800	1,550	3,330	-	-	198,000
December.....	32,400	2,040	7,380	-	-	454,000
January.....	2,500	1,730	2,200	-	-	135,000
February.....	2,760	2,000	2,340	-	-	130,000
March.....	2,160	1,500	1,760	-	-	108,000
April.....	3,040	1,920	2,130	-	-	127,000
May.....	10,000	2,230	5,060	-	-	311,000
June.....	9,500	3,410	6,120	-	-	364,000
July.....	5,090	-	3,080	-	-	189,000
August.....	2,320	1,500	1,790	-	-	110,000
September.....	1,790	1,280	1,440	-	-	85,700
The year.....	32,400	1,280	3,200	3.38	45.88	2,320,000
1922-23						
October.....	2,930	-	*1,290	-	-	79,300
November.....	2,720	1,460	1,980	-	-	118,000
December.....	13,500	1,510	3,100	-	-	191,000
January.....	24,900	2,620	7,180	-	-	441,000
February.....	3,860	1,750	2,500	-	-	139,000
March.....	4,430	1,960	2,570	-	-	158,000
April.....	4,870	2,820	3,690	-	-	220,000
May.....	-	-	*4,340	-	-	267,000
June.....	7,580	2,530	4,270	-	-	254,000
July.....	5,310	2,440	3,570	-	-	220,000
August.....	3,280	1,890	2,480	-	-	152,000
September.....	2,530	-	2,120	-	-	126,000
The year.....	24,900	-	3,270	3.45	46.83	2,370,000

Monthly discharge of Puyallup River at Puyallup--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24						
October.....	-	-	2,160	-	-	133,000
November.....	3,410	1,320	1,720	-	-	102,000
December.....	9,010	1,630	3,100	-	-	191,000
January.....	8,290	2,030	3,320	-	-	204,000
February.....	14,800	3,040	5,910	-	-	340,000
March.....	3,280	1,630	2,310	-	-	142,000
April.....	2,440	1,570	2,120	-	-	126,000
May.....	6,200	1,890	3,530	-	-	217,000
June.....	3,550	2,110	2,570	-	-	153,000
July.....	3,040	1,960	2,390	-	-	147,000
August.....	2,270	1,510	1,960	-	-	121,000
September.....	1,960	1,360	1,640	-	-	97,600
The year.....	14,800	1,320	2,720	2.87	39.06	1,970,000
1924-25						
October.....	2,440	1,250	1,630	-	-	100,000
November.....	4,870	1,820	2,660	-	-	158,000
December.....	14,700	1,960	4,420	-	-	272,000
January.....	8,770	2,530	4,120	-	-	253,000
February.....	10,800	2,190	4,440	-	-	247,000
March.....	3,700	1,890	2,590	-	-	159,000
April.....	6,890	2,350	3,610	-	-	215,000
May.....	6,890	2,110	4,350	-	-	267,000
June.....	5,090	2,190	3,150	-	-	187,000
July.....	3,040	2,270	2,760	-	-	170,000
August.....	3,040	1,570	2,150	-	-	132,000
September.....	1,690	1,250	1,550	-	-	92,200
The year.....	14,700	1,250	3,110	3.28	44.52	2,250,000
1925-26						
October.....	1,820	1,040	1,230	-	-	75,600
November.....	1,570	1,080	1,250	-	-	73,200
December.....	12,800	1,960	4,230	-	-	260,000
January.....	10,800	2,110	3,580	-	-	220,000
February.....	5,750	2,440	3,630	-	-	202,000
March.....	4,030	1,960	2,630	-	-	162,000
April.....	2,620	1,750	2,220	-	-	132,000
May.....	3,550	1,960	2,570	-	-	158,000
June.....	2,720	1,570	2,040	-	-	121,000
July.....	2,530	1,750	2,040	-	-	125,000
August.....	-	-	*2,020	-	-	124,000
September.....	-	-	1,690	-	-	101,000
The year.....	12,800	1,040	2,420	2.55	34.62	1,750,000
1926-27						
October.....	9,080	1,460	2,250	-	-	138,000
November.....	3,860	1,710	2,380	-	-	142,000
December.....	8,170	2,350	3,530	-	-	217,000
January.....	7,580	2,270	3,720	-	-	229,000
February.....	6,890	2,030	3,560	-	-	198,000
March.....	3,160	2,190	2,600	-	-	160,000
April.....	4,650	2,030	2,700	-	-	161,000
May.....	-	1,960	*3,580	-	-	220,000
June.....	-	-	*5,500	-	-	327,000
July.....	-	-	*3,000	-	-	184,000
August.....	-	1,750	2,230	-	-	137,000
September.....	4,030	1,750	2,350	-	-	140,000
The year.....	9,080	1,460	3,110	3.28	44.52	2,250,000
1927-28						
October.....	15,300	2,110	3,770	-	-	232,000
November.....	22,100	2,270	7,550	-	-	449,000
December.....	11,200	2,030	3,960	-	-	243,000
January.....	18,800	1,890	5,460	-	-	336,000
February.....	2,530	1,890	2,170	-	-	125,000
March.....	8,050	1,630	4,160	-	-	256,000
April.....	6,660	2,530	4,240	-	-	252,000
May.....	8,290	3,280	5,160	-	-	317,000
June.....	-	-	*3,010	-	-	179,000
July.....	4,870	-	*3,080	-	-	189,000
August.....	-	1,750	2,080	-	-	128,000
September.....	1,960	1,460	1,720	-	-	102,000
The year.....	22,100	1,460	3,870	4.08	55.53	2,810,000

*Estimated.



GAGING STATION ON PUYALLUP RIVER AT PUYALLUP, WASH.

Monthly discharge of Puyallup River at Puyallup--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	3,880	1,240	2,100	-	-	122,000
November.....	1,850	1,240	1,510	-	-	59,800
December.....	2,640	1,240	1,590	-	-	97,800
January.....	-	1,480	*1,710	-	-	105,000
February.....	1,850	1,480	1,520	-	-	90,000
March.....	5,740	1,750	2,820	-	-	173,000
April.....	3,580	2,280	2,800	-	-	167,000
May.....	7,100	3,030	4,960	-	-	305,000
June.....	8,170	3,880	5,130	-	-	305,000
July.....	3,580	1,660	2,690	-	-	165,000
August.....	2,770	1,400	2,130	-	-	131,000
September.....	1,950	1,300	1,600	-	-	95,200
The year.....	8,170	1,240	2,560	2.70	36.65	1,850,000
1929-30						
October.....	-	610	1,160	-	-	71,300
November.....	855	410	678	-	-	40,300
December.....	4,850	440	1,770	-	-	109,000
January.....	3,030	-	1,730	-	-	106,000
February.....	7,520	-	4,030	-	-	224,000
March.....	7,730	1,570	3,080	-	-	189,000
April.....	4,680	1,570	3,020	-	-	180,000
May.....	5,020	1,570	2,720	-	-	167,000
June.....	3,730	2,170	2,740	-	-	163,000
July.....	3,300	1,480	2,170	-	-	133,000
August.....	2,280	1,300	1,780	-	-	109,000
September.....	1,750	1,130	1,440	-	-	85,700
The year.....	7,730	410	2,180	2.30	31.22	1,580,000
1930-31						
October.....	-	-	*1,620	-	-	99,600
November.....	-	-	*1,130	-	-	67,200
December.....	1,570	645	1,040	-	-	64,000
January.....	6,700	645	2,560	-	-	157,000
February.....	3,730	1,130	2,120	-	-	118,000
March.....	9,190	1,480	2,660	-	-	164,000
April.....	16,700	1,580	4,300	-	-	256,000
May.....	4,880	2,180	3,360	-	-	207,000
June.....	6,760	2,070	3,610	-	-	215,000
July.....	3,950	1,630	2,430	-	-	149,000
August.....	2,420	1,120	1,900	-	-	117,000
September.....	2,020	717	1,500	-	-	89,500
The year.....	16,700	-	2,350	2.48	33.66	1,700,000
1931-32						
October.....	10,600	704	1,780	-	-	109,000
November.....	3,950	2,020	2,910	-	-	173,000
December.....	9,680	1,240	2,860	-	-	176,000
January.....	11,900	1,740	3,390	-	-	208,000
February.....	24,500	1,630	4,490	-	-	258,000
March.....	14,200	3,020	6,430	-	-	395,000
April.....	6,870	3,460	4,650	-	-	277,000
May.....	5,410	3,020	4,410	-	-	271,000
June.....	8,020	3,460	5,350	-	-	318,000
July.....	-	1,850	*3,480	-	-	214,000
August.....	2,360	1,380	2,080	-	-	128,000
September.....	2,300	1,160	1,840	-	-	109,000
The year.....	24,500	704	3,630	3.83	52.13	2,640,000
1932-33						
October.....	3,600	1,280	2,290	-	-	141,000
November.....	28,000	3,530	8,120	-	-	483,000
December.....	11,900	2,300	4,520	-	-	278,000
January.....	24,000	1,850	5,390	-	-	331,000
February.....	2,840	1,330	2,020	-	-	112,000
March.....	5,230	1,630	3,240	-	-	199,000
April.....	7,100	2,180	3,360	-	-	200,000
May.....	8,250	3,020	4,360	-	-	268,000
June.....	10,600	4,250	6,230	-	-	371,000
July.....	6,210	2,960	4,480	-	-	275,000
August.....	4,100	1,800	2,580	-	-	159,000
September.....	3,740	1,530	2,120	-	-	126,000
The year.....	28,000	1,280	4,060	4.28	58.10	2,940,000

*Estimated.

Monthly discharge of Puyallup River at Puyallup--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	14,500	1,740	4,316	-	-	266,400
November.....	20,600	2,000	4,634	-	-	276,700
December.....	53,400	2,000	16,790	-	-	971,100
January.....	25,700	4,560	8,024	-	-	493,300
February.....	5,470	3,150	4,163	-	-	231,200
March.....	10,300	3,450	5,060	-	-	311,100
April.....	6,010	3,150	4,236	-	-	252,000
May.....	6,310	3,600	4,751	-	-	292,100
June.....	4,000	1,600	*2,663	-	-	156,500
July.....	3,080	1,400	2,066	-	-	127,100
August.....	2,280	900	1,797	-	-	110,500
September.....	1,820	700	1,330	-	-	79,120
The year.....	53,400	700	4,927	5.20	70.59	3,567,000
1934-35						
October.....	31,800	800	3,719	-	-	228,700
November.....	23,800	2,450	5,902	-	-	351,200
December.....	10,700	2,310	4,414	-	-	271,400
January.....	22,100	2,380	6,261	-	-	385,000
February.....	4,930	2,210	3,521	-	-	195,600
March.....	8,520	2,140	3,133	-	-	192,600
April.....	3,920	1,940	2,985	-	-	177,600
May.....	4,580	2,010	3,215	-	-	197,700
June.....	5,650	3,000	4,116	-	-	244,900
July.....	6,010	1,820	3,189	-	-	196,100
August.....	3,080	1,200	2,018	-	-	124,100
September.....	2,210	900	1,626	-	-	96,750
The year.....	31,800	800	3,676	3.88	52.67	2,662,000

*Estimated.

Yearly discharge of Puyallup River at Puyallup

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1915.....	2,320	2.45	33.26	1,680,000	2,530	2.67	36.24	1,830,000
1916.....	4,080	4.30	58.53	2,960,000	3,710	3.91	53.22	2,700,000
1917.....	3,630	3.83	51.99	2,630,000	4,290	4.53	61.49	3,100,000
1918.....	3,830	4.04	54.84	2,770,000	3,420	3.61	49.00	2,480,000
1919.....	3,350	3.53	47.92	2,420,000	3,190	3.36	45.61	2,310,000
1920.....	2,960	3.12	42.47	2,150,000	3,260	3.44	46.82	2,360,000
1921.....	4,180	4.41	59.86	3,030,000	4,320	4.56	61.90	3,130,000
1922.....	3,200	3.38	45.88	2,320,000	2,690	2.84	38.55	1,950,000
1923.....	3,270	3.45	46.83	2,370,000	3,320	3.50	47.51	2,400,000
1924.....	2,720	2.87	39.06	1,970,000	2,860	3.02	41.11	2,080,000
1925.....	3,110	3.28	44.52	2,250,000	2,940	3.10	42.08	2,130,000
1926.....	2,420	2.55	34.62	1,750,000	2,540	2.68	36.38	1,840,000
1927.....	3,110	3.28	44.52	2,250,000	3,700	3.90	52.94	2,680,000
1928.....	3,870	4.08	55.53	2,810,000	3,030	3.20	45.56	2,200,000
1929.....	2,560	2.70	36.65	1,850,000	2,430	2.56	34.75	1,760,000
1930.....	2,180	2.30	31.22	1,580,000	2,190	2.31	31.36	1,590,000
1931.....	2,350	2.48	33.66	1,700,000	2,670	2.82	38.28	1,930,000
1932.....	3,630	3.83	52.13	2,640,000	4,240	4.47	60.84	3,080,000
1933.....	4,060	4.28	58.10	2,940,000	4,910	5.18	70.32	3,550,000
1934.....	4,927	5.20	70.59	3,567,000	4,014	4.23	57.42	2,906,000
1935.....	3,676	3.88	52.67	2,662,000	-	-	-	-
Highest....	4,927	5.20	70.59	3,567,000	4,910	5.18	70.32	3,550,000
Average....	3,310	3.49	47.37	2,400,000	3,310	3.49	47.47	2,400,000
Lowest.....	2,180	2.30	31.22	1,580,000	2,190	2.31	31.36	1,590,000

Kapowsin Creek near Kapowsin, Wash.

Location.- Water-stage recorder, lat. 46°59'35", long. 122°11'35", in NE $\frac{1}{4}$ sec. 5, T.

17 N., R. 5 E., half a mile below Kapowsin Lake and $1\frac{1}{2}$ miles east of Kapowsin.

Records available.- June 1927 to October 1932.

Extremes.- Maximum discharge, 393 second-feet at 6:30 p.m. Mar. 6, 1932; minimum, 1.4 second-feet Sept. 2, 1930.

Remarks.- Natural regulation in Kapowsin Lake. No diversion.

Monthly discharge of Kapowsin Creek near Kapowsin

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1927				
June 10-30.....	42	19	27.7	1,150
July.....	18	6.3	11.3	695
August.....	6.1	4.9	5.47	336
September.....	30	6.6	13.9	827
The period.....	-	-	-	3,010
1927-28				
October.....	139	36	62.4	3,840
November.....	266	43	137	8,150
December.....	208	53	96.6	5,940
January.....	293	58	136	8,360
February.....	61	34	45.6	2,620
March.....	248	31	106	6,520
April.....	257	91	129	7,680
May.....	137	28	62.1	3,820
June.....	27	14	18.4	1,090
July.....	24	7.0	14.8	910
August.....	7.0	3.2	5.08	312
September.....	4.0	2.5	3.36	200
The year.....	293	2.5	68.2	49,400
1928-29				
October.....	37	4.8	20.9	1,290
November.....	31	14	22.8	1,360
December.....	83	22	43.4	2,670
January.....	94	32	52.6	3,230
February.....	70	28	41.0	2,280
March.....	148	62	86.0	5,290
April.....	112	62	77.4	4,610
May.....	122	42	67.6	4,160
June.....	55	32	45.3	2,700
July.....	30	5.8	13.3	818
August.....	6.1	3.6	4.55	280
September.....	5.2	3.6	4.39	261
The year.....	148	3.6	39.9	28,900
1929-30				
October.....	6.7	5.2	5.88	362
November.....	9.5	5.6	7.76	462
December.....	81	8.1	46.0	2,830
January.....	68	-	36.4	2,240
February.....	186	46	125	6,940
March.....	-	-	*69.0	4,240
April.....	-	32	44.4	2,640
May.....	49	19	32.2	1,980
June.....	39	12	22.3	1,330
July.....	13	3.6	6.85	421
August.....	3.6	1.6	2.33	143
September.....	3.2	1.6	2.30	137
The year.....	186	1.6	32.8	23,700
1930-31				
October.....	8.6	2.3	5.92	364
November.....	35	6.4	20.4	1,210
December.....	31	15	22.6	1,390
January.....	126	21	61.9	3,800
February.....	82	32	51.0	2,780
March.....	102	37	51.2	3,150
April.....	274	33	102	6,070
May.....	33	13	22.9	1,410
June.....	-	8.9	31.5	1,870
July.....	-	7.5	*18.1	1,110
August.....	7.0	3.4	4.62	284
September.....	9.6	4.1	8.02	477
The year.....	274	2.3	33.1	23,900

*Estimated.

Monthly discharge of Kapowsin Creek near Kapowsin--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1931-32				
October.....	70	7.2	19.9	1,220
November.....	-	44	61.2	3,640
December.....	92	33	54.2	3,330
January.....	150	41	76.2	4,690
February.....	355	37	94.5	5,440
March.....	374	94	166	10,200
April.....	153	59	95.1	5,660
May.....	69	24	40.1	2,470
June.....	25	6.1	13.7	815
July.....	12	5.4	8.30	510
August.....	6.6	4.6	5.45	335
September.....	5.1	2.7	3.80	226
The year.....	374	2.7	53.1	38,500
1932				
October.....	3.5	2.4	3.03	42.1

Yearly discharge of Kapowsin Creek near Kapowsin

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1928.....	68.2	49,400	50.7	36,800
1929.....	39.9	28,600	37.7	27,300
1930.....	32.8	23,700	31.8	23,000
1931.....	33.1	23,900	40.3	29,100
1932.....	53.1	38,500	-	-

Carbon River near Fairfax, Wash.

(Formerly called Carbon River at Fairfax)

Location.- Water-stage recorder, lat. 47°01'30", long. 122°02'00", in SW $\frac{1}{4}$ sec. 22, T. 18 N., R. 6 E., 1 $\frac{1}{4}$ miles northwest of Fairfax. Prior to July 13, 1912, staff gage 1 $\frac{1}{4}$ miles upstream.

Drainage area.- 82 square miles; 79 square miles at former site.

Records available.- November 1910 to July 1912, March 1929 to September 1935.

Extremes.- Maximum discharge recorded, 8,030 second-feet at 6:30 p.m. Dec. 9, 1933; minimum, 40 second-feet (estimated) Jan. 20, 1930, when stage-discharge relation was affected by ice.

Remarks.- Water diverted for use in lumber industry and returned to river above gage.

Monthly discharge of Carbon River near Fairfax

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
March 27-31.....	768	430	592	7.22	1.34	5,870
April.....	496	146	256	3.12	3.48	16,200
May.....	937	336	599	7.30	8.42	36,800
June.....	1,010	405	668	8.15	9.09	39,700
July.....	873	297	553	6.50	7.49	32,600
August.....	991	163	416	5.07	5.84	26,600
September.....	845	50	229	2.79	3.11	15,600
The year.....	-	-	-	-	-	170,000
1929-30						
October.....	1,220	50	201	2.45	2.82	12,400
November.....	85	48	59.0	7.20	.80	3,510
December.....	800	47	270	3.29	3.79	16,600
January.....	368	40	145	1.77	2.04	8,920
February.....	1,260	254	680	8.29	8.63	37,800
March.....	900	110	322	3.93	4.53	19,800
April.....	566	293	401	4.89	5.46	23,900
May.....	668	203	395	4.82	5.56	24,300
June.....	634	321	464	5.66	6.32	27,600
July.....	480	245	347	4.23	4.88	23,300
August.....	354	168	239	2.91	3.36	14,700
September.....	234	84	158	1.93	2.15	9,400
The year.....	1,260	40	304	3.71	50.34	220,000

Monthly discharge of Carbon River near Fairfax--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	704	92	182	2.22	2.56	11,200
November.....	305	92	167	2.04	2.28	9,940
December.....	174	94	129	1.57	1.81	7,950
January.....	1,180	96	380	4.63	5.34	23,400
February.....	415	103	212	2.59	2.70	11,800
March.....	1,620	125	298	3.63	4.18	18,300
April.....	1,510	219	437	5.33	5.95	26,000
May.....	709	254	474	5.78	6.66	29,100
June.....	1,000	282	559	6.82	7.61	33,300
July.....	470	294	368	4.49	5.18	22,600
August.....	351	192	251	3.06	3.53	15,400
September.....	315	119	185	2.26	2.52	11,000
The year.....	1,620	92	304	5.71	50.32	220,000
1931-32						
October.....	2,300	103	316	3.85	4.44	19,400
November.....	805	148	405	4.94	5.51	24,100
December.....	1,350	112	321	3.91	4.51	19,700
January.....	1,210	139	348	4.24	4.89	21,400
February.....	3,290	94	410	5.00	5.39	23,600
March.....	1,370	366	684	8.34	9.62	42,100
April.....	868	383	534	6.51	7.26	31,800
May.....	685	366	546	6.66	7.68	33,600
June.....	970	457	676	8.24	9.19	40,200
July.....	970	290	510	6.22	7.17	31,400
August.....	388	153	283	3.45	3.98	17,400
September.....	280	96	162	1.98	2.21	9,640
The year.....	3,290	94	433	5.28	71.85	314,000
1932-33						
October.....	868	91	371	4.52	5.21	22,800
November.....	3,400	392	1,070	13.0	14.50	63,700
December.....	2,140	-	512	6.24	7.19	31,500
January.....	2,350	156	519	6.33	7.30	31,900
February.....	248	111	151	1.84	1.92	8,390
March.....	520	174	296	3.61	4.16	18,200
April.....	760	192	324	3.95	4.41	19,300
May.....	1,030	304	529	6.45	7.44	32,500
June.....	1,340	610	867	10.6	11.83	51,600
July.....	940	460	702	8.56	9.87	43,200
August.....	742	254	406	4.95	5.71	25,000
September.....	670	179	309	3.77	4.21	18,400
The year.....	3,400	91	506	6.17	83.75	366,000
1933-34						
October.....	1,930	170	629	7.67	8.84	38,650
November.....	2,180	204	549	6.70	7.48	32,690
December.....	4,810	228	1,672	20.4	23.52	102,800
January.....	2,730	583	956	11.7	13.49	58,750
February.....	755	176	336	4.10	4.27	18,640
March.....	1,480	209	570	6.95	8.01	35,050
April.....	767	418	522	6.37	7.11	31,060
May.....	995	330	505	6.16	7.10	31,030
June.....	500	255	360	4.39	4.90	21,430
July.....	473	189	338	4.12	4.75	20,770
August.....	380	213	267	3.26	3.76	16,420
September.....	346	106	183	2.23	2.49	10,870
The year.....	4,810	106	578	7.05	95.72	418,200
1934-35						
October.....	3,650	103	447	5.45	6.28	27,490
November.....	2,290	286	624	7.61	8.49	37,110
December.....	1,540	286	490	5.98	6.89	30,150
January.....	2,040	163	650	7.68	8.85	38,730
February.....	740	214	368	4.50	4.69	20,470
March.....	1,020	155	309	3.77	4.35	19,030
April.....	372	174	270	3.29	3.67	16,090
May.....	562	298	417	5.09	5.87	25,610
June.....	753	382	572	6.98	7.79	34,050
July.....	722	318	491	5.99	6.91	30,160
August.....	404	208	284	3.46	3.99	17,450
September.....	294	137	211	2.57	2.87	12,540
The year.....	3,650	103	427	5.21	70.65	308,900

Yearly discharge of Carbon River near Fairfax

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	-	-	-	-	339	4.29	58.30	246,000
1930.....	304	3.71	50.34	220,000	299	3.66	49.58	217,000
1931.....	304	3.71	50.32	220,000	351	4.28	58.13	254,000
1932.....	433	5.28	71.85	314,000	508	6.20	94.29	369,000
1933.....	506	6.17	83.75	366,000	584	7.12	96.69	423,000
1934.....	578	7.05	95.72	418,200	468	5.71	77.54	338,800
1935.....	427	5.21	70.65	308,900	-	-	-	-

White River at Greenwater, Wash.

Location.- Water-stage recorder, lat. 47°08'50", long. 121°38'50", in SE $\frac{1}{4}$ sec. 10, T. 19 N., R. 9 E., above mouth of Greenwater River, three-quarters of a mile south-east of Greenwater.

Drainage area.- 216 square miles.

Records available.- March 1929 to September 1935.

Extremes.- Maximum discharge recorded, 12,100 second-feet at 9 p.m. Dec. 21, 1933; minimum probably less than 150 second-feet sometime during January 1930.

Remarks.- No diversion or regulation.

Monthly discharge of White River at Greenwater

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 29-31, 1929.....	684	536	597	2.76	0.31	3,550
April.....	1,060	240	490	2.27	2.53	29,200
May.....	1,870	764	1,220	5.65	6.51	75,000
June.....	1,780	973	1,360	6.30	7.03	80,900
July.....	1,420	724	979	4.53	5.22	60,200
August.....	939	532	707	3.27	3.77	43,500
September.....	560	222	376	1.74	1.94	22,400
1929-30						
October.....	330	182	238	1.10	1.27	14,600
November.....	216	139	173	.801	.89	10,300
December.....	982	165	341	1.58	1.82	21,000
January.....	469	-	*230	1.06	1.22	14,100
February.....	-	-	*877	4.06	4.23	48,700
March.....	1,470	296	605	2.80	3.23	37,200
April.....	1,150	761	923	4.27	4.76	54,900
May.....	1,320	569	847	3.92	4.52	52,100
June.....	1,220	736	922	4.27	4.76	54,900
July.....	1,080	585	762	3.53	4.07	46,900
August.....	795	463	615	2.85	3.29	37,800
September.....	552	244	401	1.86	2.08	23,900
The year.....	-	-	575	2.66	36.14	416,000
1930-31						
October.....	952	228	321	1.49	1.72	19,700
November.....	457	201	252	1.17	1.30	15,000
December.....	276	206	234	1.08	1.24	14,400
January.....	2,080	213	605	2.80	3.23	37,200
February.....	924	367	545	2.52	2.62	30,300
March.....	2,100	349	537	2.49	2.87	33,000
April.....	1,870	489	819	3.79	4.23	48,700
May.....	2,080	786	1,390	6.44	7.42	85,500
June.....	2,010	593	1,020	4.72	5.27	60,700
July.....	932	668	768	3.56	4.10	47,200
August.....	752	444	559	2.59	2.99	34,400
September.....	593	252	365	1.69	1.89	21,700
The year.....	2,100	201	619	2.87	38.88	448,000
1931-32						
October.....	1,160	216	326	1.51	1.74	20,000
November.....	1,050	302	503	2.33	2.60	29,900
December.....	1,800	258	576	2.67	3.08	35,400
January.....	2,300	354	699	3.24	3.74	45,000
February.....	4,990	279	811	3.75	4.04	46,600
March.....	2,090	552	1,160	5.32	6.13	70,700
April.....	1,470	725	1,040	4.81	5.37	61,900
May.....	1,710	868	1,350	6.25	7.21	83,000
June.....	2,450	1,060	1,720	7.96	8.88	102,000
July.....	1,950	705	1,160	5.37	6.19	71,300
August.....	826	395	622	2.88	3.32	38,200
September.....	527	300	379	1.75	1.95	22,600
The year.....	4,990	216	861	3.99	54.25	625,000

*Estimated.

Monthly discharge of White River at Greenwater--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	610	285	364	1.69	1.95	22,400
November.....	5,190	585	1,750	8.10	9.04	104,000
December.....	2,380	-	*915	4.24	4.89	56,300
January.....	-	362	853	3.95	4.55	52,400
February.....	368	262	318	1.47	1.53	17,700
March.....	566	305	458	2.12	2.44	28,200
April.....	1,720	446	749	3.47	3.87	44,600
May.....	2,230	790	1,230	5.69	6.56	75,600
June.....	3,950	1,590	2,380	11.0	12.27	142,000
July.....	2,600	1,270	1,900	8.80	10.14	117,000
August.....	1,250	608	990	4.58	5.28	60,900
September.....	740	440	556	2.57	2.87	33,100
The year.....	5,190	262	1,040	4.81	65.39	754,000
1933-34						
October.....	2,480	390	946	4.38	5.05	58,140
November.....	3,470	515	1,009	4.67	5.21	60,070
December.....	9,220	488	3,232	15.0	17.29	198,700
January.....	4,250	1,050	1,893	7.84	9.04	104,100
February.....	1,390	653	889	4.12	4.29	49,390
March.....	2,080	822	1,177	5.45	6.28	72,370
April.....	1,800	1,000	1,334	6.18	6.90	79,380
May.....	1,610	870	1,130	5.23	6.03	69,500
June.....	1,140	722	898	4.16	4.64	53,410
July.....	950	568	761	3.52	4.06	46,790
August.....	815	607	671	3.11	3.58	41,250
September.....	691	229	431	2.00	2.23	25,640
The year.....	9,220	229	1,186	5.49	74.60	858,700
1934-35						
October.....	3,690	176	656	3.04	3.50	40,350
November.....	3,850	769	1,359	6.29	7.02	80,870
December.....	2,000	664	926	4.29	4.95	56,920
January.....	4,000	386	1,305	6.04	6.96	80,250
February.....	1,700	594	897	4.15	4.32	49,840
March.....	1,320	428	633	2.93	3.38	38,900
April.....	860	428	646	2.99	3.34	38,410
May.....	1,460	825	1,111	5.14	5.93	68,530
June.....	1,960	1,080	1,396	6.46	7.21	83,070
July.....	1,450	699	988	4.57	5.27	60,770
August.....	825	538	646	2.99	3.45	39,710
September.....	706	362	509	2.36	2.63	30,500
The year.....	4,000	176	922	4.27	57.96	667,700

*Estimated.

Yearly discharge of White River at Greenwater

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	575	2.66	36.14	416,000	580	2.69	36.42	420,000
1931.....	619	2.87	38.88	448,000	669	3.10	42.04	484,000
1932.....	861	3.99	54.25	625,000	995	4.61	62.71	722,000
1933.....	1,040	4.81	65.39	754,000	1,230	5.69	77.06	889,000
1934.....	1,186	5.49	74.60	858,700	994	4.60	62.52	720,000
1935.....	922	4.27	57.96	667,700	-	-	-	-

White River near Buckley, Wash.

Location.- Water-stage recorder, lat. 47°09'00", long. 121°54'40", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 19 N., R. 7 E., 5 miles east of Buckley.

Drainage area.- 400 square miles.

Records available.- October 1928 to November 1933.

Extremes.- Maximum discharge, about 17,000 second-feet at 3 p.m. Feb. 26, 1932; minimum, 213 second-feet Nov. 21, 1929 (may have been less during period Jan. 15-30, 1930, when stage-discharge relation was affected by ice).

Remarks.- No diversion or regulation.

Monthly discharge of White River near Buckley--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	-	-	*660	1.65	1.90	40,600
November.....	918	357	487	1.22	1.36	29,000
December.....	1,120	310	495	1.24	1.43	30,400
January.....	719	-	449	1.12	1.29	27,600
February.....	419	-	336	.840	.87	18,700
March.....	3,170	483	1,060	2.65	3.06	65,200
April.....	1,980	629	1,060	2.65	2.96	63,100
May.....	4,220	1,410	2,480	6.20	7.15	152,000
June.....	3,270	1,740	2,300	5.75	6.42	137,000
July.....	1,920	954	1,220	3.05	3.52	75,000
August.....	1,060	674	815	2.04	2.35	50,100
September.....	689	320	526	1.32	1.47	31,300
The year.....	4,220	-	994	2.48	33.78	720,000
1929-30						
October.....	509	285	368	.920	1.06	22,600
November.....	357	221	264	.660	.74	15,700
December.....	2,000	230	747	1.87	2.16	45,900
January.....	1,190	-	528	1.32	1.52	32,500
February.....	3,600	500	1,700	4.25	4.43	94,400
March.....	4,100	589	1,350	3.32	3.83	81,800
April.....	1,810	1,270	1,520	3.80	4.24	90,400
May.....	2,350	975	1,410	3.52	4.06	86,700
June.....	1,870	1,040	1,390	3.48	3.88	82,700
July.....	1,310	768	983	2.46	2.84	60,400
August.....	940	573	756	1.89	2.18	46,500
September.....	669	280	492	1.23	1.37	29,300
The year.....	4,100	221	952	2.38	32.31	689,000
1930-31						
October.....	1,430	270	476	1.19	1.37	29,300
November.....	1,050	289	559	1.34	1.50	32,000
December.....	627	366	481	1.20	1.33	29,600
January.....	3,960	375	1,290	3.22	3.71	79,300
February.....	-	-	956	2.39	2.49	53,100
March.....	6,900	742	1,250	3.12	3.60	76,900
April.....	6,460	975	1,670	4.18	4.66	99,400
May.....	3,070	1,150	1,930	4.82	5.56	119,000
June.....	3,040	1,040	1,460	3.65	4.07	86,900
July.....	1,150	802	964	2.41	2.78	59,300
August.....	-	589	716	1.79	2.06	44,000
September.....	836	390	555	1.39	1.55	33,000
The year.....	6,900	270	1,020	2.55	34.73	742,000
1931-32						
October.....	5,430	292	755	1.89	2.18	46,400
November.....	2,000	615	1,090	2.72	3.04	64,900
December.....	5,230	473	1,210	3.02	3.48	74,400
January.....	6,630	650	1,420	3.55	4.09	87,300
February.....	13,400	488	1,930	4.82	5.20	111,000
March.....	7,070	1,350	2,840	7.10	8.19	175,000
April.....	3,570	1,480	2,140	5.35	5.97	127,000
May.....	2,970	1,680	2,320	5.80	6.69	143,000
June.....	3,990	1,930	2,620	6.55	7.31	156,000
July.....	2,350	940	1,500	3.75	4.32	92,200
August.....	1,060	633	884	2.21	2.55	54,400
September.....	752	460	578	1.44	1.61	34,400
The year.....	13,400	292	1,600	4.00	54.63	1,170,000
1932-33						
October.....	1,570	367	729	1.82	2.10	44,800
November.....	14,100	1,400	4,070	10.2	11.38	242,000
December.....	5,910	1,060	1,790	4.48	5.16	110,000
January.....	12,300	787	2,200	5.50	6.34	135,000
February.....	824	-	657	1.64	1.71	36,500
March.....	1,680	667	1,190	2.98	3.44	73,200
April.....	3,390	1,020	1,570	3.92	4.37	93,400
May.....	4,410	1,480	2,320	5.80	6.69	143,000
June.....	7,810	2,590	4,140	10.4	11.60	246,000
July.....	3,610	1,560	2,480	6.20	7.15	152,000
August.....	1,750	890	1,260	3.15	3.63	77,500
September.....	1,430	684	891	2.23	2.49	53,000
The year.....	14,100	367	1,940	4.85	66.06	1,410,000

*Estimated.

Monthly discharge of White River near Buckley--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933						
October.....	5,820	566	1,670	4.18	4.82	103,000
November.....	10,900	1,030	2,120	5.30	5.91	126,000
The period.....	-	-	-	-	-	229,000

Yearly discharge of White River near Buckley

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	994	2.48	33.78	720,000	973	2.43	33.05	704,000
1930.....	952	2.38	32.31	689,000	961	2.40	32.60	696,000
1931.....	1,020	2.55	34.73	742,000	1,160	2.90	39.18	837,000
1932.....	1,600	4.00	54.63	1,170,000	1,900	4.75	64.57	1,380,000
1933.....	1,940	4.85	66.06	1,410,000	-	-	-	-

White River at Buckley, Wash.

Location.- River gage: Water-stage recorder, lat. 47°10'25", long. 122°01'05", in SE $\frac{1}{4}$ sec. 34, T. 20 N., R. 6 E., 40 feet below Northern Pacific Railway bridge.

Flume gage: Water-stage recorder, lat. 47°10'10", long. 122°00'20", in sec. 35, T. 20 N., R. 6 E., half a mile above Northern Pacific Railway crossing.

Drainage area.- 424 square miles.

Records available.- April 1899 to December 1901, January 1902 to August 1903 (gage heights only), June 1910 to December 1911, January 1913 to September 1926.

Extremes.- Maximum combined daily discharge, 18,100 second-feet Dec. 18, 1917;

minimum combined, 342 second-feet Oct. 9, 1926.

Remarks.- Records since Jan. 18, 1913, adjusted for diversion through White River flume at Buckley.

Monthly discharge of White River and White River flume at Buckley

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	674	400	498	1.17	1.35	30,600
November.....	-	-	1,230	2.90	3.24	73,200
December.....	-	-	1,350	3.18	3.67	83,000
January.....	-	-	2,100	4.95	5.71	129,000
February.....	-	-	1,470	3.47	3.74	84,600
March.....	-	-	928	2.19	2.52	57,100
April.....	-	1,190	1,490	3.51	3.92	88,700
May.....	2,730	1,270	1,720	4.06	4.68	106,000
June.....	2,660	1,310	1,890	4.46	4.98	112,000
July.....	2,030	730	1,380	3.25	3.75	84,800
August.....	1,130	609	932	2.20	2.54	57,300
September.....	1,980	533	938	2.21	2.47	55,800
The year.....	-	-	1,330	3.14	42.57	962,000
1920-21						
October.....	3,670	901	1,440	3.40	3.92	88,500
November.....	2,290	575	1,130	2.67	2.98	67,200
December.....	12,100	700	1,600	3.77	4.35	98,400
January.....	8,060	848	2,180	5.14	5.93	134,000
February.....	6,570	810	2,570	6.06	6.31	143,000
March.....	4,600	1,310	2,100	4.95	5.71	129,000
April.....	4,510	1,091	1,740	4.10	4.57	104,000
May.....	4,190	1,610	2,680	6.32	7.29	165,000
June.....	4,730	2,220	3,210	7.57	8.45	191,000
July.....	3,040	1,500	2,020	4.76	5.49	124,000
August.....	1,440	731	1,120	2.64	3.04	68,900
September.....	944	456	672	1.58	1.76	40,000
The year.....	12,100	456	1,870	4.41	59.80	1,350,000

Monthly discharge of White River and White River flume at Buckley--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1921-22						
October.....	1,340	485	652	1.54	1.78	40,100
November.....	7,260	558	1,190	2.81	3.14	70,800
December.....	11,500	830	2,800	6.60	7.61	172,000
January.....	835	410	670	1.58	1.82	41,200
February.....	648	443	553	1.30	1.35	30,700
March.....	764	414	508	1.20	1.38	31,200
April.....	1,860	686	1,220	2.88	3.21	72,600
May.....	6,530	1,530	3,090	7.29	8.40	190,000
June.....	5,760	1,950	3,140	7.41	8.27	187,000
July.....	1,900	993	1,270	3.00	3.46	78,100
August.....	1,170	652	907	2.14	2.47	55,800
September.....	946	471	687	1.62	1.81	40,900
The year.....	11,500	410	1,400	3.30	44.70	1,010,000
1922-23						
October.....	1,460	378	561	1.32	1.52	34,500
November.....	1,700	393	670	1.58	1.76	39,900
December.....	6,500	-	1,230	2.90	3.34	75,600
January.....	10,900	785	2,880	6.79	7.83	177,000
February.....	1,550	-	819	1.93	2.01	45,500
March.....	2,870	799	1,130	2.67	3.06	69,500
April.....	2,490	1,420	1,940	4.58	5.11	115,000
May.....	4,110	1,410	2,300	5.42	6.25	141,000
June.....	3,670	1,620	2,260	5.33	5.95	134,000
July.....	2,760	1,160	1,830	4.32	4.98	113,000
August.....	2,110	864	1,090	2.57	2.96	67,000
September.....	995	462	696	1.64	1.83	41,400
The year.....	10,900	-	1,460	3.44	46.62	1,050,000
1923-24						
October.....	2,470	466	792	1.87	2.16	48,700
November.....	2,740	375	763	1.80	2.01	45,400
December.....	4,620	834	1,630	3.84	4.43	100,000
January.....	3,720	877	1,440	3.40	3.92	88,500
February.....	6,530	1,350	2,800	6.60	7.12	161,000
March.....	1,580	698	955	2.25	2.59	58,700
April.....	1,600	724	1,180	2.78	3.10	70,200
May.....	4,070	1,310	2,220	5.24	6.04	136,000
June.....	1,990	947	1,320	3.11	3.47	78,600
July.....	1,380	787	1,040	2.45	2.82	64,000
August.....	961	546	812	1.92	2.21	49,900
September.....	854	397	581	1.37	1.53	34,600
The year.....	6,530	375	1,290	3.04	41.40	936,000
1924-25						
October.....	1,860	358	562	1.33	1.53	34,600
November.....	3,580	381	1,300	3.07	3.42	77,400
December.....	6,060	760	2,070	4.88	5.63	127,000
January.....	3,640	796	1,720	4.06	4.68	106,000
February.....	4,440	854	1,730	4.08	4.25	96,100
March.....	1,770	751	1,120	2.64	3.04	68,900
April.....	3,430	655	1,760	4.15	4.63	105,000
May.....	4,120	1,390	2,570	6.06	6.99	158,000
June.....	2,550	1,270	1,730	4.08	4.55	103,000
July.....	1,530	976	1,210	2.85	3.29	74,400
August.....	1,080	563	817	1.93	2.22	50,200
September.....	662	409	541	1.28	1.43	32,200
The year.....	6,060	358	1,430	3.37	45.66	1,030,000
1925-26						
October.....	1,000	342	431	1.02	1.18	26,500
November.....	778	357	468	1.10	1.23	27,800
December.....	5,430	940	1,950	4.60	5.30	120,000
January.....	2,190	812	1,280	3.02	3.48	78,700
February.....	1,950	840	1,330	3.14	3.27	73,800
March.....	1,920	750	1,170	2.76	3.18	71,800
April.....	1,700	850	1,210	2.85	3.18	72,000
May.....	1,460	940	1,200	2.83	3.26	73,800
June.....	1,510	897	1,080	2.55	2.84	64,300
July.....	1,200	699	943	2.22	2.56	58,000
August.....	922	614	757	1.79	2.06	46,500
September.....	1,100	411	558	1.32	1.47	33,200
The year.....	5,430	342	1,030	2.43	33.01	747,000

Yearly discharge of White River and White River flume at Buckley

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1900.....	2,100	4.95	67.34	1,520,000	1,850	4.36	59.26	1,340,000
1901.....	1,680	3.96	53.82	1,220,000	1,590	3.75	50.86	1,160,000
1911.....	1,460	3.44	46.71	1,060,000	-	-	-	-
1914.....	1,280	3.02	40.95	927,000	1,320	3.11	42.28	957,000
1915.....	1,000	2.36	32.08	725,000	1,120	2.64	35.79	810,000
1916.....	1,940	4.68	62.18	1,400,000	1,770	4.17	56.77	1,280,000
1917.....	1,630	3.84	52.09	1,180,000	1,930	4.56	61.76	1,400,000
1918.....	1,770	4.17	56.49	1,280,000	1,610	3.80	51.69	1,170,000
1919.....	1,620	3.82	51.95	1,180,000	1,530	3.61	48.85	1,110,000
1920.....	1,330	3.14	42.57	962,000	1,420	3.35	45.56	1,030,000
1921.....	1,870	4.41	59.80	1,350,000	1,910	4.50	61.08	1,380,000
1922.....	1,400	3.30	44.70	1,010,000	1,210	2.85	38.79	878,000
1923.....	1,460	3.44	46.62	1,050,000	1,620	3.58	48.60	1,100,000
1924.....	1,290	3.04	41.40	936,000	1,350	3.18	43.58	950,000
1925.....	1,430	3.37	45.66	1,030,000	1,340	3.16	42.79	968,000
1926.....	1,030	2.43	33.01	747,000	-	-	-	-
Highest....	2,100	4.95	67.34	1,520,000	1,930	4.55	61.76	1,400,000
Average....	1,520	3.68	48.59	1,100,000	1,530	3.62	49.10	1,110,000
Lowest.....	1,000	2.36	32.08	725,000	1,120	2.64	35.79	810,000

Greenwater River at Greenwater, Wash.

Location.- Water-stage recorder, lat. 47°09'15", long. 121°38'00", in NW¼ sec. 11, T. 19 N., R. 9 E., 1 mile above mouth and 1 mile east of Greenwater; prior to Aug. 10, 1912, staff gage.

Drainage area.- 75 square miles (revised).

Records available.- May 1929 to September 1935. September 1911 to August 1912

(Fragmentary) published as Greenwater River near Enumclaw.

Extremes.- Maximum discharge recorded, 4,140 second-feet at 11:45 p.m. Dec. 9, 1933; minimum recorded, 23 second-feet Oct. 7, 1934.

Remarks.- No diversion or regulation.

Monthly discharge of Greenwater River at Greenwater

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
May.....	759	260	486	6.48	7.47	29,900
June.....	451	246	368	4.91	5.48	21,900
July.....	232	80	129	1.72	1.98	7,930
August.....	79	45	57.8	.771	.89	3,560
September.....	53	35	40.4	.539	.60	2,400
The period	-	-	-	-	-	65,700
1929-30						
October.....	40	30	33.6	.448	.52	2,070
November.....	35	28	30.3	.404	.46	1,800
December.....	130	28	64.4	.869	.99	3,950
January.....	120	-	*46.3	.617	.71	2,850
February.....	425	86	216	2.83	3.00	12,000
March.....	687	78	214	2.85	3.29	13,200
April.....	381	262	313	4.17	4.65	18,600
May.....	321	194	256	3.41	3.93	15,700
June.....	271	124	200	2.67	2.98	11,900
July.....	120	51	78.5	1.05	1.21	4,830
August.....	50	34	41.2	.549	.63	2,530
September.....	37	29	31.5	.420	.47	1,870
The year.....	687	-	126	1.68	22.83	91,300

*Estimated.

Monthly discharge of Greenwater River at Greenwater--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	68	27	38.8	0.517	0.60	2,390
November.....	-	-	*54.5	.727	.81	3,240
December.....	66	-	54.0	.720	.83	3,320
January.....	-	-	119	1.59	1.83	7,320
February.....	-	-	*130	1.73	1.80	7,220
March.....	544	110	132	2.16	2.49	9,960
April.....	709	163	265	3.51	3.92	15,600
May.....	534	180	323	4.31	4.97	19,900
June.....	201	114	142	1.89	2.11	8,450
July.....	114	57	79.6	1.06	1.22	4,890
August.....	56	37	45.3	.604	.70	2,790
September.....	-	-	*41.7	.556	.62	2,480
The year.....	709	27	121	1.61	21.90	87,600
1931-32						
October.....	516	29	71.6	.955	1.10	4,400
November.....	221	72	125	1.67	1.86	7,440
December.....	367	52	125	1.67	1.92	7,690
January.....	636	87	171	2.28	2.63	10,500
February.....	1,260	67	212	2.83	3.05	12,200
March.....	808	187	411	5.48	6.32	25,300
April.....	607	272	410	5.47	6.10	24,400
May.....	629	330	501	6.68	7.70	30,800
June.....	629	227	430	5.73	6.39	25,600
July.....	221	76	120	1.60	1.84	7,380
August.....	74	45	58.1	.775	.89	3,570
September.....	47	32	38.2	.509	.57	2,270
The year.....	1,260	29	222	2.96	40.37	162,000
1932-33						
October.....	154	30	51.9	.692	.80	3,190
November.....	1,840	138	569	7.59	8.47	33,900
December.....	720	145	272	3.63	4.18	16,700
January.....	1,380	119	310	4.13	4.76	19,100
February.....	114	-	87.7	1.17	1.22	4,870
March.....	185	84	140	1.87	2.16	8,610
April.....	670	154	276	3.68	4.11	16,400
May.....	770	294	458	6.11	7.04	28,200
June.....	1,130	490	711	9.48	10.58	42,300
July.....	473	135	302	4.03	4.65	18,600
August.....	152	71	95.9	1.28	1.48	5,900
September.....	80	59	68.7	.916	1.02	4,090
The year.....	1,840	30	279	3.72	50.47	202,000
1933-34						
October.....	609	53	170	2.27	2.62	10,450
November.....	1,160	135	287	3.83	4.27	17,100
December.....	3,720	143	1,116	14.9	17.18	68,640
January.....	1,780	343	597	7.96	9.18	36,730
February.....	565	224	312	4.16	4.33	17,310
March.....	645	257	376	5.01	5.78	23,100
April.....	495	330	*407	5.43	6.06	24,240
May.....	325	170	237	3.16	3.64	14,560
June.....	164	69	101	1.35	1.51	6,010
July.....	65	42	51.6	.688	.79	3,170
August.....	46	27	36.5	.487	.56	2,240
September.....	58	26	31.4	.419	.47	1,870
The year.....	3,720	26	311	4.15	56.39	225,400
1934-35						
October.....	1,010	24	126	1.68	1.94	7,750
November.....	990	153	315	4.20	4.69	18,760
December.....	691	172	276	3.68	4.24	16,970
January.....	1,230	122	440	5.87	6.77	27,070
February.....	635	169	316	4.21	4.38	17,530
March.....	480	118	189	2.52	2.90	11,610
April.....	279	120	199	2.65	2.96	11,860
May.....	490	250	371	4.95	5.71	22,810
June.....	515	198	353	4.71	5.26	20,980
July.....	201	83	123	1.64	1.89	7,590
August.....	89	51	65.1	.868	1.00	4,000
September.....	50	32	40.5	.540	.60	2,410
The year.....	1,230	24	234	3.12	42.34	169,300

*Estimated.

Yearly discharge of Greenwater River at Greenwater

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	126	1.68	22.83	91,300	128	1.71	23.11	92,400
1931.....	121	1.61	21.90	87,600	136	1.81	24.54	98,100
1932.....	222	2.96	40.37	162,000	270	3.60	48.94	196,000
1933.....	279	3.72	50.47	202,000	337	4.49	61.09	244,000
1934.....	311	4.15	58.39	225,400	239	3.19	43.19	172,700
1935.....	234	3.12	42.34	169,300	-	-	-	-

DUWAMISH RIVER BASIN

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 1935.

Extremes.- Maximum discharge recorded, 33,600 second-feet at 10:30 p.m. Dec. 9, 1933; minimum recorded, 81 second-feet Sept. 4, 5, 1934.

Remarks.- No diversion or regulation.

Monthly discharge of Green River near Palmer

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1931.....	4,720	184	653	2.83	3.26	40,200
November.....	2,950	611	1,200	5.19	5.79	71,400
December.....	3,390	411	985	4.26	4.91	60,600
January 1932.....	10,700	549	1,670	7.23	8.34	103,000
February.....	16,700	342	1,850	8.01	8.64	106,000
March.....	8,780	1,190	2,950	12.8	14.76	181,000
April.....	3,500	1,400	2,090	9.05	10.10	124,000
May.....	2,180	1,040	1,640	7.10	8.19	101,000
June.....	1,620	571	1,110	4.81	5.37	66,000
July.....	772	230	403	1.74	2.01	24,800
August.....	397	177	221	.957	1.10	13,600
September.....	322	154	209	.905	1.01	12,400
Water year 1931-32.....	16,700	154	1,250	5.41	73.48	904,000
October 1932.....	1,910	141	576	2.49	2.87	35,400
November.....	15,200	1,190	3,760	16.3	18.19	224,000
December.....	6,820	772	1,730	7.49	8.64	106,000
Calendar year 1932.....	16,700	141	1,510	6.54	89.22	1,100,000
January 1933.....	13,400	593	2,410	10.4	11.99	148,000
February.....	1,050	342	542	2.35	2.45	30,100
March.....	1,890	562	*1,250	5.41	6.24	76,900
April.....	2,930	998	1,600	6.93	7.73	95,200
May.....	3,260	1,400	1,950	8.44	9.73	120,000
June.....	4,460	1,190	2,140	9.26	10.33	127,000
July.....	1,190	303	696	3.01	3.47	42,800
August.....	506	118	197	.853	.98	12,100
September.....	1,190	100	391	1.69	1.89	23,300
Water year 1932-33.....	15,200	100	1,440	6.23	84.51	1,040,000
October 1933.....	7,240	234	1,609	6.97	8.04	98,910
November.....	10,900	727	1,858	8.04	8.97	110,500
December.....	26,700	862	6,188	26.8	30.90	380,500
Calendar year 1933.....	26,700	100	1,750	7.58	102.72	1,280,000
January 1934.....	12,100	1,500	3,279	14.2	16.37	201,600
February.....	2,550	659	1,142	4.94	5.14	63,410
March.....	5,060	720	1,858	8.04	9.27	114,200
April.....	2,400	598	1,101	4.77	5.32	65,510
May.....	1,080	360	586	2.54	2.93	36,050
June.....	350	203	265	1.15	1.28	15,760
July.....	217	147	171	.740	.85	10,530
August.....	156	90	117	.506	.58	7,220
September.....	350	81	148	.641	.72	8,780
Water year 1933-34.....	26,700	81	1,537	6.65	90.37	1,113,000

Monthly discharge of Green River near Palmer--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1934.....	12,400	115	1,135	4.91	5.66	69,820
November.....	6,150	812	1,792	7.76	8.66	106,600
December.....	5,740	868	1,746	7.56	8.72	107,400
Calendar year 1934.....	12,400	81	1,115	4.83	65.50	806,900
January 1935.....	10,000	700	2,630	11.4	13.14	161,700
February.....	2,390	840	1,377	5.96	6.21	76,490
March.....	3,860	548	1,131	4.90	5.65	69,540
April.....	1,360	642	1,050	4.55	5.08	62,490
May.....	1,610	1,030	1,254	5.43	6.26	77,120
June.....	1,200	395	777	3.36	3.75	46,220
July.....	614	215	336	1.45	1.67	20,660
August.....	315	146	195	.844	.97	11,980
September.....	180	115	*136	.589	.66	8,100
Water year 1934-35.....	12,400	115	1,130	4.89	66.43	818,100

LAKE WASHINGTON BASIN

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. 5 E., at Cedar Falls, three-quarters of a mile below Seattle municipal power plant.

Drainage area.— 86 square miles (revised).

Records available.— April 1914 to September 1935.

Extremes.— Maximum discharge recorded, 6,290 second-feet at 9 a.m. Dec. 19, 1917; no flow

Nov. 25, 1917, Aug. 18, 1923 (result of regulation).

Remarks.— Flow partly regulated by storage and diversion at Cedar Lake reservoir for power development. Diverted water returned to river above station. Monthly discharge in second-feet per square mile and run-off in inches not computed owing to regulation; yearly figures closely represent natural flow.

Monthly discharge of Cedar River at Cedar Falls

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	264	70	182	-	-	11,200
November.....	374	278	330	-	-	19,600
December.....	382	313	344	-	-	21,200
January.....	736	322	408	-	-	25,100
February.....	542	324	435	-	-	25,000
March.....	344	274	320	-	-	19,700
April.....	390	280	330	-	-	19,600
May.....	342	279	319	-	-	19,600
June.....	342	247	316	-	-	18,800
July.....	310	100	214	-	-	13,200
August.....	126	90	112	-	-	6,890
September.....	314	93	219	-	-	13,000
The year.....	736	70	293	3.41	46.41	213,000
1920-21						
October.....	364	291	336	-	-	20,700
November.....	351	234	319	-	-	19,000
December.....	422	298	333	-	-	20,600
January.....	688	344	491	-	-	30,200
February.....	497	349	410	-	-	22,800
March.....	476	374	423	-	-	26,000
April.....	409	307	370	-	-	22,000
May.....	411	312	379	-	-	23,300
June.....	420	334	382	-	-	22,700
July.....	400	262	328	-	-	20,800
August.....	298	88	215	-	-	15,800
September.....	204	58	172	-	-	10,200
The year.....	688	58	346	4.02	54.57	251,000

Monthly discharge of Cedar River at Cedar Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1921-22						
October.....	268	80	187	-	-	11,500
November.....	436	234	292	-	-	17,400
December.....	3,910	390	849	-	-	52,200
January.....	464	291	361	-	-	22,200
February.....	310	51	205	-	-	11,400
March.....	256	60	153	-	-	9,410
April.....	298	214	260	-	-	15,500
May.....	374	224	317	-	-	19,500
June.....	748	298	430	-	-	25,600
July.....	365	195	288	-	-	17,700
August.....	265	28	174	-	-	10,700
September.....	198	2	92	-	-	5,470
The year.....	3,910	2	302	3.51	47.65	219,000
1922-23						
October.....	294	30	106	-	-	6,520
November.....	298	230	277	-	-	16,500
December.....	376	245	295	-	-	18,100
January.....	2,590	322	813	-	-	50,000
February.....	522	105	315	-	-	17,500
March.....	311	226	283	-	-	17,400
April.....	360	245	315	-	-	18,700
May.....	430	288	397	-	-	23,600
June.....	436	308	380	-	-	22,600
July.....	326	196	266	-	-	16,400
August.....	269	130	247	-	-	15,200
September.....	106	30	52.3	-	-	3,110
The year.....	2,590	30	312	3.63	49.28	226,000
1923-24						
October.....	283	32	152	-	-	9,350
November.....	294	44	151	-	-	8,980
December.....	468	214	354	-	-	21,800
January.....	492	256	400	-	-	24,600
February.....	686	336	524	-	-	30,100
March.....	558	275	421	-	-	25,900
April.....	339	204	301	-	-	17,900
May.....	415	261	342	-	-	21,000
June.....	396	91	285	-	-	17,000
July.....	297	11	72.6	-	-	4,460
August.....	284	7	53.2	-	-	3,270
September.....	267	71	178	-	-	10,600
The year.....	686	7	269	3.13	42.60	195,000
1924-25						
October.....	248	70	147	-	-	9,040
November.....	306	66	165	-	-	9,820
December.....	644	172	346	-	-	21,300
January.....	527	309	410	-	-	25,200
February.....	1,510	295	610	-	-	33,900
March.....	378	124	240	-	-	14,800
April.....	486	98	291	-	-	17,300
May.....	433	200	332	-	-	20,400
June.....	381	82	174	-	-	10,400
July.....	124	43	65.1	-	-	4,000
August.....	157	5	44.0	-	-	2,710
September.....	275	22	92.5	-	-	5,500
The year.....	1,510	5	241	2.80	38.01	174,000
1925-26						
October.....	224	21	69.8	-	-	4,290
November.....	306	54	246	-	-	14,600
December.....	512	108	302	-	-	18,600
January.....	596	234	423	-	-	26,000
February.....	344	146	214	-	-	11,900
March.....	272	148	189	-	-	11,600
April.....	267	80	119	-	-	7,080
May.....	116	74	88.5	-	-	5,440
June.....	258	34	79.1	-	-	4,710
July.....	40	4	24.5	-	-	1,510
August.....	70	25	50.8	-	-	1,890
September.....	282	16	110	-	-	6,550
The year.....	596	4	158	1.84	24.98	114,000

Monthly discharge of Cedar River at Cedar Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926-27						
October.....	528	52	281	-	-	17,300
November.....	566	42	219	-	-	13,000
December.....	585	117	297	-	-	18,300
January.....	654	84	363	-	-	22,300
February.....	264	76	149	-	-	8,280
March.....	360	81	229	-	-	14,100
April.....	398	66	161	-	-	9,680
May.....	387	130	292	-	-	18,000
June.....	910	304	471	-	-	28,000
July.....	368	96	257	-	-	15,800
August.....	248	28	75.5	-	-	4,640
September.....	225	36	75.9	-	-	4,620
The year.....	910	28	240	2.79	37.87	174,000
1927-28						
October.....	317	65	212	-	-	13,000
November.....	1,680	276	637	-	-	37,900
December.....	1,810	80	519	-	-	31,900
January.....	3,100	266	740	-	-	45,500
February.....	402	186	302	-	-	17,400
March.....	432	98	223	-	-	13,700
April.....	392	123	203	-	-	12,100
May.....	524	187	427	-	-	26,300
June.....	190	98	126	-	-	7,500
July.....	218	40	98.6	-	-	6,060
August.....	135	19	53.4	-	-	3,280
September.....	193	14	47.1	-	-	2,800
The year.....	3,100	14	299	3.48	47.37	217,000
1928-29						
October.....	305	53	16.8	-	-	10,300
November.....	216	54	78.5	-	-	4,670
December.....	153	56	79.1	-	-	4,860
January.....	289	31	152	-	-	9,550
February.....	260	47	176	-	-	9,780
March.....	446	76	171	-	-	10,600
April.....	460	188	308	-	-	18,300
May.....	366	120	265	-	-	16,300
June.....	448	122	318	-	-	18,900
July.....	188	93	136	-	-	8,560
August.....	238	30	99.4	-	-	6,110
September.....	60	28	37.4	-	-	2,230
The year.....	460	28	165	1.92	26.06	120,000
1929-30						
October.....	94	22	36.6	-	-	2,250
November.....	149	46	91.8	-	-	5,460
December.....	195	48	108	-	-	6,640
January.....	490	33	229	-	-	14,100
February.....	415	72	239	-	-	13,500
March.....	705	98	358	-	-	22,000
April.....	257	86	193	-	-	11,500
May.....	466	122	190	-	-	11,100
June.....	371	105	148	-	-	8,810
July.....	152	50	87.5	-	-	5,380
August.....	215	27	56.9	-	-	3,500
September.....	67	30	38.2	-	-	2,270
The year.....	705	22	147	1.71	23.21	106,000
1930-31						
October.....	211	28	49.9	-	-	3,070
November.....	416	46	244	-	-	14,500
December.....	350	178	284	-	-	17,500
January.....	384	98	234	-	-	14,400
February.....	296	76	152	-	-	8,440
March.....	236	114	158	-	-	9,720
April.....	466	159	287	-	-	17,100
May.....	290	180	228	-	-	14,000
June.....	264	162	197	-	-	11,700
July.....	305	90	160	-	-	9,840
August.....	196	59	99.5	-	-	6,120
September.....	163	62	120	-	-	7,140
The year.....	466	28	184	2.14	29.05	134,000

Monthly discharge of Cedar River at Cedar Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	286	70	160	-	-	9,840
November.....	388	122	233	-	-	13,900
December.....	444	85	240	-	-	14,800
January.....	382	262	302	-	-	18,600
February.....	1,110	103	337	-	-	19,400
March.....	1,430	188	800	-	-	49,200
April.....	1,270	396	716	-	-	42,600
May.....	611	344	504	-	-	31,000
June.....	746	264	452	-	-	26,900
July.....	330	124	215	-	-	13,200
August.....	224	104	132	-	-	8,120
September.....	283	85	132	-	-	7,860
The year.....	1,430	70	352	4.09	55.67	255,000
1932-33						
October.....	322	86	137	-	-	8,420
November.....	2,880	142	960	-	-	57,100
December.....	1,800	170	509	-	-	31,300
January.....	2,730	183	695	-	-	42,700
February.....	285	152	210	-	-	11,700
March.....	425	150	271	-	-	16,700
April.....	260	204	230	-	-	13,700
May.....	294	222	261	-	-	16,000
June.....	1,420	352	829	-	-	49,300
July.....	520	168	342	-	-	21,000
August.....	266	115	174	-	-	10,700
September.....	146	100	116	-	-	6,900
The year.....	2,880	86	395	4.59	62.31	286,000
1933-34						
October.....	400	100	162	-	-	9,990
November.....	2,280	159	572	-	-	34,010
December.....	5,370	154	2,193	-	-	134,800
January.....	3,090	434	1,175	-	-	72,220
February.....	882	105	304	-	-	16,910
March.....	1,160	175	528	-	-	32,480
April.....	1,070	148	422	-	-	25,130
May.....	298	143	*195	-	-	11,970
June.....	-	-	*180	-	-	10,710
July.....	-	-	*90.0	-	-	5,530
August.....	-	-	*45.0	-	-	2,770
September.....	-	-	*45.0	-	-	2,680
The year.....	5,370	-	496	5.77	78.32	359,200
1934-35						
October.....	-	-	*100	-	-	6,150
November.....	-	57	207	-	-	12,350
December.....	1,090	215	439	-	-	26,970
January.....	2,970	264	853	-	-	52,460
February.....	1,210	275	512	-	-	28,430
March.....	550	97	265	-	-	16,300
April.....	294	118	236	-	-	14,060
May.....	336	192	251	-	-	15,420
June.....	605	200	249	-	-	14,830
July.....	310	80	160	-	-	9,850
August.....	140	42	766	-	-	4,710
September.....	110	42	73.7	-	-	4,390
The year.....	2,970	42	284	3.30	44.80	205,900

*Estimated.

Yearly discharge of Cedar River at Cedar Falls

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1915.....	164	1.91	25.93	118,000	209	2.43	32.99	152,000
1916.....	493	5.73	77.99	358,000	446	5.19	70.64	324,000
1917.....	498	5.79	78.60	361,000	653	7.59	103.03	473,000
1918.....	567	6.59	89.46	411,000	451	5.24	71.13	327,000
1919.....	319	3.71	50.36	231,000	295	3.43	46.56	214,000
1920.....	293	3.41	46.41	213,000	305	3.55	48.32	221,000
1921.....	346	4.02	54.57	251,000	375	4.36	59.18	272,000
1922.....	302	3.51	47.65	219,000	247	2.87	38.96	179,000
1923.....	312	3.63	49.28	226,000	311	3.62	49.14	225,000
1924.....	269	3.13	42.60	195,000	269	3.13	42.60	195,000
1925.....	241	2.80	38.01	174,000	237	2.76	37.46	172,000
1926.....	168	1.84	24.98	114,000	173	2.01	27.28	125,000
1927.....	240	2.79	37.87	174,000	287	3.34	45.34	208,000
1928.....	299	3.48	47.37	217,000	213	2.48	33.76	154,000
1929.....	165	1.92	26.06	120,000	158	1.84	24.98	114,000
1930.....	147	1.71	23.21	106,000	175	2.03	27.58	127,000
1931.....	184	2.14	29.05	134,000	189	2.20	29.86	137,000
1932.....	352	4.09	55.67	255,000	432	5.02	68.33	314,000
1933.....	395	4.59	62.31	286,000	508	5.91	80.22	368,000
1934.....	496	5.77	78.32	359,200	312	3.63	49.28	225,900
1935.....	264	3.30	44.80	205,900	-	-	-	-
Highest.....	567	6.59	89.46	411,000	653	7.59	103.03	473,000
Average.....	311	3.61	49.07	225,000	312	3.63	49.33	226,000
Lowest.....	147	1.71	23.21	106,000	158	1.84	24.98	114,000

Cedar River near Landsberg, Wash.

(Formerly called Cedar River at Clifford Bridge near Ravensdale, and near Ravensdale)

Location.- Water-stage recorder, lat. 47°23'35", long. 121°56'50", in sec. 17, T. 22 N., R. 7 E., 1½ miles above intake of Seattle water-supply system and Landsberg. Prior to Oct. 1, 1898, staff gage 2 miles downstream; Mar. 24, 1901, to Apr. 30, 1912, staff gage at water-supply intake, 1½ miles downstream.

Drainage area.- 138 square miles (revised); 144 square miles (revised) at former locations.

Records available.- July 1895 to April 1912, April 1914 to September 1935.

Extremes.- Maximum discharge observed, 13,600 second-feet Nov. 19, 1911; minimum observed, 83 second-feet Sept. 19, 1898.

Remarks.- Flow partly regulated by storage and diversion at Cedar Lake reservoir for power development. Flow of Rock Creek diverted around station since 1932 to lessen danger of pollution of water supply of city of Seattle. Records for water years 1932-33 and 1933-34 not adjusted for this diversion, which probably does not exceed ten percent of the flow of the river for any one month or five percent for the year. Monthly discharge in second-feet per square mile and run-off in inches not computed owing to regulation; yearly figures represent the natural flow quite closely.

Monthly discharge of Cedar River near Landsberg

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	498	238	354	-	-	21,800
November.....	974	544	680	-	-	40,500
December.....	1,010	513	656	-	-	40,500
January.....	1,760	630	974	-	-	59,900
February.....	1,360	694	928	-	-	53,400
March.....	1,100	670	767	-	-	47,200
April.....	1,520	745	865	-	-	51,500
May.....	754	638	692	-	-	42,500
June.....	725	590	663	-	-	39,500
July.....	639	364	502	-	-	30,900
August.....	553	289	315	-	-	19,400
September.....	664	273	466	-	-	27,700
The year.....	1,760	238	654	4.74	64.52	475,000

Monthly discharge of Cedar River near Landsberg--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920-21						
October.....	1,100	543	670	-	-	41,200
November.....	812	439	609	-	-	36,200
December.....	1,640	619	770	-	-	47,300
January.....	1,560	896	1,160	-	-	71,300
February.....	1,770	870	1,120	-	-	62,200
March.....	1,580	885	1,070	-	-	65,800
April.....	1,270	744	918	-	-	54,600
May.....	988	703	838	-	-	51,500
June.....	820	700	757	-	-	45,000
July.....	820	545	644	-	-	39,600
August.....	572	392	472	-	-	29,000
September.....	438	264	394	-	-	23,400
The year.....	1,770	264	784	5.68	77.10	567,000
1921-22						
October.....	674	278	418	-	-	25,700
November.....	1,430	472	644	-	-	38,300
December.....	5,410	808	1,440	-	-	88,500
January.....	830	608	699	-	-	43,000
February.....	653	356	526	-	-	29,200
March.....	593	344	444	-	-	27,300
April.....	778	542	610	-	-	36,300
May.....	978	558	671	-	-	41,300
June.....	1,170	575	752	-	-	44,700
July.....	678	478	571	-	-	35,100
August.....	509	271	427	-	-	26,300
September.....	408	-	287	-	-	17,100
The year.....	5,410	-	626	4.54	61.63	453,000
1922-23						
October.....	660	197	292	-	-	18,000
November.....	588	410	473	-	-	28,100
December.....	1,610	410	603	-	-	37,100
January.....	3,960	748	1,480	-	-	91,000
February.....	900	512	737	-	-	40,900
March.....	843	649	730	-	-	44,900
April.....	758	597	675	-	-	40,200
May.....	829	596	729	-	-	44,800
June.....	1,020	645	791	-	-	47,100
July.....	712	497	579	-	-	35,600
August.....	524	350	476	-	-	29,300
September.....	306	202	230	-	-	13,700
The year.....	3,960	197	650	4.71	63.94	471,000
1923-24						
October.....	468	188	306	-	-	18,800
November.....	524	187	312	-	-	18,600
December.....	1,020	437	628	-	-	38,600
January.....	1,270	473	732	-	-	45,000
February.....	2,410	878	1,220	-	-	70,200
March.....	1,070	682	862	-	-	53,000
April.....	824	539	682	-	-	40,600
May.....	626	519	571	-	-	35,100
June.....	616	402	527	-	-	31,400
July.....	508	242	301	-	-	18,500
August.....	427	185	227	-	-	14,000
September.....	410	214	332	-	-	19,800
The year.....	2,410	185	556	4.03	54.85	404,000
1924-25						
October.....	550	250	357	-	-	22,000
November.....	650	374	493	-	-	29,300
December.....	1,100	492	747	-	-	45,900
January.....	1,750	-	1,040	-	-	64,000
February.....	2,430	778	1,310	-	-	72,800
March.....	860	555	688	-	-	42,300
April.....	911	508	705	-	-	42,000
May.....	826	606	709	-	-	43,600
June.....	688	382	495	-	-	29,500
July.....	396	324	359	-	-	22,100
August.....	380	263	297	-	-	18,300
September.....	415	225	277	-	-	16,500
The year.....	2,430	225	619	4.49	60.95	448,000

Monthly discharge of Cedar River near Landsberg--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1925-26						
October.....	357	167	223	-	-	13,700
November.....	561	235	418	-	-	24,900
December.....	1,350	396	710	-	-	43,700
January.....	1,350	627	866	-	-	53,200
February.....	901	604	726	-	-	40,300
March.....	732	540	622	-	-	38,200
April.....	688	421	476	-	-	28,300
May.....	546	402	449	-	-	27,600
June.....	596	323	402	-	-	23,900
July.....	327	233	268	-	-	16,500
August.....	266	196	217	-	-	13,300
September.....	449	187	283	-	-	16,800
The year.....	1,350	167	470	3.41	46.29	340,000
1926-27						
October.....	874	257	525	-	-	32,300
November.....	966	269	463	-	-	27,600
December.....	1,140	454	703	-	-	43,200
January.....	1,610	547	987	-	-	60,700
February.....	1,140	521	738	-	-	41,000
March.....	902	620	786	-	-	48,300
April.....	838	504	611	-	-	36,400
May.....	932	563	773	-	-	47,500
June.....	1,470	669	911	-	-	54,200
July.....	710	406	584	-	-	35,900
August.....	543	314	373	-	-	22,900
September.....	454	316	362	-	-	21,500
The year.....	1,610	257	651	4.72	64.07	472,000
1927-28						
October.....	836	364	590	-	-	36,300
November.....	2,740	692	1,380	-	-	82,100
December.....	3,010	591	1,210	-	-	74,400
January.....	4,560	875	1,560	-	-	95,300
February.....	824	666	737	-	-	42,400
March.....	1,150	560	726	-	-	44,600
April.....	1,060	637	739	-	-	44,000
May.....	1,130	607	889	-	-	54,700
June.....	553	406	456	-	-	27,100
July.....	559	346	410	-	-	25,200
August.....	391	277	325	-	-	20,000
September.....	400	238	278	-	-	16,500
The year.....	4,560	238	775	5.62	76.50	563,000
1928-29						
October.....	688	298	432	-	-	26,600
November.....	410	234	280	-	-	16,700
December.....	446	284	333	-	-	20,500
January.....	617	282	437	-	-	26,900
February.....	611	266	445	-	-	24,700
March.....	996	416	628	-	-	38,600
April.....	924	605	764	-	-	45,500
May.....	838	530	694	-	-	42,700
June.....	977	546	809	-	-	48,100
July.....	600	435	521	-	-	32,000
August.....	622	315	425	-	-	26,100
September.....	318	237	278	-	-	16,500
The year.....	996	234	504	3.65	49.55	365,000
1929-30						
October.....	288	190	221	-	-	13,600
November.....	305	203	259	-	-	15,400
December.....	669	219	368	-	-	22,600
January.....	811	-	478	-	-	29,400
February.....	825	438	654	-	-	36,300
March.....	1,060	524	755	-	-	46,400
April.....	684	526	601	-	-	35,800
May.....	792	470	548	-	-	33,700
June.....	718	442	514	-	-	30,600
July.....	464	348	403	-	-	24,800
August.....	469	278	333	-	-	20,500
September.....	292	238	266	-	-	15,800
The year.....	1,060	190	449	3.25	44.12	325,000

Monthly discharge of Cedar River near Landsberg--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	400	223	255	-	-	15,700
November.....	628	260	448	-	-	26,700
December.....	544	380	484	-	-	29,800
January.....	736	352	540	-	-	33,200
February.....	705	335	445	-	-	24,700
March.....	952	384	539	-	-	33,100
April.....	1,030	580	778	-	-	46,300
May.....	730	492	585	-	-	36,000
June.....	632	476	530	-	-	31,500
July.....	567	395	459	-	-	28,200
August.....	488	323	379	-	-	23,300
September.....	-	286	352	-	-	20,900
The year.....	1,030	223	483	3.50	47.51	349,000
1931-32						
October.....	844	-	394	-	-	24,200
November.....	620	396	522	-	-	31,100
December.....	829	352	583	-	-	35,800
January.....	1,430	628	828	-	-	50,900
February.....	3,120	528	898	-	-	51,700
March.....	2,920	945	1,640	-	-	101,000
April.....	2,000	894	1,300	-	-	77,400
May.....	1,030	776	940	-	-	57,800
June.....	1,080	582	821	-	-	48,900
July.....	625	422	518	-	-	31,900
August.....	-	-	427	-	-	26,300
September.....	610	-	388	-	-	23,100
The year.....	3,120	-	771	5.59	76.09	560,000
*1932-33						
October.....	-	279	368	-	-	22,600
November.....	3,900	464	1,500	-	-	89,300
December.....	2,830	637	1,090	-	-	67,000
January.....	4,030	614	1,370	-	-	84,200
February.....	744	548	608	-	-	33,800
March.....	943	580	782	-	-	48,100
April.....	-	-	694	-	-	41,300
May.....	-	641	689	-	-	42,400
June.....	1,790	763	1,240	-	-	73,800
July.....	950	-	708	-	-	43,500
August.....	-	383	485	-	-	29,800
September.....	550	365	426	-	-	25,300
The year.....	4,030	279	831	6.02	81.72	601,000
*1933-34						
October.....	934	400	556	-	-	34,190
November.....	3,610	579	1,126	-	-	66,980
December.....	6,850	576	3,126	-	-	192,200
January.....	4,690	1,170	2,013	-	-	123,800
February.....	1,670	547	880	-	-	48,860
March.....	1,540	548	951	-	-	57,250
April.....	1,520	507	838	-	-	49,860
May.....	703	448	539	-	-	33,110
June.....	554	382	464	-	-	27,640
July.....	390	299	334	-	-	20,520
August.....	298	219	259	-	-	15,910
September.....	255	206	220	-	-	13,110
The year.....	6,850	206	944	6.84	92.85	683,400

*Records for October 1932 to September 1934 do not include flow of Rock Creek (see "Remarks" in station description, p. 108).

Monthly discharge of Cedar River near Landsberg--Continued

Month	Observed				Rock Creek (diverted past gage) (acre- feet)	Discharge including Rock Creek			
	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	
1934-35									
October..	1,850	206	371	22,810	2,090	24,900	405	-	-
November.	1,190	494	707	42,100	3,730	45,830	770	-	-
December.	1,850	592	943	57,990	3,730	61,720	1,004	-	-
January..	4,000	731	1,518	93,520	3,990	97,310	1,583	-	-
February.	1,710	736	996	55,290	1,980	57,270	1,031	-	-
March....	958	558	721	44,550	1,690	46,040	749	-	-
April.....	702	530	641	38,140	1,320	39,460	663	-	-
May.....	702	523	595	36,570	859	37,430	609	-	-
June.....	875	505	557	33,130	571	33,700	566	-	-
July.....	646	375	467	28,740	373	29,110	473	-	-
August....	469	307	360	22,130	248	22,380	364	-	-
September	369	288	326	19,410	190	19,600	329	-	-
The year	4,000	206	682	494,000	20,770	514,800	711	5.15	69.91

Yearly discharge of Cedar River near Landsberg

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1896.....	762	5.29	72.00	553,000	972	6.75	91.88	706,000
1897.....	1,060	7.36	99.91	771,000	999	6.94	94.21	724,000
1898.....	700	4.86	65.97	506,000	*612	4.25	57.69	445,000
1899.....	*935	6.49	88.10	677,000	*1,110	7.71	104.66	804,000
1900.....	*969	6.73	91.61	703,000	*838	5.82	79.22	608,000
1901.....	*746	5.18	70.32	540,000	*726	5.04	68.42	526,000
1902.....	695	4.83	65.56	504,000	682	4.74	64.34	494,000
1903.....	739	5.13	69.64	535,000	765	5.31	72.08	554,000
1904.....	730	5.07	69.01	530,000	632	4.39	59.75	459,000
1905.....	523	3.63	49.28	378,000	578	4.01	54.43	418,000
1906.....	601	4.17	56.60	435,000	741	5.15	69.91	537,000
1907.....	778	5.40	73.30	563,000	615	4.27	57.96	445,000
1908.....	691	4.80	65.34	501,000	670	4.65	63.29	486,000
1909.....	608	4.22	57.28	440,000	775	5.38	73.03	561,000
1910.....	798	5.54	75.20	577,000	719	4.99	67.74	520,000
1911.....	609	4.23	57.42	441,000	632	4.39	59.59	458,000
1915.....	422	3.06	41.54	305,000	507	3.67	49.82	367,000
1916.....	927	6.72	91.47	673,000	851	6.17	83.98	618,000
1917.....	837	6.07	82.40	606,000	999	7.24	98.28	723,000
1918.....	912	6.61	89.73	661,000	808	5.83	79.14	582,000
1919.....	742	5.35	75.03	537,000	705	5.11	69.36	510,000
1920.....	654	4.74	64.52	475,000	694	4.96	67.51	497,000
1921.....	784	5.68	77.10	567,000	822	5.96	80.90	595,000
1922.....	626	4.54	61.63	453,000	530	3.84	52.12	384,000
1923.....	650	4.71	63.94	471,000	640	4.64	62.98	464,000
1924.....	556	4.03	54.85	404,000	585	4.24	57.71	425,000
1925.....	619	4.49	60.95	448,000	599	4.34	58.91	433,000
1926.....	470	3.41	46.29	340,000	499	3.62	49.14	361,000
1927.....	651	4.72	64.07	472,000	775	5.62	76.29	561,000
1928.....	775	5.62	76.50	563,000	597	4.33	58.94	434,000
1929.....	504	3.65	49.55	365,000	487	3.53	47.92	353,000
1930.....	449	3.25	44.12	325,000	477	3.46	46.97	346,000
1931.....	433	3.50	47.51	349,000	509	3.69	50.09	368,000
1932.....	771	5.68	76.09	560,000	†392	6.46	87.93	648,000
1933.....	†831	6.02	81.72	601,000	†988	7.16	97.19	715,000
1934.....	†944	6.84	92.85	683,400	†708	5.13	69.64	513,000
1935.....	682	4.94	67.06	494,000	-	-	-	-
Highest.....	1,060	7.36	99.91	771,000	1,110	7.71	104.66	804,000
Average.....	709	5.04	68.47	514,000	715	5.08	68.97	518,000
Lowest.....	422	3.06	41.54	305,000	477	3.46	46.97	346,000

*Figures of monthly discharge for October 1898 to March 1901 estimated on basis of records for White River at Buckley.

†Records for October 1932 to September 1934 do not include flow of Rock Creek (see "Remarks" in station description, p. 108).

SNOHOMISH RIVER BASIN

Tye River near Skykomish, Wash.

Location.-- Staff gage, lat. 47°42'25", long. 121°17'40", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 29, T. 26 N., R. 12 E., a quarter of a mile above Foss River and 3 miles east of Skykomish.
Drainage area.-- 80 square miles.
Records available.-- August 1929 to September 1931.
Extremes.-- Maximum discharge observed, 1,500 second-feet Apr. 30, May 13, 1931; minimum, not determined, probably occurred during period Jan. 8-30, 1930, when stage-discharge relation was affected by ice.
Remarks.-- No diversion or regulation.

Monthly discharge of Tye River near Skykomish

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
August 1929.....	164	92	122	1.52	1.75	7,500
September.....	93	65	76.3	.954	1.06	4,540
The period.....	-	-	-	-	-	12,000
October 1929.....	156	60	80.5	1.01	1.16	4,950
November.....	96	53	76.9	.961	1.07	4,580
December.....	880	62	187	2.34	2.70	11,500
January 1930.....	248	-	96.6	1.21	1.40	5,940
February.....	1,270	232	543	6.79	7.07	30,200
March.....	970	178	394	4.92	5.67	24,200
April.....	1,070	475	743	9.29	10.36	44,200
May.....	1,020	435	649	8.11	9.35	39,900
June.....	835	362	525	6.56	7.32	31,200
July.....	345	112	202	2.52	2.90	12,400
August.....	112	66	86.2	1.08	1.24	5,500
September.....	127	56	67.5	.844	.94	4,020
Water year 1929-30.....	1,270	-	302	3.78	51.18	218,000
October 1930.....	425	53	136	1.70	1.96	8,360
November.....	232	110	172	2.15	2.40	10,200
December.....	178	95	145	1.81	2.09	8,920
Calendar year 1930.....	1,270	-	311	3.89	52.70	225,000
January 1931.....	1,350	102	288	3.60	4.15	17,700
February.....	1,100	188	336	4.20	4.37	18,700
March.....	900	217	383	4.79	5.52	23,600
April.....	1,500	217	454	5.68	6.34	27,000
May.....	1,500	322	802	11.3	13.03	55,500
June.....	900	337	545	6.81	7.60	32,400
July.....	307	102	173	2.16	2.49	10,600
August.....	102	65	81.2	1.02	1.18	4,990
September.....	126	65	87.2	1.09	1.22	5,190
Water year 1930-31.....	1,500	53	308	3.85	52.35	223,000

South Fork of Skykomish River near Skykomish, Wash.

Location.-- Staff gage, lat. 47°42'35", long. 121°18'40", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 30, T. 26 N., R. 12 E., a quarter of a mile below Foss River and 2 miles east of Skykomish.
Drainage area.-- 137 square miles.
Records available.-- August 1929 to September 1931.
Extremes.-- Maximum discharge observed, 2,640 second-feet Jan. 28, 1931; minimum, not determined, probably occurred during period Jan. 10-31, 1930, when stage-discharge relation was affected by ice.
Remarks.-- No diversion or regulation.

Monthly discharge of South Fork of Skykomish River near Skykomish

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
August 1929.....	439	249	327	2.39	2.76	20,100
September.....	304	142	206	1.50	1.67	12,300
The period.....	-	-	-	-	-	32,400
October 1929.....	270	130	183	1.34	1.54	11,300
November.....	178	130	154	1.12	1.25	9,160
December.....	1,240	124	411	3.00	3.46	25,300
January 1930.....	550	-	212	1.55	1.79	13,000
February.....	2,140	520	1,040	7.59	7.90	57,800
March.....	1,560	325	645	4.71	5.43	39,700
April.....	1,700	960	1,190	8.69	9.70	70,800
May.....	1,650	655	1,020	7.45	8.59	62,700
June.....	1,380	725	947	6.91	7.71	56,400
July.....	760	325	512	3.74	4.31	31,500
August.....	306	202	253	1.85	2.13	15,600
September.....	270	143	195	1.42	1.58	11,600
Water year 1929-30.....	2,140	-	558	4.07	55.39	405,000
October 1930.....	1,080	143	343	2.50	2.88	21,100
November.....	690	270	386	2.82	3.15	23,000
December.....	585	186	311	2.27	2.62	19,100
Calendar year 1930.....	2,140	-	583	4.26	57.79	422,000
January 1931.....	2,640	186	560	4.09	4.72	34,400
February.....	2,140	335	638	4.66	4.95	35,400
March.....	1,700	450	750	5.47	6.31	46,100
April.....	2,040	480	823	6.01	6.70	49,000
May.....	2,190	920	1,440	10.5	12.11	83,500
June.....	1,380	725	1,070	7.81	8.71	63,700
July.....	655	296	440	3.21	3.70	27,100
August.....	296	202	238	1.74	2.01	14,600
September.....	315	178	239	1.74	1.94	14,200
Water year 1930-31.....	2,640	143	603	4.40	59.70	436,000

South Fork of Skykomish River near Index, Wash.

Location.- Water-stage recorder, lat. 47°48'20", 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. Discharge measurements made 1 mile above gage. Prior to Mar. 31, 1934, staff gage or water-stage recorder 300 feet downstream.

Drainage area.- 355 square miles (revised).

Records available.- October 1902 to September 1905, April 1911 to September 1935.

Extremes.- Maximum discharge observed, about 57,000 second-feet at 9 a.m. Dec. 18, 1917; minimum, 214 second-feet Oct. 15-21, 23, 1925.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Skykomish River near Index

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	1,580	333	612	1.72	1.98	37,600
November.....	26,400	990	4,050	11.4	12.72	241,000
December.....	14,000	713	3,100	8.73	10.06	191,000
January.....	14,400	940	3,590	10.1	11.64	221,000
February.....	3,810	713	1,650	4.68	5.05	95,500
March.....	10,100	713	1,630	4.59	5.29	100,000
April.....	2,860	1,040	1,650	4.65	5.19	98,200
May.....	5,340	1,580	2,550	7.18	8.28	157,000
June.....	4,410	1,720	3,100	8.73	9.74	184,000
July.....	3,160	713	1,550	4.37	5.04	95,300
August.....	1,320	417	634	1.79	2.06	39,000
September.....	10,200	493	2,560	7.21	8.04	152,000
The year.....	26,400	333	2,220	6.25	85.09	1,610,000

Monthly discharge of South Fork of Skykomish River near Index--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920-21						
October.....	16,500	1,440	3,590	10.1	11.64	221,000
November.....	5,300	776	2,050	5.77	6.44	122,000
December.....	14,900	866	2,370	6.68	7.70	146,000
January.....	10,200	990	2,720	7.66	8.83	167,000
February.....	17,900	915	3,680	10.4	10.83	204,000
March.....	6,360	1,480	2,900	8.17	9.42	178,000
April.....	5,060	1,440	2,550	7.18	8.01	152,000
May.....	9,140	2,120	4,770	13.4	15.45	293,000
June.....	11,200	3,700	6,380	18.0	20.08	380,000
July.....	5,340	1,440	2,760	7.77	8.96	170,000
August.....	1,410	575	904	2.55	2.94	55,600
September.....	5,250	483	1,590	4.48	5.00	94,600
The year.....	17,900	483	3,010	8.48	115.30	2,180,000
1921-22						
October.....	-	-	*1,900	5.35	6.17	117,000
November.....	-	-	*2,600	7.32	8.17	155,000
December.....	45,000	-	*5,000	14.1	16.26	307,000
January.....	-	-	*750	2.06	2.38	44,900
February.....	693	466	560	1.58	1.64	31,100
March.....	1,170	433	683	1.92	2.21	42,000
April.....	2,960	1,020	1,790	5.04	5.62	107,000
May.....	10,100	1,920	4,480	12.5	14.41	274,000
June.....	9,490	2,760	4,980	14.0	15.62	296,000
July.....	2,480	673	1,320	3.72	4.29	81,200
August.....	753	483	596	1.68	1.94	36,600
September.....	2,960	417	773	2.18	2.43	46,000
The year.....	45,000	417	2,120	5.97	81.14	1,540,000
1922-23						
October.....	6,360	346	1,070	3.01	3.47	65,800
November.....	4,800	594	1,340	3.77	4.21	79,700
December.....	19,200	-	2,870	8.08	9.32	176,000
January.....	18,400	990	4,380	12.2	14.07	269,000
February.....	1,140	-	884	2.49	2.59	49,100
March.....	4,050	965	1,400	3.94	4.54	86,100
April.....	5,200	2,390	3,260	9.18	10.24	194,000
May.....	8,350	2,210	4,180	11.8	13.60	257,000
June.....	6,670	2,480	3,890	11.0	12.27	231,000
July.....	4,540	990	2,250	6.28	7.24	137,000
August.....	1,200	556	719	2.03	2.34	44,200
September.....	594	346	442	1.25	1.40	26,300
The year.....	19,200	346	2,230	6.28	85.29	1,620,000
1923-24						
October.....	3,590	346	884	2.49	2.87	54,400
November.....	7,990	483	1,650	4.65	5.19	98,200
December.....	19,000	1,860	2,990	8.42	9.71	184,000
January.....	16,700	990	2,160	6.08	7.01	135,000
February.....	31,000	1,890	5,410	15.2	16.39	311,000
March.....	2,480	843	1,240	3.49	4.02	76,200
April.....	4,170	843	1,800	5.07	5.66	107,000
May.....	10,700	2,300	4,750	13.4	15.45	292,000
June.....	4,290	1,650	2,590	7.30	8.14	154,000
July.....	2,040	633	1,060	2.99	3.45	65,200
August.....	1,260	387	536	1.51	1.74	33,000
September.....	1,440	320	491	1.38	1.54	29,200
The year.....	31,000	320	2,120	5.97	81.17	1,540,000

*Estimated.

Monthly discharge of South Fork of Skykomish River near Index--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	5,060	753	2,120	5.97	6.88	130,000
November.....	5,910	1,520	2,480	6.99	7.80	148,000
December.....	19,200	1,090	4,040	11.4	13.14	248,000
January.....	12,200	1,040	2,850	8.03	9.26	175,000
February.....	17,700	1,200	3,740	10.5	10.93	208,000
March.....	2,390	1,040	1,560	4.39	5.06	95,900
April.....	8,170	1,140	3,210	9.04	10.09	191,000
May.....	9,490	2,960	5,540	15.0	17.29	328,000
June.....	5,480	2,300	3,450	9.72	10.84	205,000
July.....	2,570	798	1,420	4.00	4.61	87,300
August.....	753	417	558	1.57	1.81	34,500
September.....	417	271	351	.989	1.10	20,900
The year.....	19,200	271	2,590	7.30	98.81	1,870,000
1925-26						
October.....	6,510	214	750	2.11	2.43	46,100
November.....	5,160	519	1,310	3.69	4.12	78,000
December.....	18,200	1,720	4,790	13.5	15.56	298,000
January.....	9,290	1,090	2,170	6.11	7.04	133,000
February.....	5,060	990	2,110	5.94	6.18	117,000
March.....	3,480	990	1,910	5.38	6.20	117,000
April.....	3,370	1,260	2,140	6.03	6.73	127,000
May.....	3,590	1,380	2,130	6.00	6.92	131,000
June.....	1,580	556	963	2.71	3.02	57,300
July.....	556	333	424	1.19	1.37	26,100
August.....	843	308	419	1.18	1.36	25,800
September.....	1,880	387	674	1.90	2.12	40,100
The year.....	18,200	214	1,650	4.65	63.05	1,190,000
1926-27						
October.....	17,700	843	2,500	7.04	8.12	154,000
November.....	3,810	735	1,620	5.13	5.72	108,000
December.....	5,760	1,040	2,120	5.97	6.88	130,000
January.....	6,510	830	1,730	4.87	5.62	106,000
February.....	4,930	830	1,710	4.82	5.02	95,000
March.....	1,880	980	1,500	3.66	4.22	79,900
April.....	7,820	1,160	2,350	6.62	7.39	140,000
May.....	9,490	2,660	4,260	12.0	13.83	262,000
June.....	10,900	3,060	5,670	16.0	17.85	337,000
July.....	3,160	1,040	2,050	5.77	6.65	126,000
August.....	3,370	530	802	2.26	2.61	49,500
September.....	5,340	645	1,720	4.85	5.41	102,000
The year.....	17,700	530	2,330	6.56	89.32	1,690,000
1927-28						
October.....	7,480	1,420	3,060	8.62	9.94	188,000
November.....	13,100	2,040	5,740	16.2	18.07	342,000
December.....	19,200	780	2,900	8.17	9.42	178,000
January.....	28,200	830	4,570	12.9	14.87	281,000
February.....	1,720	645	1,100	3.10	3.34	63,500
March.....	5,760	605	2,700	7.61	8.77	166,000
April.....	4,540	1,350	2,220	6.25	6.97	132,000
May.....	8,720	2,390	5,080	14.3	16.49	312,000
June.....	5,810	1,960	2,960	8.34	9.30	176,000
July.....	2,300	690	1,310	3.69	4.25	80,600
August.....	650	374	474	1.34	1.54	29,100
September.....	1,280	304	407	1.15	1.28	24,200
The year.....	28,200	304	2,720	7.66	104.24	1,970,000
1928-29						
October.....	9,490	575	1,950	5.49	6.33	120,000
November.....	2,210	575	1,070	3.01	3.36	63,700
December.....	2,760	575	976	2.75	3.17	60,000
January.....	980	-	595	1.68	1.94	36,600
February.....	690	-	454	1.28	1.33	25,200
March.....	4,800	930	1,720	4.85	5.59	106,000
April.....	4,050	830	1,830	5.15	5.75	109,000
May.....	8,350	2,570	4,800	15.5	15.56	295,000
June.....	6,670	5,160	4,660	12.8	14.28	271,000
July.....	3,160	830	1,670	4.70	5.42	103,000
August.....	780	399	540	1.52	1.75	33,200
September.....	425	271	350	.986	1.10	20,800
The year.....	9,490	271	1,720	4.85	65.58	1,240,000

Monthly discharge of South Fork of Skykomish River near Index--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	980	271	461	1.30	1.50	28,300
November.....	930	350	426	1.20	1.34	25,300
December.....	6,210	327	1,610	4.54	5.23	99,000
January.....	2,760	-	770	2.17	2.50	47,300
February.....	9,690	1,420	3,970	11.2	11.66	220,000
March.....	5,620	830	2,090	5.59	6.79	129,000
April.....	5,910	2,390	3,360	9.46	10.56	200,000
May.....	4,540	1,720	2,650	7.46	5.60	163,000
June.....	3,810	1,560	2,340	6.59	7.35	139,000
July.....	1,640	540	962	2.71	3.12	59,200
August.....	510	327	406	1.14	1.31	25,000
September.....	780	282	380	1.07	1.19	22,600
The year.....	9,690	271	1,600	4.51	61.15	1,160,000
1930-31						
October.....	4,290	304	1,260	3.61	4.16	78,700
November.....	2,570	610	1,160	3.27	3.65	69,000
December.....	2,040	510	1,010	2.85	3.29	62,100
January.....	9,270	510	2,140	6.03	6.95	152,000
February.....	9,470	895	2,040	5.75	5.99	113,000
March.....	9,740	1,450	2,720	7.66	8.83	167,000
April.....	5,740	1,500	2,620	7.38	8.23	156,000
May.....	6,190	1,990	3,700	10.4	11.99	228,000
June.....	5,460	1,990	2,810	7.92	8.84	167,000
July.....	1,780	535	961	2.71	3.12	59,100
August.....	500	350	404	1.14	1.31	24,800
September.....	1,370	350	597	1.68	1.87	35,600
The year.....	9,470	304	1,790	5.04	68.23	1,290,000
1931-32						
October.....	4,930	400	1,210	3.41	3.93	74,400
November.....	10,900	895	2,460	6.93	7.73	146,000
December.....	4,800	615	1,460	4.11	4.74	89,800
January.....	20,500	745	2,210	6.23	7.18	156,000
February.....	42,400	535	3,930	11.1	11.97	226,000
March.....	10,900	1,640	4,060	11.4	13.14	250,000
April.....	6,350	2,380	3,690	10.4	11.60	220,000
May.....	6,040	2,750	4,340	12.2	14.07	267,000
June.....	9,480	2,950	4,660	13.1	14.62	277,000
July.....	4,930	1,130	2,350	6.62	7.63	144,000
August.....	1,190	575	812	2.29	2.64	49,900
September.....	1,570	400	581	1.64	1.83	34,600
The year.....	42,400	400	2,640	7.44	101.08	1,910,000
1932-33						
October.....	4,930	327	1,634	4.60	5.30	100,400
November.....	35,900	2,230	7,910	22.3	24.88	470,700
December.....	27,200	1,370	3,377	9.51	10.96	207,700
January.....	11,400	640	2,792	7.66	9.06	171,700
February.....	2,500	-	760	2.20	2.29	43,310
March.....	2,500	730	1,719	4.84	5.58	105,700
April.....	5,730	1,580	2,645	7.45	8.31	157,400
May.....	9,660	2,500	4,119	11.6	13.37	253,200
June.....	12,300	4,700	6,860	19.3	21.53	408,200
July.....	6,630	2,590	4,682	13.2	15.22	287,900
August.....	3,470	730	1,693	4.77	5.50	104,100
September.....	6,000	600	1,962	5.53	6.17	116,800
The year.....	35,900	327	3,352	9.44	128.17	2,427,000
1933-34						
October.....	21,700	685	4,326	12.2	14.07	266,000
November.....	20,400	1,230	3,766	10.7	11.94	225,300
December.....	27,200	1,420	9,440	26.6	30.67	580,500
January.....	11,800	3,030	5,334	15.0	17.29	327,900
February.....	4,700	1,290	2,262	6.37	6.63	125,600
March.....	11,200	1,640	4,278	12.1	13.95	263,000
April.....	6,320	2,650	4,244	12.0	13.39	252,500
May.....	6,680	2,190	3,158	8.90	10.26	194,200
June.....	2,280	1,050	1,627	4.58	5.11	96,850
July.....	1,340	630	859	2.36	2.72	51,610
August.....	582	438	498	1.40	1.61	30,590
September.....	1,420	415	588	1.66	1.85	34,960
The year.....	27,200	416	3,383	9.53	129.49	2,449,000

Monthly discharge of South Fork of Skykomish River near Index--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
October.....	23,100	418	2,610	7.35	8.47	160,500
November.....	15,200	1,940	4,132	11.6	12.94	245,900
December.....	11,000	1,360	2,843	8.01	9.24	174,800
January.....	26,200	830	5,093	14.3	16.49	313,100
February.....	5,500	1,420	2,651	7.47	7.78	147,300
March.....	5,950	835	1,630	4.59	5.29	100,200
April.....	2,790	728	1,641	4.62	5.16	97,660
May.....	6,100	2,540	3,688	10.4	11.99	226,800
June.....	6,700	2,790	4,322	12.2	13.61	257,200
July.....	3,350	925	2,072	5.84	6.73	127,400
August.....	1,260	491	635	1.79	2.06	39,030
September.....	1,120	402	491	1.38	1.54	29,220
The year.....	26,200	402	2,651	7.47	101.30	1,919,000

Yearly discharge of South Fork of Skykomish River near Index

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1903.....	2,400	6.76	91.77	1,740,000	2,590	7.30	99.09	1,870,000
1904.....	2,290	6.45	87.79	1,660,000	2,130	6.00	81.67	1,540,000
1905.....	1,790	5.04	68.41	1,300,000	-	-	-	-
1912.....	2,350	6.62	90.11	1,700,000	2,200	6.20	84.39	1,600,000
1913.....	2,650	7.46	101.27	1,920,000	2,740	7.72	104.79	1,980,000
1914.....	2,330	6.56	89.05	1,690,000	2,550	6.62	89.86	1,700,000
1915.....	1,470	4.14	56.19	1,060,000	1,460	4.11	55.79	1,060,000
1916.....	2,840	8.00	108.90	2,060,000	2,550	7.18	97.75	1,850,000
1917.....	2,490	7.01	95.16	1,800,000	3,290	9.27	125.85	2,380,000
1918.....	3,000	8.45	114.70	2,170,000	2,710	7.63	103.57	1,960,000
1919.....	2,710	7.53	103.58	1,960,000	2,580	7.27	98.68	1,860,000
1920.....	2,220	6.25	85.09	1,610,000	2,250	6.54	86.11	1,630,000
1921.....	3,010	8.48	115.30	2,180,000	3,140	8.85	120.12	2,270,000
1922.....	2,120	5.97	81.14	1,540,000	1,770	4.99	67.54	1,280,000
1923.....	2,250	6.28	85.29	1,620,000	2,250	6.34	86.06	1,630,000
1924.....	2,120	5.97	81.17	1,540,000	2,380	6.70	91.22	1,750,000
1925.....	2,590	7.50	98.81	1,870,000	2,440	6.87	93.10	1,760,000
1926.....	1,650	4.65	63.05	1,190,000	1,610	4.54	61.66	1,170,000
1927.....	2,330	6.56	89.32	1,690,000	2,770	7.80	106.03	2,010,000
1928.....	2,720	7.66	104.24	1,970,000	2,080	5.86	79.67	1,510,000
1929.....	1,720	4.85	65.58	1,240,000	1,590	4.48	60.79	1,150,000
1930.....	1,600	4.51	61.15	1,160,000	1,680	4.73	64.18	1,210,000
1931.....	1,790	5.04	68.23	1,290,000	1,920	5.41	73.53	1,390,000
1932.....	2,640	7.44	101.08	1,910,000	3,280	9.24	125.82	2,380,000
1933.....	3,350	9.44	128.17	2,427,000	3,757	10.6	143.71	2,720,000
1934.....	3,383	9.53	129.45	2,449,000	2,705	7.62	103.46	1,958,000
1935.....	2,651	7.47	101.30	1,919,000	-	-	-	-
Highest.....	3,383	9.53	129.49	2,449,000	3,757	10.6	143.71	2,720,000
Average.....	2,390	6.72	91.31	1,730,000	2,410	6.79	92.18	1,740,000
Lowest.....	1,470	4.14	56.19	1,060,000	1,460	4.11	55.79	1,060,000

Skykomish River near Gold Bar, Wash.

Location.- Water-stage recorder, lat. 47°50'15", long. 121°40'00", in SW $\frac{1}{4}$ sec. 9, T. 27 N., R. 9 E., 2 miles southeast of Gold Bar.

Drainage area.- 535 square miles.

Records available.- September 1928 to September 1935.

Extremes.- Maximum discharge recorded, 79,000 second-feet at 7:30 p.m. Dec. 21, 1933; minimum, 392 second-feet Oct. 2, 3, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Skykomish River near Gold Bar

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928						
September 16-30.....	768	496	615	1.15	0.64	18,300
1928-29						
October.....	15,900	718	4,030	7.53	8.68	248,000
November.....	2,710	993	1,690	3.16	3.53	101,000
December.....	4,500	1,030	1,670	3.12	3.60	103,000
January.....	1,700	813	1,090	2.04	2.35	67,000
February.....	1,190	630	791	1.48	1.54	45,900
March.....	7,460	1,200	2,690	5.03	5.80	165,000
April.....	6,510	1,420	2,890	5.40	6.02	172,000
May.....	12,900	3,630	7,670	14.3	16.49	472,000
June.....	9,980	5,080	7,330	13.7	15.29	436,000
July.....	5,060	1,480	2,720	5.08	5.86	167,000
August.....	1,430	750	983	1.84	2.12	60,400
September.....	813	447	594	1.11	1.24	35,300
The year.....	15,900	447	2,860	5.35	72.52	2,070,000
1929-30						
October.....	1,340	398	803	1.50	1.73	49,400
November.....	1,600	531	678	1.27	1.42	40,300
December.....	7,720	454	2,610	4.88	5.53	160,000
January.....	3,710	-	1,580	2.58	2.97	84,800
February.....	13,400	2,390	6,100	11.4	11.67	339,000
March.....	8,850	1,570	3,400	6.36	7.33	209,000
April.....	10,200	3,800	5,430	10.1	11.27	323,000
May.....	6,890	2,780	4,350	8.13	9.37	267,000
June.....	6,410	2,650	3,940	7.36	8.21	234,000
July.....	2,850	1,000	1,740	3.25	3.75	107,000
August.....	960	524	722	1.35	1.56	44,400
September.....	1,270	428	632	1.24	1.38	39,400
The year.....	13,400	398	2,620	4.90	66.49	1,900,000
1930-31						
October.....	8,260	517	2,240	4.19	4.83	138,000
November.....	2,730	1,120	1,890	3.53	3.94	112,000
December.....	3,250	960	1,770	3.31	3.82	109,000
January.....	24,900	950	4,060	7.59	8.75	250,000
February.....	10,500	1,490	3,090	5.78	6.02	172,000
March.....	12,000	2,270	4,240	7.93	9.14	261,000
April.....	9,750	2,410	4,360	8.15	9.09	259,000
May.....	10,400	3,650	6,210	11.6	13.37	382,000
June.....	8,850	3,330	4,850	9.07	10.12	289,000
July.....	3,010	920	1,650	3.08	3.55	101,000
August.....	920	590	712	1.33	1.53	45,800
September.....	2,720	555	1,150	2.15	2.40	68,400
The year.....	24,900	517	3,020	5.64	76.56	2,190,000
1931-32						
October.....	6,710	725	2,020	3.78	4.36	124,000
November.....	10,600	1,490	3,860	7.21	8.04	230,000
December.....	8,460	1,050	2,510	4.69	5.41	154,000
January.....	22,800	1,200	3,230	6.04	6.96	199,000
February.....	55,600	892	5,570	10.4	11.22	320,000
March.....	16,000	2,800	6,400	12.0	13.83	394,000
April.....	9,910	3,900	6,050	11.3	12.61	360,000
May.....	9,600	4,410	6,970	13.0	14.99	429,000
June.....	13,400	5,060	7,980	14.9	16.62	475,000
July.....	9,300	2,070	4,230	7.91	9.12	260,000
August.....	2,140	1,150	1,520	2.84	3.27	93,500
September.....	3,240	832	1,140	2.13	2.38	67,800
The year.....	55,600	725	4,280	8.00	108.81	3,110,000

Monthly discharge of Skykomish River near Gold Bar--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	7,440	705	2,735	5.11	5.89	168,200
November.....	51,600	3,980	11,930	22.3	24.88	710,000
December.....	37,400	1,870	5,307	9.92	11.44	326,300
January.....	18,500	1,330	4,407	8.24	9.50	271,000
February.....	3,760	835	1,414	2.64	2.75	78,560
March.....	3,980	1,560	2,700	5.05	5.82	168,000
April.....	9,040	2,400	4,013	7.50	8.37	238,800
May.....	13,800	3,740	6,297	11.8	13.60	387,200
June.....	19,100	7,200	10,930	20.5	22.87	652,300
July.....	12,000	4,500	8,080	15.1	17.41	496,800
August.....	6,100	1,530	2,989	5.59	6.44	183,800
September.....	11,500	1,070	3,366	6.29	7.02	200,300
The year.....	51,600	705	5,358	10.0	135.99	3,879,000
1933-34						
October.....	27,600	1,420	6,658	12.4	14.30	409,400
November.....	34,200	2,000	5,895	11.0	12.27	350,800
December.....	49,400	2,360	14,490	27.1	31.24	891,000
January.....	27,600	4,320	8,835	16.5	19.02	543,500
February.....	7,200	2,210	3,709	6.93	7.22	206,000
March.....	18,400	3,070	6,841	12.8	14.76	420,600
April.....	9,900	4,660	6,879	12.9	14.39	409,300
May.....	11,700	3,670	5,259	9.83	11.33	323,400
June.....	3,670	1,620	2,600	4.86	5.42	154,700
July.....	2,560	988	1,391	2.60	3.00	85,500
August.....	995	654	754	1.41	1.63	46,550
September.....	2,630	640	976	1.82	2.03	58,060
The year.....	49,400	640	5,385	10.1	136.61	3,898,000
1934-35						
October.....	37,600	636	4,158	7.77	8.96	255,700
November.....	27,700	3,130	6,704	12.5	13.95	398,900
December.....	18,400	2,400	4,538	8.54	9.85	280,900
January.....	45,900	1,260	8,245	15.4	17.75	507,000
February.....	8,900	2,200	3,996	7.47	7.78	222,000
March.....	9,500	1,380	2,705	5.06	5.83	165,300
April.....	4,540	1,540	2,758	5.16	5.76	164,100
May.....	9,500	3,710	5,878	11.0	12.88	351,400
June.....	10,400	4,350	6,753	12.6	14.08	401,800
July.....	5,350	1,770	3,385	6.33	7.30	208,200
August.....	2,080	904	1,235	2.31	2.86	75,940
September.....	2,230	634	917	1.71	1.91	54,570
The year.....	45,900	634	4,278	8.00	108.49	3,097,000

Yearly discharge of Skykomish River near Gold Bar

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	2,860	5.35	72.52	2,070,000	2,580	4.82	65.49	1,870,000
1930.....	2,620	4.90	66.49	1,900,000	2,770	5.18	70.30	2,010,000
1931.....	3,020	5.64	76.55	2,190,000	3,220	6.02	81.78	2,330,000
1932.....	4,280	8.00	108.81	3,110,000	5,240	9.79	135.21	3,800,000
1933.....	5,358	10.0	135.99	3,879,000	5,975	11.2	151.59	4,326,000
1934.....	5,385	10.1	136.61	3,898,000	4,596	8.22	111.56	3,183,000
1935.....	4,278	8.00	108.49	3,097,000	-	-	-	-

Beckler River near Skykomish, Wash.

Location.- Water-stage recorder, lat. 47°44'20", long. 121°19'00", in SW $\frac{1}{4}$ sec. 18, T. 26 N., R. 12 E., 4 miles northeast of Skykomish.

Drainage area.- 95 square miles.

Records available.- September 1929 to August 1933.

Extremes.- Maximum discharge, 10,900 second-feet at 1:30 a.m. Nov. 13, 1932; minimum, not determined, probably occurred during period Jan. 9-29, 1930, when stage-discharge relation was affected by ice.

Remarks.- No diversion or regulation.

Monthly discharge of Beckler River near Skykomish

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
September 19-30, 1929.....	70	51	58.8	0.619	0.28	1,400
October 1929.....	150	51	80.2	.844	.97	4,930
November.....	185	61	75.3	.793	.88	4,480
December.....	733	80	280	2.74	3.18	16,000
January 1930.....	434	-	142	1.49	1.72	8,730
February.....	2,130	413	903	9.51	9.90	50,200
March.....	1,460	248	509	5.36	6.18	31,300
April.....	1,640	781	1,030	10.8	12.05	51,300
May.....	1,140	553	796	8.33	9.68	48,900
June.....	1,000	400	628	6.61	7.38	37,400
July.....	396	100	215	2.26	2.61	13,200
August.....	98	58	76.1	.801	.92	4,680
September.....	115	56	66.5	.700	.78	3,960
Water year 1929-30.....	2,130	-	394	4.15	56.21	285,000
October 1930.....	821	57	223	2.35	2.71	13,700
November.....	332	159	247	2.60	2.90	14,700
December.....	416	150	252	2.65	3.06	15,500
Calendar year 1930.....	2,130	-	419	4.41	59.87	304,000
January 1931.....	3,150	145	492	5.18	5.37	30,300
February.....	1,220	285	501	5.27	5.49	27,800
March.....	1,590	369	696	7.33	8.45	42,800
April.....	1,730	394	692	7.28	8.12	41,200
May.....	1,830	682	1,140	12.0	13.83	70,100
June.....	1,080	475	720	7.58	8.46	42,800
July.....	457	107	220	2.32	2.68	13,500
August.....	105	66	83.9	.883	1.02	5,160
September.....	245	66	108	1.14	1.27	6,430
Water year 1930-31.....	3,150	57	447	4.71	63.96	324,000
October 1931.....	658	93	222	2.34	2.70	13,600
November.....	1,350	237	539	5.67	6.33	32,100
December.....	944	162	331	3.48	4.01	20,400
Calendar year 1931.....	3,150	66	478	5.03	68.33	346,000
January 1932.....	2,290	-	471	4.96	5.72	29,000
February.....	7,240	-	750	7.90	8.52	43,100
March.....	1,920	449	697	9.44	10.88	55,200
April.....	1,600	652	1,000	10.5	11.71	59,500
May.....	1,690	878	1,300	13.7	15.79	79,900
June.....	2,500	974	1,480	15.6	17.40	88,100
July.....	1,280	238	579	6.09	7.02	35,600
August.....	231	100	148	1.56	1.80	9,100
September.....	237	74	100	1.05	1.17	5,950
Water year 1931-32.....	7,240	74	649	6.83	93.05	472,000
October 1932.....	756	69	284	2.99	3.45	17,500
November.....	8,150	624	1,740	18.3	20.42	104,000
December.....	5,440	284	774	8.15	9.40	47,600
Calendar year 1932.....	8,150	69	791	8.33	113.28	575,000
January 1933.....	1,780	168	501	5.27	6.08	30,800
February.....	-	-	170	1.79	1.86	9,440
March.....	445	197	323	3.40	3.92	19,900
April.....	1,180	316	543	5.72	6.38	32,300
May.....	2,040	624	1,040	10.9	12.57	64,000
June.....	-	-	*1,810	19.1	21.31	108,000
July.....	-	658	*1,210	12.7	14.64	74,400
August.....	-	-	*431	4.54	5.23	26,500
The period.....	-	-	-	-	-	534,000

*Estimated.

Miller Creek at Miller River, Wash.

(Formerly called Miller Creek near Miller River and Miller River near Berlin)

Location.- Staff gage, lat. 47°42'20", long. 121°23'50", in SW $\frac{1}{4}$ sec. 28, T. 26 N., R. 11 E., five-eighths of a mile above mouth and south of Miller River. Prior to Oct. 1, 1919, staff gage at site five-eighths of a mile upstream.

Drainage area.- 44.2 square miles.

Records available.- May 1911 to September 1919 (fragmentary), October 1928 to September 1931.

Extremes.- Maximum discharge, not determined, occurred during flood of Dec. 18, 1917, which destroyed gage; minimum, 18 second-feet Sept. 3, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Miller Creek at Miller River

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	-	-	*310	7.01	8.08	19,100
November.....	-	-	*170	3.85	4.30	10,100
December.....	-	-	*140	3.17	3.66	8,610
January.....	209	40	79.5	1.80	2.08	4,890
February.....	74	33	45.2	1.02	1.06	2,510
March.....	1,020	64	240	5.43	6.26	14,800
April.....	785	46	303	6.86	7.65	18,000
May.....	1,630	450	868	19.6	22.80	53,400
June.....	1,020	470	775	17.5	19.52	46,100
July.....	605	231	335	7.58	8.74	20,600
August.....	209	45	120	2.71	3.12	7,380
September.....	-	23	29.7	.672	.75	1,770
The year.....	-	-	285	6.45	87.82	207,000
1929-30						
October.....	268	23	83.0	1.88	2.17	5,100
November.....	220	47	69.0	1.56	1.74	4,110
December.....	1,710	40	310	7.01	8.08	19,100
January.....	465	-	98.4	2.23	2.57	6,050
February.....	1,900	134	686	15.5	16.14	38,100
March.....	1,120	91	314	7.10	8.19	19,300
April.....	930	191	450	10.2	11.38	26,800
May.....	810	171	392	8.87	10.23	24,100
June.....	750	237	361	8.17	9.12	21,500
July.....	263	47	130	2.94	3.39	7,990
August.....	42	20	29.0	.656	.76	1,780
September.....	181	18	44.2	1.00	1.12	2,630
The year.....	1,900	18	244	5.52	74.89	177,000
1930-31						
October.....	1,190	31	287	6.49	7.48	17,600
November.....	425	70	144	3.26	3.64	8,570
December.....	445	61	130	2.94	3.39	7,990
January.....	2,600	58	496	11.2	12.91	30,500
February.....	1,620	79	245	5.54	5.77	13,600
March.....	1,330	79	385	8.71	10.04	23,700
April.....	1,050	191	381	8.62	9.62	22,700
May.....	1,050	237	586	13.3	15.33	36,000
June.....	990	263	448	10.1	11.27	26,700
July.....	213	44	98.9	2.24	2.58	6,080
August.....	43	22	29.1	.658	.76	1,790
September.....	237	25	102	2.31	2.58	6,070
The year.....	2,600	22	278	6.29	85.37	201,000

*Estimated by comparison with records for South Fork of Skykomish River near Skykomish and near Index.

Yearly discharge of Miller Creek at Miller River

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1912.....	378	8.55	116.16	274,000	313	7.08	96.38	227,000
1913.....	395	8.94	121.40	286,000	414	9.37	127.18	300,000
1914.....	352	7.51	102.02	240,000	333	7.53	102.34	241,000
1915.....	214	4.84	65.57	155,000	221	5.00	67.97	160,000
1916.....	430	9.73	132.53	312,000	378	8.55	116.43	274,000
1917.....	365	8.05	109.41	256,000	465	10.5	142.96	337,000
1918.....	405	9.16	124.29	293,000	408	9.23	125.20	295,000
1919.....	408	9.23	125.45	296,000	-	-	-	-
1920.....	285	6.45	87.82	207,000	273	6.18	83.77	199,000
1930.....	244	5.52	74.89	177,000	252	5.70	77.41	182,000
1931.....	278	6.29	85.37	201,000	-	-	-	-

Yearly discharge of Miller Creek at Miller River--Continued

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
Highest....	430	9.73	132.53	312,000	465	10.5	142.96	337,000
Average....	339	7.66	104.08	245,000	340	7.68	104.40	246,000
Lowest.....	214	4.84	65.57	155,000	221	5.00	67.97	160,000

North Fork of Skykomish River at Index, Wash.

Location.- Chain and staff gages, lat. 47°49'20", long. 121°32'50", in SE $\frac{1}{4}$ sec. 17, T. 27 N., R. 10 E., on highway bridge at Index, 1 $\frac{1}{2}$ miles above mouth.

Drainage area.- 149 square miles (revised).

Records available.- August 1910 to September 1922, February 1929 to September 1935.

Extremes.- Maximum discharge observed, about 21,000 second-feet at 12:15 p.m. Feb. 26, 1932; possibly as much as 26,500 second-feet Dec. 21, 1933; minimum discharge, 78 second-feet Sept. 25, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of North Fork of Skykomish River at Index

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	884	115	284	1.91	2.20	17,500
November.....	15,000	365	2,230	15.0	16.74	133,000
December.....	6,600	-	1,360	9.13	10.53	83,600
January.....	9,470	309	1,820	12.2	14.07	112,000
February.....	2,020	272	764	5.13	5.53	43,900
March.....	4,940	212	759	5.09	5.87	46,700
April.....	1,560	378	663	4.45	4.96	39,500
May.....	3,030	680	1,360	9.13	10.53	83,600
June.....	2,410	1,140	1,670	11.2	12.50	99,400
July.....	1,900	309	869	5.83	6.72	53,400
August.....	1,140	176	295	1.98	2.28	18,100
September.....	7,680	187	1,560	10.5	11.71	92,800
The year.....	15,000	-	1,130	7.58	103.64	824,000
1920-21						
October.....	7,020	720	1,800	12.1	13.95	110,000
November.....	3,210	352	1,070	7.18	8.01	63,700
December.....	6,810	352	1,110	7.45	8.59	68,200
January.....	5,140	403	1,200	8.05	9.28	73,800
February.....	9,470	378	1,820	12.2	12.70	101,000
March.....	2,700	600	1,280	8.59	9.90	78,700
April.....	2,410	600	1,180	7.92	8.84	70,200
May.....	5,340	895	2,500	16.8	19.37	154,000
June.....	6,390	2,020	3,500	23.5	26.22	208,000
July.....	2,700	850	1,620	10.9	12.57	99,600
August.....	850	272	478	3.21	3.70	29,400
September.....	5,140	226	1,030	6.91	7.71	61,500
The year.....	9,470	226	1,550	10.4	140.84	1,120,000
1921-22						
October.....	12,100	309	1,450	9.73	11.22	89,200
November.....	6,600	350	1,410	9.46	10.56	83,900
December.....	-	340	2,720	18.3	21.10	167,000
January.....	568	95	251	1.68	1.94	15,400
February.....	226	80	165	1.11	1.16	9,160
March.....	605	130	245	1.64	1.89	15,100
April.....	1,570	362	765	5.27	5.68	46,700
May.....	3,820	812	2,040	13.7	15.79	125,000
June.....	3,970	1,340	2,350	15.8	17.63	140,000
July.....	1,340	246	583	3.91	4.51	35,800
August.....	700	141	266	1.79	2.06	16,400
September.....	1,450	130	416	2.79	3.11	24,800
The year.....	-	80	1,060	7.11	96.85	768,000

Monthly discharge of North Fork of Skykomish River at Index--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
February 20-28.....	265	180	216	1.45	0.49	3,660
March.....	2,310	265	749	5.03	5.80	46,100
April.....	2,060	342	838	5.62	6.27	49,900
May.....	4,100	1,160	2,330	15.6	17.99	143,000
June.....	3,350	1,520	2,230	15.0	16.74	133,000
July.....	1,520	403	818	5.49	6.33	50,300
August.....	390	180	249	1.67	1.92	15,300
September.....	255	99	145	.973	1.09	8,630
The period.....	-	-	-	-	-	450,000
1929-30						
October.....	985	91	276	1.85	2.13	17,000
November.....	640	153	224	1.50	1.67	13,300
December.....	4,030	145	861	5.78	6.66	52,900
January.....	1,280	-	363	2.44	2.81	22,500
February.....	5,160	640	1,940	13.0	13.54	108,000
March.....	2,620	330	977	6.56	7.56	60,100
April.....	2,800	1,220	1,650	11.1	12.38	98,200
May.....	2,260	850	1,370	9.19	10.60	84,200
June.....	2,090	850	1,310	8.79	9.81	78,000
July.....	895	235	502	3.37	3.88	30,900
August.....	235	131	178	1.19	1.37	10,900
September.....	680	78	198	1.33	1.48	11,800
The year.....	5,160	78	811	5.44	73.89	588,000
1930-31						
October.....	4,930	145	885	5.94	6.85	54,400
November.....	1,130	330	581	3.90	4.35	34,600
December.....	1,180	263	541	3.63	4.18	33,300
January.....	8,300	254	1,580	9.28	10.68	84,800
February.....	4,250	418	910	6.11	6.36	50,500
March.....	3,810	700	1,270	8.52	9.82	78,100
April.....	3,190	710	1,540	8.99	10.03	79,700
May.....	3,600	1,230	2,100	14.1	16.26	129,000
June.....	4,030	1,080	1,780	11.9	13.28	106,000
July.....	910	288	550	3.69	4.25	33,800
August.....	298	174	210	1.41	1.53	12,900
September.....	1,000	180	416	2.79	3.11	24,800
The year.....	8,300	145	998	6.70	90.80	722,000
1931-32						
October.....	2,600	224	705	4.73	5.45	43,300
November.....	4,250	420	1,200	8.05	8.98	71,400
December.....	2,990	288	733	4.92	5.67	45,100
January.....	9,080	339	997	6.69	7.71	61,300
February.....	18,600	236	1,630	10.9	11.76	93,800
March.....	6,860	767	2,160	14.5	16.72	133,000
April.....	4,420	1,090	2,150	14.4	16.07	128,000
May.....	3,330	1,620	2,630	17.7	20.41	162,000
June.....	4,880	1,800	3,000	20.1	22.43	179,000
July.....	3,980	653	1,650	11.1	12.80	101,000
August.....	677	314	462	3.10	3.57	28,400
September.....	605	236	305	2.05	2.29	18,100
The year.....	18,600	224	1,470	9.87	133.86	1,060,000
1932-33						
October.....	3,540	188	1,051	7.05	8.13	64,650
November.....	14,100	1,170	3,662	24.6	27.45	217,900
December.....	12,900	400	1,467	9.85	11.36	90,180
January.....	4,900	362	1,176	7.89	9.10	72,290
February.....	1,110	-	358	2.40	2.50	19,870
March.....	1,110	408	684	4.59	5.29	42,070
April.....	2,820	570	1,147	7.70	8.59	68,280
May.....	4,150	1,080	2,069	13.9	16.03	127,200
June.....	5,680	2,340	3,624	24.3	27.11	215,700
July.....	4,150	1,400	2,838	19.0	21.90	174,500
August.....	2,460	410	951	6.38	7.36	58,470
September.....	5,680	315	1,388	9.32	10.40	82,570
The year.....	14,100	-	1,704	11.4	155.22	1,234,000

Monthly discharge of North Fork of Skykomish River at Index--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	11,700	430	2,277	15.3	17.34	140,000
November.....	16,200	333	1,958	13.1	14.62	116,500
December.....	14,400	570	4,581	30.7	35.39	281,700
January.....	7,600	1,260	2,792	18.7	21.56	171,600
February.....	2,330	540	1,077	7.23	7.53	59,810
March.....	7,890	885	2,294	15.4	17.75	141,000
April.....	3,190	1,490	2,172	14.6	16.29	129,200
May.....	3,590	1,110	1,680	11.3	13.03	103,500
June.....	1,340	410	808	5.42	6.05	48,090
July.....	1,890	270	422	2.83	3.26	25,970
August.....	315	158	204	1.37	1.58	12,540
September.....	1,260	132	292	1.96	2.19	17,550
The year.....	16,200	132	1,723	11.6	156.89	1,247,000
1934-35						
October.....	9,050	120	1,275	8.56	9.87	78,430
November.....	11,000	1,180	2,265	15.2	16.96	134,800
December.....	7,600	631	1,484	9.96	11.48	91,230
January.....	16,200	320	2,671	17.9	20.64	164,200
February.....	3,190	704	1,325	8.89	9.26	73,570
March.....	3,390	341	787	5.28	6.09	48,380
April.....	1,860	341	862	5.79	6.46	51,260
May.....	3,190	1,160	2,011	13.5	15.56	123,600
June.....	3,390	1,590	2,275	15.3	17.07	135,400
July.....	1,770	612	1,214	8.15	9.40	74,620
August.....	835	273	386	2.59	2.99	23,750
September.....	1,110	171	317	2.13	2.38	18,840
The year.....	16,200	120	1,406	9.44	128.16	1,018,000

Yearly discharge of North Fork of Skykomish River at Index

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	1,060	7.11	96.52	769,000	974	6.54	88.78	705,000
1912.....	1,070	7.13	97.74	776,000	1,020	6.85	93.23	742,000
1913.....	1,240	8.32	112.94	900,000	1,260	8.46	114.84	914,000
1914.....	1,140	7.65	103.84	827,000	1,160	7.79	105.74	838,000
1915.....	720	4.83	65.56	522,000	697	4.68	63.53	505,000
1916.....	1,290	8.68	117.38	936,000	1,180	7.92	107.80	856,000
1917.....	1,170	7.85	106.56	844,000	1,480	9.93	134.79	1,070,000
1918.....	1,370	9.19	124.74	993,000	1,260	8.46	114.84	914,000
1919.....	1,330	8.93	121.22	965,000	1,310	8.79	119.32	946,000
1920.....	1,130	7.58	103.64	824,000	1,150	7.72	104.72	831,000
1921.....	1,550	10.4	140.84	1,120,000	1,680	11.3	153.17	1,220,000
1922.....	1,060	7.11	96.85	768,000	-	-	-	-
1930.....	811	5.44	73.89	588,000	866	5.81	76.81	627,000
1931.....	998	6.70	90.80	722,000	1,050	7.05	95.52	759,000
1932.....	1,470	9.87	133.86	1,060,000	1,760	11.8	160.70	1,280,000
1933.....	1,704	11.4	155.22	1,234,000	1,933	13.0	175.93	1,399,000
1934.....	1,723	11.6	156.89	1,247,000	1,400	9.40	127.55	1,013,000
1935.....	1,406	9.44	128.16	1,018,000	-	-	-	-
Highest.....	1,723	11.6	156.89	1,247,000	1,933	13.0	175.93	1,399,000
Average.....	1,240	8.29	112.62	895,000	1,260	8.47	114.95	914,000
Lowest.....	720	4.83	65.56	522,000	697	4.68	63.53	505,000

Troublesome Creek near Index, Wash.

Location.- Water-stage recorder, lat. 47°54'00", long. 121°23'50", in NE $\frac{1}{4}$ sec. 21, T. 28 N., R. 11 E. (unsurveyed), $\frac{1}{4}$ quarter of a mile above mouth and 9 miles northeast of Index. Discharge measurements made $\frac{1}{4}$ and 2 miles above.

Drainage area.- 10.4 square miles at measuring section.

Records available.- July 1929 to September 1935.

Extremes.- Maximum discharge recorded, 2,300 second-feet at 2:30 p.m. Dec. 21, 1933; minimum discharge, 11 second-feet Jan. 30, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Troublesome Creek near Index

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
July 16-31.....	100	68	80.4	7.73	4.60	2,550
August.....	86	38	54.1	5.20	6.00	3,330
September.....	40	14	29.1	2.80	3.12	1,730
The period.....	-	-	-	-	-	7,610
1929-30						
October.....	50	13	31.0	2.98	3.44	1,910
November.....	31	14	20.8	2.00	2.23	1,240
December.....	194	14	65.4	6.38	7.36	4,080
January.....	71	11	27.4	2.63	3.03	1,620
February.....	504	41	158	15.2	15.83	8,780
March.....	226	22	71.3	6.86	7.91	4,580
April.....	300	96	142	13.7	15.29	8,450
May.....	192	66	119	11.4	13.14	7,320
June.....	208	96	135	13.0	14.50	8,030
July.....	142	53	88.8	8.54	9.85	5,460
August.....	56	30	42.1	4.05	4.67	2,590
September.....	66	22	38.4	3.69	4.12	2,230
The year.....	504	11	77.7	7.47	101.37	56,200
1930-31						
October.....	367	28	86.3	8.30	9.57	5,310
November.....	93	32	56.9	5.47	6.10	3,390
December.....	86	25	45.8	4.40	5.07	2,820
January.....	724	22	119	11.4	13.14	7,320
February.....	163	21	56.2	5.40	5.62	3,120
March.....	335	32	88.7	8.53	9.83	5,450
April.....	324	54	117	11.2	12.50	6,960
May.....	334	93	193	18.6	21.44	11,900
June.....	414	123	208	20.0	22.31	12,400
July.....	127	56	87.5	8.41	9.70	5,380
August.....	62	30	37.7	3.62	4.17	2,320
September.....	-	29	57.7	5.55	6.19	3,430
The year.....	724	21	96.3	9.26	125.64	69,800
1931-32						
October.....	193	20	66.9	6.43	7.41	4,110
November.....	299	26	112	10.8	12.05	6,660
December.....	256	18	54.2	5.21	6.01	3,330
January.....	580	23	75.2	7.23	8.34	4,620
February.....	1,700	14	146	14.0	15.10	8,400
March.....	351	33	126	12.1	13.95	7,750
April.....	231	66	127	12.2	13.61	7,560
May.....	209	81	141	13.6	15.68	8,670
June.....	326	89	177	17.0	18.97	10,500
July.....	362	89	154	14.8	17.06	9,470
August.....	108	55	78.4	7.54	8.69	4,820
September.....	69	35	48.4	4.65	5.19	2,880
The year.....	1,700	14	109	10.5	142.06	78,800
1932-33						
October.....	228	18	91.2	8.77	10.11	5,610
November.....	1,140	85	309	29.7	33.14	18,400
December.....	803	32	115	11.1	12.80	7,070
January.....	487	28	117	11.2	12.91	7,190
February.....	65	22	29.9	2.88	3.00	1,680
March.....	120	32	48.5	4.66	5.37	2,980
April.....	256	42	96.8	9.31	10.39	5,760
May.....	416	75	154	14.8	17.06	9,470
June.....	508	183	279	26.8	29.90	16,600
July.....	390	164	237	22.8	26.29	14,600
August.....	208	69	134	12.9	14.87	8,240
September.....	457	46	148	14.2	15.84	8,810
The year.....	1,140	18	147	14.1	191.68	106,000

Monthly discharge of Troublesome River near Index--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	800	45	*226	21.7	25.02	13,880
November.....	1,200	56	161	15.5	17.29	9,600
December.....	1,270	43	381	36.6	42.20	23,400
January.....	1,579	127	274	26.3	30.32	16,850
February.....	186	62	93.6	9.48	9.87	5,480
March.....	660	75	217	20.9	24.10	13,330
April.....	321	100	*180	17.3	19.30	10,720
May.....	338	99	158	15.2	17.52	9,730
June.....	153	71	101	9.71	10.83	6,020
July.....	174	55	81.5	7.84	9.04	5,010
August.....	57	45	495	4.76	5.49	3,050
September.....	130	24	520	5.00	5.58	3,090
The year.....	1,270	24	166	16.0	216.56	120,200
1934-35						
October.....	800	18	149	14.3	16.49	9,180
November.....	795	69	291	28.0	31.24	17,310
December.....	622	53	195	18.8	21.67	12,010
January.....	1,140	18	287	27.6	31.82	17,640
February.....	276	41	94.6	9.10	9.48	5,260
March.....	343	19	61.8	5.94	6.85	3,800
April.....	113	18	58.1	5.59	6.24	3,463
May.....	262	95	156	15.0	17.29	9,570
June.....	302	118	202	19.4	21.64	12,000
July.....	228	85	147	14.1	16.26	9,060
August.....	82	45	55.7	5.45	6.28	3,490
September.....	122	25	50.6	4.87	5.43	3,010
The year.....	1,140	18	146	14.0	190.69	105,800

*Estimated.

Yearly discharge of Troublesome Creek near Index

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	77.7	7.47	101.37	56,200	83.6	8.04	109.08	60,500
1931.....	96.3	9.26	125.64	69,800	100	9.62	130.37	72,400
1932.....	109	10.5	142.06	78,800	132	12.7	172.64	95,800
1933.....	147	14.1	191.68	106,000	169	16.2	220.14	122,200
1934.....	166	16.0	216.56	120,200	154	14.8	201.45	111,800
1935.....	146	14.0	190.69	105,800	-	-	-	-

Wallace River at Gold Bar, Wash.

Location.- Staff gage, lat. 47°51'50", long. 121°41'45", in NE $\frac{1}{4}$ sec. 6, T. 27 N., R. 9 E., at highway bridge at Gold Bar.

Drainage area.- 18.7 square miles.

Records available.- December 1928 to September 1933.

Extremes.- Maximum discharge observed, 2,590 second-feet at 2:30 p.m. Feb. 26, 1932; minimum discharge, 9.6 second-feet Aug. 27, Sept. 3-5, 1930.

Remarks.- No diversion.

Monthly discharge of Wallace River at Gold Bar

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
December 9-31, 1928.....	435	42	99.6	5.33	4.56	4,540
January 1929.....	68	28	48.3	2.58	2.97	2,970
February.....	46	22	30.0	1.60	1.67	1,670
March.....	390	52	139	7.43	8.57	8,550
April.....	260	60	125	6.68	7.45	7,440
May.....	420	87	203	10.9	12.57	12,500
June.....	470	113	244	13.0	14.50	14,500
July.....	102	22	52.0	2.78	3.20	3,200
August.....	57	14	19.1	1.02	1.18	1,170
September.....	44	11	16.6	.888	.99	988
The period.....	-	-	-	-	-	57,500
October 1929.....	480	13	71.4	3.82	4.40	4,390
November.....	66	24	32.6	1.74	1.94	1,940
December.....	570	21	138	7.38	8.51	8,480
Calendar year 1929.....	570	11	93.6	5.01	67.95	67,800
January 1930.....	271	26	76.4	4.09	4.72	4,700
February.....	1,140	76	279	14.9	15.52	15,500
March.....	1,040	47	163	8.72	10.05	10,000
April.....	506	104	163	8.72	9.73	9,700
May.....	338	82	129	6.90	7.96	7,930
June.....	258	60	117	6.26	6.98	6,960
July.....	68	16	33.0	1.76	2.03	2,030
August.....	16	9.9	12.2	.652	.75	750
September.....	258	9.6	45.4	2.43	2.71	2,700
Water year 1929-30.....	1,140	9.6	104	5.56	75.30	75,100
October 1930.....	1,160	30	166	8.82	10.24	10,200
November.....	193	40	95.8	5.12	5.71	5,700
December.....	293	49	105	5.61	6.47	6,460
Calendar year 1930.....	1,160	9.6	114	6.10	82.87	82,600
January 1931.....	1,600	48	240	12.8	14.76	14,800
February.....	848	48	117	6.26	6.52	6,500
March.....	878	68	177	9.47	10.92	10,900
April.....	506	91	192	10.3	11.49	11,400
May.....	368	76	147	7.86	9.06	9,040
June.....	390	54	154	8.24	9.19	9,160
July.....	110	16	41.6	2.22	2.56	2,560
August.....	40	11	14.9	.797	.92	916
September.....	597	12	116	6.20	6.92	6,900
Water year 1930-31.....	1,600	11	130	6.95	94.76	94,500
October 1931.....	536	41	149	7.97	9.19	9,160
November.....	942	66	177	9.47	10.57	10,500
December.....	659	49	140	7.49	8.64	8,610
Calendar year 1931.....	1,600	11	139	7.43	100.74	100,000
January 1932.....	1,350	53	170	9.09	10.48	10,500
February.....	2,450	35	225	12.0	12.94	12,900
March.....	1,860	67	385	20.6	23.75	23,700
April.....	542	127	263	14.1	15.73	15,600
May.....	312	113	224	12.0	13.83	13,800
June.....	408	130	222	11.9	13.28	13,200
July.....	441	40	140	7.49	8.64	8,610
August.....	80	30	41.0	2.19	2.52	2,520
September.....	408	24	56.1	3.00	3.35	3,340
Water year 1931-32.....	2,450	24	183	9.79	132.92	132,000
October 1932.....	647	18	186	9.95	11.47	11,400
November.....	2,320	167	615	32.9	36.71	36,600
December.....	1,950	66	234	12.5	14.41	14,400
Calendar year 1932.....	2,450	18	229	12.2	167.11	167,000
January 1933.....	1,900	56	256	13.7	15.79	15,700
February.....	170	41	60.3	3.22	3.35	3,350
March.....	250	66	128	6.84	7.89	7,870
April.....	314	80	151	8.07	9.00	8,980
May.....	532	128	224	12.0	13.83	13,800
June.....	655	193	307	16.4	18.30	18,300
July.....	299	55	165	8.72	10.05	10,000
August.....	110	22	41.4	2.21	2.55	2,550
September.....	619	30	161	8.61	9.61	9,580
Water year 1932-33.....	2,320	18	211	11.3	152.96	153,000

Olney Creek near Startup, Wash.

Location.- Water-stage recorder, lat. 47°55'35", long. 121°43'10", in S $\frac{1}{2}$ sec. 12, T. 28 N., R. 8 E., $\frac{1}{2}$ miles above Stickney Bridge and 5 miles northeast of Startup.

Drainage area.- 10 square miles.

Records available.- October 1922 to October 1926, February 1929 to November 1933.

Extremes.- Maximum discharge, 2,400 second-feet at 12:10 p.m. Feb. 26, 1932; minimum, 3.8 second-feet Oct. 16, 1925.

Remarks.- No diversion or regulation.

Monthly discharge of Olney Creek near Startup

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1922-23						
October.....	362	17	59.0	5.90	6.80	3,630
November.....	150	22	43.8	4.38	4.89	2,610
December.....	750	18	108	10.8	12.45	6,640
January.....	867	30	161	16.1	18.56	9,900
February.....	133	-	38.6	3.86	4.02	2,140
March.....	152	36	68.7	6.87	7.92	4,220
April.....	242	61	108	10.8	12.05	6,430
May.....	150	48	87.9	8.79	10.13	5,400
June.....	333	-	83.3	8.33	9.29	4,960
July.....	35	8	17.3	1.73	1.99	1,060
August.....	25	6	7.63	.763	.88	469
September.....	65	5.5	11.5	1.15	1.28	684
The year.....	867	5.5	66.5	6.65	90.26	48,100
1923-24						
October.....	262	7.0	35.0	3.50	4.04	2,150
November.....	311	13	67.6	6.76	7.54	4,020
December.....	332	47	132	13.2	15.22	8,120
January.....	553	37	126	12.6	14.53	7,750
February.....	855	61	178	17.8	19.20	10,200
March.....	92	26	42.0	4.20	4.84	2,580
April.....	181	34	87.0	8.70	9.71	5,180
May.....	136	38	68.2	6.82	7.86	4,190
June.....	121	26	52.5	5.25	5.84	3,110
July.....	25	10	15.1	1.51	1.74	928
August.....	204	8.0	22.7	2.27	2.62	1,400
September.....	-	8.0	41.2	4.12	4.60	2,450
The year.....	855	7.0	71.7	7.17	97.74	52,100
1924-25						
October.....	-	-	*157	15.7	18.10	9,650
November.....	261	52	125	12.5	13.95	7,440
December.....	741	31	169	16.9	19.48	10,400
January.....	584	-	*164	16.4	18.91	10,100
February.....	528	37	136	13.6	14.16	7,550
March.....	171	38	81.7	8.17	9.42	5,020
April.....	369	50	107	10.7	11.94	6,370
May.....	144	47	86.4	8.64	9.96	5,310
June.....	106	21	52.1	5.21	5.81	3,100
July.....	20	6.5	11.5	1.15	1.33	707
August.....	44	5.8	11.3	1.13	1.30	695
September.....	9.7	5.5	7.24	.724	.81	431
The year.....	741	5.5	92.2	9.22	125.17	66,800
1925-26						
October.....	819	3.8	88.5	8.85	10.20	5,440
November.....	253	26	81.2	8.12	9.06	4,830
December.....	748	42	229	22.9	26.40	14,100
January.....	589	31	102	10.2	11.76	6,270
February.....	-	-	131	13.1	13.64	7,280
March.....	136	32	64.9	6.49	7.48	3,990
April.....	52	27	37.0	3.70	4.13	2,200
May.....	388	26	70.6	7.06	8.14	4,340
June.....	58	12	24.6	2.46	2.74	1,460
July.....	12	5.2	8.94	.894	1.03	550
August.....	94	4.2	17.9	1.79	2.06	1,100
September.....	149	10	44.8	4.48	5.00	2,670
The year.....	819	3.8	74.9	7.49	101.64	54,200
1926						
October 1-23.....	412	36	105	10.5	8.98	4,790

*Estimated.

Monthly discharge of Olney Creek near Startup--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
February 22-28.....	35	20	29.7	2.97	0.77	412
March.....	282	50	112	11.2	12.91	6,890
April.....	164	35	83.7	8.37	9.34	4,980
May.....	203	73	126	12.6	14.53	7,750
June.....	238	52	112	11.2	12.50	6,660
July.....	51	10	23.3	2.33	2.69	1,430
August.....	45	7.3	10.3	1.03	1.19	633
September.....	45	6.9	10.6	1.06	1.18	631
The period.....	-	-	-	-	-	29,400
1929-30						
October.....	208	8.9	33.2	3.32	3.83	2,040
November.....	49	14	20.0	2.00	2.23	1,190
December.....	350	11	97.3	9.73	11.22	5,980
January.....	192	16	49.3	4.93	5.68	3,030
February.....	898	32	169	16.9	17.60	9,390
March.....	759	21	95.6	9.56	11.02	5,880
April.....	-	-	*108	10.8	12.05	6,430
May.....	195	-	62.6	6.26	7.22	3,850
June.....	181	20	55.0	5.50	6.14	3,270
July.....	29	7.4	14.7	1.47	1.70	904
August.....	7.4	6.3	6.80	.680	.78	418
September.....	206	6.2	28.8	2.88	3.21	1,710
The year.....	898	6.2	60.9	6.09	32.68	44,100
1930-31						
October.....	393	14	87.0	8.70	10.03	5,350
November.....	189	20	55.2	5.52	6.16	3,280
December.....	250	27	63.0	6.30	7.26	3,970
January.....	611	30	154	15.4	17.75	9,470
February.....	361	23	60.8	6.08	6.33	3,380
March.....	506	37	122	12.2	14.07	7,500
April.....	353	45	112	11.2	12.50	6,660
May.....	119	34	54.3	5.43	6.26	3,340
June.....	561	24	96.8	9.68	10.80	5,700
July.....	66	9.0	23.0	2.30	2.65	1,410
August.....	17	5.4	7.71	.771	.89	474
September.....	499	6.0	86.2	8.62	9.62	5,130
The year.....	611	5.4	76.9	7.69	104.32	55,600
1931-32						
October.....	464	12	91.7	9.17	10.57	5,640
November.....	517	31	119	11.9	13.28	7,080
December.....	498	28	88.2	8.82	10.17	5,420
January.....	920	25	114	11.4	13.14	7,010
February.....	1,470	17	141	14.1	15.21	8,110
March.....	1,030	51	258	25.8	29.74	15,900
April.....	349	88	164	16.4	18.30	9,760
May.....	190	64	105	10.5	12.11	6,460
June.....	145	63	90.9	9.09	10.14	5,410
July.....	228	24	68.1	6.81	7.85	4,190
August.....	58	17	25.7	2.57	2.96	1,580
September.....	184	16	30.5	3.05	3.40	1,810
The year.....	1,470	12	108	10.8	146.87	78,400
1932-33						
October.....	461	14	122	12.2	14.07	7,500
November.....	1,200	58	315	31.5	35.14	18,700
December.....	1,260	28	158	15.8	18.22	9,720
January.....	878	23	145	14.5	16.72	8,920
February.....	144	16	37.4	3.74	3.90	2,080
March.....	249	42	113	11.3	13.03	6,950
April.....	171	51	93.1	9.31	10.39	5,540
May.....	273	92	135	13.5	15.56	8,300
June.....	359	86	143	14.3	15.95	8,510
July.....	160	28	70.0	7.00	8.07	4,300
August.....	123	12	26.7	2.67	3.08	1,640
September.....	300	19	107	10.7	11.94	6,370
The year.....	1,260	12	122	12.2	166.07	88,500

*Estimated.

Monthly discharge of Olney Creek near Startup--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933						
October.....	320	21	111	11.1	12.80	6,820
November.....	778	-	*97.0	9.70	10.82	5,770
The period....	-	-	-	-	-	12,600

*Estimated.

Yearly discharge of Olney Creek near Startup

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1923.....	66.5	6.65	90.26	48,100	68.4	6.84	92.92	49,600
1924.....	71.7	7.17	97.74	52,100	89.9	8.99	122.47	65,300
1925.....	92.2	9.22	125.17	66,800	87.9	8.79	119.30	63,700
1926.....	74.9	7.49	101.64	54,200	-	-	-	-
1930.....	60.9	6.09	82.68	44,100	65.4	6.54	88.85	47,400
1931.....	76.9	7.69	104.32	55,600	84.6	8.46	114.89	61,300
1932.....	108	10.8	146.87	78,400	132	13.2	180.28	96,200
1933.....	122	12.2	166.07	88,500	-	-	-	-

May Creek near Gold Bar, Wash.

Location.- Staff gage, lat. 47°51'20", long. 121°36'50", in sec. 2, T. 27 N., R. 9 E., three-quarters of a mile below Lake Isabel and $\frac{3}{4}$ miles east of Gold Bar.

Drainage area.- 4.5 square miles.

Records available.- September 1928 to December 1934.

Extremes.- Maximum discharge observed, 475 second-feet Dec. 2, 1932; minimum discharge, 1.0 second-foot Sept. 4-6, 1934.

Remarks.- No diversion or regulation.

Monthly discharge of May Creek near Gold Bar

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928						
September.....	9.4	4.7	7.19	1.67	1.86	428
1928-29						
October.....	138	7.7	42.3	9.84	11.34	2,600
November.....	28	12	19.0	4.42	4.93	1,130
December.....	27	11	15.8	3.67	4.23	972
January.....	16	6.8	9.40	2.19	2.52	578
February.....	7.4	3.4	5.98	1.39	1.45	332
March.....	43	6.5	18.8	4.37	5.04	1,160
April.....	49	13	25.4	5.44	6.07	1,390
May.....	108	42	72.2	16.8	19.37	4,440
June.....	100	49	75.9	17.2	19.19	4,400
July.....	46	6.3	21.8	5.07	5.84	1,340
August.....	5.8	2.2	2.95	.688	.79	181
September.....	4.1	1.6	2.28	.530	.59	136
The year.....	138	1.6	25.8	6.00	81.36	18,700
1929-30						
October.....	14	2.2	4.91	1.14	1.31	302
November.....	12	6.3	8.38	1.95	2.19	499
December.....	82	6.0	29.7	6.91	7.97	1,830
January.....	35	3.8	12.9	3.00	3.46	793
February.....	93	24	58.4	13.6	14.16	3,240
March.....	90	9.4	29.1	6.77	7.80	1,790
April.....	68	37	45.1	10.5	11.71	2,680
May.....	55	22	35.1	8.16	9.41	2,160
June.....	98	25	46.6	10.8	12.05	2,770
July.....	29	2.8	12.1	2.81	3.24	744
August.....	2.6	1.2	1.70	.395	.46	105
September.....	15	1.1	5.92	1.38	1.54	352
The year.....	92	1.1	23.8	5.53	75.29	17,300

Monthly discharge of May Creek near Gold Bar--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	86	6.6	34.7	8.07	9.30	2,130
November.....	30	15	21.4	4.98	5.56	1,270
December.....	48	15	*26.5	6.16	7.10	1,630
January.....	-	12	58.2	13.5	15.56	3,580
February.....	66	13	30.6	7.12	7.41	1,700
March.....	106	23	40.1	9.33	10.76	2,470
April.....	82	30	47.1	11.0	12.27	2,800
May.....	86	43	58.3	13.6	15.68	3,580
June.....	137	43	61.6	14.3	15.95	3,670
July.....	46	5.2	18.7	4.35	5.02	1,150
August.....	4.8	1.5	2.30	.535	.62	141
September.....	70	1.9	23.9	5.56	6.20	1,420
The year.....	-	1.5	35.3	8.21	111.43	25,500
1931-32						
October.....	67	9.7	26.2	6.09	7.02	1,610
November.....	60	14	35.6	8.28	9.24	2,120
December.....	80	6.8	26.6	6.19	7.14	1,640
January.....	80	13	30.4	7.07	8.15	1,870
February.....	219	6.8	32.0	7.44	8.02	1,840
March.....	188	28	73.1	17.0	19.60	4,490
April.....	90	34	52.1	12.1	13.50	3,100
May.....	86	44	62.1	14.4	16.60	3,820
June.....	138	40	72.8	16.9	18.86	4,330
July.....	128	18	47.2	11.0	12.68	2,900
August.....	20	7.0	11.8	2.74	3.16	726
September.....	16	5.0	8.14	1.89	2.11	484
The year.....	219	5.0	39.9	9.28	126.08	28,900
1932-33						
October.....	108	5.0	32.0	7.44	8.58	1,970
November.....	348	37	142	33.0	36.82	8,450
December.....	475	13	65.1	15.1	17.41	4,000
January.....	186	12	42.4	9.86	11.37	2,610
February.....	19	7.0	10.2	2.37	2.47	566
March.....	26	10	17.4	4.05	4.67	1,070
April.....	63	16	27.0	6.28	7.01	1,610
May.....	123	29	54.5	12.7	14.64	3,350
June.....	144	62	89.0	20.7	23.09	5,300
July.....	77	35	56.9	13.7	15.79	3,620
August.....	37	7.5	19.5	4.53	5.22	1,200
September.....	90	8.5	30.9	7.19	8.02	1,840
The year.....	475	5.0	49.2	11.4	155.09	35,600
1933-34						
October.....	137	9.9	50.3	11.7	13.49	3,090
November.....	186	11	46.1	10.7	11.94	2,750
December.....	270	22	105	24.4	28.13	6,470
January.....	158	40	72.5	16.9	19.48	4,460
February.....	67	12	29.9	6.95	7.24	1,660
March.....	110	16	44.7	10.4	11.99	2,750
April.....	77	28	44.0	10.2	11.38	2,620
May.....	90	17	55.3	8.21	9.46	2,170
June.....	24	5.4	10.7	2.49	2.78	634
July.....	8.0	2.2	4.53	1.05	1.21	278
August.....	3.3	1.2	2.29	.533	.61	141
September.....	34	1.0	11.6	2.70	3.01	699
The year.....	270	1.0	38.3	8.91	120.72	27,710
1934						
October.....	137	3.3	27.0	6.28	7.24	1,660
November.....	186	24	69.0	15.8	17.63	4,040
December.....	123	30	45.3	10.5	12.11	2,780
The period.....	-	-	-	-	-	8,480

*Estimated.

Yearly discharge of May Creek near Gold Bar

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	25.8	6.00	81.36	18,700	22.9	5.33	72.32	16,600
1930.....	23.8	5.53	75.29	17,300	27.2	6.33	85.79	19,700
1931.....	35.3	8.21	111.43	25,500	35.7	8.30	112.87	25,900
1932.....	39.9	9.28	126.08	28,900	52.3	12.2	165.49	38,000
1933.....	49.2	11.4	155.09	35,600	46.2	10.7	145.84	33,500
1934.....	38.3	8.91	120.72	27,710	33.0	7.67	104.14	23,880

Sultan River near Startup, Wash.

Location.- Water-stage recorder, lat. 47°58'30", long. 121°46'30", in NE $\frac{1}{4}$ sec. 28, T. 29 N., R. 8 E., $1\frac{1}{2}$ miles above intake of Everett water-supply system and $7\frac{1}{2}$ miles north of Startup.

Drainage area.- 75 square miles.

Records available.- May 1934 to September 1935.

Extremes.- Maximum discharge recorded, 15,600 second-feet at 7 p.m. Oct. 24, 1934; minimum recorded, 66 second-feet Sept. 7, 1934.

Remarks.- No diversion or regulation.

Monthly discharge of Sultan River near Startup

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934						
May.....	2,500	397	663	8.84	10.19	40,790
June.....	484	154	260	3.47	3.87	15,470
July.....	1,460	109	245	3.27	3.77	15,090
August.....	154	72	101	1.35	1.56	6,190
September.....	1,620	67	281	3.75	4.18	16,710
The period.....	-	-	-	-	-	94,250
1934-35						
October.....	6,650	95	944	12.6	14.53	58,060
November.....	7,320	488	1,504	20.1	22.43	89,490
December.....	5,080	412	1,111	14.8	17.06	68,320
January.....	12,000	199	1,809	24.1	27.78	111,200
February.....	2,280	344	832	11.1	11.56	46,200
March.....	3,930	201	612	8.16	9.41	37,650
April.....	1,180	220	595	7.93	8.85	35,390
May.....	1,460	555	916	12.2	14.07	56,300
June.....	1,520	481	860	11.5	12.83	51,190
July.....	988	216	523	6.97	8.04	32,160
August.....	920	133	209	2.79	3.22	12,830
September.....	984	97	243	3.24	3.62	14,470
The year.....	12,000	95	847	11.3	153.40	613,300

Sultan River near Sultan, Wash.

Location.- Water-stage recorder, lat. 47°55'40", long. 121°42'50", in sec. 8, T. 28 N., R. 8 E., at Horseshoe Bend, $4\frac{1}{2}$ miles north of Sultan and mouth of river. Prior to Oct. 29, 1915, water-stage recorder at site $1\frac{1}{2}$ miles upstream.

Drainage area.- 88 square miles.

Records available.- August 1911 to October 1926, February 1929 to October 1931.

Extremes.- Maximum discharge, 24,600 second-feet Dec. 12, 1921 (stage determined from floodmarks); minimum, 2.7 second-feet Aug. 25, 1931, result of diversion.

Remarks.- City of Everett diverts water above station for municipal use.

Monthly discharge of Sultan River near Sultan

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	1,100	57	354	21,800
November.....	13,100	430	2,000	119,000
December.....	7,460	124	1,200	73,800
January.....	11,500	187	1,720	106,000
February.....	1,220	132	437	25,100
March.....	6,360	126	749	46,100
April.....	1,770	292	667	39,700
May.....	1,490	497	781	48,000
June.....	1,600	382	784	46,700
July.....	641	101	270	16,600
August.....	809	54	131	8,060
September.....	7,620	81	1,310	78,000
The year.....	13,100	54	866	629,000
1920-21				
October.....	4,780	324	1,270	78,100
November.....	2,360	170	764	45,500
December.....	5,950	287	1,090	67,000
January.....	6,800	318	1,180	72,600
February.....	10,800	336	1,680	93,300
March.....	4,200	324	1,090	67,000
April.....	3,340	376	1,000	59,500
May.....	2,100	742	1,220	75,000
June.....	2,160	696	1,320	78,600
July.....	1,560	243	572	35,200
August.....	1,230	127	233	14,300
September.....	3,770	112	695	41,400
The year.....	10,800	112	1,000	728,000
1921-22				
October.....	8,680	142	1,050	64,600
November.....	7,460	366	1,320	78,600
December.....	14,800	172	1,910	117,000
January.....	662	110	227	14,000
February.....	370	110	195	10,800
March.....	1,290	128	313	19,200
April.....	1,540	373	763	45,400
May.....	3,830	585	1,560	95,900
June.....	2,480	567	1,100	65,500
July.....	680	123	286	17,600
August.....	493	92	177	10,900
September.....	1,380	107	375	22,300
The year.....	14,800	92	776	562,000
1922-23				
October.....	6,500	99	757	46,500
November.....	1,340	190	468	27,800
December.....	8,960	115	1,330	81,800
January.....	10,000	292	1,810	111,000
February.....	970	-	378	21,000
March.....	1,480	330	554	34,100
April.....	1,390	530	916	54,500
May.....	1,820	532	944	58,000
June.....	1,510	430	824	49,000
July.....	802	152	367	22,600
August.....	243	87	112	6,890
September.....	445	52	108	6,430
The year.....	10,000	52	718	520,000
1923-24				
October.....	2,100	69	372	22,900
November.....	-	114	756	45,000
December.....	-	-	1,240	76,200
January.....	8,570	258	993	61,100
February.....	11,900	-	2,010	116,000
March.....	832	222	378	23,200
April.....	2,190	265	708	42,100
May.....	1,790	399	841	51,700
June.....	908	314	549	32,700
July.....	414	117	196	12,100
August.....	780	88	161	9,900
September.....	1,160	69	207	12,300
The year.....	11,900	69	695	505,000

Monthly discharge of Sultan River near Sultan--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1924-25				
October.....	4,250	262	1,320	81,200
November.....	4,390	-	1,210	72,000
December.....	5,950	278	1,570	96,500
January.....	5,350	316	1,400	86,100
February.....	6,180	345	1,400	77,800
March.....	1,150	326	629	38,700
April.....	2,530	356	994	59,100
May.....	1,780	600	1,150	70,700
June.....	1,000	420	669	39,800
July.....	476	161	272	16,700
August.....	250	100	*132	8,120
September.....	100	45	*66.5	3,960
The year.....	6,180	45	899	651,000
1925-26				
October.....	3,420	32	408	25,100
November.....	1,560	183	685	40,800
December.....	6,980	384	1,850	114,000
January.....	4,910	277	857	52,700
February.....	2,310	428	1,030	57,200
March.....	1,870	301	720	44,300
April.....	-	-	*550	32,700
May.....	-	-	*628	38,600
June.....	475	116	232	13,800
July.....	112	41	70.0	4,300
August.....	446	35	118	7,260
September.....	1,930	77	321	22,700
The year.....	6,980	32	625	453,000
1926				
October.....	5,050	384	†1,130	†69,500
1929				
February 23-28.....	277	227	239	2,840
March.....	2,280	234	747	45,900
April.....	1,400	320	737	43,900
May.....	1,960	710	1,300	79,900
June.....	2,200	610	1,120	63,600
July.....	610	186	337	20,700
August.....	277	82	126	7,750
September.....	195	41	76.8	4,570
The period.....	-	-	-	272,000
1929-30				
October.....	778	47	238	14,600
November.....	656	128	188	11,200
December.....	3,790	112	830	51,000
January.....	1,320	136	365	22,400
February.....	4,420	366	1,660	92,200
March.....	2,980	242	802	49,500
April.....	1,900	527	878	52,200
May.....	1,650	378	668	41,100
June.....	1,200	378	675	40,200
July.....	513	116	238	14,600
August.....	111	46	75.2	4,620
September.....	728	41	185	11,000
The year.....	4,420	41	559	404,000
1930-31				
October.....	2,960	143	760	46,700
November.....	988	179	436	25,900
December.....	1,420	167	466	28,700
January.....	6,130	162	1,250	76,900
February.....	4,250	134	557	30,900
March.....	3,390	288	988	60,800
April.....	3,040	525	986	58,700
May.....	1,200	390	698	42,900
June.....	3,490	268	811	46,500
July.....	555	9.3	149	9,160
August.....	9.0	2.9	5.40	332
September.....	1,880	4.2	415	24,700
The year.....	6,130	2.9	627	454,000
1931				
October 1-16.....	2,380	63	454	14,400

*Estimated.

†Partly estimated.

Yearly discharge of Sultan River near Sultan

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1912.....	706	514,000	701	509,000
1913.....	850	616,000	821	594,000
1914.....	753	545,000	768	556,000
1915.....	558	404,000	594	430,000
1916.....	901	655,000	780	566,000
1917.....	827	598,000	1,150	822,000
1918.....	1,020	740,000	879	637,000
1919.....	881	639,000	875	634,000
1920.....	866	629,000	833	605,000
1921.....	1,000	728,000	1,100	797,000
1922.....	776	562,000	652	458,000
1923.....	718	520,000	701	508,000
1924.....	695	505,000	841	611,000
1925.....	899	651,000	802	581,000
1926.....	625	453,000	-	-
1930.....	559	404,000	592	429,000
1931.....	627	454,000	-	-
Highest.....	1,020	740,000	1,150	822,000
Average.....	780	566,000	803	582,000
Lowest.....	558	404,000	592	429,000

Middle Fork of Snoqualmie River near North Bend, Wash.

Location.- Staff gage, lat. 47°31'00", long. 121°46'00", in sec. 34, T. 24 N., R. 8 E., at highway bridge $1\frac{1}{2}$ miles north of North Bend. Prior to Aug. 7, 1915, gages at different sites a half a mile above confluence with North Fork; Aug. 7, 1915 to Sept. 30, 1926, water-stage recorder at site 1 mile southeast of North Bend.

Drainage area.- 173 square miles (revised).

Records available.- August 1907 to September 1926, February 1929 to September 1932.

Extremes.- Maximum discharge, 18,300 second-feet at 10 a.m. Dec. 18, 1917 (may have been greater during floods of November 1909 and November 1910); minimum, 102 second-feet Oct. 24, 1925.

Remarks.- No diversion or regulation.

Monthly discharge of Middle Fork of Snoqualmie River near North Bend

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	1,160	188	462	2.67	3.08	28,400
November.....	7,400	682	2,120	12.3	13.72	126,000
December.....	5,620	329	1,490	8.61	9.93	91,600
January.....	7,240	434	2,230	12.9	14.87	137,000
February.....	1,950	292	709	4.10	4.42	40,800
March.....	5,570	285	929	5.37	6.19	57,100
April.....	2,610	582	1,040	6.01	6.70	61,900
May.....	2,980	800	1,330	7.69	8.87	81,800
June.....	2,620	860	1,520	8.79	9.81	90,400
July.....	1,440	321	678	3.92	4.52	41,700
August.....	1,160	196	312	1.80	2.08	19,200
September.....	4,300	253	1,320	7.63	8.51	78,600
The year.....	7,400	188	1,180	6.82	92.70	854,000
1920-21						
October.....	7,090	641	1,660	9.60	11.07	102,000
November.....	3,620	310	1,080	6.24	6.96	64,300
December.....	8,640	485	1,400	8.09	9.33	86,100
January.....	7,350	531	1,650	9.54	11.00	101,000
February.....	9,440	643	2,070	12.0	12.50	115,000
March.....	4,190	637	1,440	8.32	9.59	88,500
April.....	3,760	655	1,370	7.92	8.24	81,500
May.....	3,980	1,060	1,970	11.4	13.14	121,000
June.....	4,520	1,410	2,510	14.5	16.18	149,000
July.....	2,520	649	1,140	6.59	7.60	70,100
August.....	637	275	414	2.39	2.76	25,500
September.....	2,840	292	959	5.54	6.18	57,100
The year.....	9,440	275	1,470	8.50	115.15	1,060,000

Monthly discharge of Middle Fork of Snoqualmie River near North Bend--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1921-22						
October.....	6,600	345	1,140	6.59	7.60	70,100
November.....	9,350	750	1,520	8.79	9.81	90,400
December.....	14,600	401	2,650	15.3	17.64	163,000
January.....	581	270	378	2.18	2.61	23,200
February.....	515	253	356	2.06	2.14	19,800
March.....	808	247	435	2.51	2.89	26,700
April.....	2,160	626	1,120	6.47	7.22	66,600
May.....	5,320	1,010	2,500	14.5	16.72	154,000
June.....	4,960	1,500	2,590	15.0	16.74	154,000
July.....	1,500	294	875	3.90	4.50	41,500
August.....	-	-	284	1.64	1.89	17,500
September.....	1,970	226	588	3.40	3.79	35,000
The year.....	14,600	-	1,190	6.88	93.45	862,000
1922-23						
October.....	3,220	194	690	3.99	4.60	42,400
November.....	2,080	348	790	4.57	5.10	47,000
December.....	10,200	256	1,730	10.0	11.53	106,000
January.....	9,260	514	2,590	15.0	17.29	159,000
February.....	1,050	-	540	3.12	3.25	30,000
March.....	2,340	572	906	5.24	6.04	55,700
April.....	2,270	1,090	1,550	8.96	10.00	92,200
May.....	3,140	1,050	1,930	11.2	12.91	119,000
June.....	3,380	1,090	1,950	11.3	12.61	116,000
July.....	2,140	455	1,060	6.13	7.07	65,200
August.....	892	250	330	1.91	2.20	20,300
September.....	266	165	209	1.21	1.35	12,400
The year.....	10,200	165	1,200	6.94	93.95	865,000
1923-24						
October.....	4,780	182	730	4.22	4.86	44,900
November.....	4,180	266	986	5.70	6.36	58,700
December.....	3,760	885	1,600	9.25	10.66	98,400
January.....	4,600	578	1,340	7.75	8.94	82,400
February.....	12,800	986	2,670	15.4	16.61	154,000
March.....	1,260	390	617	3.57	4.12	37,900
April.....	2,990	450	1,120	6.47	7.22	66,600
May.....	4,610	1,090	2,190	12.7	14.64	135,000
June.....	2,140	813	1,270	7.34	8.19	75,600
July.....	1,050	298	528	3.05	3.52	32,500
August.....	908	199	289	1.67	1.92	17,800
September.....	1,130	189	334	1.93	2.15	19,900
The year.....	12,800	182	1,130	6.53	89.19	824,000
1924-25						
October.....	3,220	415	1,400	8.09	9.33	86,100
November.....	4,000	802	1,510	8.73	9.74	89,800
December.....	9,210	596	2,050	11.3	13.60	126,000
January.....	4,990	800	1,640	9.48	10.93	101,000
February.....	5,170	514	1,550	8.96	9.33	86,100
March.....	1,300	481	771	4.46	5.14	47,400
April.....	3,930	546	1,540	8.90	9.93	91,600
May.....	3,520	1,170	2,150	12.4	14.30	132,000
June.....	2,020	893	1,350	7.80	8.70	80,300
July.....	949	318	576	3.33	3.84	35,400
August.....	315	195	241	1.39	1.59	14,800
September.....	217	135	173	1.00	1.12	10,300
The year.....	9,210	135	1,250	7.23	97.55	901,000
1925-26						
October.....	3,440	102	479	2.77	3.19	29,500
November.....	1,790	-	834	4.82	5.38	49,600
December.....	6,700	652	2,520	14.6	16.83	155,000
January.....	5,340	507	1,150	6.65	7.67	70,700
February.....	2,540	527	1,160	6.71	6.99	64,400
March.....	2,020	512	1,050	6.07	7.00	64,600
April.....	1,530	591	965	5.58	6.23	57,400
May.....	2,470	613	1,050	6.07	7.00	64,600
June.....	-	-	*580	3.35	3.74	34,500
July.....	-	-	*310	1.79	2.06	19,100
August.....	-	-	*320	1.85	2.13	19,700
September.....	-	-	*550	3.18	3.55	32,700
The year.....	6,700	102	914	5.28	71.77	662,000

*Estimated.

Monthly discharge of Middle Fork of Snoqualmie River near North Bend--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
February 15-28.....	780	232	458	2.65	1.38	12,700
March.....	3,010	630	1,220	7.05	8.13	75,000
April.....	2,180	492	1,110	6.42	7.16	66,000
May.....	3,820	1,390	2,290	13.2	15.22	141,000
June.....	3,460	1,550	2,340	13.5	15.06	139,000
July.....	1,550	415	872	5.04	5.81	53,600
August.....	415	191	265	1.53	1.78	16,300
September.....	222	145	185	1.07	1.19	11,000
The period.....	-	-	-	-	-	515,000
1929-30						
October.....	425	132	237	1.37	1.58	14,600
November.....	478	198	245	1.42	1.58	14,600
December.....	5,210	198	1,250	7.23	8.34	76,900
January.....	3,340	244	604	3.49	4.02	37,100
February.....	5,490	720	2,340	13.50	14.06	130,000
March.....	4,090	408	1,160	6.71	7.74	71,500
April.....	2,290	980	1,450	8.38	9.35	86,500
May.....	2,600	750	1,400	8.09	9.33	86,100
June.....	2,290	750	1,190	6.88	7.68	70,800
July.....	780	254	489	2.83	3.26	30,100
August.....	237	147	194	1.12	1.29	11,900
September.....	660	137	210	1.21	1.35	12,500
The year.....	5,490	132	887	5.13	69.58	642,000
1930-31						
October.....	3,610	147	1,020	5.90	6.80	62,700
November.....	1,990	326	785	4.54	5.06	46,700
December.....	1,270	326	575	3.32	3.83	35,400
January.....	6,180	307	1,400	8.09	9.33	86,100
February.....	6,710	440	1,130	6.53	6.90	62,800
March.....	4,340	690	1,620	9.36	10.79	99,600
April.....	3,720	795	1,490	8.61	9.61	88,700
May.....	2,800	900	1,660	9.60	11.07	102,000
June.....	3,870	900	1,530	8.84	9.86	91,000
July.....	865	236	426	2.46	2.84	26,200
August.....	229	156	190	1.10	1.27	11,700
September.....	1,050	163	456	2.64	2.94	27,100
The year.....	6,710	147	1,020	5.90	80.20	740,000
1931-32						
October.....	7,430	236	1,090	6.30	7.26	67,000
November.....	6,350	465	1,470	8.50	9.48	87,500
December.....	4,990	330	976	5.64	6.50	60,000
January.....	10,800	440	1,580	7.98	9.20	84,800
February.....	16,200	330	1,640	9.48	10.22	94,300
March.....	7,180	690	2,220	12.8	14.76	136,000
April.....	3,780	910	1,770	10.2	11.38	105,000
May.....	3,160	1,050	1,970	11.4	13.14	121,000
June.....	3,950	1,210	2,230	12.9	14.39	133,000
July.....	3,450	480	1,310	7.57	8.73	80,500
August.....	540	307	394	2.28	2.63	24,200
September.....	1,130	254	351	2.03	2.26	20,900
The year.....	16,200	236	1,400	8.09	109.95	1,010,000

Yearly discharge of Middle Fork of Snoqualmie River near North Bend

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1908.....	1,010	5.84	79.49	737,000	1,050	6.07	82.63	765,000
1909.....	966	5.58	75.75	699,000	1,210	6.99	94.88	874,000
1910.....	1,310	7.57	102.76	947,000	1,280	7.40	100.45	927,000
1911.....	1,040	6.01	81.58	751,000	998	5.77	78.32	723,000
1912.....	1,220	7.05	95.96	885,000	1,100	6.36	86.57	795,000
1913.....	1,290	7.46	101.27	933,000	1,350	7.80	105.88	974,000
1914.....	1,140	6.59	89.45	823,000	1,090	6.30	85.52	790,000
1915.....	762	4.40	59.73	552,000	850	4.91	66.65	615,000
1916.....	1,610	8.73	118.83	1,100,000	1,310	7.57	103.04	954,000
1917.....	1,270	7.34	99.63	921,000	1,610	9.31	126.38	1,170,000
1918.....	1,550	8.96	121.63	1,120,000	1,450	8.58	113.75	1,050,000
1919.....	1,310	7.57	102.76	950,000	1,240	7.17	97.33	898,000
1920.....	1,180	6.82	92.70	854,000	1,190	6.88	93.33	861,000
1921.....	1,470	8.50	115.15	1,060,000	1,560	9.02	122.84	1,130,000
1922.....	1,190	6.88	93.45	862,000	1,010	5.84	79.63	734,000
1923.....	1,200	6.94	93.95	865,000	1,200	6.94	94.60	872,000
1924.....	1,130	6.53	89.19	824,000	1,270	7.34	99.98	924,000
1925.....	1,250	7.23	97.55	901,000	1,150	6.65	90.28	833,000
1926.....	914	5.28	71.77	662,000	-	-	-	-
1930.....	887	5.13	69.58	642,000	941	5.44	73.77	681,000
1931.....	1,020	5.90	80.20	740,000	1,120	6.47	87.75	810,000
1932.....	1,400	8.09	109.95	1,010,000	-	-	-	-
Highest.....	1,550	8.96	121.63	1,120,000	1,610	9.31	126.38	1,170,000
Average.....	1,180	6.84	92.83	856,000	1,200	6.93	94.18	869,000
Lowest.....	762	4.40	59.73	552,000	850	4.91	66.65	615,000

Snoqualmie River near Snoqualmie, Wash.

Location.— Water-stage recorder, lat. 47°32'45", long. 121°50'35", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 19, T. 24 N., R. 8 E., an eighth of a mile below Snoqualmie Falls and $\frac{1}{2}$ mile below Snoqualmie. Prior to Aug. 1, 1904, staff gage at site 300 feet below mouth of South Fork.

Drainage area.— 375 square miles (revised).

Records available.— May 1898 to July 1900, September 1902 to September 1904, August 1907 to September 1932.

Extremes.— Maximum discharge probably in excess of 32,000 second-feet Dec. 12, 1921 (determined from study of combined flow of three forks of Snoqualmie River at and near North Bend); minimum, 223 second-feet Oct. 23, 1925 (sum of flow of three forks of Snoqualmie River at and near North Bend).

Remarks.— Entire low-water flow diverted through Snoqualmie Falls power plant but returned above gage; some regulation at higher stages.

Monthly discharge of Snoqualmie River near Snoqualmie

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	-	-	*913	2.43	2.80	56,100
November.....	-	-	*4,080	10.9	12.16	243,000
December.....	-	-	*2,950	7.87	9.07	181,000
January.....	-	-	*4,420	11.8	13.60	272,000
February.....	-	-	*1,780	4.75	5.12	102,000
March.....	-	-	*1,950	5.20	6.00	120,000
April.....	-	-	*2,210	5.89	6.57	132,000
May.....	-	-	*2,680	7.15	8.24	165,000
June.....	-	-	*2,860	7.63	8.51	170,000
July.....	-	-	*1,160	3.09	3.56	71,300
August.....	-	-	*544	1.45	1.67	33,400
September.....	-	-	*2,440	6.51	7.26	145,000
The year.....	-	-	*2,330	6.21	84.56	1,690,000

*Discharge computed by summation of flow of North and Middle Forks of Snoqualmie River near North Bend and South Fork of Snoqualmie River at North Bend.

Monthly discharge of Snoqualmie River near Snoqualmie--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920-21						
October.....	-	-	*3,200	8.53	9.83	197,000
November.....	-	-	*2,190	5.84	6.52	130,000
December.....	-	-	*2,790	7.44	8.58	172,000
January.....	-	-	*3,680	9.81	11.31	226,000
February.....	-	-	*4,240	11.3	11.77	235,000
March.....	-	-	*3,320	8.85	10.20	204,000
April.....	-	-	*3,070	8.19	9.14	183,000
May.....	-	-	*4,200	11.2	12.91	258,000
June.....	-	-	*4,850	12.9	14.39	288,000
July.....	-	-	*2,110	5.63	6.49	130,000
August.....	-	-	*721	1.92	2.21	44,300
September.....	-	-	*1,710	4.56	5.09	102,000
The year.....	-	-	*3,000	8.00	108.44	2,170,000
1921-22						
October.....	-	-	*2,110	5.63	6.49	130,000
November.....	-	-	*2,980	7.95	8.87	177,000
December.....	-	-	*5,360	14.3	16.49	330,000
January.....	-	-	*908	2.42	2.79	55,800
February.....	-	-	*744	1.98	2.06	41,300
March.....	-	-	*889	2.37	2.73	54,700
April.....	-	-	*2,320	6.19	6.91	138,000
May.....	-	-	*5,110	13.6	15.68	314,000
June.....	-	-	*4,890	13.0	14.50	291,000
July.....	-	-	*1,310	3.49	4.02	80,600
August.....	-	-	*551	1.47	1.70	33,900
September.....	-	-	*1,110	2.96	3.30	66,000
The year.....	-	-	*2,370	6.32	85.54	1,710,000
1922-23						
October.....	-	-	*1,350	3.60	4.15	83,000
November.....	-	-	*1,560	4.16	4.64	92,800
December.....	-	-	*3,300	8.90	10.14	203,000
January.....	-	-	*2,270	14.1	16.26	324,000
February.....	-	-	*1,400	3.73	3.98	77,800
March.....	-	-	*1,970	5.25	6.05	121,000
April.....	-	-	*3,280	8.75	9.76	195,000
May.....	-	-	*3,890	10.4	11.99	239,000
June.....	-	-	*3,880	10.3	11.49	231,000
July.....	-	-	*1,770	4.72	5.44	109,000
August.....	-	-	*589	1.57	1.81	36,200
September.....	-	-	*386	1.03	1.15	23,000
The year.....	-	-	*2,400	6.40	86.76	1,730,000
1923-24						
October.....	-	-	*1,220	3.25	3.75	75,000
November.....	-	-	*1,780	4.75	5.30	106,000
December.....	-	-	*3,160	8.43	9.72	194,000
January.....	-	-	*2,910	7.76	8.95	179,000
February.....	-	-	*5,490	14.6	15.75	316,000
March.....	-	-	*1,530	4.08	4.70	94,100
April.....	-	-	*2,280	6.08	6.78	136,000
May.....	-	-	*4,000	10.7	12.34	246,000
June.....	-	-	*2,220	5.92	6.60	132,000
July.....	-	-	*867	2.31	2.66	53,300
August.....	-	-	*643	1.45	1.37	33,400
September.....	-	-	*648	1.73	1.93	38,600
The year.....	-	-	*2,210	5.89	80.15	1,600,000
1924-25						
October.....	-	-	*2,660	7.09	8.17	164,000
November.....	-	-	*3,070	8.19	9.14	183,000
December.....	-	-	*4,280	11.4	13.14	263,000
January.....	-	-	*3,700	9.87	11.38	228,000
February.....	-	-	*3,680	9.81	10.22	204,000
March.....	-	-	*1,920	5.12	5.90	118,000
April.....	-	-	*3,310	8.83	9.85	197,000
May.....	-	-	*4,220	11.3	13.03	259,000
June.....	-	-	*2,580	6.88	7.68	154,000
July.....	-	-	*992	2.65	3.06	61,000
August.....	-	-	*445	1.19	1.37	27,400
September.....	-	-	*335	.893	1.00	19,900
The year.....	-	-	*2,600	6.93	93.94	1,880,000

*Discharge computed by summation of flow of North and Middle Forks of Snoqualmie River near North Bend and South Fork of Snoqualmie River at North Bend.

Monthly discharge of Snoqualmie River near Snoqualmie--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1925-26						
October.....	-	-	*854	2.28	2.63	52,500
November.....	-	-	*1,790	4.77	5.32	107,000
December.....	-	-	*5,210	13.9	16.03	320,000
January.....	-	-	*2,580	6.88	7.93	159,000
February.....	-	-	*2,650	7.07	7.36	147,000
March.....	-	-	*2,450	6.53	7.53	151,000
April.....	-	-	*2,120	5.65	6.30	126,000
May.....	-	-	*2,180	5.81	6.70	134,000
June.....	1,700	710	1,100	2.93	3.27	65,500
July.....	862	400	536	1.43	1.65	33,000
August.....	1,340	414	585	1.56	1.80	36,000
September.....	4,320	493	1,060	2.83	3.16	63,100
The year.....	-	-	1,920	5.12	69.68	1,390,000
1926-27						
October.....	8,400	1,180	2,650	7.60	8.76	175,000
November.....	5,420	865	2,300	6.13	6.84	137,000
December.....	7,390	1,550	2,740	7.31	8.43	168,000
January.....	5,230	840	2,450	6.53	7.53	151,000
February.....	7,360	1,220	2,780	7.41	7.72	154,000
March.....	2,950	1,630	2,050	5.47	6.31	126,000
April.....	8,170	1,590	2,780	7.41	8.27	165,000
May.....	10,000	2,890	4,730	12.6	14.53	291,000
June.....	10,000	2,840	5,290	14.1	15.73	315,000
July.....	2,950	950	2,030	5.41	6.24	125,000
August.....	3,890	504	830	2.21	2.55	51,000
September.....	7,040	672	2,390	6.37	7.11	142,000
The year.....	10,000	504	2,760	7.36	100.02	2,000,000
1927-28						
October.....	-	-	*3,640	9.71	11.20	224,000
November.....	-	-	*6,860	17.8	19.66	396,000
December.....	-	-	*5,310	8.83	10.18	204,000
January.....	-	-	*6,030	16.1	18.56	371,000
February.....	-	-	*1,460	3.89	4.20	84,000
March.....	-	-	*5,330	9.01	10.39	209,000
April.....	-	-	*2,440	6.51	7.26	145,000
May.....	-	-	*4,720	12.6	14.53	290,000
June.....	-	-	*2,550	6.60	7.59	152,000
July.....	-	-	*1,100	2.93	3.32	67,600
August.....	-	-	*425	1.13	1.30	26,100
September.....	-	-	*416	1.11	1.24	24,800
The year.....	-	-	*3,020	8.05	109.69	2,190,000
1928-29						
October.....	-	-	*2,320	6.19	7.14	143,000
November.....	-	-	*1,240	3.31	3.69	73,800
December.....	-	-	*1,110	2.86	3.41	68,200
January.....	-	-	*785	2.09	2.41	48,300
February.....	-	-	*604	1.61	1.68	33,500
March.....	-	-	*2,440	6.51	7.50	150,000
April.....	-	-	*2,350	6.27	7.00	140,000
May.....	-	-	*4,830	12.2	14.87	297,000
June.....	-	-	*4,640	12.4	13.83	276,000
July.....	-	-	*1,620	4.32	4.98	99,600
August.....	-	-	*549	1.46	1.68	33,800
September.....	-	-	*330	.960	1.07	21,400
The year.....	-	-	*1,910	5.09	69.26	1,380,000
1929-30						
October.....	-	-	*494	1.32	1.52	30,400
November.....	-	-	*521	1.39	1.55	31,000
December.....	-	-	*2,330	6.21	7.16	143,000
January.....	-	-	*1,220	3.25	3.75	75,000
February.....	-	-	*4,400	11.7	12.18	244,000
March.....	-	-	*2,280	6.08	7.01	140,000
April.....	-	-	*2,690	7.71	8.60	172,000
May.....	-	-	*2,630	7.01	8.08	162,000
June.....	-	-	*2,230	5.95	6.64	133,000
July.....	-	-	*893	2.38	2.74	54,900
August.....	-	-	*365	.973	1.12	22,400
September.....	-	-	*392	1.05	1.17	23,300
The year.....	-	-	*1,700	4.53	61.52	1,230,000

*Discharge computed by summation of flow of North and Middle Forks of Snoqualmie River near North Bend and South Fork of Snoqualmie River at North Bend.

†Discharge estimated on basis of records for South Fork of Skykomish River near Index.

Monthly discharge of Snoqualmie River near Snoqualmie--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	-	-	*1,890	5.01	5.78	116,000
November.....	-	-	*1,470	3.92	4.37	87,500
December.....	-	-	*1,150	3.07	3.54	70,700
January.....	-	-	*2,780	7.41	8.54	171,000
February.....	-	-	*2,230	5.95	6.20	124,000
March.....	-	-	*3,500	8.80	10.14	203,000
April.....	-	-	*3,170	8.45	9.43	189,000
May.....	-	-	*3,160	8.43	9.72	194,000
June.....	-	-	*2,770	7.39	8.24	165,000
July.....	-	-	*894	2.38	2.74	55,000
August.....	-	-	*388	1.03	1.19	23,900
September.....	-	-	*911	2.43	2.71	54,200
The year.....	-	-	*2,000	5.33	72.60	1,450,000
1931-32						
October.....	-	-	*2,050	5.47	6.31	126,000
November.....	-	-	*2,800	7.47	8.33	167,000
December.....	-	-	*1,970	5.25	6.05	121,000
January.....	-	-	*2,820	7.52	8.67	173,000
February.....	-	-	*3,340	8.91	9.61	192,000
March.....	-	-	*5,120	13.7	15.79	315,000
April.....	-	-	*4,450	11.9	13.28	265,000
May.....	-	-	*4,470	11.9	13.72	275,000
June.....	-	-	*4,620	12.3	13.72	275,000
July.....	-	-	*2,520	6.72	7.75	155,000
August.....	-	-	*850	2.27	2.62	52,500
September.....	-	-	*752	2.01	2.24	44,700
The year.....	-	-	*2,980	7.95	108.09	2,160,000

*Discharge computed by summation of flow of North and Middle Forks of Snoqualmie River near North Bend and South Fork of Snoqualmie River at North Bend.

Yearly discharge of Snoqualmie River near Snoqualmie

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1899.....	3,430	9.15	124.20	2,480,000	-	-	-	-
1903.....	2,670	7.12	96.65	1,930,000	2,790	7.44	100.99	2,020,000
1904.....	*2,470	6.59	89.70	1,790,000	-	-	-	-
1908.....	*2,140	5.71	77.72	1,560,000	*2,180	5.81	79.08	1,580,000
1909.....	*2,000	5.33	72.35	1,450,000	*2,500	6.67	90.54	1,810,000
1910.....	*2,630	7.01	95.16	1,900,000	*2,540	6.77	91.90	1,840,000
1911.....	*2,070	5.52	74.93	1,500,000	*1,970	5.25	71.26	1,430,000
1912.....	*2,360	6.29	85.62	1,710,000	*2,140	5.71	77.72	1,550,000
1913.....	*2,460	6.56	89.05	1,780,000	*2,530	6.75	91.33	1,830,000
1914.....	*2,300	6.13	83.21	1,660,000	*2,260	6.03	81.85	1,630,000
1915.....	*1,620	4.32	58.64	1,170,000	*1,770	4.72	64.07	1,280,000
1916.....	*3,000	8.00	108.90	2,180,000	*2,640	7.04	95.82	1,920,000
1917.....	*2,550	6.80	92.31	1,840,000	*3,180	8.48	115.11	2,300,000
1918.....	*3,000	8.00	108.60	2,170,000	*2,810	7.49	101.87	2,030,000
1919.....	*2,620	6.99	94.98	1,900,000	*2,480	6.61	89.73	1,790,000
1920.....	*2,330	6.21	84.56	1,660,000	*2,360	6.29	85.46	1,710,000
1921.....	*3,000	8.00	108.44	2,170,000	*3,190	8.51	115.36	2,310,000
1922.....	*2,370	6.32	85.54	1,710,000	*2,010	5.36	72.62	1,450,000
1923.....	*2,400	6.40	86.76	1,730,000	*2,390	6.37	86.60	1,730,000
1924.....	*2,210	5.89	80.15	1,600,000	*2,530	6.75	91.83	1,840,000
1925.....	*2,600	6.93	93.04	1,850,000	*2,410	6.43	87.47	1,750,000
1926.....	*1,920	5.12	69.68	1,390,000	*1,930	5.15	69.73	1,390,000
1927.....	*2,760	7.36	100.02	2,000,000	*3,240	8.64	117.23	2,340,000
1928.....	*3,020	8.05	109.69	2,190,000	*2,280	6.08	82.69	1,650,000
1929.....	*1,910	5.09	69.26	1,380,000	*1,800	4.80	65.25	1,300,000
1930.....	*1,700	4.53	61.52	1,230,000	*1,800	4.80	64.98	1,300,000
1931.....	*2,000	5.33	72.60	1,450,000	*2,200	5.87	79.60	1,590,000
1932.....	*2,980	7.95	108.09	2,160,000	-	-	-	-
Highest.....	3,430	9.15	124.20	2,480,000	3,240	8.64	117.23	2,340,000
Average.....	2,450	6.52	88.65	1,770,000	2,400	6.39	86.81	1,730,000
Lowest.....	1,620	4.32	58.64	1,170,000	1,770	4.72	64.07	1,280,000

*Monthly discharge for August and September 1904, October 1927 to February 1929 estimated on basis of records for South Fork of Skykomish River near Index.

*Monthly discharge for August 1907 to May 1926, March 1929 to September 1932 computed by summation of flow of North and Middle Forks of Snoqualmie River near North Bend and South Fork of Snoqualmie River at North Bend.

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. Prior to Dec. 20, 1933, cable gage 100 feet upstream.

Drainage area.- 605 square miles.

Records available.- October 1928 to September 1935.

Extremes.- Maximum discharge recorded, about 51,000 second-feet at 6 p.m. Feb. 26, 1932; minimum recorded, 354 second-feet Sept. 9, 13, 1935.

Remarks.- Entire low flow at Snoqualmie Falls diverted for power but returned to river above gage; some regulation at higher stages.

Monthly discharge of Snoqualmie River near Tolt

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	-	-	*4,470	7.39	8.52	275,000
November.....	-	-	*1,980	3.27	3.65	118,000
December.....	-	-	*2,140	3.54	4.08	132,000
January.....	-	-	*1,260	2.08	2.40	77,500
February.....	-	-	*873	1.44	1.50	48,500
March.....	8,220	1,350	3,850	6.36	7.33	237,000
April.....	5,940	1,520	3,470	5.74	6.40	206,000
May.....	9,540	3,350	6,360	10.5	12.11	391,000
June.....	8,870	3,870	5,960	9.85	10.99	355,000
July.....	3,690	930	1,930	3.19	3.68	119,000
August.....	930	470	693	1.15	1.33	42,600
September.....	855	430	521	.861	.96	31,000
The year.....	-	-	2,810	4.64	62.95	2,030,000
1929-30						
October.....	1,550	446	761	1.26	1.45	46,800
November.....	1,080	598	792	1.31	1.46	47,100
December.....	12,600	645	3,930	6.50	7.49	242,000
January.....	6,500	670	1,920	3.17	3.66	118,000
February.....	13,000	2,500	6,780	11.2	11.66	377,000
March.....	13,000	1,350	3,510	5.80	6.69	216,000
April.....	8,700	2,950	4,040	6.68	7.45	240,000
May.....	8,400	2,210	3,450	5.67	6.54	211,000
June.....	5,790	1,870	3,000	4.96	5.55	179,000
July.....	2,070	513	965	1.59	1.85	59,200
August.....	555	430	492	.813	.94	30,300
September.....	1,130	415	547	.904	1.01	32,500
The year.....	13,000	415	2,480	4.10	55.71	1,800,000
1930-31						
October.....	13,000	555	2,760	4.56	5.26	170,000
November.....	6,020	910	2,230	3.69	4.12	133,000
December.....	4,350	1,040	1,870	3.09	3.56	115,000
January.....	25,500	995	5,290	8.74	10.08	325,000
February.....	17,600	1,180	3,420	5.65	5.88	190,000
March.....	10,600	2,350	4,720	7.80	8.99	290,000
April.....	19,200	2,450	4,850	8.02	8.95	289,000
May.....	9,300	2,450	4,280	7.07	8.15	263,000
June.....	7,590	1,480	3,500	5.79	6.46	208,000
July.....	2,780	645	1,200	1.98	2.28	73,800
August.....	670	415	509	.841	.97	31,300
September.....	3,490	430	1,253	2.07	2.31	74,400
The year.....	25,500	415	2,990	4.94	67.01	2,160,000
1931-32						
October.....	16,400	620	2,830	4.68	5.40	174,000
November.....	14,800	1,730	4,400	7.27	8.11	262,000
December.....	12,300	1,250	3,530	5.83	6.72	217,000
January.....	30,700	2,140	5,180	8.56	9.87	319,000
February.....	36,500	1,360	5,540	9.16	9.88	319,000
March.....	29,700	4,250	9,980	16.5	19.02	614,000
April.....	10,900	4,820	6,800	11.7	12.50	405,000
May.....	7,590	4,440	5,620	9.79	10.71	346,000
June.....	8,110	4,060	5,450	9.01	10.05	324,000
July.....	7,840	1,730	3,320	5.49	6.33	204,000
August.....	2,000	910	1,340	2.21	2.55	82,400
September.....	4,060	655	1,180	1.95	2.18	70,200
The year.....	36,500	620	4,590	7.59	103.32	3,340,000

*Estimated on basis of records for North, Middle, and South Forks of Snoqualmie River.

Monthly discharge of Snoqualmie River near Tolt--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	11,600	560	3,080	5.09	5.87	189,000
November.....	36,000	4,250	12,800	21.2	23.65	762,000
December.....	25,000	2,050	6,640	11.0	12.68	408,000
January.....	26,800	2,320	6,960	11.5	13.26	428,000
February.....	5,690	1,360	2,380	3.93	4.09	132,000
March.....	8,230	2,720	4,360	7.21	8.31	268,000
April.....	7,580	2,420	4,060	6.71	7.49	242,000
May.....	12,100	3,740	5,730	9.47	10.92	352,000
June.....	13,600	5,090	7,740	12.8	14.28	461,000
July.....	6,000	1,880	4,000	6.61	7.62	246,000
August.....	3,500	795	1,420	2.35	2.71	87,300
September.....	9,240	595	3,020	4.99	5.57	180,000
The year.....	36,000	560	5,190	8.58	116.45	3,760,000
1933-34						
October.....	25,900	890	5,760	9.52	10.98	354,200
November.....	30,900	2,420	6,712	11.1	12.38	399,400
December.....	38,800	2,720	14,530	24.0	27.67	893,500
January.....	26,100	5,400	9,550	15.8	18.22	587,200
February.....	7,760	2,400	4,003	6.62	6.89	222,300
March.....	12,500	2,400	5,122	8.47	9.76	314,900
April.....	8,020	3,040	4,244	7.01	7.82	252,600
May.....	8,280	2,320	3,178	5.25	6.05	195,400
June.....	2,480	1,190	1,567	2.59	2.89	93,240
July.....	1,640	931	1,097	1.76	2.03	65,610
August.....	1,070	634	773	1.28	1.48	47,560
September.....	3,340	618	1,106	1.83	2.04	65,820
The year.....	38,800	618	4,823	7.97	108.21	3,492,000
1934-35						
October.....	35,600	812	4,434	7.33	8.45	272,600
November.....	21,700	3,000	6,381	10.5	11.71	379,700
December.....	14,400	3,100	5,319	8.79	10.13	327,100
January.....	35,300	1,930	8,530	14.1	16.26	524,500
February.....	7,320	2,550	3,974	6.57	6.94	220,700
March.....	10,500	1,660	3,282	5.42	6.25	201,800
April.....	4,000	1,840	2,942	4.70	5.24	169,100
May.....	5,200	2,730	3,626	5.99	6.91	222,900
June.....	7,010	2,370	3,584	5.92	6.60	213,300
July.....	5,550	1,120	2,126	3.51	4.05	130,700
August.....	1,920	730	1,001	1.65	1.90	61,550
September.....	1,520	542	779	1.29	1.44	46,360
The year.....	35,600	542	3,827	6.33	86.78	2,770,000

Yearly discharge of Snoqualmie River near Tolt

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	2,610	4.64	62.95	2,030,000	2,550	4.21	57.10	1,840,000
1930.....	2,480	4.10	55.71	1,800,000	2,600	4.30	58.25	1,880,000
1931.....	2,990	4.94	67.01	2,180,000	3,310	5.47	74.30	2,400,000
1932.....	4,590	7.59	103.32	3,340,000	5,570	9.21	125.29	4,040,000
1933.....	5,190	8.58	116.45	3,760,000	5,580	9.22	125.28	4,040,000
1934.....	4,823	7.97	108.21	3,492,000	3,901	6.45	87.47	2,824,000
1935.....	3,827	6.33	85.78	2,770,000	-	-	-	-

North Fork of Snoqualmie River near Snoqualmie Falls, Wash.

Location.- Water-stage recorder, lat. 47°37'10", long. 121°42'35", in SW $\frac{1}{4}$ 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 1935.

Extremes.- Maximum discharge recorded, 8,020 second-feet at 4 p.m. Feb. 26, 1932; minimum recorded, 30 second-feet Sept. 17-19, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of North Fork of Snoqualmie River near Snoqualmie Falls

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
September.....	90	30	43.5	0.669	0.75	2,590
1929-30						
October.....	260	39	119	1.83	2.11	7,320
November.....	389	64	130	2.00	2.23	7,740
December.....	2,490	85	511	7.86	9.06	31,400
January.....	1,120	-	243	3.74	4.31	14,900
February.....	2,640	225	980	15.1	15.72	54,400
March.....	1,590	156	449	6.81	7.97	27,600
April.....	1,120	318	539	8.29	9.25	32,100
May.....	1,030	234	473	7.28	8.39	29,100
June.....	940	204	398	6.12	6.83	23,700
July.....	248	59	115	1.77	2.04	7,070
August.....	58	36	45.0	.692	.80	2,770
September.....	276	34	76.6	1.18	1.32	4,560
The year.....	2,640	34	335	5.15	70.03	243,000
1930-31						
October.....	1,880	65	492	7.57	8.73	30,300
November.....	605	125	290	4.46	4.98	17,300
December.....	774	126	260	4.00	4.61	16,000
January.....	2,890	124	675	10.4	11.99	41,500
February.....	2,250	150	*398	6.12	6.37	22,100
March.....	2,230	236	682	10.5	12.11	41,900
April.....	1,690	262	577	8.88	9.91	34,500
May.....	940	275	539	8.29	9.56	33,100
June.....	1,710	234	520	8.00	8.93	30,900
July.....	272	61	122	1.88	2.17	7,500
August.....	79	42	52.4	.806	.93	3,220
September.....	778	47	225	3.46	3.86	13,400
The year.....	2,890	42	403	6.20	64.15	292,000
1931-32						
October.....	2,600	91	467	7.18	8.28	28,700
November.....	2,660	157	542	8.34	9.30	32,500
December.....	1,900	133	408	6.28	7.24	25,100
January.....	3,640	154	537	8.26	9.52	33,000
February.....	5,900	105	626	9.63	10.39	36,000
March.....	2,950	364	1,070	16.5	19.02	65,800
April.....	1,720	507	946	14.6	16.29	56,300
May.....	1,280	491	884	13.6	15.68	54,400
June.....	1,510	602	906	13.9	15.51	53,900
July.....	1,690	166	483	7.43	8.57	29,700
August.....	215	100	144	2.22	2.56	8,850
September.....	957	82	171	2.63	2.93	10,200
The year.....	5,900	82	598	9.20	125.29	434,000
1932-33						
October.....	1,500	-	*393	6.05	6.98	24,200
November.....	-	-	*1,460	22.5	25.10	86,900
December.....	4,870	-	751	11.6	13.37	46,200
January.....	4,750	219	833	12.8	14.76	51,200
February.....	477	-	203	3.12	3.25	11,300
March.....	1,000	242	465	7.15	8.24	28,600
April.....	1,160	307	544	8.37	9.34	32,400
May.....	1,810	512	845	13.0	14.99	52,000
June.....	2,050	768	1,140	17.5	19.52	67,800
July.....	1,260	330	*682	10.5	12.11	41,900
August.....	580	116	226	3.48	4.01	13,900
September.....	1,550	113	521	8.02	8.95	31,000
The year.....	-	-	673	10.4	140.62	487,000

*Estimated.

Monthly discharge of North Fork of Snoqualmie River near Snoqualmie Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	3,030	151	866	13.3	15.33	53,260
November.....	4,200	151	688	10.3	11.49	39,730
December.....	4,590	257	1,856	28.6	32.97	114,100
January.....	3,770	464	1,310	20.2	23.29	80,570
February.....	1,200	182	432	6.65	6.92	24,010
March.....	2,410	194	743	11.4	13.14	45,680
April.....	1,200	315	519	7.98	8.90	30,880
May.....	1,610	220	*424	6.52	7.52	26,070
June.....	260	101	145	2.23	2.49	8,610
July.....	178	78	97.5	1.50	1.73	6,000
August.....	103	50	*67.3	1.04	1.20	4,140
September.....	562	50	135	2.08	2.32	8,050
The year.....	4,590	50	609	9.37	127.30	441,100
1934-35						
October.....	6,000	99	714	11.0	12.68	43,920
November.....	2,500	330	*787	12.1	13.50	46,850
December.....	2,760	321	717	11.0	12.68	44,110
January.....	4,880	199	1,072	16.5	19.02	65,930
February.....	1,240	251	499	7.68	8.00	27,710
March.....	2,380	172	403	6.20	7.15	24,760
April.....	750	197	387	5.95	6.84	23,050
May.....	882	370	564	8.68	10.01	34,690
June.....	1,740	348	602	9.26	10.33	35,830
July.....	860	131	302	4.65	5.36	18,540
August.....	491	88	139	2.14	2.47	8,530
September.....	346	52	110	1.69	1.89	6,570
The year.....	6,000	52	526	8.09	109.73	380,500

*Estimated.

Yearly discharge of North Fork of Snoqualmie River near Snoqualmie Falls

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	335	5.15	70.03	243,000	359	5.52	74.95	260,000
1931.....	403	6.20	84.15	292,000	434	6.68	90.65	314,000
1932.....	598	9.20	125.29	434,000	696	10.7	145.92	505,000
1933.....	673	10.4	140.62	487,000	742	11.4	154.96	537,000
1934.....	609	9.37	127.30	441,100	510	7.85	106.37	368,900
1935.....	526	8.08	109.73	380,500	-	-	-	-

North Fork of Snoqualmie River near North Bend, Wash.

Location.-- Water-stage recorder, lat. $47^{\circ}32'20''$, long. $121^{\circ}44'20''$, in NE $\frac{1}{4}$ sec. 26, T. 24 N., R. 8 E., 2 miles above mouth and $3\frac{1}{2}$ miles northeast of North Bend. Prior to Sept. 26, 1916, staff gage and water-stage recorder an eighth of a mile above mouth. Discharge measurements made 1,000 feet above mouth.

Drainage area.-- 105 square miles at mouth.

Records available.-- July 1907 to September 1926, February 1929 to September 1935. Records represent flow at mouth of river.

Extremes.-- Maximum discharge recorded, about 11,500 second-feet Oct. 24 or 25, 1934 (water above gage Nov. 18, 19, 23, 24, 29, 30, 1909, stage and discharge may have exceeded those of 1934); minimum discharge, 54 second-feet Aug. 31, Sept. 1, 1930, Sept. 1, 1934.

Remarks.-- No diversion or regulation.

Monthly discharge of North Fork of Snoqualmie River near North Bend

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	-	104	287	2.73	3.15	17,600
November.....	4,140	452	1,180	11.2	12.50	70,200
December.....	-	-	882	8.40	9.68	54,200
January.....	-	259	1,240	11.8	13.60	76,200
February.....	1,080	182	410	3.90	4.21	23,600
March.....	3,420	173	522	4.97	5.73	32,100
April.....	1,490	311	638	6.08	6.78	38,000
May.....	1,660	456	771	7.34	8.46	47,400
June.....	1,210	475	788	7.50	8.37	46,900
July.....	568	123	255	2.43	2.80	15,700
August.....	427	71	110	1.05	1.21	6,760
September.....	-	103	721	6.87	7.66	42,900
The year.....	-	71	650	6.19	84.15	472,000
1920-21						
October.....	-	345	911	8.68	10.01	56,000
November.....	1,940	199	661	6.30	7.03	39,500
December.....	4,500	301	800	7.62	8.78	49,200
January.....	-	338	1,060	10.1	11.64	65,200
February.....	4,500	324	1,070	10.2	10.62	59,400
March.....	2,380	369	898	8.55	9.86	55,200
April.....	2,280	369	880	8.58	9.35	52,400
May.....	2,100	758	1,170	11.1	12.80	71,900
June.....	2,180	802	1,240	11.8	13.17	73,800
July.....	1,340	192	484	4.61	5.32	29,800
August.....	275	117	149	1.42	1.64	9,160
September.....	1,460	143	439	4.18	4.66	26,100
The year.....	4,500	117	812	7.73	104.88	587,000
1921-22						
October.....	-	156	551	5.25	6.05	33,900
November.....	4,200	399	907	8.64	9.64	54,000
December.....	7,530	277	1,420	13.5	15.56	87,300
January.....	367	187	251	2.39	2.76	15,400
February.....	277	161	210	2.00	2.08	11,700
March.....	594	159	264	2.51	2.89	16,200
April.....	1,290	395	702	6.69	7.46	41,800
May.....	3,360	715	1,530	14.6	16.83	94,100
June.....	2,520	667	1,280	12.0	13.39	75,000
July.....	648	118	277	2.64	3.04	17,000
August.....	303	89	131	1.25	1.44	8,060
September.....	1,450	128	363	3.46	3.86	21,600
The year.....	7,530	89	658	6.27	85.00	476,000
1922-23						
October.....	2,050	114	459	4.37	5.04	28,200
November.....	1,170	229	459	4.37	4.88	27,500
December.....	5,750	159	947	9.02	10.40	59,200
January.....	5,000	375	1,380	13.1	15.10	84,800
February.....	-	-	416	3.96	4.12	23,100
March.....	1,400	355	566	5.39	6.21	34,800
April.....	-	-	*930	8.68	9.88	55,500
May.....	-	-	1,030	9.81	11.31	65,500
June.....	-	-	999	9.51	10.61	59,400
July.....	818	149	372	3.54	4.08	22,900
August.....	308	87	123	1.17	1.35	7,560
September.....	114	64	80.4	.766	.85	4,780
The year.....	5,750	64	649	6.18	83.83	470,000
1923-24						
October.....	1,900	70	298	2.84	3.27	18,500
November.....	2,000	127	466	4.44	4.95	27,700
December.....	2,300	615	901	8.58	9.89	55,400
January.....	3,680	413	949	9.04	10.42	58,400
February.....	7,170	556	1,540	14.7	15.85	88,600
March.....	836	222	363	3.46	3.99	22,500
April.....	1,620	228	631	6.01	6.70	37,500
May.....	2,620	563	*1,010	9.62	11.09	62,100
June.....	905	304	561	5.34	5.96	33,400
July.....	323	108	176	1.68	1.94	10,800
August.....	748	69	148	1.41	1.63	9,100
September.....	959	56	193	1.84	2.05	11,500
The year.....	7,170	56	600	5.71	77.74	435,000

*Estimated.

Monthly discharge of North Fork of Snoqualmie River near North Bend--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	1,800	253	815	7.76	8.95	50,100
November.....	2,960	385	858	9.12	10.18	57,000
December.....	4,290	327	1,240	11.8	13.60	76,200
January.....	3,900	364	1,090	10.4	11.99	67,000
February.....	3,640	149	1,010	9.62	10.02	56,100
March.....	936	327	522	4.97	5.73	32,100
April.....	2,380	381	952	9.07	10.12	56,600
May.....	1,700	518	1,080	10.3	11.87	66,400
June.....	1,380	385	652	6.21	6.93	38,800
July.....	347	99	193	1.84	2.12	11,900
August.....	145	77	96.1	.915	1.05	5,910
September.....	92	65	77.9	.742	.83	4,640
The year.....	4,290	65	723	6.89	93.39	523,000
1925-26						
October.....	1,600	56	235	2.24	2.58	14,400
November.....	1,430	199	624	5.94	6.63	37,100
December.....	6,050	455	1,700	16.20	18.68	105,000
January.....	2,800	331	822	7.83	9.03	50,500
February.....	1,480	445	826	7.87	8.20	45,900
March.....	1,320	360	714	6.80	7.84	43,900
April.....	1,000	367	549	5.23	5.84	32,700
May.....	1,580	298	610	5.81	6.70	37,500
June.....	-	-	*300	2.86	3.19	17,900
July.....	-	-	*125	1.19	1.37	7,690
August.....	-	-	*135	1.29	1.49	8,300
September.....	-	-	*300	2.86	3.19	17,900
The year.....	6,050	56	578	5.50	74.74	419,000
1929						
February 14-28.....	212	120	159	1.51	.84	4,730
March.....	1,820	236	690	6.57	7.57	42,400
April.....	1,290	284	660	6.29	7.02	39,300
May.....	2,120	793	1,430	13.6	15.68	87,900
June.....	1,820	700	1,280	12.2	13.61	76,200
July.....	700	158	334	3.18	3.67	20,500
August.....	152	78	107	1.02	1.18	6,580
September.....	140	59	78	.743	.83	4,640
The period.....	-	-	-	-	-	282,000
1929-30						
October.....	267	68	157	1.50	1.73	9,650
November.....	377	127	184	1.75	1.95	10,900
December.....	2,740	144	651	6.20	7.15	40,000
January.....	1,350	-	351	3.34	3.85	21,600
February.....	2,640	342	1,240	11.8	12.29	68,900
March.....	1,820	218	570	5.43	6.26	35,000
April.....	1,740	487	751	7.15	7.98	44,700
May.....	1,480	346	649	6.18	7.12	39,900
June.....	1,280	290	567	5.40	6.02	33,700
July.....	354	94	180	1.71	1.97	11,100
August.....	90	54	69.7	.664	.77	4,290
September.....	272	54	101	.962	1.07	6,010
The year.....	2,740	54	450	4.29	58.16	326,000
1930-31						
October.....	1,860	96	569	5.42	6.25	35,000
November.....	785	196	408	3.89	4.34	24,300
December.....	900	198	366	3.49	4.02	22,500
January.....	3,580	196	898	8.55	9.88	55,200
February.....	2,760	257	612	5.83	6.07	34,000
March.....	2,640	410	971	9.25	10.68	59,700
April.....	2,390	453	854	8.13	9.07	50,800
May.....	1,190	415	701	6.68	7.70	43,100
June.....	1,950	348	669	6.37	7.11	39,800
July.....	456	105	189	1.90	2.08	11,600
August.....	113	85	85.2	.792	.91	5,180
September.....	861	70	306	2.91	3.25	18,200
The year.....	3,580	65	552	5.26	71.32	399,000

*Estimated.

Monthly discharge of North Fork of Snoqualmie River near North Bend--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	3,120	151	626	5.96	6.87	38,500
November.....	2,900	-	756	7.20	8.03	45,000
December.....	2,310	244	599	5.70	6.57	36,800
January.....	4,150	289	759	7.23	8.34	46,700
February.....	7,840	187	874	8.32	8.97	50,300
March.....	3,360	665	1,550	14.8	17.06	95,300
April.....	2,430	940	1,510	14.4	16.07	89,800
May.....	-	870	1,400	13.3	15.33	86,100
June.....	2,130	960	1,370	13.0	14.50	81,500
July.....	2,030	-	695	6.62	7.63	42,700
August.....	293	127	197	1.88	2.17	12,100
September.....	1,350	112	241	2.30	2.57	14,300
The year.....	7,840	112	880	8.38	114.11	639,000
1932-33						
October.....	3,030	-	*840	8.00	9.22	51,600
November.....	6,880	767	2,250	21.4	23.88	134,000
December.....	6,380	543	1,080	10.3	11.87	66,400
January.....	5,930	331	1,160	11.0	12.68	71,300
February.....	657	-	281	2.68	2.79	15,600
March.....	1,290	370	693	6.60	7.61	42,600
April.....	1,480	463	756	7.20	8.03	45,000
May.....	2,320	756	1,150	11.0	12.68	70,700
June.....	2,620	1,010	1,530	14.6	16.29	91,000
July.....	1,430	421	827	7.88	9.08	50,800
August.....	827	119	283	2.70	3.11	17,400
September.....	1,900	125	695	6.62	7.39	41,400
The year.....	6,880	-	963	9.17	124.63	698,000
1933-34						
October.....	3,740	197	1,159	11.0	12.68	71,240
November.....	6,000	340	1,043	9.93	11.08	62,050
December.....	6,090	516	2,555	24.3	28.02	157,100
January.....	6,370	815	1,859	17.7	20.41	114,300
February.....	1,540	311	662	6.30	6.56	36,760
March.....	2,730	320	954	9.09	10.48	58,680
April.....	1,440	554	775	7.38	8.23	46,100
May.....	2,080	369	642	6.11	7.04	39,480
June.....	434	134	212	2.02	2.25	12,630
July.....	279	84	119	1.13	1.30	7,300
August.....	131	55	76.6	.730	.84	4,710
September.....	706	54	*166	1.58	1.76	9,860
The year.....	6,370	54	857	8.16	110.65	620,200
1934-35						
October.....	7,000	100	*861	8.20	9.45	52,950
November.....	4,530	525	1,269	12.1	13.50	75,490
December.....	3,460	564	1,087	10.4	11.99	66,860
January.....	5,940	337	1,493	14.2	16.37	91,790
February.....	1,840	430	797	7.59	7.90	44,280
March.....	2,800	262	621	5.91	6.81	38,170
April.....	1,200	398	668	6.36	7.10	39,760
May.....	1,300	616	877	8.35	9.63	53,910
June.....	2,440	510	834	7.94	8.86	49,640
July.....	1,450	189	466	4.44	5.12	28,650
August.....	579	127	200	1.90	2.19	12,300
September.....	427	90	156	1.49	1.66	9,280
The year.....	7,000	90	778	7.41	100.58	563,100

*Estimated.

Yearly discharge of North Fork of Snoqualmie River near North Bend

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1908.....	639	6.09	82.89	464,000	636	6.06	82.49	462,000
1909.....	619	5.90	80.09	449,000	790	7.52	102.08	572,000
1910.....	836	7.98	108.06	606,000	789	7.61	101.94	571,000
1911.....	605	5.78	78.19	438,000	577	5.50	74.66	418,000
1912.....	667	6.35	86.44	484,000	608	5.79	78.82	441,000
1913.....	698	6.65	90.27	505,000	698	6.65	90.27	505,000
1914.....	683	6.50	88.23	495,000	686	6.53	88.64	497,000
1915.....	520	4.95	67.19	377,000	587	5.30	71.94	403,000
1916.....	837	7.97	108.49	607,000	759	7.04	95.82	536,000
1917.....	728	6.93	94.07	528,000	893	8.50	115.38	646,000
1918.....	797	7.59	103.03	577,000	741	7.06	95.84	536,000
1919.....	682	6.50	88.23	494,000	659	6.28	85.25	477,000
1920.....	650	6.19	84.15	472,000	663	6.22	84.64	474,000
1921.....	812	7.73	104.88	587,000	864	8.13	110.31	618,000
1922.....	658	6.27	85.00	476,000	573	5.46	74.07	415,000
1923.....	649	6.18	83.83	470,000	632	6.02	81.62	457,000
1924.....	600	5.71	77.74	435,000	712	6.78	92.36	517,000
1925.....	723	6.89	93.39	523,000	685	6.52	88.55	496,000
1926.....	578	5.50	74.74	419,000	-	-	-	-
1930.....	450	4.29	58.16	326,000	479	4.56	61.94	347,000
1931.....	552	5.28	71.32	399,000	605	5.76	78.18	438,000
1932.....	880	8.38	114.11	639,000	1,060	10.1	137.61	771,000
1933.....	963	9.17	124.63	698,000	1,020	9.71	131.44	738,000
1934.....	857	8.16	110.65	620,200	725	6.90	93.81	525,100
1935.....	778	7.41	100.58	563,100	-	-	-	-
Highest.....	963	9.17	124.63	698,000	1,060	10.1	137.61	771,000
Average.....	698	6.65	90.33	506,000	712	6.78	92.07	516,000
Lowest.....	450	4.29	58.16	326,000	479	4.56	61.94	347,000

South Fork of Snoqualmie River at North Bend, Wash.

Location.- Water-stage recorder, lat. 47°29'20", long. 121°47'10", in SE¹ sec. 9, T. 23 N., R. 8 E., half a mile south of North Bend and 3½ miles above mouth. Prior to Oct. 1, 1916, staff gage and water-stage recorder 1 mile downstream.

Drainage area.- 84 square miles.

Records available.- July 1907 to September 1926, February 1929 to September 1935.

Extremes.- Water over gage Nov. 3, 4, 19, 23, 29, 1909 (gage height and discharge not determined); minimum discharge, 85 second-feet Oct. 22, 1925.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Snoqualmie River at North Bend

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	320	92	164	1.95	2.25	10,100
November.....	2,620	345	775	9.23	10.30	46,100
December.....	1,690	223	580	6.90	7.96	35,700
January.....	2,770	311	954	11.4	13.14	58,700
February.....	1,190	375	666	7.93	8.55	38,300
March.....	1,700	311	498	5.93	6.84	30,600
April.....	990	375	535	6.37	7.11	31,800
May.....	1,020	425	584	6.95	8.01	35,900
June.....	750	403	548	6.52	7.27	32,600
July.....	414	135	227	2.70	3.11	14,000
August.....	318	95	122	1.45	1.67	7,500
September.....	967	108	395	4.70	5.24	23,500
The year.....	2,770	92	502	5.98	81.45	365,000
1920-21						
October.....	2,320	302	629	7.49	8.64	38,700
November.....	990	182	446	5.31	5.92	26,500
December.....	3,730	250	586	6.98	8.05	36,000
January.....	2,960	596	965	11.5	13.26	59,300
February.....	3,940	535	1,100	13.1	13.64	61,100
March.....	2,010	660	985	11.7	13.49	60,600
April.....	1,930	596	821	9.77	10.90	48,900
May.....	1,760	703	1,060	12.6	14.53	65,200
June.....	1,660	793	1,100	13.1	14.62	65,500
July.....	1,010	208	486	5.79	6.68	29,900
August.....	200	130	158	1.88	2.17	9,720
September.....	819	130	315	3.75	4.18	18,700
The year.....	3,940	130	719	8.56	116.08	620,000

Monthly discharge of South Fork of Snoqualmie River at North Bend--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1921-22						
October.....	1,960	170	420	5.00	5.76	25,800
November.....	2,640	333	554	6.60	7.36	33,000
December.....	6,460	402	1,290	15.4	17.75	79,300
January.....	402	176	279	3.32	3.83	17,200
February.....	216	142	178	2.12	2.21	9,890
March.....	307	141	190	2.26	2.61	11,700
April.....	960	278	503	5.99	6.68	29,900
May.....	2,040	560	1,080	12.9	14.87	66,400
June.....	1,820	678	1,040	12.4	13.83	61,900
July.....	638	168	359	4.27	4.92	22,100
August.....	168	110	136	1.62	1.87	8,360
September.....	309	110	160	1.90	2.12	9,620
The year.....	6,460	110	518	6.17	83.81	375,000
1922-23						
October.....	769	98	201	2.39	2.76	12,400
November.....	720	158	306	3.64	4.06	18,200
December.....	3,700	132	625	7.44	8.58	38,400
January.....	4,080	522	1,300	15.5	17.87	79,900
February.....	522	400	446	5.31	5.53	24,800
March.....	1,080	368	494	5.88	6.78	30,400
April.....	1,080	560	797	9.49	10.59	47,400
May.....	1,480	598	930	11.1	12.80	57,200
June.....	1,430	638	931	11.1	12.38	55,400
July.....	678	168	340	4.05	4.67	20,900
August.....	209	104	156	1.82	1.87	8,300
September.....	110	88	96.2	1.15	1.28	5,720
The year.....	4,080	88	551	6.56	89.17	399,000
1923-24						
October.....	779	84	192	2.29	2.64	11,800
November.....	1,470	110	325	3.87	4.32	19,300
December.....	1,770	416	664	7.90	9.11	40,800
January.....	1,930	378	625	7.44	8.58	38,400
February.....	5,040	740	1,280	15.2	16.39	73,600
March.....	898	343	552	6.57	7.57	33,900
April.....	942	336	524	6.24	6.96	31,200
May.....	1,450	480	797	9.49	10.94	49,000
June.....	650	234	392	4.67	5.21	23,300
July.....	234	121	163	1.94	2.24	10,000
August.....	148	92	106	1.26	1.45	6,520
September.....	400	80	121	1.44	1.61	7,200
The year.....	5,040	80	476	5.67	77.02	345,000
1924-25						
October.....	875	226	441	5.25	6.05	27,100
November.....	1,010	402	604	7.19	8.02	35,900
December.....	3,720	378	995	11.8	13.60	61,200
January.....	2,600	610	973	11.6	13.37	59,800
February.....	2,600	650	1,120	13.3	13.85	62,200
March.....	785	512	622	7.40	8.53	38,200
April.....	1,500	512	816	9.71	10.83	48,600
May.....	1,400	630	995	11.8	13.60	61,200
June.....	695	412	573	6.82	7.61	34,100
July.....	385	124	223	2.65	3.06	13,700
August.....	119	97	108	1.29	1.49	6,640
September.....	96	73	83.8	0.998	1.11	4,990
The year.....	3,720	73	626	7.45	101.12	454,000
1925-26						
October.....	785	65	140	1.67	1.92	8,610
November.....	530	143	328	3.90	4.35	19,500
December.....	2,360	461	993	11.8	13.60	61,100
January.....	1,740	428	607	7.23	8.34	37,300
February.....	975	433	667	7.94	8.27	37,000
March.....	1,100	464	690	8.21	9.46	42,400
April.....	838	460	610	7.26	8.10	36,300
May.....	725	386	515	6.13	7.07	31,700
June.....	-	-	*220	2.62	2.92	13,100
July.....	-	-	*100	1.19	1.37	6,150
August.....	-	-	*130	1.55	1.79	7,990
September.....	-	-	*210	2.50	2.79	12,500
The year.....	2,360	65	433	5.15	69.98	314,000

*Estimated.

Monthly discharge of South Fork of Snoqualmie River at North Bend--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
February 12-28.....	245	123	172	2.05	1.30	5,800
March.....	1,180	257	533	6.35	7.32	32,800
April.....	1,080	290	584	6.95	7.75	34,800
May.....	1,550	750	1,110	13.2	15.22	68,200
June.....	1,250	675	1,020	12.1	13.50	60,700
July.....	650	257	414	4.93	5.68	25,500
August.....	254	115	177	2.11	2.43	10,900
September.....	113	81	97.3	1.16	1.29	5,790
The period.....	-	-	-	-	-	244,000
1929-30						
October.....	143	81	100	1.19	1.37	6,150
November.....	112	82	92.4	1.10	1.23	5,500
December.....	1,000	88	428	5.10	5.88	26,300
January.....	808	129	262	3.12	3.60	16,100
February.....	1,730	406	822	9.79	10.20	45,700
March.....	1,260	291	550	6.55	7.55	33,800
April.....	1,060	530	686	8.17	9.12	40,800
May.....	940	392	577	6.87	7.92	35,500
June.....	760	331	477	5.68	6.34	28,400
July.....	330	135	224	2.67	3.08	13,800
August.....	133	82	101	1.20	1.38	6,210
September.....	111	73	81.5	.970	1.08	4,850
The year.....	1,730	73	363	4.32	58.75	263,000
1930-31						
October.....	1,250	68	288	3.43	3.95	17,700
November.....	392	177	273	3.25	3.63	16,200
December.....	264	146	213	2.54	2.93	13,100
January.....	2,350	146	477	5.68	6.55	29,300
February.....	1,360	247	484	5.76	6.00	26,900
March.....	1,500	401	713	8.49	9.79	43,800
April.....	1,650	578	823	9.80	10.93	49,000
May.....	1,300	578	794	9.45	10.90	48,800
June.....	1,100	395	575	6.85	7.64	34,200
July.....	476	165	279	3.32	3.83	17,200
August.....	156	89	115	1.37	1.58	7,070
September.....	288	83	149	1.77	1.98	8,870
The year.....	2,350	68	431	5.13	69.71	312,000
1931-32						
October.....	-	105	333	3.96	4.56	20,500
November.....	1,460	300	572	6.81	7.60	34,000
December.....	925	232	394	4.69	5.41	24,200
January.....	2,980	291	681	8.11	9.35	41,900
February.....	5,360	303	830	9.88	10.66	47,700
March.....	2,750	810	1,350	16.1	18.56	83,000
April.....	1,650	832	1,170	13.9	15.51	69,600
May.....	1,450	788	1,100	13.1	15.10	67,600
June.....	1,500	742	1,020	12.1	13.50	60,700
July.....	939	326	*519	6.18	7.12	31,900
August.....	-	-	259	3.08	3.55	15,900
September.....	304	122	160	1.90	2.12	9,520
The year.....	5,360	105	698	8.31	113.04	507,000
1932-33						
October.....	1,350	107	402	4.79	5.52	24,700
November.....	5,980	615	1,620	19.3	21.53	96,400
December.....	4,870	505	990	11.8	13.60	60,900
January.....	4,310	418	1,060	12.6	14.53	65,200
February.....	630	305	382	4.55	4.74	21,200
March.....	735	374	549	6.54	7.54	33,800
April.....	1,290	435	662	7.88	8.79	39,400
May.....	-	625	922	11.0	12.68	56,700
June.....	2,040	810	1,250	14.9	16.62	74,400
July.....	1,050	326	625	7.44	8.58	38,400
August.....	414	155	238	2.83	3.26	14,600
September.....	1,090	-	*421	5.01	5.59	25,100
The year.....	5,980	107	761	9.06	122.98	551,000

*Estimated.

Monthly discharge of South Fork of Snoqualmie River at North Bend--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	3,100	229	843	10.0	11.53	51,830
November.....	4,380	552	986	11.7	13.05	58,670
December.....	5,990	552	2,267	27.0	31.13	139,400
January.....	4,210	945	1,579	18.8	21.67	97,090
February.....	1,300	575	771	9.18	9.56	42,800
March.....	2,080	592	997	11.9	13.72	61,310
April.....	1,420	610	838	9.98	11.14	49,870
May.....	1,040	488	592	7.05	8.13	36,420
June.....	470	191	299	3.56	3.97	17,780
July.....	186	121	145	1.73	1.99	8,930
August.....	216	120	169	2.01	2.32	10,380
September.....	-	-	*170	2.02	2.25	10,120
The year.....	5,990	-	807	9.61	130.46	584,600
1934-35						
October.....	6,300	75	632	7.52	8.67	38,880
November.....	2,370	544	939	11.2	12.50	55,860
December.....	1,980	492	792	9.43	10.87	48,690
January.....	4,080	439	1,233	14.7	16.95	75,810
February.....	1,230	476	718	8.55	8.90	39,850
March.....	1,590	318	564	6.71	7.74	34,680
April.....	650	358	488	5.81	6.48	29,050
May.....	1,080	544	733	8.73	10.06	45,050
June.....	1,000	-	648	7.71	8.60	38,570
July.....	-	-	*363	4.32	4.98	22,290
August.....	220	121	165	1.96	2.26	10,130
September.....	132	91	107	1.27	1.42	6,360
The year.....	6,300	75	615	7.32	99.43	445,200

*Estimated.

Yearly discharge of South Fork of Snoqualmie River at North Bend

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1908.....	490	5.83	79.37	356,000	492	5.86	79.70	357,000
1909.....	419	4.99	67.78	304,000	496	5.90	80.20	359,000
1910.....	477	5.68	77.11	346,000	467	5.58	75.49	338,000
1911.....	428	5.10	69.23	310,000	393	4.68	63.61	285,000
1912.....	473	5.63	76.61	343,000	437	5.20	70.86	317,000
1913.....	473	5.63	76.39	342,000	492	5.86	79.51	356,000
1914.....	480	5.71	77.59	348,000	480	5.71	77.55	347,000
1915.....	334	3.98	53.89	241,000	368	4.38	59.47	266,000
1916.....	659	7.85	106.70	478,000	590	7.02	95.47	428,000
1917.....	549	6.54	88.68	397,000	673	8.01	108.75	487,000
1918.....	648	7.71	104.78	469,000	621	7.39	100.40	450,000
1919.....	627	7.46	101.36	454,000	579	6.89	93.61	419,000
1920.....	502	5.98	81.45	365,000	515	6.13	83.55	374,000
1921.....	719	8.56	116.08	520,000	769	9.15	124.34	557,000
1922.....	518	6.17	83.81	375,000	423	5.04	68.34	306,000
1923.....	551	6.56	89.17	399,000	555	6.61	89.64	402,000
1924.....	476	5.67	77.02	345,000	547	6.51	88.62	397,000
1925.....	626	7.45	101.12	454,000	578	6.88	93.32	419,000
1926.....	433	5.15	69.98	314,000	-	-	-	-
1930.....	363	4.32	58.75	263,000	376	4.48	60.78	272,000
1931.....	431	5.13	69.71	312,000	475	5.65	76.77	344,000
1932.....	698	8.31	113.04	507,000	840	10.0	136.12	610,000
1933.....	761	9.06	122.98	551,000	854	10.2	138.04	618,000
1934.....	807	9.61	130.46	584,600	660	7.88	106.79	478,100
1935.....	615	7.32	99.43	445,200	-	-	-	-
Highest.....	807	9.61	130.46	584,600	854	10.2	138.04	618,000
Average.....	542	6.46	87.70	393,000	551	6.56	89.18	399,000
Lowest.....	334	3.98	53.89	241,000	368	4.38	59.47	266,000

Tokul Creek near Snoqualmie, Wash.

Location.- Staff gage, lat. 47°33'05", long. 121°50'35", in sec. 19, T. 24 N., R. 8 E., 800 feet above mouth and $1\frac{1}{2}$ miles north of Snoqualmie. Prior to Nov. 1, 1914, staff gage $1\frac{1}{2}$ miles upstream.

Drainage area.- 35.5 square miles.

Records available.- July 1907 to October 1914, March 1929 to September 1931.

Extremes.- Maximum discharge, not determined, probably occurred in November 1909; minimum, 13 second-feet Sept. 16-20, 1909.

Remarks.- Small diversion for Snoqualmie Falls lumber mill and settlement.

Monthly discharge of Tokul Creek near Snoqualmie

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1929				
March 20-31.....	415	162	309	7,350
April.....	302	94	162	9,640
May.....	131	45	81.3	5,000
June.....	227	72	123	7,320
July.....	72	28	39.5	2,430
August.....	28	25	26.3	1,620
September.....	27	23	24.1	1,430
The period.....	-	-	-	34,800
1929-30				
October.....	30	23	26.9	1,650
November.....	94	27	33.5	1,990
December.....	343	30	142	8,730
January.....	332	-	-	7,260
February.....	302	64	180	10,000
March.....	246	56	98.7	6,070
April.....	100	69	82.4	4,900
May.....	193	52	85.2	5,240
June.....	144	47	72.4	4,310
July.....	52	28	36.5	2,240
August.....	28	22	25.4	1,560
September.....	30	22	23.0	1,370
The year.....	343	22	76.4	55,300
1930-31				
October.....	152	21	54.9	3,380
November.....	152	55	95.4	5,680
December.....	144	62	87.8	5,400
January.....	322	72	176	10,800
February.....	343	75	147	8,160
March.....	255	91	151	9,280
April.....	388	75	177	10,500
May.....	75	40	60.0	3,690
June.....	168	32	65.7	3,910
July.....	96	33	51.5	3,170
August.....	33	27	30.1	1,850
September.....	59	26	38.0	2,260
The year.....	388	21	94.1	68,100

Yearly discharge of Tokul Creek near Snoqualmie

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1909.....	90.0	65,200	-	-
1910.....	-	-	152	110,000
1911.....	130	93,800	104	75,400
1912.....	98.9	71,900	104	75,700
1913.....	102	74,200	97.1	70,300
1914.....	91.5	66,200	-	-
1930.....	76.4	55,300	79.3	57,400
1931.....	94.1	68,100	-	-

Tolt River near Tolt, Wash.

Location.- Water-stage recorder, lat. 47°41'45", long. 121°49'20", in sec. 31, T. 26 N., R. 8 E., 150 feet below forks and 6 miles northeast of Tolt.

Drainage area.- 80 square miles.

Records available.- August 1928 to January 1932.

Extremes.- Maximum discharge, not determined, probably occurred Feb. 1, 1930; minimum, 65 second-feet Sept. 11, 1928.

Remarks.- No diversion or regulation.

Monthly discharge of Tolt River near Tolt

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
August 10-31, 1928.....	94	73	83.1	1.04	0.85	3,630
September.....	435	65	90.6	1.13	1.26	5,390
The period.....	-	-	-	-	-	9,020
October 1928.....	3,280	234	679	8.49	9.79	41,800
November.....	742	204	353	4.16	4.64	19,800
December.....	1,170	170	344	4.30	4.96	21,200
January 1929.....	609	-	246	3.08	3.55	15,100
February.....	335	-	163	2.04	2.12	9,050
March.....	1,470	372	671	8.39	9.67	41,300
April.....	870	319	574	7.18	8.01	34,200
May.....	1,180	552	882	11.0	12.68	54,200
June.....	1,110	438	785	9.81	10.94	46,700
July.....	420	-	228	2.85	3.29	14,000
August.....	-	-	*162	2.02	2.35	9,960
September.....	332	72	100	1.25	1.40	5,950
Water year 1928-29.....	3,280	72	433	5.41	73.38	313,000
October 1929.....	355	75	166	2.08	2.40	10,200
November.....	314	105	155	1.94	2.16	9,220
December.....	1,940	114	606	7.58	8.74	37,300
Calendar year 1929.....	1,940	72	397	4.96	67.29	287,000
January 1930.....	1,280	-	404	5.05	5.82	24,800
February.....	-	-	*1,010	12.6	13.12	56,100
March.....	2,000	-	581	7.26	8.37	35,700
April.....	1,020	409	587	7.34	8.19	34,900
May.....	1,070	352	509	6.36	7.33	31,300
June.....	-	231	411	5.14	5.74	24,500
July.....	251	97	148	1.85	2.13	9,100
August.....	96	72	82.9	1.04	1.20	5,100
September.....	428	68	121	1.51	1.68	7,200
Water year 1929-30.....	-	68	394	4.92	66.88	285,000
October 1930.....	1,530	92	462	5.78	6.66	28,400
November.....	828	194	395	4.94	5.51	23,500
December.....	898	251	421	5.26	6.06	25,900
Calendar year 1930.....	-	68	423	5.29	71.81	306,000
January 1931.....	2,100	254	794	9.92	11.44	48,800
February.....	2,230	254	512	6.40	6.66	28,400
March.....	2,330	359	*848	10.6	12.22	52,100
April.....	1,760	402	671	8.39	9.36	39,900
May.....	648	274	417	5.21	6.01	25,600
June.....	1,600	220	460	5.75	6.42	27,400
July.....	388	110	189	2.36	2.72	11,600
August.....	132	76	95.1	1.19	1.37	5,850
September.....	799	78	293	3.66	4.08	17,400
Water year 1930-31.....	2,330	76	463	5.79	78.51	335,000
October 1931.....	1,940	143	470	5.88	6.78	28,900
November.....	2,400	331	674	8.42	9.39	40,100
December.....	2,090	274	582	7.28	8.39	35,800
Calendar year 1931.....	2,400	76	500	6.25	84.84	362,000
January 1-3, 1932.....	395	352	370	4.62	.52	2,200
The period.....	-	-	-	-	-	107,000

*Estimated.

SURFACE WATERS OF WASHINGTON, 1919-35

STILLAGUAMISH RIVER BASIN

South Fork of Stillaguamish River at Silverton, Wash.

Location.- Staff gage, lat. 48°04'20", long. 121°34'50", in SE $\frac{1}{4}$ sec. 24, T. 30 N., R. 9 E., three-quarters of a mile below Silverton.

Drainage area.- 38.4 square miles.

Records available.- May 1929 to September 1932.

Extremes.- Maximum discharge observed, about 8,800 second-feet at 7:55 a.m. Jan. 11, 1932; may have been higher Feb. 26, 1932; minimum discharge, 24 second-feet Sept. 1, 2, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Stillaguamish River at Silverton

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
May 23-31, 1929.....	950	323	563	14.7	4.92	10,100
June.....	1,050	348	564	14.7	13.40	33,600
July.....	348	119	212	5.52	6.36	13,000
August.....	144	50	75.9	1.98	2.28	4,670
September.....	65	27	40.3	1.05	1.17	2,400
The period.....	-	-	-	-	-	63,800
October 1929.....	448	26	111	2.89	3.33	6,820
November.....	257	48	77.8	2.03	2.26	4,630
December.....	2,450	45	358	9.32	10.74	22,000
January 1930.....	-	-	125	3.26	3.76	7,690
February.....	2,500	138	780	20.3	21.14	43,300
March.....	1,050	92	297	7.73	8.91	18,300
April.....	1,100	267	456	11.9	13.28	27,100
May.....	850	173	332	8.65	9.97	20,400
June.....	540	215	348	9.06	10.11	20,700
July.....	276	56	134	3.49	4.02	8,240
August.....	56	25	38.9	1.01	1.16	2,390
September.....	308	24	72.2	1.88	2.10	4,300
Water year 1929-30.....	2,500	24	257	6.69	90.78	186,000
October 1930.....	1,680	43	324	8.44	9.73	19,900
November.....	375	88	193	5.03	5.61	11,500
December.....	690	76	219	5.70	6.57	13,500
Calendar year 1930.....	2,500	24	273	7.11	96.36	197,000
January 1931.....	3,760	82	620	16.1	18.56	38,100
February.....	2,450	88	289	7.53	7.84	16,000
March.....	2,300	173	507	13.2	15.22	31,200
April.....	1,370	228	492	12.8	14.28	29,300
May.....	905	308	531	13.8	15.91	32,600
June.....	2,150	285	580	15.1	16.85	34,500
July.....	330	67	173	4.51	5.20	10,600
August.....	64	32	44.9	1.17	1.35	2,760
September.....	950	33	231	6.02	6.72	13,700
Water year 1930-31.....	3,760	32	350	9.11	123.84	254,000
October 1931.....	970	66	286	7.45	8.59	17,600
November.....	2,120	99	478	12.4	13.83	28,400
December.....	2,560	88	371	9.66	11.14	22,800
Calendar year 1931.....	3,760	32	383	9.97	135.49	278,000
January 1932.....	5,470	107	509	13.3	15.33	31,300
February.....	7,040	-	702	18.3	19.74	40,400
March.....	2,120	212	594	15.2	17.52	35,900
April.....	1,040	356	606	15.8	17.63	36,100
May.....	850	418	628	16.4	18.91	38,600
June.....	1,080	416	648	16.9	18.86	38,600
July.....	1,350	212	459	12.0	13.63	28,200
August.....	244	109	163	4.32	4.96	10,200
September.....	356	58	115	2.99	3.34	6,840
Water year 1931-32.....	7,040	58	462	12.0	163.70	335,000

South Fork of Stillaguamish River near Granite Falls, Wash.

Location.- Water-stage recorder, lat. 48°06'10", long. 121°56'40", in SW 1/4 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 1935.

Extremes.- Maximum discharge, about 26,700 second-feet at 1 p.m. Feb. 26, 1932 (stage determined from graph based on gage readings); minimum, 66 second-feet Sept. 4, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Stillaguamish River near Granite Falls

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928						
July 20-31.....	244	170	217	1.62	0.81	5,160
August.....	159	88	117	.983	1.13	7,190
September.....	1,300	81	153	1.29	1.44	9,100
The period.....	-	-	-	-	-	21,400
1928-29						
October.....	7,400	209	1,220	10.3	11.87	75,000
November.....	2,440	186	668	5.61	6.26	39,700
December.....	3,310	209	724	6.08	7.01	44,500
January.....	1,440	142	349	2.93	3.38	21,500
February.....	382	113	183	1.54	1.60	10,200
March.....	3,850	438	1,010	8.49	9.79	62,100
April.....	1,780	409	945	7.94	8.96	56,200
May.....	2,880	776	1,570	13.2	15.22	96,500
June.....	3,470	684	1,320	11.1	12.38	78,600
July.....	672	206	375	3.15	3.63	23,100
August.....	386	107	156	1.51	1.51	9,590
September.....	170	77	99.6	.837	.93	5,930
The year.....	7,400	77	721	6.06	32.44	523,000
1929-30						
October.....	750	72	256	2.15	2.48	15,700
November.....	843	132	203	1.71	1.91	12,100
December.....	5,650	120	1,170	9.83	11.33	71,900
January.....	1,820	-	458	3.85	4.44	28,200
February.....	5,680	480	2,230	18.7	19.47	124,000
March.....	3,950	282	980	8.24	9.50	60,500
April.....	2,250	648	1,080	9.08	10.13	64,500
May.....	2,240	414	808	6.79	7.83	49,700
June.....	1,640	409	796	6.69	7.46	47,400
July.....	553	132	253	2.13	2.46	15,600
August.....	127	70	91.4	.768	.89	5,620
September.....	1,160	68	231	1.94	2.16	13,700
The year.....	5,680	68	702	5.90	80.06	509,000
1930-31						
October.....	3,060	101	917	7.71	8.89	56,400
November.....	1,280	244	616	5.18	5.78	36,700
December.....	2,270	297	739	6.21	7.16	45,400
January.....	9,160	297	1,890	15.9	18.33	116,000
February.....	6,830	312	343	7.92	8.25	52,400
March.....	5,040	535	1,600	13.4	15.45	98,400
April.....	4,540	642	1,430	12.0	13.39	85,100
May.....	1,800	636	1,020	8.57	9.88	62,700
June.....	5,770	510	1,230	10.3	11.49	73,200
July.....	769	152	340	2.86	3.30	20,900
August.....	143	86	111	.933	1.08	6,820
September.....	2,960	86	738	6.20	6.92	43,900
The year.....	9,160	86	964	8.10	109.92	698,000
1931-32						
October.....	2,780	186	863	7.25	8.36	53,100
November.....	6,380	344	1,440	12.1	13.50	85,700
December.....	6,250	348	1,290	10.8	12.45	79,500
January.....	9,580	400	1,380	11.4	13.14	83,600
February.....	20,200	293	2,030	17.1	18.44	117,000
March.....	7,290	700	2,220	18.7	21.56	136,000
April.....	3,720	1,100	1,920	16.1	17.96	114,000
May.....	2,010	884	1,430	12.0	13.83	87,900
June.....	2,200	919	1,350	11.3	12.61	80,300
July.....	2,950	381	1,000	8.40	9.68	61,500
August.....	414	219	295	2.48	2.86	18,100
September.....	1,000	175	319	2.68	2.99	19,000
The year.....	20,200	175	1,290	10.8	147.38	936,000

Monthly discharge of South Fork of Stillaguamish River near Granite Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	3,490	131	1,010	8.49	9.79	62,100
November.....	11,800	915	3,330	28.0	31.24	198,000
December.....	11,300	393	1,640	13.8	15.91	101,000
January.....	7,440	366	1,580	13.3	15.33	97,200
February.....	2,700	234	560	4.71	4.90	31,100
March.....	2,960	591	1,260	10.6	12.22	77,500
April.....	2,240	659	1,130	9.50	10.60	67,200
May.....	3,180	1,020	1,570	13.2	15.22	96,500
June.....	4,830	1,310	2,010	16.9	18.66	120,000
July.....	1,910	618	1,190	10.0	11.53	73,200
August.....	864	227	454	3.62	4.40	27,900
September.....	4,160	166	1,140	9.58	10.69	67,800
The year.....	11,800	131	1,410	11.8	160.69	1,020,000
1933-34						
October.....	5,540	234	1,596	13.4	15.45	98,160
November.....	7,860	282	1,326	11.1	12.38	78,930
December.....	10,100	503	3,917	32.9	37.93	240,900
January.....	7,360	1,110	2,641	22.2	25.59	162,400
February.....	2,230	397	1,006	8.45	8.80	55,800
March.....	5,260	389	1,819	15.3	17.64	111,800
April.....	3,090	666	969	8.14	9.08	57,640
May.....	4,000	562	1,037	9.97	10.34	65,620
June.....	874	240	436	3.66	4.08	25,920
July.....	2,210	168	367	3.08	3.55	22,540
August.....	310	106	161	1.35	1.56	9,900
September.....	4,020	89	496	4.17	4.65	29,540
The year.....	10,100	89	1,325	11.1	151.05	959,200
1934-35						
October.....	8,560	120	1,172	9.85	11.36	72,050
November.....	10,400	666	2,197	18.5	20.64	130,700
December.....	6,340	666	1,512	12.7	14.64	92,980
January.....	18,400	290	2,711	22.8	26.29	166,700
February.....	2,540	499	1,080	9.08	9.46	60,000
March.....	5,410	322	898	7.55	8.70	55,240
April.....	1,510	337	751	6.31	7.04	44,690
May.....	2,220	658	1,107	9.30	10.72	68,090
June.....	1,700	578	1,025	8.61	9.61	60,970
July.....	1,120	281	610	5.13	5.91	37,530
August.....	990	169	253	2.13	2.46	15,570
September.....	2,090	109	338	3.09	3.45	21,920
The year.....	18,400	109	1,142	9.60	130.28	826,400

Yearly discharge of South Fork of Stillaguamish River near Granite Falls

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	721	6.06	82.44	523,000	640	5.38	73.02	463,000
1930.....	702	5.90	80.06	509,000	756	6.35	86.17	547,000
1931.....	964	8.10	109.92	698,000	1,070	8.99	123.40	778,000
1932.....	1,290	10.8	147.38	938,000	1,490	12.5	170.01	1,080,000
1933.....	1,410	11.8	160.69	1,020,000	1,490	12.5	169.51	1,080,000
1934.....	1,325	11.1	151.05	959,200	1,156	9.71	131.93	837,000
1935.....	1,142	9.60	130.28	826,400	-	-	-	-

South Fork of Stillaguamish River near Arlington, Wash.

Location.- Staff gage, lat. 48°11'40", long. 122°05'45", in NW¼ sec. 7, T. 31 N., R. 6 E., 1½ miles east of Arlington.

Drainage area.- 254 square miles.

Records available.- October 1928 to September 1935.

Extremes.- Maximum discharge observed, about 35,000 second-feet at 5 p.m. Feb. 26, 1932; minimum observed, 108 second-feet Sept. 6, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Stillaguamish River near Arlington

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	-	-	*1,880	7.40	8.53	116,000
November.....	-	-	*1,080	4.25	4.74	64,300
December.....	-	-	*1,360	5.35	6.17	83,600
January.....	2,770	306	702	2.76	3.18	43,200
February.....	895	257	451	1.78	1.85	25,000
March.....	6,660	850	1,940	7.64	8.81	119,000
April.....	2,940	895	1,660	6.54	7.30	98,800
May.....	6,000	1,100	2,550	10.0	11.53	157,000
June.....	6,000	1,040	1,910	7.52	8.39	114,000
July.....	1,040	292	567	2.23	2.57	34,900
August.....	725	166	244	.961	1.11	15,000
September.....	306	141	174	.685	.76	10,400
The year.....	-	-	1,220	4.80	64.94	881,000
1929-30						
October.....	990	143	379	1.49	1.72	23,300
November.....	1,760	222	357	1.41	1.57	21,200
December.....	10,000	201	2,040	8.03	9.26	125,000
January.....	3,630	-	939	3.70	4.27	57,700
February.....	9,530	1,120	3,610	14.2	14.79	200,000
March.....	6,440	585	1,790	7.05	8.13	110,000
April.....	3,810	1,020	1,710	6.73	7.51	102,000
May.....	3,630	690	1,330	5.20	6.00	81,200
June.....	2,770	620	1,210	4.76	5.31	72,000
July.....	805	193	371	1.46	1.68	22,800
August.....	190	117	155	.610	.70	9,530
September.....	2,010	108	425	1.67	1.86	25,300
The year.....	10,000	108	1,170	4.61	62.80	850,000
1930-31						
October.....	4,760	238	1,480	5.83	6.72	91,000
November.....	2,940	402	1,100	4.33	4.83	65,500
December.....	3,280	525	1,310	5.16	5.95	80,600
January.....	15,100	525	3,250	12.8	14.76	200,000
February.....	9,530	595	1,660	6.54	6.81	92,200
March.....	10,500	960	3,020	11.9	13.72	186,000
April.....	7,840	1,150	2,450	9.65	10.77	146,000
May.....	2,450	870	1,440	5.67	6.54	88,500
June.....	9,780	710	1,960	7.72	8.61	117,000
July.....	1,000	238	499	1.96	2.26	30,700
August.....	272	149	182	.717	.83	11,200
September.....	7,120	149	1,370	5.39	6.01	81,500
The year.....	15,100	149	1,640	6.46	87.81	1,190,000
1931-32						
October.....	6,440	290	1,400	5.51	6.35	86,100
November.....	8,090	790	2,150	8.45	9.44	128,000
December.....	9,110	670	2,180	8.58	9.80	134,000
January.....	15,600	960	2,940	11.2	12.91	175,000
February.....	30,700	710	3,280	12.9	13.91	189,000
March.....	11,800	1,580	4,520	17.8	20.52	278,000
April.....	6,100	1,310	3,250	12.8	14.28	193,000
May.....	3,890	1,440	2,220	8.74	10.08	136,000
June.....	3,290	1,380	2,020	7.95	8.87	120,000
July.....	4,230	580	1,420	5.59	6.44	87,300
August.....	620	308	433	1.70	1.96	26,600
September.....	2,480	236	424	1.67	1.86	25,200
The year.....	30,700	236	2,170	8.54	116.51	1,580,000
1932-33						
October.....	5,260	159	1,443	5.68	6.55	88,710
November.....	27,400	1,200	5,396	21.2	23.65	321,100
December.....	23,700	970	3,525	13.9	16.03	216,700
January.....	12,000	920	3,068	12.1	13.95	188,700
February.....	6,480	470	1,314	5.17	5.38	72,990
March.....	7,500	1,280	2,531	9.96	11.48	155,600
April.....	3,650	1,170	1,909	7.52	8.39	113,600
May.....	6,730	1,790	2,680	10.6	12.22	164,800
June.....	8,020	1,920	3,236	12.7	14.17	192,600
July.....	3,650	875	1,737	6.84	7.89	106,800
August.....	1,220	310	655	2.58	2.97	40,260
September.....	6,480	255	1,449	5.70	6.36	86,200
The year.....	27,400	159	2,415	9.51	129.04	1,748,000

*Estimated on basis of records for station near Granite Falls.

Monthly discharge of South Fork of Stillaguamish River near Arlington--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	11,500	373	2,439	9.60	11.07	150,000
November.....	13,500	565	2,471	9.73	10.86	147,000
December.....	13,500	875	5,729	22.6	26.06	352,300
January.....	12,900	1,790	4,193	16.5	19.02	257,800
February.....	4,050	670	1,741	6.85	7.13	96,690
March.....	12,000	670	2,750	10.8	12.45	169,100
April.....	5,760	970	1,635	6.44	7.18	97,310
May.....	5,540	790	1,517	5.97	6.88	93,270
June.....	1,550	290	612	2.41	2.69	36,400
July.....	2,540	225	464	1.93	2.11	28,500
August.....	373	162	210	.827	.95	12,920
September.....	5,100	146	659	2.59	2.89	39,210
The year.....	13,500	146	2,045	8.05	109.29	1,480,000
1934-35						
October.....	12,900	168	1,553	6.11	7.04	95,510
November.....	22,000	1,280	4,160	16.4	18.30	247,500
December.....	11,800	1,280	2,857	11.2	12.91	175,700
January.....	30,200	605	4,642	19.1	22.02	297,700
February.....	5,320	1,180	2,196	8.65	9.01	121,900
March.....	11,200	760	1,905	7.50	8.65	117,100
April.....	3,070	760	1,469	5.78	6.45	87,420
May.....	4,050	1,180	1,823	7.18	8.28	112,100
June.....	2,210	890	1,501	5.91	6.59	89,310
July.....	1,790	420	895	3.52	4.06	55,040
August.....	1,670	268	392	1.54	1.78	24,090
September.....	2,540	220	559	2.20	2.46	33,250
The year.....	30,200	168	2,012	7.92	107.55	1,457,000

Yearly discharge of South Fork of Stillaguamish River near Arlington

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	1,220	4.80	64.94	821,000	1,090	4.29	58.05	787,000
1930.....	1,170	4.61	62.80	850,000	1,270	5.00	67.75	918,000
1931.....	1,640	6.46	87.81	1,190,000	1,800	7.09	95.99	1,300,000
1932.....	2,170	8.54	116.51	1,580,000	2,560	10.1	137.06	1,860,000
1933.....	2,415	9.51	129.04	1,748,000	2,446	9.63	130.80	1,770,000
1934.....	2,045	8.05	109.29	1,480,000	1,865	7.34	99.55	1,350,000
1935.....	2,012	7.92	107.55	1,457,000	-	-	-	-

Canyon Creek near Granite Falls, Wash.

Location.- Staff gage, lat. 48°07'05", long. 121°57'00", in NE $\frac{1}{4}$ sec. 6, T. 30 N., R. 7 E., 3 miles north of Granite Falls.

Drainage area.- 59 square miles.

Records available.- December 1928 to September 1932.

Extremes.- Maximum discharge observed, about 8,000 second-feet Jan. 11, 1932; minimum observed, 32 second-feet Aug. 24 to Sept. 6, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Canyon Creek near Granite Falls

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
December 19-31, 1928.....	970	135	346	5.86	2.83	8,920
January 1929.....	850	90	184	3.12	3.60	11,300
February.....	190	65	89.8	1.52	1.58	4,990
March.....	1,900	240	590	10.0	11.53	36,300
April.....	850	215	465	7.88	8.79	27,700
May.....	1,220	295	533	10.7	12.34	38,900
June.....	1,100	228	476	8.07	9.00	28,500
July.....	215	70	126	2.14	2.47	7,750
August.....	312	51	68.5	1.16	1.34	4,210
September.....	65	39	46.4	.786	.88	2,760
The period.....	-	-	-	-	-	171,000
October 1929.....	610	39	104	1.76	2.03	6,400
November.....	252	53	72.2	1.22	1.36	4,300
December.....	1,980	53	486	8.24	9.50	29,900
Calendar year 1929.....	1,980	39	280	4.75	64.42	203,000
January 1930.....	970	82	237	4.53	5.22	16,400
February.....	3,200	259	909	15.4	16.04	50,500
March.....	1,820	132	448	7.59	8.75	27,500
April.....	1,160	259	412	6.98	7.79	24,500
May.....	1,090	175	311	5.27	6.08	19,100
June.....	685	132	293	4.97	5.54	17,400
July.....	164	50	80.8	1.37	1.58	4,970
August.....	50	32	37.8	1.641	.74	2,320
September.....	1,090	32	130	2.20	2.46	7,740
Water year 1929-30.....	3,200	32	292	4.95	67.09	211,000
October 1930.....	2,000	63	407	6.90	7.96	25,000
November.....	810	117	312	5.29	5.90	18,600
December.....	1,680	159	407	6.90	7.96	25,000
Calendar year 1930.....	3,200	32	330	5.59	76.02	239,000
January 1931.....	5,050	237	918	15.6	17.99	56,400
February.....	2,360	159	452	7.66	7.98	25,100
March.....	2,240	332	788	13.4	15.45	48,500
April.....	1,770	367	669	11.3	12.61	39,800
May.....	620	209	358	6.07	7.00	22,000
June.....	2,610	155	495	8.39	9.36	29,500
July.....	283	61	132	2.24	2.58	8,120
August.....	61	40	49.3	1.836	.96	3,030
September.....	3,140	56	508	8.61	9.61	30,200
Water year 1930-31.....	5,050	40	457	7.75	105.36	331,000
October 1931.....	1,910	107	411	6.97	8.04	25,300
November.....	3,280	209	637	11.3	12.61	39,700
December.....	2,480	183	608	10.3	11.87	37,400
Calendar year 1931.....	5,050	40	504	8.54	116.06	365,000
January 1932.....	7,990	209	849	14.4	16.60	52,200
February.....	6,800	137	793	13.4	14.45	45,600
March.....	5,050	448	1,420	24.1	27.78	87,300
April.....	3,000	590	1,040	17.6	19.64	61,900
May.....	890	405	631	10.7	12.34	38,800
June.....	820	332	526	8.92	9.95	31,300
July.....	2,480	162	494	8.37	9.65	30,400
August.....	162	101	123	2.08	2.40	7,560
September.....	267	80	117	1.98	2.21	6,960
Water year 1931-32.....	7,990	80	640	10.8	147.54	464,000

North Fork of Stillaguamish River near Arlington, Wash.

Location.- Water-stage recorder, lat. 48°15'45", long. 122°02'45", in SE 1/4 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 1935.

Extremes.- Maximum discharge recorded, 27,700 second-feet at 9 p.m. Feb. 26, 1932; minimum recorded, 156 second-feet Sept. 1, 1931.

Remarks.- No diversion or regulation.

Monthly discharge of North Fork of Stillaguamish River near Arlington

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928						
July 21-31.....	440	292	366	1.36	0.56	7,990
August.....	279	203	235	.874	1.01	14,400
September.....	1,100	176	258	.952	1.06	15,200
1928-29						
October.....	10,000	434	1,750	6.51	7.50	108,000
November.....	5,220	373	1,470	5.46	6.09	87,500
December.....	4,510	434	1,300	4.83	5.57	79,900
January.....	2,760	-	783	2.91	3.36	48,100
February.....	980	325	467	1.74	1.81	25,900
March.....	5,670	1,100	1,900	7.06	8.14	117,000
April.....	2,940	980	1,830	6.80	7.59	109,000
May.....	3,800	1,350	2,340	8.70	10.03	144,000
June.....	3,150	950	1,730	6.43	7.17	103,000
July.....	890	350	559	2.08	2.40	34,400
August.....	606	246	305	1.13	1.30	18,800
September.....	290	193	222	.825	.92	13,200
The year.....	10,000	193	1,230	4.57	61.88	889,000
1929-30						
October.....	603	191	334	1.24	1.43	20,500
November.....	916	203	268	.996	1.11	15,900
December.....	7,460	216	1,770	6.58	7.59	109,000
January.....	3,040	350	929	3.45	3.98	57,100
February.....	8,410	1,340	3,620	13.5	14.06	201,000
March.....	4,780	674	1,730	6.43	7.41	106,000
April.....	3,380	1,060	1,970	7.32	8.17	117,000
May.....	3,050	745	1,160	4.31	4.97	71,300
June.....	1,580	550	956	3.55	3.96	56,900
July.....	646	263	381	1.42	1.64	23,400
August.....	254	178	212	.788	.91	13,000
September.....	1,960	163	363	1.35	1.51	21,600
The year.....	8,410	163	1,120	4.16	56.74	813,000
1930-31						
October.....	3,880	236	1,310	4.87	5.62	80,600
November.....	2,240	457	1,050	3.90	4.35	62,500
December.....	3,850	614	1,380	5.13	5.91	84,800
January.....	16,200	614	3,370	12.5	14.41	207,000
February.....	9,220	810	1,940	7.21	7.51	108,000
March.....	7,390	1,160	2,850	10.6	12.22	175,000
April.....	7,910	1,300	2,700	10.0	11.16	161,000
May.....	2,870	920	1,530	5.69	6.56	94,100
June.....	6,950	705	1,590	5.91	6.59	94,600
July.....	1,260	307	602	2.24	2.58	37,000
August.....	304	178	240	.892	1.03	14,800
September.....	4,440	167	1,290	4.80	5.36	76,800
The year.....	16,200	167	1,650	6.13	83.30	1,200,000
1931-32						
October.....	3,640	355	1,330	4.94	5.70	81,800
November.....	7,910	782	2,390	8.88	9.91	142,000
December.....	10,500	755	2,370	8.81	10.16	146,000
January.....	12,600	838	2,450	9.11	10.50	151,000
February.....	23,400	640	3,230	12.0	12.94	186,000
March.....	9,700	1,580	4,170	15.5	17.87	256,000
April.....	6,100	2,060	3,390	12.6	14.06	202,000
May.....	2,920	1,540	2,210	8.22	9.48	136,000
June.....	2,920	1,400	1,930	7.17	8.00	115,000
July.....	3,410	637	1,460	5.43	6.26	89,800
August.....	682	361	423	1.80	2.08	29,700
September.....	1,010	232	359	1.33	1.48	21,400
The year.....	23,400	232	2,140	7.96	108.44	1,560,000

Monthly discharge of North Fork of Stillaguamish River near Arlington--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	4,170	185	1,290	4.80	5.53	79,300
November.....	17,200	1,800	5,180	19.2	21.42	307,000
December.....	19,500	872	3,100	11.5	13.28	191,000
January.....	10,800	1,000	2,840	10.6	12.22	175,000
February.....	3,580	-	1,290	4.80	5.00	71,600
March.....	5,570	1,480	2,540	9.44	10.88	156,000
April.....	3,230	1,200	1,950	7.25	8.09	116,000
May.....	5,940	1,740	2,570	9.55	11.01	158,000
June.....	4,900	1,990	2,890	10.7	11.94	172,000
July.....	2,740	910	1,640	6.10	7.03	101,000
August.....	1,050	368	521	2.51	2.66	38,200
September.....	4,770	301	1,310	4.87	5.43	78,000
The year.....	19,500	185	2,270	8.44	114.47	1,640,000
1933-34						
October.....	11,000	457	2,635	9.80	11.30	162,000
November.....	9,020	620	2,088	7.76	8.66	124,200
December.....	14,300	910	5,734	21.3	24.56	352,600
January.....	13,800	2,250	4,435	16.5	19.02	272,700
February.....	3,820	838	1,928	7.17	7.47	107,100
March.....	2,460	755	2,092	10.0	11.53	165,500
April.....	4,520	1,070	1,736	6.45	7.20	103,300
May.....	4,300	848	1,534	5.70	6.57	94,310
June.....	1,360	432	643	2.39	2.67	38,270
July.....	3,220	334	613	2.28	2.63	37,700
August.....	524	267	330	1.23	1.42	20,280
September.....	2,660	250	566	2.10	2.34	33,690
The year.....	14,300	250	2,088	7.76	105.37	1,512,000
1934-35						
October.....	10,600	265	1,385	5.15	5.94	85,160
November.....	13,900	1,280	3,439	12.8	14.28	204,600
December.....	6,240	1,420	2,547	9.47	10.92	156,600
January.....	21,300	820	4,655	17.3	19.94	286,200
February.....	5,060	1,200	2,326	8.65	2.01	129,200
March.....	6,480	785	1,697	6.31	7.28	104,400
April.....	2,160	718	1,253	4.66	5.20	74,570
May.....	2,580	1,030	1,613	6.00	6.92	99,150
June.....	2,010	762	1,324	4.92	5.49	78,770
July.....	1,280	454	720	2.68	3.09	41,290
August.....	705	297	383	1.42	1.64	23,570
September.....	3,400	225	568	2.11	2.35	33,780
The year.....	21,300	225	1,824	6.78	92.06	1,320,000

Yearly discharge of North Fork of Stillaguamish River near Arlington

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	1,230	4.57	61.88	889,000	1,050	3.90	52.85	759,000
1930.....	1,120	4.16	58.74	813,000	1,240	4.61	62.49	895,000
1931.....	1,650	6.13	83.30	1,200,000	1,650	6.88	93.19	1,340,000
1932.....	2,140	7.96	108.44	1,560,000	2,430	8.03	122.88	1,760,000
1933.....	2,270	8.44	114.47	1,640,000	2,350	8.74	118.78	1,700,000
1934.....	2,088	7.76	105.37	1,512,000	1,822	6.77	91.99	1,319,000
1935.....	1,824	6.78	92.06	1,320,000	-	-	-	-

Deer Creek at Oso, Wash.

Location.- Water-stage recorder, lat. 48°17'10", long. 121°55'50", in sec. 5, T. 32 N., R. 7 E., 1½ miles above Oso and mouth.

Drainage area.- 71 square miles (revised).

Records available.- August 1917 to September 1930.

Extremes.- Maximum discharge, 10,400 second-feet Dec. 12, 1921 (stage determined from floodmarks in well); minimum, 18 second-feet Sept. 5, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Deer Creek at Oso

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	453	34	127	1.79	2.06	7,810
November.....	6,180	229	982	13.8	15.40	58,400
December.....	3,550	-	783	11.0	12.68	48,100
January.....	5,430	-	1,150	16.2	18.68	70,700
February.....	776	59	281	3.96	4.27	16,200
March.....	4,000	-	555	7.82	9.02	34,100
April.....	1,310	230	453	6.38	7.12	27,000
May.....	1,700	298	502	7.07	8.15	30,900
June.....	780	178	386	5.44	6.07	23,000
July.....	165	41	75.2	1.06	1.22	4,620
August.....	519	29	65.8	9.27	1.07	4,050
September.....	4,050	37	886	12.5	13.95	52,700
The year.....	6,180	29	520	7.32	99.69	378,000
1920-21						
October.....	-	216	919	12.9	14.87	56,500
November.....	1,760	92	562	7.92	8.84	33,400
December.....	-	216	745	10.5	12.11	45,800
January.....	4,040	228	776	10.9	12.57	47,700
February.....	-	196	1,020	14.4	15.00	56,600
March.....	1,680	195	512	7.21	8.31	31,500
April.....	2,130	217	554	7.80	8.70	33,000
May.....	1,020	376	667	9.39	10.83	41,000
June.....	1,460	304	654	9.21	10.28	38,900
July.....	480	64	160	2.25	2.59	9,840
August.....	373	41	71.4	1.01	1.16	4,390
September.....	1,490	61	384	5.41	6.04	22,800
The year.....	-	41	582	8.20	111.30	421,000
1921-22						
October.....	4,060	78	792	11.2	12.91	48,700
November.....	4,290	210	1,050	14.8	16.51	62,500
December.....	-	-	1,060	14.9	17.18	65,200
January.....	1,480	-	262	3.69	4.25	16,100
February.....	-	-	*194	2.73	2.84	10,800
March.....	1,040	-	235	3.31	3.82	14,400
April.....	2,230	-	623	8.77	9.78	37,100
May.....	2,240	362	1,040	14.6	16.83	64,000
June.....	1,670	263	715	10.1	11.27	42,500
July.....	256	54	109	1.54	1.78	6,700
August.....	540	45	123	1.73	1.99	7,560
September.....	1,440	72	314	4.42	4.93	18,700
The year.....	-	45	544	7.66	104.09	394,000
1922-23						
October.....	-	-	448	6.31	7.28	27,500
November.....	1,180	116	294	4.14	4.62	17,500
December.....	4,950	-	1,020	14.4	16.60	62,700
January.....	4,260	126	1,150	16.2	18.68	70,700
February.....	-	83	255	3.59	3.74	14,200
March.....	-	181	371	5.23	6.03	22,800
April.....	988	391	623	8.77	9.78	37,100
May.....	1,370	410	651	9.17	10.57	40,000
June.....	1,240	190	463	6.52	7.27	27,600
July.....	237	46	103	1.45	1.67	6,330
August.....	82	34	40.8	5.75	6.66	2,510
September.....	526	28	86.4	1.22	1.36	5,140
The year.....	4,950	28	462	6.51	88.26	334,000

*Estimated.

Monthly discharge of Deer Creek at Oso--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24						
October.....	1,020	46	186	2.62	3.02	11,400
November.....	3,800	60	495	6.97	7.78	29,600
December.....	-	223	*835	11.8	13.60	51,300
January.....	4,950	-	672	9.46	10.91	41,300
February.....	6,420	419	1,310	18.5	19.95	75,400
March.....	605	111	232	3.27	3.77	14,300
April.....	2,220	175	446	6.28	7.01	26,500
May.....	770	175	366	5.15	5.94	22,500
June.....	571	80	168	2.37	2.64	10,000
July.....	98	45	61.4	*865	1.00	3,780
August.....	767	36	82.2	1.16	1.34	5,050
September.....	1,770	35	194	2.73	3.05	11,500
The year.....	6,420	35	417	5.87	80.01	303,000
1924-25						
October.....	2,620	143	860	12.1	13.95	52,900
November.....	-	-	*782	11.0	12.27	46,500
December.....	4,820	212	1,140	16.1	18.56	70,100
January.....	3,860	230	1,060	14.9	17.18	65,200
February.....	3,380	64	978	13.8	14.37	54,300
March.....	1,220	175	443	6.24	7.19	27,200
April.....	1,630	239	676	9.52	10.62	40,200
May.....	1,550	425	895	12.6	14.53	55,000
June.....	509	147	324	4.56	5.09	19,300
July.....	127	40	75.0	1.06	1.22	4,610
August.....	291	30	58.2	*820	.95	3,580
September.....	52	25	32.1	.452	.50	1,910
The year.....	4,820	25	609	8.58	116.43	441,000
1925-26						
October.....	2,040	22	251	3.54	4.08	15,400
November.....	1,190	85	483	6.52	7.27	27,600
December.....	3,740	204	1,260	17.7	20.41	77,500
January.....	2,650	150	575	8.10	9.34	35,400
February.....	1,570	328	735	10.4	10.83	40,800
March.....	-	-	479	6.75	7.78	29,500
April.....	834	181	308	4.34	4.64	18,300
May.....	1,200	156	418	5.89	6.79	25,700
June.....	245	41	94.5	1.33	1.48	5,620
July.....	40	23	30.3	1.427	.49	1,860
August.....	472	19	101	1.42	1.64	6,210
September.....	1,780	34	338	4.76	5.31	20,100
The year.....	3,740	19	419	5.90	80.26	304,000
1926-27						
October.....	3,090	227	854	12.0	13.83	52,500
November.....	1,550	139	609	8.58	9.57	36,200
December.....	3,690	208	805	11.3	13.03	49,500
January.....	2,850	192	681	9.59	11.06	41,900
February.....	2,590	146	680	9.58	9.96	37,800
March.....	1,260	235	429	6.04	6.96	26,400
April.....	1,820	202	492	6.93	7.73	29,300
May.....	2,730	420	857	12.1	13.95	52,700
June.....	1,280	245	613	8.63	9.63	36,500
July.....	287	47	126	1.77	2.04	7,750
August.....	1,100	32	77.6	1.09	1.26	4,710
September.....	1,200	56	318	4.48	5.00	18,900
The year.....	3,690	32	544	7.66	104.04	394,000
1927-28						
October.....	1,970	218	769	10.8	12.45	47,300
November.....	-	-	*1,140	16.1	17.96	67,800
December.....	-	82	449	6.32	7.29	27,600
January.....	5,080	148	1,170	16.5	19.02	71,900
February.....	3,908	188	549	4.92	5.31	20,100
March.....	2,430	155	731	10.3	11.87	44,900
April.....	2,270	317	549	7.73	8.62	32,700
May.....	1,300	245	545	7.68	8.65	33,500
June.....	872	109	253	3.56	3.97	15,100
July.....	221	45	77.9	1.10	1.27	4,790
August.....	44	25	32.7	.461	.53	2,010
September.....	181	22	35.2	.496	.55	2,090
The year.....	5,080	22	510	7.18	97.69	370,000

*Estimated.

Monthly discharge of Deer Creek at Oso--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	3,550	96	595	8.38	9.66	36,600
November.....	3,160	87	531	7.48	8.34	31,600
December.....	1,700	99	422	5.94	6.85	25,900
January.....	1,080	-	210	2.96	3.41	12,900
February.....	222	61	98.0	1.38	1.44	5,440
March.....	2,390	227	572	8.06	9.29	35,200
April.....	1,300	199	526	7.41	8.27	31,300
May.....	2,290	405	824	11.6	13.37	50,700
June.....	1,120	170	497	7.00	7.81	29,600
July.....	158	50	88.8	1.25	1.44	5,460
August.....	347	29	49.6	.699	.81	3,050
September.....	60	23	31.1	.438	.49	1,850
The year.....	3,550	23	372	5.24	71.18	270,000
1929-30						
October.....	256	23	98.0	1.38	1.59	6,030
November.....	458	40	75.9	1.07	1.19	4,520
December.....	3,450	45	592	8.34	9.62	36,400
January.....	-	-	250	3.52	4.06	15,400
February.....	3,230	217	1,270	17.9	18.64	70,500
March.....	2,460	134	537	7.56	8.72	33,000
April.....	1,450	248	501	7.06	7.88	29,800
May.....	1,480	180	335	4.72	5.44	20,600
June.....	419	-	195	2.75	3.07	11,600
July.....	114	33	53.2	.749	.86	3,270
August.....	33	20	24.8	.349	.40	1,520
September.....	1,230	18	114	1.61	1.80	6,780
The year.....	3,450	18	331	4.66	63.27	239,000

Yearly discharge of Deer Creek at Oso

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1918.....	579	8.15	110.75	419,000	551	7.76	105.40	399,000
1919.....	526	7.41	100.73	381,000	479	6.75	91.56	347,000
1920.....	520	7.32	99.69	378,000	550	7.75	105.37	399,000
1921.....	582	8.20	111.30	421,000	638	8.99	122.08	462,000
1922.....	544	7.66	104.09	394,000	450	6.34	85.99	326,000
1923.....	462	6.51	88.26	334,000	440	6.20	84.16	319,000
1924.....	417	5.87	80.01	303,000	523	7.37	100.39	380,000
1925.....	609	8.58	116.43	441,000	541	7.62	103.41	392,000
1926.....	419	5.90	80.26	304,000	444	6.25	84.93	322,000
1927.....	544	7.66	104.04	394,000	551	7.76	105.31	399,000
1928.....	510	7.18	97.69	370,000	442	6.23	84.84	321,000
1929.....	372	5.24	71.18	270,000	307	4.32	58.73	222,000
1930.....	331	4.66	63.27	239,000	-	-	-	-
Highest....	609	8.58	116.43	441,000	638	8.99	122.08	462,000
Average....	493	6.95	94.44	358,000	493	6.94	94.35	357,000
Lowest.....	331	4.66	63.27	239,000	307	4.32	58.73	222,000

Pilchuck Creek near Bryant, Wash.

Location.- Staff gage, lat. 48°16'00", long. 122°09'50", in NE $\frac{1}{4}$ sec. 16, T. 32 N., R. 5 E., at highway bridge 2 miles north of Bryant.

Drainage area.- 52 square miles.

Records available.- March 1929 to September 1931.

Extremes.- Maximum discharge observed, 3,040 second-feet Mar. 24, 1930; minimum discharge, 0.5 second-foot Aug. 29 to Sept. 1, 1931.

Remarks.- No diversion or regulation.

Monthly discharge of Pilchuck Creek near Bryant

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
March 12-31, 1929.....	1,420	231	462	8.88	6.60	18,300
April.....	1,250	189	343	6.60	7.36	20,400
May.....	850	88	218	4.19	4.83	13,400
June.....	561	32	118	2.27	2.53	7,020
July.....	31	9.3	17.6	.338	.39	1,080
August.....	138	4.6	14.2	.273	.31	873
September.....	14	4.9	7.21	.139	.16	429
The period.....	-	-	-	-	-	61,500
October 1929.....	665	4.9	62.0	1.19	1.37	3,810
November.....	665	17	194	3.73	4.16	11,500
December.....	1,820	25	347	6.67	7.69	21,300
January 1930.....	1,330	-	236	4.54	5.23	14,500
February.....	2,760	136	535	10.3	10.73	29,700
March.....	3,040	76	337	6.48	7.47	20,700
April.....	326	75	129	2.48	2.77	7,680
May.....	900	34	128	2.46	2.84	7,870
June.....	123	32	55.4	1.07	1.19	3,300
July.....	27	2.8	11.1	.213	.25	682
August.....	2.8	.9	1.58	.030	.03	97.2
September.....	1,220	.8	63.1	1.21	1.35	3,750
Water year 1929-30.....	3,040	.8	173	3.33	45.08	125,000
October 1930.....	1,820	30	340	6.54	7.54	20,900
November.....	415	67	154	2.96	3.30	9,160
December.....	1,280	84	244	4.69	5.41	15,000
Calendar year 1930.....	3,040	.8	184	3.54	48.11	133,000
January 1931.....	2,900	104	524	10.1	11.64	32,200
February.....	2,340	101	340	6.54	6.81	18,900
March.....	2,080	139	596	11.5	13.26	36,600
April.....	1,690	110	458	8.81	9.83	27,300
May.....	295	31	103	1.96	2.28	6,330
June.....	2,340	11	313	6.02	6.72	18,600
July.....	154	5.0	51.2	.985	1.14	3,150
August.....	4.5	.5	1.52	.029	.03	93.5
September.....	2,080	.5	316	6.08	6.78	18,800
Water year 1930-31.....	2,900	.5	286	5.50	74.74	207,000

SKAGIT RIVER BASIN

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. Prior to Oct. 1, 1922, water-stage recorder at practically same site but different datum.

Drainage area.- 370 square miles.

Records available.- October 1934 to September 1935. March 1915 to September 1922 in reports of Department of Mines and Resources, Canada.

Extremes.- Maximum discharge, 7,560 second-feet June 17, 1916; minimum, 120 second-feet Oct. 1, 1915; from records of Dominion Water Power & Hydrometric Bureau, Department of Mines and Resources, Canada.

Remarks.- No diversion or regulation. This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Monthly discharge of Skagit River near Hope, British Columbia

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
October 23-31.....	500	301	398	1.08	0.36	7,100
November.....	3,000	550	1,010	2.73	3.05	60,200
December.....	882	450	618	1.67	1.92	38,000
January.....	5,200	170	1,090	2.95	3.40	67,100
February.....	3,810	655	1,530	4.14	4.31	84,800
March.....	635	410	519	1.40	1.61	31,900
April.....	1,040	349	560	1.51	1.68	33,500
May.....	3,520	1,010	2,130	5.76	6.64	131,000
June.....	4,140	1,780	2,710	7.32	8.17	161,000
July.....	2,100	738	1,330	3.59	4.14	81,700
August.....	822	345	495	1.34	1.54	30,400
September.....	568	221	308	.83	.93	18,500
The year.....	5,200	170	1,090	2.95	37.75	745,000

Skagit River near Newhalem, Wash.

(Formerly called Skagit River above Ruby Creek, near Marblemount)

Location.- Water-stage recorder, lat. 48°45', long. 121°02', in sec. 30, T. 38 N., R.Drainage area.- 765 square miles, of which 390 square miles is in Canada.Records available.- March 1930 to September 1935.Remarks.- Maximum discharge recorded, 25,700 second-feet at 6 p.m. Feb. 27, 1932;

minimum recorded, 366 second-feet Dec. 5, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Skagit River near Newhalem

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930						
March.....	4,500	1,080	1,690	2.21	2.55	104,000
April.....	7,200	3,760	5,030	6.58	7.34	299,000
May.....	7,410	3,040	4,300	5.62	6.48	264,000
June.....	7,830	3,530	4,860	6.35	7.08	289,000
July.....	3,840	-	2,750	3.59	4.14	169,000
August.....	-	-	*1,390	1.82	2.10	85,500
September.....	1,340	635	980	1.28	1.43	58,500
The period.....	-	-	-	-	-	1,270,000
1930-31						
October.....	1,600	581	860	1.12	1.29	52,900
November.....	1,330	714	873	1.14	1.27	51,900
December.....	763	479	627	.820	.95	38,600
January.....	4,500	450	1,290	1.69	1.95	79,300
February.....	2,970	1,160	1,650	2.16	2.25	91,600
March.....	3,600	1,160	1,850	2.42	2.79	114,000
April.....	7,000	1,690	2,330	3.05	3.40	139,000
May.....	9,630	3,680	6,200	8.10	9.34	381,000
June.....	7,000	2,420	4,400	5.75	6.42	262,000
July.....	2,780	1,460	2,090	2.73	3.15	129,000
August.....	1,640	896	1,110	1.45	1.67	68,200
September.....	2,870	872	1,280	1.67	1.86	76,200
The year.....	9,630	450	2,050	2.68	36.34	1,480,000
1931-32						
October.....	1,200	646	831	1.09	1.26	51,100
November.....	3,020	874	1,580	2.07	2.31	94,000
December.....	2,560	639	1,120	1.46	1.68	68,900
January.....	2,500	834	1,180	1.54	1.78	72,600
February.....	21,400	568	2,740	3.58	3.86	158,000
March.....	8,190	1,930	2,850	3.73	4.30	175,000
April.....	5,300	2,260	3,500	4.58	5.11	208,000
May.....	8,400	3,920	6,260	8.18	9.43	385,000
June.....	11,300	4,560	7,120	9.31	10.39	424,000
July.....	5,110	1,880	3,070	4.01	4.62	189,000
August.....	2,040	1,160	1,650	2.16	2.49	101,000
September.....	1,240	736	938	1.23	1.37	55,800
The year.....	21,400	568	2,730	3.57	48.60	1,980,000

*Estimated.

Monthly discharge of Skagit River near Newhalem--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	2,460	600	1,240	1.62	1.87	76,200
November.....	9,700	1,460	3,980	5.20	5.80	237,000
December.....	6,870	1,120	2,560	3.35	3.86	157,000
January.....	2,300	940	1,360	1.78	2.05	83,600
February.....	1,080	678	790	1.03	1.07	43,900
March.....	1,380	842	1,080	1.41	1.63	66,400
April.....	7,480	1,380	2,840	3.71	4.14	169,000
May.....	9,020	3,520	5,150	6.73	7.76	317,000
June.....	16,700	5,870	9,570	12.5	13.95	569,000
July.....	9,700	3,660	7,010	9.16	10.56	431,000
August.....	3,950	1,700	2,890	3.78	4.36	178,000
September.....	3,800	1,240	1,670	2.18	2.43	99,400
The year.....	16,700	600	3,350	4.38	59.48	2,430,000
1933-34						
October.....	8,800	1,200	3,422	4.47	5.15	210,400
November.....	6,070	2,260	3,436	4.49	5.01	204,500
December.....	6,670	2,320	3,420	4.47	5.15	210,300
January.....	5,500	2,320	3,396	4.44	5.12	208,800
February.....	3,060	1,980	2,497	3.26	3.40	138,700
March.....	7,700	2,440	3,779	4.94	5.70	232,400
April.....	14,000	4,150	7,858	10.3	11.49	467,600
May.....	10,800	4,970	7,193	9.40	10.64	442,300
June.....	7,070	3,060	4,844	6.33	7.06	288,200
July.....	4,810	1,930	2,721	3.66	4.10	167,300
August.....	2,150	1,330	1,612	2.11	2.43	99,130
September.....	1,380	678	1,048	1.37	1.53	62,360
The year.....	14,000	678	3,774	4.93	66.98	2,732,000
1934-35						
October.....	2,170	594	1,122	1.47	1.70	69,020
November.....	10,900	1,930	3,718	4.86	5.42	221,300
December.....	2,940	1,480	2,049	2.68	3.09	126,000
January.....	15,400	870	3,392	4.43	5.11	208,600
February.....	8,800	1,880	3,875	5.07	5.28	215,200
March.....	1,930	1,200	1,539	2.01	2.32	94,630
April.....	2,800	1,040	1,627	2.13	2.38	96,790
May.....	7,700	2,800	4,942	6.46	7.45	303,900
June.....	9,020	4,300	6,142	8.03	8.96	365,500
July.....	5,200	2,380	3,804	4.97	5.73	233,900
August.....	2,520	1,250	1,661	2.17	2.50	102,100
September.....	3,500	884	1,444	1.89	2.11	85,920
The year.....	15,400	594	2,932	3.83	52.05	2,123,000

Yearly discharge of Skagit River near Newhalem

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1931.....	2,050	2.68	36.34	1,480,000	2,150	2.81	36.08	1,550,000
1932.....	2,730	3.57	48.60	1,980,000	3,080	4.03	54.88	2,240,000
1933.....	3,350	4.36	59.48	2,430,000	3,570	4.67	63.26	2,580,000
1934.....	3,774	4.93	66.98	2,732,000	3,485	4.56	61.88	2,523,000
1935.....	2,932	3.83	52.05	2,123,000	-	-	-	-

Skagit River below Ruby Creek, near Newhalem, Wash.

(Formerly called Skagit River below Ruby Creek, near Marblemount)

Location.- Water-stage recorder, lat. 48°44', long. 121°04', in Whatcom County, three-quarters of a mile below Ruby Creek and 10 miles northeast of Newhalem.Drainage area.- 978 square miles, of which 390 square miles is in Canada.Records available.- June 1919 to September 1930.Extremes.- Maximum discharge, 45,700 second-feet at 7 p.m. Dec. 12, 1921; minimum, 390 second-feet Dec. 11, 12, 1929 (discharge probably less sometime during that winter).Remarks.- No diversion or regulation.

Monthly discharge of Skagit River below Ruby Creek, near Newhalem

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919						
June.....	14,400	7,250	9,870	10.1	11.27	587,000
July.....	11,000	4,250	7,380	7.55	8.70	454,000
August.....	4,430	1,850	2,990	3.06	3.53	184,000
September.....	2,570	945	1,510	1.54	1.72	89,800
The period.....	-	-	-	-	-	1,310,000
1919-20						
October.....	930	654	779	.797	.92	47,900
November.....	5,340	570	2,140	2.19	2.44	127,000
December.....	5,070	-	2,190	2.24	2.58	135,000
January.....	4,720	1,200	2,230	2.28	2.63	137,000
February.....	3,810	1,250	2,210	2.26	2.44	127,000
March.....	1,910	1,040	1,270	1.30	1.50	78,100
April.....	3,020	982	1,350	1.38	1.54	80,300
May.....	7,510	2,640	4,790	4.90	5.65	295,000
June.....	11,000	3,170	7,260	7.42	8.28	432,000
July.....	11,800	3,180	6,370	6.51	7.50	392,000
August.....	2,950	1,350	2,250	2.30	2.65	138,000
September.....	4,080	1,160	2,050	2.10	2.34	122,000
The year.....	11,800	570	2,910	2.98	40.47	2,110,000
1920-21						
October.....	10,600	2,100	3,960	4.05	4.67	243,000
November.....	2,870	1,250	1,880	1.92	2.14	112,000
December.....	2,570	990	1,540	1.57	1.81	94,700
January.....	3,100	1,120	1,790	1.83	2.11	110,000
February.....	7,770	945	2,570	2.63	2.74	143,000
March.....	3,480	1,790	2,320	2.37	2.73	143,000
April.....	3,580	1,910	2,740	2.80	3.12	163,000
May.....	16,200	2,500	8,830	9.03	10.41	543,000
June.....	24,700	7,760	13,500	13.8	15.40	803,000
July.....	9,550	3,980	5,790	5.92	6.82	356,000
August.....	4,250	1,620	2,650	2.71	3.12	163,000
September.....	4,250	975	1,720	1.76	1.96	102,000
The year.....	24,700	945	4,110	4.20	57.03	2,980,000
1921-22						
October.....	13,000	1,270	3,060	3.13	3.61	188,000
November.....	5,820	1,690	2,840	2.90	3.24	169,000
December.....	29,200	1,860	5,250	5.37	6.19	323,000
January.....	1,850	787	1,200	1.23	1.42	73,800
February.....	822	678	750	.767	.80	41,700
March.....	714	627	657	.672	.77	40,400
April.....	3,180	750	1,670	1.71	1.91	99,400
May.....	15,300	2,880	6,970	7.02	8.09	422,000
June.....	24,700	7,230	12,200	12.5	14.00	726,000
July.....	7,490	2,540	4,070	4.16	4.80	250,000
August.....	2,600	1,800	2,120	2.17	2.50	130,000
September.....	2,150	1,190	1,600	1.64	1.83	95,200
The year.....	29,200	627	3,540	3.62	49.16	2,560,000

Monthly discharge of Skagit River below Ruby Creek, near Newhalem--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1922-23						
October.....	3,240	814	1,420	1.45	1.67	87,300
November.....	1,640	918	1,120	1.15	1.28	66,600
December.....	5,140	-	1,660	1.70	1.96	102,000
January.....	3,560	850	2,040	2.09	2.41	125,000
February.....	1,100	-	934	.955	.99	51,900
March.....	2,600	902	1,130	1.16	1.34	69,500
April.....	7,760	2,880	4,350	4.45	4.96	259,000
May.....	14,000	4,160	8,400	8.59	9.90	516,000
June.....	17,700	5,820	9,940	10.2	11.38	591,000
July.....	11,000	2,810	5,780	5.91	6.81	355,000
August.....	2,600	1,800	2,160	2.21	2.55	133,000
September.....	2,030	934	1,320	1.35	1.51	78,600
The year.....	17,700	-	3,360	3.44	46.76	2,430,000
1923-24						
October.....	1,340	751	965	.987	1.14	59,300
November.....	1,030	604	748	.765	.85	44,500
December.....	2,320	842	1,460	1.49	1.72	89,800
January.....	4,570	751	983	1.01	1.16	60,400
February.....	21,200	2,260	4,810	4.92	5.31	277,000
March.....	2,820	1,150	1,650	1.69	1.95	101,000
April.....	4,280	1,160	1,880	1.92	2.14	112,000
May.....	19,700	4,370	10,400	10.6	12.22	640,000
June.....	10,600	4,180	6,070	6.21	6.93	361,000
July.....	6,250	2,140	3,210	3.28	3.78	197,000
August.....	2,020	1,110	1,660	1.70	1.96	102,000
September.....	2,820	800	1,280	1.31	1.46	76,200
The year.....	21,200	604	2,930	3.00	40.62	2,120,000
1924-25						
October.....	6,840	1,040	2,020	2.07	2.39	124,000
November.....	2,920	1,370	2,050	2.10	2.34	122,000
December.....	16,200	1,420	4,500	4.60	5.30	277,000
January.....	2,350	1,220	1,660	1.70	1.96	102,000
February.....	6,600	1,520	2,700	2.76	2.87	150,000
March.....	2,350	1,370	1,750	1.79	2.06	108,000
April.....	9,100	1,630	4,810	4.92	5.49	286,000
May.....	22,200	5,020	11,900	12.2	14.07	732,000
June.....	12,200	5,880	8,640	8.83	9.85	514,000
July.....	6,600	3,000	4,580	4.48	5.16	269,000
August.....	3,070	1,220	1,920	1.96	2.26	118,000
September.....	1,320	680	1,050	1.07	1.19	62,500
The year.....	22,200	680	3,960	4.05	54.94	2,860,000
1925-26						
October.....	716	450	577	.590	.68	35,500
November.....	704	534	605	.619	.69	36,000
December.....	3,600	1,540	2,160	2.21	2.55	133,000
January.....	1,650	952	1,250	1.28	1.48	76,900
February.....	1,710	912	1,220	1.25	1.30	67,800
March.....	2,420	1,020	1,460	1.49	1.72	89,800
April.....	6,940	1,600	3,900	3.99	4.45	232,000
May.....	5,840	2,490	3,770	3.85	4.44	232,000
June.....	4,560	2,220	2,870	2.93	3.27	171,000
July.....	2,850	1,200	1,920	1.96	2.26	118,000
August.....	1,960	1,120	1,290	1.32	1.52	79,300
September.....	1,250	615	818	.836	.93	48,700
The year.....	6,940	450	1,820	1.86	25.29	1,320,000
1926-27						
October.....	7,280	664	1,980	2.02	2.33	122,000
November.....	2,020	860	1,190	1.22	1.36	70,800
December.....	3,980	1,020	1,710	1.75	2.02	105,000
January.....	2,700	775	1,290	1.32	1.52	79,300
February.....	1,130	740	909	.929	.97	50,500
March.....	1,210	888	1,060	1.08	1.24	65,200
April.....	7,460	1,230	2,530	2.59	2.89	151,000
May.....	12,400	3,600	6,130	6.27	7.23	377,000
June.....	20,200	6,440	11,500	11.8	13.17	684,000
July.....	5,840	3,080	4,360	4.46	5.14	268,000
August.....	3,080	1,480	2,140	2.19	2.52	132,000
September.....	4,630	1,330	2,320	2.37	2.64	138,000
The year.....	20,200	664	3,100	3.17	43.03	2,240,000

Monthly discharge of Skagit River below Ruby Creek, near Newhalem--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927-28						
October.....	6,690	1,600	3,250	3.32	3.83	200,000
November.....	5,850	1,890	3,150	3.22	3.59	187,000
December.....	7,200	1,210	2,790	2.85	3.29	172,000
January.....	-	-	3,940	4.03	4.65	242,000
February.....	1,830	1,210	1,500	1.53	1.65	86,300
March.....	4,000	1,140	2,060	2.11	2.43	127,000
April.....	5,280	1,650	2,480	2.54	2.83	148,000
May.....	21,200	3,300	10,500	10.7	12.34	646,000
June.....	7,460	4,270	6,020	6.16	6.87	358,000
July.....	4,850	2,150	3,480	3.56	4.10	214,000
August.....	1,960	1,140	1,510	1.54	1.78	92,800
September.....	2,260	803	1,060	1.08	1.20	63,100
The year.....	21,200	803	3,500	3.58	48.56	2,540,000
1928-29						
October.....	10,100	852	2,090	2.14	2.47	129,000
November.....	1,600	920	1,160	1.19	1.33	69,000
December.....	1,480	754	976	.998	1.15	60,000
January.....	761	-	619	.633	.73	38,100
February.....	-	-	497	.508	.53	27,600
March.....	2,150	-	928	.949	1.09	57,100
April.....	4,000	873	1,710	1.75	1.95	102,000
May.....	13,200	3,450	7,110	7.27	8.38	437,000
June.....	11,300	4,960	7,410	7.58	8.46	441,000
July.....	4,850	2,020	3,140	3.21	3.70	193,000
August.....	2,220	-	1,630	1.67	1.92	100,000
September.....	-	620	919	.940	1.05	54,700
The year.....	13,200	-	2,360	2.41	32.76	1,710,000
1929-30						
October.....	1,860	628	826	.845	.97	50,800
November.....	-	-	*500	.511	.57	29,800
December.....	-	-	*591	.604	.70	36,300
January.....	-	-	*500	.511	.59	30,700
February.....	5,180	600	2,280	2.33	2.43	127,000
March.....	-	-	*1,830	1.87	2.16	113,000
April.....	-	-	6,230	6.37	7.11	371,000
May.....	-	4,020	5,680	5.81	6.70	349,000
June.....	10,100	5,070	6,650	6.80	7.59	396,000
July.....	5,390	2,180	3,760	3.84	4.43	231,000
August.....	2,180	1,120	1,700	1.74	2.01	105,000
September.....	1,570	784	1,160	1.19	1.33	69,000
The year.....	10,100	-	*2,630	2.69	36.59	1,910,000

*Estimated.

Yearly discharge of Skagit River below Ruby Creek, near Newhalem

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1920.....	2,910	2.98	40.47	2,110,000	3,100	3.17	43.15	2,250,000
1921.....	4,110	4.20	57.03	2,980,000	4,430	4.53	61.45	3,210,000
1922.....	3,540	3.62	49.16	2,560,000	2,950	3.02	41.03	2,130,000
1923.....	3,360	3.44	46.76	2,430,000	3,280	3.35	45.56	2,370,000
1924.....	2,930	3.00	40.62	2,120,000	3,370	3.45	46.94	2,450,000
1925.....	3,960	4.05	54.94	2,860,000	3,520	3.60	48.83	2,550,000
1926.....	1,820	1.86	25.29	1,320,000	1,950	1.99	27.08	1,410,000
1927.....	3,100	3.17	43.03	2,240,000	3,460	3.54	48.03	2,500,000
1928.....	3,500	3.58	48.56	2,540,000	3,080	3.15	42.80	2,240,000
1929.....	2,360	2.41	32.76	1,710,000	2,170	2.22	30.05	1,570,000
1930.....	2,630	2.69	36.59	1,910,000	-	-	-	-
Highest.....	4,110	4.20	57.03	2,980,000	4,430	4.53	61.45	3,210,000
Average.....	3,110	3.18	43.20	2,250,000	3,130	3.20	43.49	2,270,000
Lowest.....	1,820	1.86	25.29	1,320,000	1,950	1.99	27.08	1,410,000

Skagit River at Reflector Bar, near Newhalem, Wash.
(Formerly called Skagit River at Reflector Bar, near Marblemount)

Location.- Water-stage recorder, lat. 48°43', long. 121°08', in sec. 8, T. 37 N., R. 13 E. (unsurveyed), at Reflector Bar ranger station, 75 feet below mouth of Canyon Diablo and 6 miles northeast of Newhalem. Prior to Apr. 13, 1914, staff gage.

Drainage area.- 1,100 square miles, of which 390 square miles is in Canada.

Records available.- October 1913 to September 1922.

Extremes.- Maximum discharge, 58,000 second-feet at 7 p.m. Dec. 12, 1921; minimum, 665 second-feet Nov. 12, 1919.

Remarks.- No diversion or regulation.

Monthly discharge of Skagit River at Reflector Bar, near Newhalem

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	1,330	807	1,020	0.927	1.07	62,700
November.....	7,350	665	2,780	2.53	2.82	165,000
December.....	6,200	-	2,690	2.45	2.82	165,000
January.....	6,050	1,480	2,810	2.55	2.94	173,000
February.....	5,060	1,460	2,710	2.46	2.65	156,000
March.....	2,460	1,280	1,570	1.43	1.65	96,500
April.....	3,490	1,260	1,670	1.52	1.70	99,400
May.....	8,800	3,060	5,480	4.98	5.74	337,000
June.....	13,900	3,710	8,750	7.95	8.87	521,000
July.....	15,200	4,670	8,470	7.70	8.88	521,000
August.....	4,930	1,980	3,690	3.35	3.86	227,000
September.....	6,200	1,880	3,100	2.82	3.15	184,000
The year.....	15,200	665	3,730	3.39	46.15	2,710,000
1920-21						
October.....	13,100	2,760	4,950	4.50	5.19	304,000
November.....	3,380	1,500	2,270	2.06	2.30	135,000
December.....	3,280	1,220	1,850	1.68	1.94	114,000
January.....	3,940	1,350	2,240	2.04	2.35	138,000
February.....	10,200	1,190	3,210	2.92	3.04	178,000
March.....	4,170	2,120	2,760	2.51	2.89	170,000
April.....	4,170	2,210	3,220	2.93	3.27	192,000
May.....	19,400	2,960	10,400	9.45	10.90	640,000
June.....	29,800	10,400	16,700	15.2	16.96	994,000
July.....	12,300	5,690	7,650	6.95	8.01	470,000
August.....	6,480	2,380	4,030	3.66	4.22	248,000
September.....	6,020	1,400	2,430	2.21	2.47	145,000
The year.....	29,800	1,190	5,140	4.67	63.54	3,730,000
1921-22						
October.....	17,500	1,720	4,070	3.70	4.27	250,000
November.....	6,960	2,070	3,510	3.19	3.56	209,000
December.....	38,000	2,170	6,700	6.09	7.02	412,000
January.....	2,100	-	1,420	1.29	1.49	87,300
February.....	1,000	739	876	.796	.83	48,700
March.....	880	725	785	.714	.82	48,300
April.....	3,880	947	2,000	1.82	2.03	119,000
May.....	17,500	3,540	8,150	7.41	8.54	501,000
June.....	-	9,550	14,500	13.2	14.73	863,000
July.....	-	3,650	5,700	5.18	5.97	350,000
August.....	4,500	2,700	3,490	3.17	3.66	215,000
September.....	3,760	1,820	2,530	2.30	2.57	151,000
The year.....	38,000	725	4,490	4.08	55.49	3,250,000

Yearly discharge of Skagit River at Reflector Bar, near Newhalem

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1914.....	4,100	3.73	50.64	2,970,000	4,120	3.75	50.90	2,990,000
1915.....	2,750	2.50	33.94	1,990,000	2,610	2.37	32.17	1,890,000
1916.....	4,520	4.11	55.94	3,280,000	4,340	3.95	55.77	3,150,000
1917.....	3,690	3.35	45.48	2,670,000	4,110	3.74	50.77	2,970,000
1918.....	4,960	4.51	61.22	3,590,000	4,890	4.45	60.41	3,540,000
1919.....	4,680	4.25	57.81	3,390,000	4,680	4.16	56.56	3,320,000
1920.....	3,730	3.39	46.15	2,710,000	3,950	3.59	48.87	2,870,000
1921.....	5,140	4.67	63.54	3,730,000	5,590	5.08	68.96	4,050,000
1922.....	4,490	4.08	55.49	3,250,000	-	-	-	-

Skagit River at Newhalem, Wash.

(Formerly called Skagit River near Marblemount and at Power Camp, near Marblemount)

Location.- Water-stage recorder, lat. 48°40', long. 121°15', in SE $\frac{1}{4}$ sec. 21, T. 37 N., R. 12 E., at city of Seattle power plant at Newhalem, a quarter of a mile above Newhalem Creek. Prior to May 24, 1914, staff gage a quarter of a mile above present site; Nov. 15, 1920 to June 4, 1923, staff gage about 500 feet above present site.

Drainage area.- 1,160 square miles (revised), of which 390 square miles is in Canada.

Records available.- October 1908 to May 1914, October 1920 to September 1935.

Extremes.- Maximum discharge, 60,000 second-feet at 8 p.m. Dec. 12, 1921; minimum, less than 90 second-feet Jan. 27, Aug. 25, 1930, result of regulation; minimum daily discharge, 136 second-feet Aug. 24, 1930, result of regulation.

Remarks.- Water diverted 3 miles above station and returned to river at Seattle power plant just above station. Low flow may all be carried through plant. Flow partly regulated by storage and release of water at tunnel intake and above Diablo Dam. Storage in Diablo Reservoir was begun in August 1929; mean for September 1929 possibly 10 percent less than natural flow, due to storage.

Monthly discharge of Skagit River at Newhalem

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920-21						
October.....	-	-	*5,740	4.95	5.71	353,000
November.....	4,090	1,450	2,660	2.29	2.56	158,000
December.....	4,880	1,450	2,310	1.99	2.29	142,000
January.....	5,990	1,630	2,810	2.42	2.79	173,000
February.....	14,700	1,360	3,970	3.42	3.66	220,000
March.....	5,050	2,500	3,350	2.89	3.33	206,000
April.....	5,050	2,620	3,810	3.28	3.66	227,000
May.....	21,000	3,520	11,400	9.83	11.33	701,000
June.....	29,800	10,300	17,600	15.2	16.96	1,050,000
July.....	12,600	6,410	8,560	7.38	8.51	526,000
August.....	7,350	2,500	4,160	3.59	4.14	256,000
September.....	8,100	1,270	2,720	2.34	2.61	162,000
The year.....	29,800	1,270	5,760	4.97	67.45	4,170,000
1921-22						
October.....	20,600	1,630	4,680	4.03	4.65	288,000
November.....	8,100	2,150	4,170	3.59	4.00	248,000
December.....	42,400	2,310	7,680	6.62	7.63	472,000
January.....	2,310	1,080	1,530	1.32	1.52	94,100
February.....	1,030	800	938	1.009	.84	52,100
March.....	1,010	740	809	.697	.80	49,700
April.....	4,380	1,080	2,290	1.97	2.20	136,000
May.....	19,600	3,630	8,850	7.63	8.80	544,000
June.....	28,000	8,870	14,600	12.6	14.06	869,000
July.....	10,700	3,780	5,960	5.14	5.93	366,000
August.....	5,160	2,760	3,680	3.17	3.66	226,000
September.....	4,620	1,560	2,690	2.32	2.59	160,000
The year.....	42,400	740	4,840	4.17	56.68	3,500,000
1922-23						
October.....	7,400	1,160	2,150	1.85	2.13	132,000
November.....	2,310	1,080	1,460	1.26	1.41	86,900
December.....	9,300	-	2,510	2.16	2.49	154,000
January.....	5,160	1,320	2,940	2.45	2.82	175,000
February.....	1,400	940	1,190	1.03	1.07	66,100
March.....	3,460	1,160	1,480	1.28	1.48	91,000
April.....	9,300	3,620	5,530	4.77	5.32	329,000
May.....	15,900	5,160	9,590	8.27	9.53	590,000
June.....	20,100	7,000	11,700	10.1	11.27	696,000
July.....	14,400	4,400	8,230	7.09	8.17	506,000
August.....	4,830	3,040	3,900	3.28	3.78	234,000
September.....	3,970	1,350	2,250	1.94	2.16	134,000
The year.....	20,100	-	4,420	3.81	51.63	3,190,000
1923-24						
October.....	2,070	925	1,440	1.24	1.43	88,500
November.....	1,820	810	1,090	1.940	1.05	64,900
December.....	3,750	1,200	2,180	1.85	2.17	134,000
January.....	8,250	1,010	1,440	1.24	1.43	88,500
February.....	26,700	2,800	6,270	5.41	5.84	361,000
March.....	3,580	1,360	2,010	1.73	1.99	124,000
April.....	5,430	1,320	2,540	2.02	2.25	139,000
May.....	22,200	5,230	12,400	10.7	12.34	762,000
June.....	12,700	5,450	7,700	6.64	7.41	453,000
July.....	9,330	3,210	4,850	4.25	4.90	303,000
August.....	3,650	1,740	2,950	2.53	2.92	180,000
September.....	4,660	1,100	2,090	1.80	2.01	124,000
The year.....	26,700	810	3,900	3.36	45.74	2,830,000

*Estimated.

Monthly discharge of Skagit River at Newhalem--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	11,000	1,320	2,900	2.50	2.88	178,000
November.....	3,960	1,700	2,630	2.29	2.56	158,000
December.....	21,200	1,640	5,630	4.88	5.63	348,000
January.....	3,580	1,400	2,150	1.85	2.13	132,000
February.....	8,660	1,920	3,480	3.00	3.12	193,000
March.....	3,130	1,720	2,240	1.93	2.22	138,000
April.....	11,000	1,990	5,850	5.04	5.62	348,000
May.....	24,400	5,960	13,500	11.6	13.37	830,000
June.....	15,200	6,970	10,500	9.05	10.10	625,000
July.....	8,650	4,960	6,520	5.62	6.48	401,000
August.....	5,280	1,720	3,200	2.76	3.18	197,000
September.....	2,280	940	1,720	1.48	1.65	102,000
The year.....	24,400	940	5,040	4.34	56.94	3,650,000
1925-26						
October.....	1,490	657	863	.744	.86	53,100
November.....	1,280	656	851	.734	.82	50,600
December.....	5,830	2,070	3,170	2.73	3.15	195,000
January.....	2,390	1,190	1,680	1.45	1.67	103,000
February.....	2,520	1,120	1,670	1.44	1.80	92,800
March.....	3,050	1,330	1,920	1.66	1.91	118,000
April.....	8,660	1,960	4,610	4.15	4.63	286,000
May.....	7,170	3,330	4,690	4.22	4.66	301,000
June.....	6,750	3,140	4,270	3.68	4.11	254,000
July.....	5,440	2,120	3,500	3.02	3.48	215,000
August.....	3,840	2,120	2,640	2.28	2.63	162,000
September.....	2,620	862	1,460	1.26	1.41	86,900
The year.....	8,660	656	2,650	2.28	31.03	1,920,000
1926-27						
October.....	13,200	955	3,220	2.78	3.20	198,000
November.....	3,100	1,230	1,850	1.59	1.77	110,000
December.....	6,290	1,410	2,410	2.08	2.40	148,000
January.....	4,000	1,060	1,830	1.58	1.82	113,000
February.....	1,610	934	1,260	1.09	1.14	70,000
March.....	1,620	1,160	1,430	1.23	1.42	87,900
April.....	9,640	1,570	3,270	2.82	3.15	195,000
May.....	14,800	4,450	7,360	6.34	7.31	453,000
June.....	24,200	8,290	13,700	11.8	13.17	815,000
July.....	7,550	4,940	6,460	5.57	6.42	397,000
August.....	4,960	2,450	3,890	3.18	3.67	227,000
September.....	8,100	2,220	3,630	3.13	3.49	216,000
The year.....	24,200	934	4,190	3.61	46.96	3,030,000
1927-28						
October.....	9,240	2,210	4,550	3.92	4.52	280,000
November.....	8,520	2,470	4,330	3.73	4.16	258,000
December.....	9,590	1,520	3,550	3.06	3.53	218,000
January.....	18,000	1,690	5,210	4.49	5.18	320,000
February.....	2,280	1,530	1,940	1.57	1.80	112,000
March.....	5,380	1,410	2,670	2.30	2.65	164,000
April.....	6,580	2,060	3,070	2.65	2.96	183,000
May.....	24,800	3,980	12,400	10.7	12.34	762,000
June.....	10,200	5,280	7,870	6.61	7.38	456,000
July.....	7,150	3,410	5,340	4.60	5.30	328,000
August.....	3,580	1,910	2,590	2.23	2.57	159,000
September.....	4,190	1,190	1,790	1.54	1.72	107,000
The year.....	24,800	1,190	4,610	3.97	54.11	3,350,000

Monthly discharge of Skagit River at Newhalem--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	7,690	1,300	2,930	2.53	2.92	180,000
November.....	2,350	1,160	1,590	1.37	1.53	94,600
December.....	2,200	956	1,300	1.12	1.29	79,900
January.....	986	-	771	.665	.77	47,400
February.....	-	-	598	.516	.54	33,200
March.....	3,200	598	1,210	1.04	1.20	74,400
April.....	5,170	1,070	2,160	1.86	2.08	129,000
May.....	-	4,220	8,580	7.40	8.53	528,000
June.....	13,500	6,440	9,190	7.92	8.84	547,000
July.....	6,570	2,920	4,460	3.84	4.43	274,000
August.....	3,630	1,940	2,720	2.34	2.70	167,000
September.....	2,330	704	1,470	1.27	1.42	87,500
The year.....	-	-	3,100	2.67	36.25	2,240,000

Month	Observed				Gain or loss in storage in Diablo 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		
1929-30										
October..	3,630	230	1,160	71,300	+660	72,000	1,170	1.01	1.16	
November..	835	275	606	36,100	+1,190	37,300	627	.541	.60	
December..	1,900	262	767	47,200	+4,170	51,400	836	.721	.83	
January....	1,310	-	744	45,700	-4,240	41,500	675	.582	.67	
February....	6,250	578	3,110	173,000	+5,980	179,000	3,220	2.78	2.90	
March.....	7,690	666	2,580	159,000	-5,080	154,000	2,500	2.16	2.49	
April.....	11,000	5,380	7,400	440,000	-2,040	438,000	7,360	6.34	7.07	
May.....	11,600	4,740	6,620	407,000	+170	407,000	6,620	5.71	6.58	
June.....	12,500	6,070	7,870	468,000	-220	468,000	7,860	6.78	7.56	
July.....	7,560	3,060	5,150	317,000	+2,470	319,000	5,190	4.47	5.15	
August....	3,890	136	2,520	155,000	+21,500	176,000	2,880	2.47	2.85	
September..	2,130	690	1,470	87,500	+35,000	122,000	2,060	1.77	1.98	
The year	12,500	136	3,320	2,410,000	+59,600	2,470,000	3,400	2.93	39.84	
1930-31										
October..	2,040	828	1,420	87,300	+9,660	97,000	1,580	1.36	1.57	
November..	2,000	619	1,420	84,500	-6,100	78,400	1,320	1.14	1.27	
December..	1,460	536	1,110	68,200	-9,340	58,900	958	.826	.95	
January....	7,040	534	1,750	108,000	+36,900	145,000	2,360	2.03	2.34	
February....	5,320	1,270	2,520	140,000	-3,370	137,000	2,470	2.13	2.22	
March.....	5,560	1,800	2,850	175,000	+554	176,000	2,860	2.47	2.85	
April.....	11,700	2,180	3,690	220,000	+1,600	222,000	3,730	3.22	3.59	
May.....	14,800	5,660	9,930	611,000	-10,500	600,000	9,760	8.41	9.70	
June.....	11,600	4,460	7,710	459,000	+168	459,000	7,710	6.65	7.42	
July.....	5,490	2,260	4,110	253,000	+10,400	263,000	4,280	3.69	4.25	
August....	3,760	1,840	2,310	142,000	+470	142,000	2,310	1.99	2.29	
September..	8,320	1,730	2,540	151,000	-6,610	144,000	2,420	2.09	2.33	
The year	14,800	534	3,450	2,500,000	+23,800	2,520,000	3,480	3.00	40.78	
1931-32										
October..	2,260	1,540	1,870	115,000	-34,600	80,400	1,310	1.13	1.30	
November..	3,900	1,280	1,950	116,000	+56,000	152,000	2,550	2.20	2.46	
December..	2,360	1,040	1,790	110,000	-6,980	103,000	1,680	1.45	1.67	
January....	2,220	1,210	1,650	101,000	+3,030	104,000	1,690	1.46	1.68	
February....	32,100	1,200	4,680	269,000	+330	269,000	4,680	4.03	4.35	
March.....	13,000	1,590	4,460	274,000	-4,310	270,000	4,390	3.78	4.36	
April.....	8,460	3,640	5,710	340,000	+1,540	342,000	5,750	4.96	5.53	
May.....	13,100	6,100	9,710	597,000	+1,510	599,000	9,740	8.40	9.68	
June.....	19,300	6,570	11,600	690,000	+9,650	700,000	11,800	10.2	11.38	
July.....	8,670	3,380	5,680	349,000	-2,440	347,000	5,640	4.86	5.60	
August....	4,280	2,220	3,280	202,000	+3,010	205,000	3,330	2.87	3.31	
September..	2,670	1,480	2,050	122,000	-18,600	103,000	1,730	1.49	1.66	
The year	32,100	1,040	4,530	3,280,000	-11,900	3,270,000	4,510	3.89	52.98	

Monthly discharge of Skagit River at Newhalem--Continued

Month	Observed				Gain or loss in storage in Diablo 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	
1932-33									
October..	2,570	1,370	1,970	121,000	+13,600	135,000	2,200	1.90	2.19
November..	19,800	2,200	6,410	381,000	+5,010	386,000	6,490	5.59	6.24
December..	11,600	1,890	3,830	236,000	-3,480	233,000	3,790	3.27	3.77
January....	3,760	1,580	2,190	135,000	-7,320	128,000	2,080	1.79	2.06
February....	2,300	1,460	1,940	108,000	-49,700	58,300	1,050	.905	.94
March.....	3,220	969	1,710	105,000	-7,530	97,500	1,590	1.37	1.58
April.....	11,200	1,240	3,280	195,000	+57,000	252,000	4,240	3.66	4.08
May.....	13,700	2,180	7,490	461,000	+5,880	467,000	7,600	6.55	7.55
June.....	26,500	8,240	14,700	875,000	+1,140	876,000	14,700	12.7	14.17
July.....	16,600	6,180	11,500	707,000	+2,630	710,000	11,500	9.91	11.42
August....	7,480	2,950	5,350	329,000	0	329,000	5,350	4.61	5.32
September	6,960	1,860	3,090	184,000	+1,310	185,000	3,110	2.68	2.99
The year	26,500	969	5,300	3,840,000	+18,500	3,860,000	5,330	4.59	62.31
1933-34									
October..	16,600	1,560	6,027	370,600	+470	371,100	6,035	5.20	6.00
November..	11,000	2,580	5,706	339,600	-560	339,000	5,697	4.91	5.48
December..	15,800	3,130	5,829	358,400	-850	357,600	5,816	5.01	5.78
January....	8,580	3,300	5,050	310,500	+100	310,600	5,051	4.35	5.02
February....	5,020	2,250	3,819	212,100	-380	211,700	3,812	3.28	3.43
March.....	13,000	3,750	5,995	368,600	+100	368,700	5,996	5.17	5.96
April.....	22,600	6,160	12,300	732,100	-2,820	729,300	12,260	10.6	11.83
May.....	17,200	7,390	11,500	707,000	+1,030	708,000	11,510	9.92	11.44
June.....	12,700	4,710	8,552	497,000	+850	497,800	8,366	7.21	8.04
July.....	9,520	3,170	5,325	327,400	-660	326,700	5,313	4.58	5.28
August....	4,240	2,780	3,373	207,400	-470	206,900	3,365	2.90	3.34
September	3,100	1,450	2,237	133,100	-14,850	118,200	1,986	1.71	1.91
The year	22,600	1,450	6,304	4,564,000	-18,040	4,546,000	6,279	5.41	73.51
1934-35									
October..	2,500	1,380	2,025	124,500	+40	124,500	2,025	1.75	2.02
November..	19,200	3,230	5,684	338,200	+15,120	353,300	5,937	5.12	5.71
December..	4,980	1,560	3,224	198,200	+3,900	202,100	3,287	2.83	3.26
January....	24,800	1,700	5,695	350,100	-280	349,800	5,689	4.90	5.65
February....	13,400	3,000	5,792	321,700	-2,680	319,000	5,744	4.95	5.16
March.....	6,180	1,310	3,070	188,800	-43,460	145,300	2,363	2.04	2.35
April.....	2,890	1,990	2,440	145,200	+7,700	152,900	2,570	2.22	2.48
May.....	13,100	2,830	7,419	456,200	+35,190	491,400	7,992	6.89	7.94
June.....	15,200	6,760	10,800	624,500	-90	624,400	10,490	9.04	10.09
July.....	10,400	4,720	6,952	427,500	-1,850	425,600	6,922	5.97	6.88
August....	4,680	2,350	3,263	200,600	+4,950	205,600	3,344	2.88	3.32
September	6,370	1,880	2,961	176,200	-7,720	168,500	2,832	2.44	2.72
The year	24,800	1,310	4,906	3,552,000	+10,820	3,562,000	4,921	4.24	57.58

Yearly discharge of Skagit River at Newhalem

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1909.....	4,270	3.68	49.95	3,090,000	4,920	4.24	57.55	3,560,000
1910.....	5,870	5.06	68.69	4,250,000	5,980	5.16	70.04	4,330,000
1911.....	5,030	4.34	58.91	3,640,000	4,130	3.56	48.32	2,990,000
1912.....	3,650	3.15	42.88	2,650,000	3,670	3.16	43.02	2,660,000
1913.....	4,650	4.01	54.43	3,370,000	4,690	4.22	57.28	3,540,000
1921.....	5,750	4.97	67.45	4,170,000	6,260	5.40	73.17	4,530,000
1922.....	4,840	4.17	56.68	3,500,000	3,960	3.41	46.43	2,870,000
1923.....	4,420	3.81	51.63	3,190,000	4,290	3.70	50.25	3,110,000
1924.....	3,900	3.36	45.74	2,830,000	4,440	3.83	52.16	3,220,000
1925.....	5,040	4.34	58.94	3,650,000	4,510	3.89	52.70	3,260,000
1926.....	2,650	2.28	31.03	1,920,000	2,670	2.47	33.57	2,070,000
1927.....	4,190	3.61	48.96	3,030,000	4,600	3.97	53.80	3,330,000
1928.....	4,610	3.97	54.11	3,350,000	4,060	3.50	47.64	2,950,000
1929.....	3,100	2.67	36.25	2,240,000	2,630	2.44	33.10	2,050,000
1930.....	3,400	2.93	39.84	2,470,000	3,510	3.03	41.04	2,540,000
1931.....	3,480	3.00	40.78	2,520,000	3,620	3.12	42.42	2,820,000
1932.....	4,510	3.89	52.98	3,270,000	5,090	4.39	59.75	3,690,000
1933.....	5,350	4.59	62.31	3,860,000	5,760	4.97	67.37	4,170,000
1934.....	6,279	5.41	73.51	4,546,000	5,745	4.95	67.24	4,158,000
1935.....	4,321	4.24	57.58	3,532,000	-	-	-	-
Highest.....	6,279	5.41	73.51	4,546,000	6,260	5.40	73.17	4,530,000
Average.....	4,500	3.87	52.63	3,260,000	4,480	3.86	52.47	3,240,000
Lowest.....	2,650	2.28	31.03	1,920,000	2,630	2.44	33.10	2,050,000

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 dallas, 2 miles below Baker River, and $2\frac{3}{4}$ miles southwest of Concrete.

Drainage area.- 2,700 square miles, of which 390 square miles is in Canada.

Records available.- September 1924 to September 1935.

Extremes.- Maximum discharge recorded, 147,000 second-feet at 9:30 p.m. Feb. 27, 1932 (gage height, 27.3 feet); minimum probably less than 2,160 second-feet during period Oct. 1-24, 1925, when recorder was not operating and when gates in Baker River dam were closed for first time.

Data collected from many sources indicate that floods have occurred as follows:

Date	Gage-height in feet	Discharge in second-feet
1815	55.6	500,000
1856	44.6	350,000
Nov. 19, 1897	38.4	275,000
30, 1909	36.4	260,000
Dec. 30, 1917	33.0	220,000
13, 1921	34.9	240,000

Note.- The dates, stages, and discharges of the floods of 1815 and 1856 are somewhat doubtful due to uncertain information.

Remarks.- Water diverted for operation of power plants upstream is returned to river above station. At low stages flow partly regulated by storage and release of water in Diablo Reservoir on upper Skagit River beginning with October 1931 and in Lake Shannon reservoir beginning with October 1925.

Monthly discharge of Skagit River near Concrete

Month	Observed				Gain or loss in storage (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	
1924									
Sept. 15-30	22,900	3,500	7,820	248,000	0	248,000	7,820	2.90	1.73

*Adjusted for gain or loss in storage in Lake Shannon reservoir since October 1925 and in Diablo Reservoir since October 1931.

Monthly discharge of Skagit River near Concrete--Continued

Month	Observed				Gain or loss in storage (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	
1924-25									
October..	55,800	5,580	14,000	861,000	0	861,000	14,000	5.19	5.98
November..	37,300	7,510	13,800	821,000	0	821,000	13,800	5.11	5.70
December..	85,400	7,070	21,300	1,310,000	0	1,310,000	21,300	7.89	9.10
January..	29,200	6,850	12,700	781,000	0	781,000	12,700	4.70	5.42
February..	52,200	8,200	17,800	989,000	0	989,000	17,800	6.59	6.86
March....	14,600	7,070	9,160	583,000	0	583,000	9,160	3.39	3.91
April.....	34,700	7,070	17,600	1,050,000	0	1,050,000	17,600	6.52	7.27
May.....	61,300	18,000	36,300	2,230,000	0	2,230,000	36,300	13.4	15.45
June.....	44,400	18,900	29,700	1,770,000	0	1,770,000	29,700	11.0	12.27
July.....	27,000	13,900	19,600	1,210,000	0	1,210,000	19,600	7.26	8.37
August....	15,000	5,780	9,330	574,000	0	574,000	9,330	3.46	3.99
September	6,630	3,400	5,300	315,000	0	315,000	5,300	1.96	2.19
The year	85,400	3,400	17,200	12,500,000	0	12,500,000	17,200	6.37	86.51
1925-26									
October..	12,600	-	†3,810	234,000	0	234,000	†3,810	1.41	1.63
November..	6,740	2,740	4,430	264,000	+24,500	288,000	4,840	1.79	2.00
December..	42,100	9,840	18,600	1,140,000	+51,500	1,190,000	19,400	7.19	8.29
January..	19,800	6,820	9,530	586,000	-240	586,000	9,530	3.53	4.07
February..	15,900	6,520	9,380	521,000	+310	521,000	9,380	3.47	3.61
March....	12,500	6,170	8,100	498,000	-1,510	496,000	8,070	2.99	3.45
April.....	23,900	7,300	14,000	833,000	+3,360	836,000	14,000	5.19	5.79
May.....	21,200	10,000	14,400	885,000	+12,900	898,000	14,600	5.41	6.24
June.....	20,000	8,680	12,300	732,000	+2,510	735,000	12,400	4.59	5.12
July.....	13,900	6,740	9,400	578,000	-20,600	557,000	9,060	3.36	3.87
August....	10,900	6,290	7,410	456,000	-3,620	452,000	7,350	2.72	3.14
September	7,860	3,650	5,680	338,000	-20,500	318,000	5,340	1.98	2.21
The year	42,100	-	9,760	7,060,000	+48,600	7,110,000	9,820	3.64	49.42
1926-27									
October..	56,700	5,200	14,900	916,000	+44,000	960,000	15,600	5.78	6.65
November..	20,400	6,750	10,500	625,000	+2,390	627,000	10,500	3.89	4.34
December..	43,400	5,970	12,700	781,000	-3,630	777,000	12,600	4.67	5.38
January..	-	5,580	10,400	640,000	-1,040	639,000	10,400	3.85	4.44
February..	15,600	5,440	8,900	494,000	-13,700	480,000	8,640	3.20	3.33
March....	10,100	6,480	7,750	477,000	-22,400	455,000	7,400	2.74	3.16
April.....	26,200	5,440	10,200	607,000	+38,500	646,000	10,900	4.04	4.51
May.....	42,200	12,500	20,600	1,270,000	+40,300	1,310,000	23,300	7.89	9.10
June.....	-	23,400	36,800	2,190,000	+13,100	2,200,000	37,000	13.7	15.29
July.....	22,800	14,600	19,900	1,220,000	+9,630	1,230,000	20,000	7.41	8.54
August....	14,600	7,220	10,400	640,000	-3,770	636,000	10,300	3.81	4.39
September	26,800	-	12,300	732,000	+3,160	735,000	12,400	4.59	5.12
The year	56,700	5,200	14,600	10,600,000	+106,000	10,700,000	14,800	5.48	74.26
1927-28									
October..	39,000	-	16,600	1,020,000	-1,910	1,020,000	16,600	6.15	7.09
November..	44,900	-	19,900	1,180,000	+2,140	1,180,000	19,800	7.33	8.18
December..	47,500	6,240	14,400	885,000	-18,000	867,000	14,100	5.22	6.02
January..	81,200	6,150	22,600	1,590,000	+13,900	1,400,000	22,800	8.44	9.73
February..	10,600	6,560	8,340	480,000	-18,800	461,000	8,010	2.97	3.20
March....	22,200	6,440	11,500	707,000	+14,600	722,000	11,700	4.33	4.99
April.....	18,000	7,420	11,000	655,000	+4,230	651,000	10,900	4.04	4.51
May.....	57,000	13,000	31,900	1,960,000	+9,540	1,970,000	32,000	11.9	13.72
June.....	30,800	14,300	22,500	1,340,000	-670	1,340,000	22,500	8.33	9.29
July.....	22,300	10,900	16,000	984,000	+3,500	988,000	16,100	5.96	6.87
August....	10,600	6,400	8,190	504,000	-38,000	466,000	7,580	2.81	3.24
September	11,200	-	5,710	340,000	-19,900	320,000	5,380	1.99	2.22
The year	81,200	-	15,800	11,400,000	-57,800	11,400,000	15,700	5.81	79.06
1928-29									
October..	62,200	5,940	13,100	806,000	+40,300	846,000	13,800	5.11	5.89
November..	12,800	6,200	8,460	503,000	-22,000	481,000	8,080	2.99	3.34
December..	12,400	-	6,850	421,000	-9,840	411,000	6,680	2.47	2.85
January..	6,780	-	4,670	287,000	-50,600	236,000	†3,840	1.42	1.64
February..	3,920	-	3,190	177,000	-20,200	157,000	2,830	1.05	1.09
March....	14,800	3,000	6,220	382,000	+22,200	404,000	6,570	2.43	2.80
April.....	16,600	5,540	8,990	535,000	+6,180	541,000	9,090	3.37	3.78
May.....	44,400	12,900	24,100	1,480,000	+92,600	1,570,000	25,500	9.44	10.88
June.....	41,200	19,300	28,000	1,870,000	-70	1,870,000	28,100	10.4	11.60
July.....	23,000	9,890	15,000	922,000	-3,660	918,000	14,900	5.52	6.36
August....	11,300	7,060	8,880	546,000	-32,200	514,000	8,360	3.10	3.57
September	7,380	3,900	5,690	339,000	-37,900	301,000	5,060	1.87	2.09
The year	62,200	-	11,100	8,070,000	-15,200	8,050,000	11,100	4.11	55.87

*Adjusted for gain or loss in storage in Lake Shannon reservoir since October 1925 and in Diablo Reservoir since October 1931.

†Estimated.

Monthly discharge of Skagit River near Concrete--Continued

Month	Observed				Gain or loss in storage (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	
1929-30									
October..	-	-	5,140	316,000	-23,800	292,000	14,750	1.76	2.03
November.	-	-	3,540	211,000	-15,600	195,000	13,280	1.21	1.35
December.	12,200	-	5,290	325,000	+66,000	391,000	6,360	2.36	2.72
January..	7,540	-	4,490	276,000	-29,600	246,000	14,000	1.48	1.71
February.	29,200	7,320	15,400	855,000	+73,400	928,000	16,700	6.19	6.45
March....	23,000	5,620	10,100	621,000	-20,100	601,000	9,770	3.62	4.17
April.....	29,800	15,600	20,300	1,210,000	+23,300	1,230,000	20,700	7.67	8.56
May.....	30,400	12,400	17,600	1,080,000	-140	1,080,000	17,600	6.52	7.52
June.....	30,800	16,000	21,400	1,270,000	+790	1,270,000	21,300	7.89	8.80
July.....	22,200	9,540	14,900	916,000	-14,200	902,000	14,700	5.44	6.27
August....	10,300	3,970	7,670	472,000	-19,800	452,000	7,350	2.72	3.14
September	9,130	4,280	5,530	329,000	-11,000	318,000	5,340	1.98	2.21
The year	30,800	-	10,900	7,880,000	+29,200	7,900,000	10,900	4.04	54.93
1930-31									
October..	-	3,520	7,010	431,000	+15,400	446,000	17,250	2.69	3.10
November.	-	-	6,570	391,000	-41,200	350,000	5,880	2.18	2.43
December.	-	-	5,550	341,000	-990	340,000	15,530	2.05	2.36
January..	48,900	3,490	11,900	732,000	+71,500	804,000	13,100	4.86	5.59
February.	18,800	6,980	10,900	605,000	-25,800	579,000	10,400	3.85	4.01
March....	26,000	7,840	12,400	762,000	+24,600	787,000	12,800	4.74	5.46
April.....	32,200	8,720	14,300	851,000	+480	851,000	14,300	5.30	5.91
May.....	39,500	14,900	26,500	1,630,000	+560	1,630,000	26,500	9.81	11.31
June.....	51,300	16,600	25,400	1,510,000	-610	1,510,000	25,400	9.41	10.50
July.....	17,700	9,650	13,300	818,000	-8,470	810,000	13,200	4.89	5.64
August....	10,800	5,760	7,670	472,000	-52,900	419,000	6,810	2.52	2.90
September	21,700	6,520	9,600	571,000	-5,620	565,000	9,500	3.52	3.93
The year	51,300	3,490	12,600	9,110,000	-23,000	9,090,000	12,600	4.67	63.14
1931-32									
October..	11,800	4,680	7,460	459,000	-8,990	450,000	7,320	2.71	3.12
November.	-	-	11,100	660,000	+59,000	719,000	12,100	4.48	5.00
December.	23,800	-	9,650	593,000	+10,100	603,000	9,810	3.63	4.18
January..	19,100	5,760	8,770	539,000	-3,260	536,000	8,720	3.23	3.72
February.	129,000	5,530	18,200	1,050,000	-2,500	1,050,000	18,300	6.78	7.31
March....	40,400	9,700	18,700	1,150,000	-4,020	1,150,000	18,700	6.93	7.99
April.....	28,200	11,500	18,700	1,110,000	+10,000	1,120,000	18,800	6.96	7.76
May.....	32,200	16,300	25,600	1,570,000	-4,180	1,570,000	25,500	9.44	10.88
June.....	50,400	19,000	32,600	1,940,000	+1,490	1,940,000	32,600	12.1	13.50
July.....	35,500	12,200	20,300	1,250,000	+11,900	1,260,000	20,500	7.59	8.75
August....	14,500	8,100	11,000	676,000	-1,130	675,000	11,000	4.07	4.69
September	9,160	6,380	7,440	443,000	-46,000	397,000	6,670	2.47	2.76
The year	129,000	4,680	15,800	11,400,000	+22,400	11,500,000	15,800	5.85	79.66
1932-33									
October..	19,300	6,000	9,750	600,000	+24,400	624,000	10,100	3.74	4.31
November.	97,800	11,600	29,300	1,740,000	+42,800	1,780,000	29,900	11.1	12.38
December.	63,600	8,700	16,300	1,000,000	-5,800	994,000	16,200	6.00	6.92
January..	32,000	6,780	11,700	719,000	-18,200	701,000	11,400	4.22	4.86
February.	10,700	5,200	6,360	353,000	-64,900	288,000	5,190	1.92	2.00
March....	11,400	6,180	8,650	532,000	+16,600	549,000	8,930	3.31	3.82
April.....	30,100	7,420	12,500	744,000	+50,200	794,000	13,300	4.93	5.50
May.....	36,300	11,500	21,300	1,310,000	+6,470	1,320,000	21,500	7.96	9.18
June.....	66,500	24,600	38,300	2,280,000	+1,430	2,280,000	38,300	14.2	15.84
July.....	49,000	20,700	33,800	2,080,000	+11,100	2,090,000	34,000	12.6	14.53
August....	24,200	9,390	16,800	1,050,000	+280	1,050,000	16,800	6.22	7.17
September	35,800	6,990	12,500	744,000	+1,800	746,000	12,500	4.63	5.17
The year	97,800	5,200	18,100	13,100,000	+66,200	13,200,000	18,200	6.74	91.68
1933-34									
October..	53,200	6,720	70,690	1,272,000	-2,070	1,270,000	20,650	7.65	8.82
November.	60,400	8,840	18,440	1,097,000	+2,610	1,100,000	19,490	6.85	7.64
December.	85,000	10,700	31,150	1,915,000	-4,150	1,911,000	31,080	11.5	13.26
January..	42,200	14,900	24,010	1,476,000	+410	1,476,000	24,000	8.89	10.25
February.	21,400	8,970	13,830	768,000	+180	768,200	13,830	5.12	5.33
March....	43,300	11,500	19,830	1,219,000	+1,430	1,220,000	19,840	7.55	8.47
April.....	47,800	17,400	29,270	1,742,000	-6,980	1,735,000	29,160	10.8	12.05
May.....	50,300	18,100	27,720	1,704,000	+5,910	1,710,000	27,810	10.3	11.87
June.....	30,300	12,500	20,200	1,202,000	+1,930	1,204,000	20,230	7.49	8.36
July.....	29,600	9,440	14,560	895,200	-640	894,600	14,550	5.39	6.21
August....	11,900	8,020	9,094	559,200	-470	558,700	9,086	3.57	3.88
September	13,600	5,510	7,374	438,800	-32,940	405,900	6,821	2.53	2.82
The year	85,000	5,510	19,740	14,290,000	-34,780	14,250,000	19,690	7.29	98.96

*Adjusted for gain or loss in storage in Lake Shannon reservoir since October 1925 and in Diablo Reservoir since October 1931.

†Estimated.

Monthly discharge of Skagit River near Concrete--Continued

Month	Observed				Gain or loss in storage (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	
1934-35									
October..	35,600	5,360	9,505	584,400	+17,480	601,900	9,789	3.63	4.18
November..	80,500	12,200	22,830	1,359,000	+14,190	1,373,000	23,070	8.54	9.53
December..	28,000	9,750	14,090	868,300	-1,410	864,900	14,070	5.21	6.01
January..	120,000	6,600	25,240	1,552,000	+4,560	1,557,000	25,320	9.38	10.81
February..	43,900	10,500	19,010	1,056,000	-17,500	1,038,000	18,690	6.92	7.21
March....	16,400	7,260	10,050	617,800	-49,860	567,900	9,236	3.42	3.94
April....	11,200	7,100	8,624	513,100	-6,120	507,000	8,520	3.16	3.53
May.....	31,800	10,400	19,290	1,186,000	+55,220	1,241,000	20,180	7.47	8.61
June.....	39,100	17,100	26,500	1,577,000	+11,900	1,589,000	26,700	9.89	11.03
July.....	27,200	13,500	18,240	1,121,000	+1,620	1,123,000	18,260	6.76	7.79
August...	12,000	7,680	9,663	594,100	-28,650	565,400	9,195	3.41	3.93
September	17,600	6,500	8,858	527,100	-11,170	515,900	8,670	3.21	3.58
The year	120,000	5,360	15,960	11,550,000	-9,740	11,540,000	15,950	5.91	80.15

*Adjusted for gain or loss in storage in Lake Shannon reservoir since October 1925 and in Diablo Reservoir since October 1931.

Yearly discharge of Skagit River near Concrete

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1925.....	17,200	6.37	86.51	12,500,000	15,500	5.74	77.65	11,200,000
1926.....	9,820	3.64	49.42	7,110,000	10,700	3.96	53.88	7,780,000
1927.....	14,800	5.48	74.26	10,700,000	15,700	5.81	79.17	11,400,000
1928.....	15,700	5.81	79.08	11,400,000	13,900	5.15	69.85	10,100,000
1929.....	11,100	4.11	55.87	8,050,000	9,930	3.68	49.99	7,190,000
1930.....	10,900	4.04	54.93	7,900,000	11,300	4.19	56.72	8,180,000
1931.....	12,600	4.67	63.14	9,090,000	13,400	4.96	67.55	9,730,000
1932.....	15,800	5.85	79.66	11,500,000	18,000	6.67	90.07	13,100,000
1933.....	18,200	6.74	91.68	13,200,000	19,400	7.19	97.79	14,100,000
1934.....	19,690	7.29	98.96	14,250,000	17,700	6.56	88.96	12,510,000
1935.....	15,950	5.91	80.15	11,540,000	-	-	-	-
Highest.....	19,690	7.29	98.96	14,250,000	19,400	7.19	97.79	14,100,000
Average.....	14,700	5.45	73.97	10,700,000	14,600	5.39	73.24	10,600,000
Lowest.....	9,820	3.64	49.42	7,110,000	9,930	3.68	49.99	7,190,000

Skagit River near Sedro Woolley, Wash.

Location.- Staff and chain gages, lat. 48°29'05", long. 122°14'30", in NW¼ sec. 36, T. 35 N., R. 4 E., at Northern Pacific Railway bridge, three-quarters of a mile below entrance to Beatty's Slough, and 1½ miles south of Sedro Woolley.

Drainage area.- 2,970 square miles, of which 390 square miles is in Canada.

Records available.- May 1908 to September 1924.

Extremes.- Maximum discharge observed, 220,000 second-feet at 9 a.m. Nov. 30, 1909; minimum observed, 2,830 second-feet Sept. 29-30, Oct. 10-11, 1915.

Indian tradition indicates a flood occurring probably between 1805 and 1825 (discharge, about 400,000 second-feet), while another flood probably in December 1856, is indicated by silt marks on bark of trees (discharge, about 300,000 second-feet).

Remarks.- Flow in Beatty's Slough (from 1.5 percent of total flow at low stages to 8 percent at high stages) is included in the records.

Monthly discharge of Skagit River near Sedro Woolley

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	7,070	5,290	5,990	2.02	2.33	368,000
November.....	76,600	5,940	19,100	6.43	7.17	1,140,000
December.....	39,400	5,000	16,900	5.69	6.56	1,040,000
January.....	-	-	*18,000	6.06	6.99	1,110,000
February.....	-	-	*14,100	4.75	5.12	811,000
March.....	-	-	*9,400	3.16	3.64	578,000
April.....	-	-	*7,200	2.42	2.70	428,000
May.....	-	-	*16,300	5.49	6.33	1,000,000
June.....	-	-	*25,100	8.45	9.43	1,490,000
July.....	-	-	*25,500	8.59	9.90	1,570,000
August.....	-	-	*11,900	4.01	4.62	732,000
September.....	-	-	*17,300	5.82	6.49	1,030,000
The year.....	-	-	15,600	5.25	71.28	11,300,000
1920-21						
October.....	-	-	*23,100	7.78	8.97	1,420,000
November.....	-	-	*11,900	4.01	4.47	708,000
December.....	-	-	*11,700	3.94	4.54	719,000
January.....	-	-	*13,100	4.41	5.08	806,000
February.....	85,300	7,780	18,100	6.09	6.34	1,010,000
March.....	22,500	9,620	13,000	4.38	5.05	799,000
April.....	19,200	8,270	12,000	4.04	4.51	714,000
May.....	49,700	9,620	27,700	9.33	10.76	1,700,000
June.....	74,600	27,600	45,800	15.4	17.18	2,730,000
July.....	49,000	18,200	25,400	8.55	9.86	1,560,000
August.....	22,500	9,060	14,700	4.95	5.71	904,000
September.....	44,500	5,390	13,200	4.44	4.95	786,000
The year.....	-	-	19,100	6.43	87.42	13,900,000
1921-22						
October.....	44,500	7,540	15,700	5.29	6.10	965,000
November.....	37,200	9,620	19,500	6.57	7.33	1,160,000
December.....	188,000	9,420	34,500	11.6	13.37	2,120,000
January.....	9,420	5,200	6,950	2.34	2.70	427,000
February.....	6,200	4,680	5,410	1.82	1.90	300,000
March.....	9,110	4,680	5,540	1.87	2.16	341,000
April.....	15,900	5,570	9,330	3.14	3.50	555,000
May.....	53,500	11,800	24,200	8.15	9.40	1,490,000
June.....	74,600	27,600	41,700	14.0	15.62	2,480,000
July.....	28,100	12,200	18,800	6.33	7.30	1,160,000
August.....	15,400	8,800	11,300	3.80	4.38	695,000
September.....	15,000	8,500	10,700	3.60	4.02	637,000
The year.....	188,000	4,680	17,000	5.72	77.78	12,300,000
1922-23						
October.....	46,400	4,850	10,400	3.50	4.04	640,000
November.....	14,200	5,570	7,090	2.39	2.67	422,000
December.....	60,300	-	15,000	5.05	5.82	922,000
January.....	53,500	7,400	20,600	6.94	8.00	1,270,000
February.....	8,800	-	6,700	2.26	2.35	372,000
March.....	16,400	5,980	7,710	2.60	3.00	474,000
April.....	26,400	13,000	16,800	5.66	6.32	1,000,000
May.....	45,700	13,300	25,500	8.59	9.90	1,570,000
June.....	59,400	19,200	31,200	10.5	11.71	1,860,000
July.....	43,400	13,000	23,900	8.05	9.28	1,470,000
August.....	12,600	8,800	10,600	3.57	4.12	652,000
September.....	13,000	5,020	7,440	2.51	2.80	443,000
The year.....	60,300	-	15,300	5.15	70.01	11,100,000
1923-24						
October.....	11,500	4,200	6,370	2.14	2.47	392,000
November.....	22,200	3,610	6,900	2.32	2.59	411,000
December.....	25,900	7,400	13,700	4.61	5.32	842,000
January.....	-	-	*11,000	3.70	4.27	676,000
February.....	-	-	*34,600	11.6	12.51	1,990,000
March.....	-	-	*10,500	3.54	4.08	646,000
April.....	-	-	*9,540	3.21	3.58	568,000
May.....	-	-	*32,600	11.0	12.68	2,000,000
June.....	-	-	*21,500	7.24	8.08	1,280,000
July.....	-	-	*14,700	4.95	5.71	904,000
August.....	-	-	*9,370	3.15	3.63	576,000
September.....	-	-	*8,330	2.80	3.12	496,000
The year.....	-	-	*14,900	5.02	68.04	10,800,000

*Computed on basis of summation of flow of Skagit River at Reflector Bar, Sauk River at Darrington, and Baker River below Anderson Creek.

Yearly discharge of Skagit River near Sedro Woolley

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1909.....	11,900	4.01	54.48	8,620,000	14,500	4.88	66.44	10,500,000
1910.....	18,700	6.30	85.55	13,600,000	19,300	6.50	88.37	14,000,000
1911.....	17,600	5.93	80.57	12,700,000	14,500	4.88	66.31	10,500,000
1912.....	14,400	4.85	65.85	10,400,000	14,200	4.78	65.40	10,300,000
1913.....	16,900	5.69	77.17	12,200,000	17,500	5.89	79.83	12,700,000
1914.....	16,200	5.45	74.03	11,700,000	16,000	5.39	73.17	11,600,000
1915.....	10,700	3.60	48.94	7,750,000	10,600	3.57	48.61	7,700,000
1916.....	18,100	6.09	82.94	13,100,000	17,100	5.76	78.37	12,400,000
1917.....	15,800	5.32	72.19	11,400,000	18,400	6.20	84.20	13,300,000
1918.....	19,600	6.60	89.29	14,200,000	19,000	6.40	86.52	13,700,000
1919.....	17,500	5.89	80.15	12,700,000	17,000	5.72	77.58	12,300,000
1920.....	15,600	5.25	71.28	11,300,000	16,000	5.39	73.20	11,600,000
1921.....	19,100	6.43	87.42	13,900,000	21,100	7.10	96.24	15,300,000
1922.....	17,000	5.72	77.78	12,300,000	13,900	4.68	63.51	10,100,000
1923.....	15,300	5.15	70.01	11,100,000	14,900	5.02	67.86	10,800,000
1924.....	14,900	5.02	68.04	10,800,000	-	-	-	-
Highest.....	19,600	6.60	89.29	14,200,000	21,100	7.10	96.24	15,300,000
Average.....	16,200	5.46	74.11	11,700,000	16,300	5.48	74.37	11,800,000
Lowest.....	10,700	3.60	48.94	7,750,000	10,600	3.57	48.61	7,700,000

Ruby Creek near Newhalem, Wash.

(Formerly called Ruby Creek near Marblemount)

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 1935.

Extremes.- Maximum discharge recorded, 6,730 second-feet at 2 p.m. Feb. 27, 1932; minimum, not determined, occurred during period Dec. 24, 1930, to Jan. 1, 1931, when stage-discharge relation was affected by ice.

Remarks.- No diversion or regulation.

Monthly discharge of Ruby Creek near Newhalem

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919						
June.....	2,690	-	1,990	9.48	10.58	118,000
July.....	2,120	-	1,550	7.38	8.51	95,300
August.....	-	354	610	2.90	3.34	37,500
September.....	640	172	309	1.47	1.64	18,400
The period.....	-	-	-	-	-	269,000
1919-20						
October.....	172	96	135	6.43	.74	8,300
November.....	1,000	87	356	1.70	1.90	21,200
December.....	587	-	257	1.22	1.41	15,800
January.....	746	143	281	1.34	1.54	17,300
February.....	546	189	319	1.52	1.64	18,300
March.....	361	157	212	1.01	1.16	13,000
The period.....	-	-	-	-	-	93,900
1930						
April.....	1,890	-	1,040	4.95	5.52	61,900
May.....	2,480	800	1,220	5.81	6.70	75,000
June.....	2,740	1,070	1,500	7.14	7.97	89,300
July.....	1,210	365	762	3.63	4.18	46,900
August.....	377	171	284	1.35	1.56	17,500
September.....	307	104	175	6.83	.93	10,400
The period.....	-	-	-	-	-	301,000

Monthly discharge of Ruby Creek near Newhalem--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	323	94	143	0.681	0.79	8,790
November.....	171	108	130	.619	.69	7,740
December.....	123	-	90.0	.429	.49	5,530
January.....	690	65	172	.819	.94	10,600
February.....	436	167	250	1.19	1.24	13,900
March.....	515	198	283	1.35	1.56	17,400
April.....	2,200	284	493	2.35	2.62	29,300
May.....	3,330	920	1,660	8.86	10.22	114,000
June.....	2,180	625	1,230	5.86	6.54	73,200
July.....	730	315	498	2.37	2.73	30,600
August.....	348	166	226	1.08	1.24	13,900
September.....	435	144	214	1.02	1.14	12,700
The year.....	3,330	-	467	2.22	30.20	388,000
1931-32						
October.....	211	124	146	.695	.80	8,980
November.....	550	-	254	1.21	1.35	15,100
December.....	-	-	194	.924	1.07	11,900
January.....	503	-	155	.758	.85	9,530
February.....	6,090	-	631	3.00	3.24	36,300
March.....	1,500	412	575	2.74	3.16	35,400
April.....	1,540	427	816	3.89	4.34	48,600
May.....	2,730	1,120	1,920	9.14	10.54	118,000
June.....	3,700	1,390	2,240	10.7	11.94	133,000
July.....	1,460	427	791	3.77	4.35	48,600
August.....	476	224	357	1.70	1.96	22,000
September.....	259	132	178	.848	.95	10,600
The year.....	6,090	-	686	3.27	44.55	498,000
1932-33						
October.....	460	101	221	1.05	1.21	13,600
November.....	2,670	226	803	3.82	4.26	47,800
December.....	1,240	260	480	2.29	2.64	29,500
January.....	421	177	249	1.19	1.37	15,300
February.....	217	117	143	.681	.71	7,940
March.....	225	141	182	.867	1.00	11,200
April.....	1,850	208	606	2.89	3.22	36,100
May.....	2,730	705	1,270	6.05	6.98	78,100
June.....	5,880	1,600	2,950	14.0	15.62	176,000
July.....	2,990	888	2,110	10.0	11.53	130,000
August.....	1,490	336	717	3.41	3.93	44,100
September.....	729	250	331	1.58	1.76	19,700
The year.....	5,880	101	840	4.00	54.23	609,000
1933-34						
October.....	2,170	300	821	3.91	4.51	50,480
November.....	1,630	548	860	4.10	4.57	51,200
December.....	1,920	522	787	3.75	4.32	48,380
January.....	870	375	531	2.53	2.92	32,620
February.....	512	372	435	2.07	2.16	24,130
March.....	1,780	477	857	4.08	4.70	52,680
April.....	4,300	1,010	2,216	10.6	11.83	131,900
May.....	3,460	1,430	2,164	10.3	11.87	133,000
June.....	2,520	936	1,648	7.85	8.75	98,070
July.....	1,520	466	810	3.86	4.45	49,810
August.....	512	276	367	1.75	2.02	22,540
September.....	294	118	201	.957	1.07	11,980
The year.....	4,300	118	976	4.65	63.18	706,800
1934-35						
October.....	434	101	182	.867	1.00	11,170
November.....	1,960	394	733	3.49	3.89	43,630
December.....	806	320	420	2.00	2.31	25,840
January.....	2,800	120	643	3.06	3.53	39,520
February.....	1,850	377	854	3.97	4.13	46,310
March.....	418	223	300	1.43	1.65	18,430
April.....	850	194	396	1.89	2.11	23,550
May.....	2,920	742	1,905	7.64	8.81	98,710
June.....	3,170	1,460	2,132	10.2	11.58	126,800
July.....	1,960	665	1,225	5.83	6.72	75,320
August.....	620	294	426	2.03	2.34	26,180
September.....	545	154	264	1.26	1.41	15,690
The year.....	3,170	101	761	3.62	49.28	551,100

Yearly discharge of Ruby Creek near Newhalem

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-foot		Run-off		Discharge in second-foot		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1931.....	467	2.22	30.20	338,000	486	2.31	31.45	352,000
1932.....	686	3.27	44.55	498,000	762	3.63	49.44	553,000
1933.....	840	4.00	54.23	609,000	923	4.40	59.52	669,000
1934.....	976	4.65	63.18	706,800	880	4.19	56.98	637,400
1935.....	761	3.62	49.28	551,100	-	-	-	-

Thunder Creek near Newhalem, Wash.

(Formerly called Thunder Creek above Colonial Creek, near Marblemount)

Location.- Water-stage recorder, lat. 48°40', long. 121°04', in SE $\frac{1}{4}$ 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 1935.

Extremes.- Maximum discharge recorded, 8,780 second-feet at 10 p.m. Feb. 26, 1932; minimum, not determined, occurred during December 1930 or January 1931 when stage-discharge relation was affected by ice.

Remarks.- No diversion or regulation.

Monthly discharge of Thunder Creek near Newhalem

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	1,510	141	360	3.67	4.23	22,100
November.....	377	156	179	1.83	2.04	10,700
December.....	-	-	*95.2	.871	1.12	5,850
January.....	1,350	-	*278	2.84	3.27	17,100
February.....	-	-	*212	2.16	2.25	11,800
March.....	-	-	*222	2.27	2.62	13,600
April.....	1,190	212	333	3.40	3.79	19,800
May.....	1,800	524	985	10.1	11.64	60,600
June.....	3,490	698	1,350	13.8	15.40	80,300
July.....	1,690	698	1,140	11.6	13.37	70,100
August.....	1,380	586	825	8.42	9.71	50,700
September.....	2,860	274	664	6.78	7.56	39,500
The year.....	3,490	-	555	5.66	77.00	402,000
1931-32						
October.....	477	141	214	2.18	2.51	13,200
November.....	637	139	301	3.07	3.42	17,900
December.....	444	109	195	1.99	2.29	12,000
January.....	448	103	180	1.84	2.12	11,100
February.....	7,720	74	684	6.98	7.53	39,300
March.....	1,240	-	455	4.64	5.35	28,000
April.....	882	326	590	6.02	6.72	35,100
May.....	1,120	640	842	8.59	9.90	51,800
June.....	3,900	740	1,620	16.5	18.41	96,400
July.....	1,980	820	1,140	11.6	13.37	70,100
August.....	1,300	442	935	9.54	11.00	57,500
September.....	780	-	380	3.88	4.33	22,600
The year.....	7,720	74	627	6.40	86.95	455,000
1932-33						
October.....	995	190	400	4.08	4.70	24,600
November.....	3,570	217	760	7.76	8.66	45,200
December.....	1,370	149	352	3.59	4.14	21,600
January.....	425	116	183	1.87	2.16	11,300
February.....	131	88	97.8	.998	1.04	5,430
March.....	149	95	121	1.23	1.42	7,440
April.....	945	169	332	3.39	3.78	19,800
May.....	1,270	391	619	6.32	7.29	38,100
June.....	3,030	692	1,390	14.2	15.44	82,700
July.....	2,810	1,130	1,710	17.4	20.06	105,000
August.....	2,060	800	1,330	13.6	15.68	81,800
September.....	1,530	327	678	6.92	7.72	40,300
The year.....	3,570	88	668	6.82	92.49	485,000

*Estimated.

Monthly discharge of Thunder Creek near Newhalem--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	2,850	304	917	9.36	10.79	56,370
November.....	2,310	313	728	7.43	8.29	43,320
December.....	2,400	324	746	7.61	8.77	45,850
January.....	846	319	493	5.03	5.80	30,320
February.....	473	234	335	3.42	3.56	18,620
March.....	1,430	307	546	5.57	6.42	33,540
April.....	2,120	497	1,057	10.8	12.05	62,900
May.....	2,260	586	1,125	11.5	13.26	69,180
June.....	2,080	758	1,245	12.7	14.17	74,070
July.....	3,550	766	1,382	14.1	16.26	85,000
August.....	1,550	875	1,125	11.5	13.26	69,200
September.....	1,280	199	608	6.20	6.92	36,180
The year.....	3,550	199	863	8.81	119.55	624,600
1934-35						
October.....	982	190	451	4.60	5.30	27,750
November.....	3,390	286	717	7.32	8.17	42,680
December.....	562	217	351	3.38	3.90	20,370
January.....	5,300	125	686	7.00	8.07	42,210
February.....	1,500	217	500	5.10	5.31	27,760
March.....	351	145	201	2.05	2.36	12,370
April.....	402	121	216	2.20	2.46	12,870
May.....	1,290	372	747	7.62	8.78	45,930
June.....	1,780	860	1,279	13.1	14.62	76,110
July.....	2,500	750	1,401	14.3	16.49	86,120
August.....	1,510	690	947	9.66	11.14	58,220
September.....	1,930	328	850	8.67	9.67	50,590
The year.....	5,300	121	695	7.09	96.27	503,000

Yearly discharge of Thunder Creek near Newhalem

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1931.....	555	5.66	77.00	402,000	562	5.73	77.83	407,000
1932.....	627	6.40	86.95	455,000	693	7.07	96.23	503,000
1933.....	668	6.82	92.49	483,000	742	7.57	102.84	537,000
1934.....	863	8.81	119.55	624,000	787	8.03	109.07	569,800
1935.....	695	7.09	96.27	503,000	-	-	-	-

Thunder Creek near Marblemount, Wash.

(Published in Washington State Water-Supply Bulletin No. 5 as Thunder Creek below Colonial Creek, near Newhalem)

Location.- Water-stage recorder, lat. 48°43', long. 121°06', in Whatcom County, a quarter of a mile above mouth and 20 miles northeast of Marblemount.

Drainage area.- 111 square miles.

Records available.- February 1919 to September 1930.

Extremes.- Maximum discharge, 9,720 second-feet about 4:30 p.m. Dec. 12, 1921; minimum, not determined, probably occurred during period Jan. 19 to Feb. 15, 1929, when stage-discharge relation was affected by ice.

Remarks.- No diversion or regulation.

Monthly discharge of Thunder Creek near Marblemount

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919						
February 15-28.....	150	126	137	1.23	0.64	3,800
March.....	332	113	148	1.33	1.53	9,100
April.....	859	332	515	4.64	5.18	30,600
May.....	3,110	477	988	8.90	10.26	60,800
June.....	1,940	-	1,070	9.64	10.78	63,700
July.....	2,690	1,060	1,570	14.1	16.26	96,500
August.....	1,640	818	1,260	11.4	13.14	77,500
September.....	1,150	304	666	6.00	6.69	39,600
The period.....	-	-	-	-	-	382,000

Monthly discharge of Thunder Creek near Marblemount--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	430	113	202	1.82	2.10	12,400
November.....	1,980	92	490	4.41	4.92	29,200
December.....	1,690	-	381	3.43	3.95	23,400
January.....	-	180	346	3.12	3.60	21,300
February.....	592	160	317	2.86	3.08	18,200
March.....	323	143	185	1.67	1.92	11,400
April.....	395	156	196	1.77	1.98	11,700
May.....	970	318	536	4.83	5.57	33,000
June.....	2,090	354	887	7.99	8.91	52,800
July.....	2,280	1,210	1,660	16.8	19.37	114,000
August.....	1,980	571	1,340	12.1	13.95	82,400
September.....	2,500	511	899	8.10	9.04	53,500
The year.....	2,500	92	639	5.76	78.39	463,000
1920-21						
October.....	2,800	361	721	6.50	7.49	44,300
November.....	441	217	296	2.67	2.98	17,600
December.....	468	177	244	2.20	2.54	15,000
January.....	460	184	289	2.60	3.00	17,800
February.....	1,340	168	402	3.62	3.77	22,300
March.....	495	262	330	2.97	3.42	20,300
April.....	473	261	355	3.20	3.57	21,100
May.....	1,850	326	1,010	9.10	10.49	62,100
June.....	3,800	1,040	1,970	17.7	19.75	117,000
July.....	2,120	1,040	1,660	14.1	16.26	95,900
August.....	1,960	619	1,230	11.1	12.80	75,600
September.....	1,280	278	573	5.16	5.76	34,100
The year.....	3,800	168	750	6.76	91.83	543,000
1921-22						
October.....	4,020	346	920	8.29	9.56	56,600
November.....	950	265	486	4.38	4.89	28,900
December.....	6,330	216	865	7.79	8.98	53,200
January.....	216	-	149	1.34	1.54	9,160
February.....	-	-	82.6	.744	.77	4,590
March.....	91	71	77.5	.698	.80	4,770
April.....	364	94	196	1.77	1.98	11,700
May.....	1,930	329	753	6.78	7.82	46,300
June.....	2,510	1,220	1,660	15.0	16.74	98,800
July.....	2,430	1,010	1,430	12.9	14.87	87,900
August.....	1,520	830	1,210	10.9	12.57	74,400
September.....	1,430	516	860	7.75	8.65	51,200
The year.....	6,330	-	728	6.56	89.17	528,000
1922-23						
October.....	1,420	273	477	4.30	4.96	29,300
November.....	346	195	233	2.10	2.34	13,900
December.....	1,060	-	305	2.75	3.17	18,800
January.....	675	165	362	3.26	3.76	22,300
February.....	-	-	173	1.56	1.62	9,610
March.....	407	154	189	1.70	1.96	11,600
April.....	870	407	546	4.92	5.49	32,500
May.....	1,550	500	905	8.15	9.40	55,600
June.....	2,350	602	1,330	12.0	13.39	79,100
July.....	2,430	1,080	1,680	15.1	17.41	103,000
August.....	1,860	775	1,220	11.0	12.68	75,000
September.....	1,310	334	740	6.67	7.44	44,000
The year.....	2,430	-	684	6.16	83.62	495,000
1923-24						
October.....	692	147	369	3.32	3.83	22,700
November.....	282	116	162	1.46	1.63	9,640
December.....	528	140	280	2.52	2.90	17,200
January.....	949	124	173	1.56	1.80	10,600
February.....	3,930	331	751	6.77	7.30	43,200
March.....	393	163	236	2.13	2.46	14,500
April.....	604	154	269	2.42	2.70	16,000
May.....	2,260	523	1,230	11.1	12.80	75,600
June.....	1,600	695	1,020	9.19	10.25	60,700
July.....	2,190	702	1,240	11.2	12.91	76,200
August.....	1,380	542	996	8.97	10.34	61,200
September.....	1,260	243	646	5.82	6.49	38,400
The year.....	3,930	116	614	5.53	75.41	446,000

Monthly discharge of Thunder Creek near Marblemount--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	1,970	185	443	3.99	4.60	27,200
November.....	543	228	315	2.84	3.17	18,700
December.....	3,060	-	563	5.07	5.84	34,600
January.....	313	134	196	1.77	2.04	12,100
February.....	774	185	323	2.91	3.03	17,900
March.....	278	166	208	1.87	2.16	12,800
April.....	1,030	197	522	4.70	5.24	31,100
May.....	2,420	516	1,300	11.7	13.49	79,900
June.....	2,660	636	1,400	12.6	14.06	83,300
July.....	1,910	1,230	1,560	14.1	16.26	95,900
August.....	1,770	470	1,030	9.28	10.70	63,300
September.....	906	222	598	5.39	6.01	35,600
The year.....	3,060	-	708	6.38	86.60	512,000
1925-26						
October.....	508	160	234	2.11	2.43	14,400
November.....	186	119	135	1.22	1.36	8,030
December.....	1,100	246	435	3.92	4.52	26,700
January.....	375	168	225	2.03	2.34	13,800
February.....	330	152	214	1.93	2.01	11,900
March.....	391	-	239	2.15	2.48	14,700
April.....	1,200	224	587	5.29	5.90	34,900
May.....	1,150	375	680	6.13	7.07	41,800
June.....	1,880	617	1,050	9.46	10.56	62,500
July.....	2,120	770	1,320	11.9	13.72	81,200
August.....	1,460	735	1,060	9.55	11.01	65,200
September.....	1,000	178	463	4.17	4.65	27,600
The year.....	2,120	119	556	5.01	68.05	403,000
1926-27						
October.....	4,380	196	811	7.31	8.43	49,900
November.....	438	216	312	2.81	3.14	18,600
December.....	775	178	294	2.65	3.06	18,100
January.....	390	131	205	1.85	2.13	12,600
February.....	187	124	147	1.32	1.38	8,160
March.....	170	138	154	1.39	1.60	9,470
April.....	900	170	305	2.75	3.07	18,100
May.....	1,590	375	658	5.93	6.84	40,500
June.....	2,600	900	1,560	14.1	15.73	92,800
July.....	2,020	1,050	1,410	12.7	14.64	86,700
August.....	1,840	695	1,230	11.1	12.80	75,600
September.....	2,410	503	919	8.28	9.24	54,700
The year.....	4,380	124	671	6.05	82.06	485,000
1927-28						
October.....	1,980	375	778	7.01	8.08	47,800
November.....	1,250	345	587	5.38	6.00	35,500
December.....	1,580	178	425	3.83	4.42	26,100
January.....	2,440	-	639	5.76	6.64	39,300
February.....	234	157	199	1.79	1.93	11,400
March.....	504	155	264	2.38	2.74	16,200
April.....	572	207	289	2.60	2.90	17,200
May.....	2,680	359	1,290	11.6	13.37	79,300
June.....	2,050	633	1,200	10.8	12.05	71,400
July.....	2,050	1,060	1,500	13.5	15.56	92,200
August.....	1,410	718	971	8.75	10.09	59,700
September.....	1,470	328	665	5.99	6.68	39,600
The year.....	2,680	155	739	6.66	90.46	536,000
1928-29						
October.....	4,290	235	709	6.39	7.37	43,600
November.....	285	155	206	1.86	2.08	12,300
December.....	235	91	135	1.22	1.41	8,300
January.....	97	-	73.6	1.663	.76	4,530
February.....	-	-	58.9	1.531	.55	3,270
March.....	285	65	103	1.928	1.07	6,330
April.....	548	97	205	1.85	2.06	12,200
May.....	1,710	420	921	8.30	9.57	56,600
June.....	2,050	660	1,240	11.2	12.50	73,800
July.....	1,410	805	1,140	10.3	11.87	70,100
August.....	-	615	1,000	9.01	10.39	61,500
September.....	1,120	127	539	4.86	5.42	32,100
The year.....	4,290	-	531	4.78	65.05	385,000

Monthly discharge of Thunder Creek near Marblemount--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	1,120	113	275	2.48	2.86	16,900
November.....	127	75	90.6	.816	.91	5,390
December.....	152	70	87.5	.788	.91	5,380
January.....	-	-	84.7	.763	.88	5,210
February.....	-	-	407	3.67	3.82	22,600
March.....	-	-	*267	2.41	2.78	16,400
April.....	1,120	480	690	6.22	6.94	41,100
May.....	1,290	360	617	5.56	6.41	37,900
June.....	1,530	570	970	8.74	9.75	57,700
July.....	1,950	840	1,140	10.3	11.87	70,100
August.....	1,370	530	927	8.35	9.63	57,000
September.....	1,190	250	*674	6.07	6.77	40,100
The year.....	1,950	-	519	4.68	63.53	376,000

*Estimated.

Yearly discharge of Thunder Creek near Marblemount

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1920.....	639	5.76	78.39	463,000	655	5.90	80.43	475,000
1921.....	750	6.76	91.83	543,000	836	7.53	102.25	605,000
1922.....	728	6.56	89.17	528,000	623	5.61	76.21	451,000
1923.....	684	6.16	83.62	495,000	666	6.00	81.51	482,000
1924.....	614	5.53	75.41	446,000	657	5.92	80.66	477,000
1925.....	708	6.38	86.60	512,000	664	5.98	81.30	481,000
1926.....	556	5.01	68.05	403,000	608	5.48	74.37	440,000
1927.....	671	6.05	82.06	485,000	702	6.32	85.93	508,000
1928.....	739	6.66	90.46	536,000	676	6.09	82.82	490,000
1929.....	531	4.78	66.05	385,000	481	4.35	58.87	348,000
1930.....	519	4.68	63.53	376,000	-	-	-	-
Highest.....	750	6.76	91.83	543,000	836	7.53	102.25	605,000
Average.....	649	5.85	79.47	470,000	657	5.92	80.44	476,000
Lowest.....	519	4.68	63.53	376,000	481	4.35	58.87	348,000

Stetattle Creek near Newhalem, Wash.

(Formerly called Stetattle Creek near Marblemount)

Location.- Water-stage recorder. lat. 48°44', long. 121°10', in NE $\frac{1}{4}$ sec. 6, T. 37 N., R. 13 E., 4,000 feet above mouth and $5\frac{1}{2}$ miles northeast of Newhalem. Prior to May 1, 1915, staff gage half a mile downstream.

Drainage area.- 21.4 square miles.

Records available.- December 1915 to March 1914, December 1914 to April 1915, September 1933 to September 1935.

Extremes.- Maximum discharge recorded, 4,520 second-feet 7:30 a.m. and 9:10 a.m. Nov. 5, 1934; minimum discharge observed, 23 second-feet Feb. 9-13, 1914.

Remarks.- No diversion or regulation.

Monthly discharge of Stetattle Creek near Newhalem

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
September 1933.....	550	52	178	8.32	9.28	10,580
October 1933.....	1,430	39	293	13.7	15.79	18,030
November.....	722	61	203	9.49	10.59	12,100
December.....	904	85	290	13.6	15.68	17,830
January 1934.....	555	100	212	9.91	11.42	13,040
February.....	309	64	141	6.59	6.66	7,850
March.....	654	102	243	11.4	13.14	14,970
April.....	535	163	323	15.1	16.85	19,200
May.....	689	186	323	15.1	17.41	19,830
June.....	404	156	255	11.9	13.28	15,180
July.....	747	107	192	8.97	10.34	11,830
August.....	174	83	109	5.09	5.87	6,710
September.....	177	28	77.5	3.62	4.04	4,610
Water year 1933-34.....	1,430	28	223	10.4	141.27	161,200

Monthly discharge of Stettatle Creek near Newhalem--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1934.....	521	28	147	6.87	7.92	9,050
November.....	2,200	102	320	15.0	16.74	19,070
December.....	384	69	162	7.57	8.73	9,940
Calendar year 1934.....	2,200	28	209	9.77	132.60	151,300
January 1935.....	2,330	45	301	14.1	16.26	18,490
February.....	646	66	164	7.68	7.98	9,090
March.....	274	40	85.2	3.98	4.59	5,240
April.....	222	36	116	5.42	6.05	6,880
May.....	467	157	285	13.5	15.33	17,540
June.....	498	220	336	15.7	17.52	20,020
July.....	396	168	261	12.2	14.07	16,040
August.....	168	75	114	5.33	6.14	7,040
September.....	160	36	*80.9	3.78	4.22	4,820
Water year 1934-35.....	2,330	28	198	9.25	125.55	143,200

*Estimated.

Cascade River at Marblemount, Wash.

Location.- Water-stage recorder, lat. 48°31'45", long. 121°23'30", in SW $\frac{1}{4}$ sec. 9, T. 35 N., R. 11 E., 2 miles east of Marblemount.

Drainage area.- 180 square miles.

Records available.- September 1928 to September 1935.

Extremes.- Maximum discharge recorded, 12,900 second-feet at 10 p.m. Feb. 26, 1932; minimum recorded, 149 second-feet Nov. 15, 1929; (may have been less during January or February 1929, when stage-discharge relation was affected by ice).

Remarks.- No diversion or regulation.

Monthly discharge of Cascade River at Marblemount

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928						
September 4-30.....	902	270	373	2.07	2.08	20,000
1928-29						
October.....	8,310	328	1,020	5.67	6.54	62,700
November.....	710	278	416	2.31	2.58	24,800
December.....	625	244	317	1.76	2.05	19,500
January.....	253	-	201	1.12	1.29	12,400
February.....	-	-	*146	0.81	0.84	8,110
March.....	648	157	313	1.74	2.01	19,200
April.....	1,140	235	509	2.83	3.16	30,300
May.....	2,860	820	1,600	8.89	10.25	98,400
June.....	3,220	1,110	1,960	10.9	12.18	117,000
July.....	1,840	820	1,220	6.78	7.82	75,000
August.....	960	526	699	3.88	4.47	45,000
September.....	517	207	361	2.01	2.24	21,500
The year.....	8,310	-	734	4.08	55.39	532,000
1929-30						
October.....	728	203	307	1.71	1.97	18,900
November.....	271	149	176	0.978	1.09	10,500
December.....	930	158	335	1.86	2.14	20,800
January.....	365	-	210	1.17	1.35	12,900
February.....	2,010	492	972	5.40	5.62	54,000
March.....	1,740	292	611	3.39	3.91	37,600
April.....	2,040	990	1,310	7.28	8.12	78,000
May.....	2,100	765	1,160	6.44	7.42	71,300
June.....	2,320	1,110	1,580	8.78	9.80	94,000
July.....	2,100	820	1,330	7.39	8.52	81,800
August.....	990	443	724	4.02	4.64	44,500
September.....	1,080	242	552	3.07	3.42	32,800
The year.....	2,320	-	769	4.27	58.00	557,000

*Estimated.

Monthly discharge of Cascade River at Marblemount--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	1,780	244	645	3.58	4.13	39,700
November.....	820	399	476	2.64	2.94	28,300
December.....	488	286	352	1.96	2.26	21,600
January.....	3,370	282	841	4.67	5.38	51,700
February.....	1,230	402	639	3.55	3.70	35,500
March.....	1,450	500	681	3.78	4.36	41,900
April.....	2,260	482	851	4.73	5.28	50,600
May.....	2,670	990	1,710	9.50	10.95	105,000
June.....	3,370	1,340	1,790	9.94	11.09	107,000
July.....	-	765	1,110	6.17	7.11	68,200
August.....	902	421	556	3.09	3.56	34,200
September.....	2,100	427	746	4.14	4.62	44,400
The year.....	3,370	244	867	4.82	65.38	628,000
1931-32						
October.....	1,020	332	482	2.68	3.09	29,600
November.....	1,660	397	804	4.47	4.99	47,800
December.....	1,760	328	598	3.32	3.83	36,800
January.....	1,430	358	524	2.91	3.36	32,200
February.....	9,250	279	1,140	6.33	6.83	65,600
March.....	1,880	586	1,040	5.78	6.66	64,000
April.....	2,110	794	1,220	6.78	7.56	72,600
May.....	2,320	1,020	1,660	9.22	10.63	102,000
June.....	3,760	1,220	2,290	12.7	14.17	136,000
July.....	2,680	985	1,580	8.78	10.12	97,200
August.....	1,280	586	941	5.23	6.03	57,900
September.....	848	357	505	2.81	3.14	30,000
The year.....	9,250	279	1,060	5.89	80.41	772,000
1932-33						
October.....	2,020	214	653	3.63	4.18	40,200
November.....	6,650	735	2,050	11.4	12.72	122,000
December.....	4,180	421	941	5.23	6.03	57,900
January.....	1,640	312	585	3.25	3.75	36,000
February.....	455	-	270	1.50	1.56	15,000
March.....	578	289	447	2.48	2.86	27,500
April.....	2,080	474	880	4.89	5.46	52,400
May.....	2,600	812	1,320	7.33	8.45	81,200
June.....	5,150	1,520	2,600	14.4	16.07	155,000
July.....	3,990	1,850	2,750	15.2	17.52	168,000
August.....	2,360	900	1,600	8.89	10.25	98,400
September.....	3,080	582	1,070	5.94	6.63	63,700
The year.....	6,650	214	1,270	7.06	95.48	917,000
1933-34						
October.....	4,060	496	1,592	8.84	10.19	97,870
November.....	4,390	588	1,371	7.62	8.50	81,560
December.....	5,160	650	1,946	10.8	12.45	119,700
January.....	2,240	855	1,372	7.62	8.78	84,390
February.....	1,280	520	858	4.77	4.97	47,640
March.....	2,930	695	1,173	6.52	7.52	72,110
April.....	3,210	990	1,773	9.85	10.99	105,500
May.....	2,720	855	1,676	9.31	10.73	103,100
June.....	2,350	990	1,489	8.27	9.23	88,600
July.....	2,690	820	1,270	7.06	8.14	78,060
August.....	1,120	695	843	4.68	5.40	51,810
September.....	890	287	556	3.09	3.45	33,100
The year.....	5,160	287	1,331	7.39	100.35	963,400
1934-35						
October.....	3,220	259	682	3.79	4.37	41,920
November.....	6,720	730	1,409	7.83	8.74	83,850
December.....	1,630	592	912	5.07	5.84	56,100
January.....	8,550	340	1,599	8.88	10.24	98,320
February.....	3,210	510	1,053	5.85	6.09	58,510
March.....	935	342	485	2.69	3.10	29,840
April.....	755	295	481	2.67	2.98	28,640
May.....	2,250	660	1,288	7.16	8.26	79,200
June.....	3,000	1,290	2,018	11.2	12.50	120,100
July.....	2,650	1,090	1,598	8.88	10.24	98,280
August.....	1,090	615	813	4.52	5.21	49,960
September.....	1,640	358	680	3.78	4.22	40,490
The year.....	8,550	259	1,085	6.03	81.79	785,200

Yearly discharge of Cascade River at Marblemount

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	734	4.08	55.39	532,000	656	3.64	49.44	475,000
1930.....	769	4.27	58.00	557,000	824	4.58	62.13	596,000
1931.....	867	4.82	65.38	628,000	902	5.01	67.96	653,000
1932.....	1,060	5.89	80.41	772,000	1,210	6.72	91.43	878,000
1933.....	1,270	7.06	95.48	917,000	1,380	7.67	103.69	997,000
1934.....	1,331	7.39	100.35	963,400	1,169	6.49	88.16	846,200
1935.....	1,085	6.03	81.79	785,200	-	-	-	-

North Fork of Sauk River near Barlow Pass, Wash.

Location.- Water-stage recorder, lat. 48°05'20", long. 121°20'00", in sec. 14, T. 30 N., R. 11 E., 500 feet below dam site, 2½ miles above confluence with South Fork, and 7 miles northeast of Barlow Pass.

Drainage area.- 76 square miles.

Records available.- October 1917 to December 1920.

Extremes.- Maximum discharge, 11,000 second-feet Dec. 29, 1917 (stage determined from floodmarks); minimum, 75 second-feet, probably on Oct. 20, 1917 (may have been less in December 1919).

Remarks.- No diversion or regulation.

Monthly discharge of North Fork of Sauk River near Barlow Pass

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1919.....	205	88	121	1.59	1.83	7,440
November.....	2,510	121	571	7.51	8.38	34,000
December.....	-	-	*565	7.43	8.57	34,700
Calendar year 1919.....	2,510	88	525	6.91	93.72	380,000
January 1920.....	-	445	698	9.18	10.58	42,900
February.....	-	198	391	5.14	5.54	22,500
March.....	595	172	244	3.21	3.70	15,000
April.....	425	172	234	3.08	3.44	13,900
May.....	1,080	349	594	7.82	9.02	36,500
June.....	1,360	445	882	11.6	12.94	52,500
July.....	1,360	368	738	9.71	11.20	45,400
August.....	-	-	307	4.04	4.66	18,900
September.....	1,740	185	643	8.46	9.44	38,300
Water year 1919-20.....	2,510	88	499	6.57	89.30	362,000
October 1920.....	2,630	406	807	10.6	12.22	49,600
November.....	778	234	402	5.29	5.90	23,900
December 1-9.....	386	296	336	4.42	1.48	6,000

*Estimated.

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 1935.

Extremes.- Maximum discharge recorded, 23,000 second-feet at 4 p.m. Dec. 12, 1921; minimum recorded, 146 second-feet Sept. 25, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Sauk River above Whitechuck River, near Darrington

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	-	178	260	1.71	1.97	16,000
November.....	-	-	*1,430	9.41	10.50	85,100
December.....	3,720	-	1,200	7.89	9.10	73,800
January.....	6,880	478	1,560	10.3	11.87	95,900
February.....	1,900	363	827	5.44	5.87	47,600
March.....	2,360	310	603	3.97	4.58	37,100
April.....	989	387	555	3.65	4.07	33,000
May.....	2,200	707	1,200	7.89	9.10	73,800
June.....	2,460	798	1,680	11.1	12.38	100,000
July.....	2,530	615	1,310	8.62	9.94	80,600
August.....	851	287	508	3.34	3.85	31,200
September.....	5,220	275	1,500	9.87	11.01	89,500
The year.....	6,880	178	1,050	6.91	94.24	763,000
1920-21						
October.....	7,480	-	*1,770	11.6	13.37	109,000
November.....	-	-	*743	4.89	5.46	44,200
December.....	4,020	-	*841	5.53	6.38	51,700
January.....	2,810	435	1,010	6.64	7.66	62,100
February.....	5,910	417	1,350	8.88	9.25	75,000
March.....	2,020	615	1,060	6.97	8.04	65,200
April.....	-	-	*1,000	6.58	7.34	59,500
May.....	-	-	*2,200	14.5	16.72	135,000
June.....	5,640	1,960	3,400	22.4	24.99	202,000
July.....	3,010	1,270	1,830	12.0	13.83	113,000
August.....	1,320	472	784	5.16	5.95	48,200
September.....	3,060	275	911	5.99	6.68	54,200
The year.....	7,480	275	1,410	9.28	125.67	1,020,000
1921-22						
October.....	-	-	*1,430	9.41	10.85	87,900
November.....	3,420	622	1,390	9.14	10.20	82,700
December.....	16,700	608	2,660	17.5	20.18	164,000
January.....	601	387	464	3.05	3.52	28,500
February.....	403	220	321	2.11	2.20	17,800
March.....	673	230	340	2.24	2.58	20,900
April.....	929	373	692	4.55	5.08	41,200
May.....	4,060	911	1,900	12.5	14.41	117,000
June.....	4,510	1,770	2,680	17.6	19.64	159,000
July.....	2,040	500	1,030	6.78	7.82	63,500
August.....	768	-	529	3.48	4.01	32,500
September.....	1,260	224	458	3.01	3.36	27,500
The year.....	16,700	220	1,160	7.63	103.85	842,000
1928						
August 17-31.....	412	324	371	2.44	1.36	11,000
September.....	1,160	168	288	1.89	2.11	17,100
1928-29						
October.....	5,340	322	1,070	7.04	8.12	65,800
November.....	865	264	482	3.17	3.54	28,700
December.....	1,500	256	468	3.08	3.55	28,800
January.....	458	-	250	1.64	1.89	15,400
February.....	192	-	167	1.10	1.14	9,280
March.....	1,550	185	481	3.16	3.64	29,600
April.....	1,450	296	654	4.30	4.80	38,900
May.....	3,620	988	2,020	13.3	15.33	124,000
June.....	3,210	1,500	2,150	14.1	15.73	128,000
July.....	1,710	631	1,070	7.04	8.12	65,800
August.....	607	269	392	2.58	2.97	24,100
September.....	269	160	217	1.43	1.60	12,900
The year.....	5,340	-	790	5.20	70.43	571,000
1929-30						
October.....	421	156	240	1.58	1.82	14,800
November.....	552	168	210	1.38	1.54	12,500
December.....	2,490	164	657	4.32	4.98	40,400
January.....	755	-	284	1.87	2.16	17,500
February.....	4,020	630	1,540	10.1	10.52	85,500
March.....	1,800	292	700	4.61	5.32	43,000
April.....	2,800	1,180	1,520	10.0	11.16	90,400
May.....	2,180	830	1,310	8.62	9.94	80,600
June.....	2,250	1,090	1,430	9.41	10.50	85,100
July.....	1,270	386	809	5.32	6.13	49,700
August.....	379	201	291	1.91	2.20	17,900
September.....	444	148	239	1.57	1.75	14,200
The year.....	4,020	-	763	5.02	68.02	552,000

*Estimated.

Monthly discharge of Sauk River above Whitechuck River, near Darrington--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	2,040	168	564	3.71	4.28	34,700
November.....	630	310	424	2.79	3.11	25,200
December.....	773	253	433	2.85	3.29	28,800
January.....	5,600	249	1,180	7.76	8.95	72,800
February.....	-	-	869	5.72	5.96	48,300
March.....	2,980	536	1,080	6.97	8.04	65,200
April.....	2,680	822	1,180	7.63	8.51	69,000
May.....	3,050	1,200	2,020	13.3	15.33	124,000
June.....	4,380	1,480	1,980	13.0	14.50	118,000
July.....	1,360	371	819	5.39	6.21	50,400
August.....	382	-	251	1.65	1.90	15,400
September.....	-	-	416	2.74	3.06	24,800
The year.....	5,600	168	931	6.12	83.14	674,000
1931-32						
October.....	-	-	*585	3.85	4.44	36,000
November.....	-	330	*1,080	6.97	7.78	63,100
December.....	2,540	253	665	4.38	5.05	40,900
January.....	2,680	320	665	4.38	5.05	40,900
February.....	14,600	204	1,580	10.3	11.11	89,700
March.....	2,990	823	1,480	9.74	11.23	91,000
April.....	2,290	1,010	1,530	10.1	11.27	91,000
May.....	-	1,340	2,070	13.6	15.68	127,000
June.....	4,090	1,500	2,510	16.5	18.41	149,000
July.....	2,750	791	1,480	9.74	11.23	91,000
August.....	903	337	614	4.04	4.66	37,800
September.....	582	226	315	2.07	2.31	18,700
The year.....	14,600	204	1,210	7.96	108.22	876,000
1932-33						
October.....	1,730	152	705	4.64	5.35	43,300
November.....	10,100	919	2,580	17.0	18.97	154,000
December.....	6,470	498	1,230	8.09	9.33	75,600
January.....	3,080	310	890	5.86	6.76	54,700
February.....	868	196	297	1.95	2.03	16,500
March.....	1,090	310	625	4.11	4.74	38,400
April.....	2,140	519	962	6.33	7.06	57,200
May.....	3,460	1,040	1,690	11.1	12.80	104,000
June.....	5,340	2,140	3,180	20.9	23.32	189,000
July.....	4,120	1,700	2,800	18.4	21.21	172,000
August.....	2,210	512	1,240	8.16	9.41	76,200
September.....	3,760	315	1,050	6.91	7.71	82,500
The year.....	10,100	152	1,440	9.47	128.69	1,040,000
1933-34						
October.....	4,800	449	1,704	11.2	12.91	104,800
November.....	6,000	526	1,416	9.32	10.40	84,280
December.....	9,720	652	3,077	20.2	23.29	189,200
January.....	4,570	1,070	1,968	12.9	14.87	121,000
February.....	1,580	585	948	6.24	6.50	52,660
March.....	4,390	775	1,698	11.2	12.91	104,400
April.....	3,160	1,230	1,991	13.1	14.62	118,500
May.....	4,030	1,220	1,859	12.2	14.07	114,300
June.....	1,840	809	1,231	8.10	9.04	73,260
July.....	1,700	484	770	5.07	5.84	47,330
August.....	508	323	395	2.60	3.00	24,290
September.....	1,150	224	394	2.59	2.89	23,450
The year.....	9,720	224	1,461	9.61	130.34	1,057,000
1934-35						
October.....	7,020	188	996	6.55	7.55	61,260
November.....	8,030	947	1,970	13.0	14.50	117,200
December.....	3,440	646	1,102	7.25	8.36	67,740
January.....	12,700	315	2,108	13.9	16.03	129,600
February.....	2,680	646	1,199	7.89	8.22	66,580
March.....	1,930	368	667	4.39	5.06	41,000
April.....	1,070	300	606	3.99	4.45	36,080
May.....	2,680	920	1,619	10.7	12.34	99,570
June.....	3,200	1,450	2,151	14.2	15.84	128,000
July.....	2,200	790	1,385	9.11	10.50	85,190
August.....	886	362	525	3.45	3.98	32,260
September.....	1,340	237	427	2.81	3.14	25,590
The year.....	12,700	188	1,229	8.09	109.97	889,900

*Estimated.

Yearly discharge of Sauk River above Whitechuck River, near Darrington

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1918.....	1,320	8.68	117.77	955,000	1,250	8.22	111.68	906,000
1919.....	1,230	8.09	109.49	887,000	1,160	7.63	103.33	837,000
1920.....	1,050	6.91	94.24	763,000	1,090	7.17	97.88	793,000
1921.....	1,410	9.28	125.67	1,020,000	1,590	10.5	141.69	1,150,000
1922.....	1,160	7.63	103.85	842,000	-	-	-	-
1929.....	790	5.20	70.43	571,000	712	4.68	63.56	516,000
1930.....	763	5.02	68.02	552,000	788	5.18	70.36	570,000
1931.....	931	6.12	83.14	674,000	1,010	6.64	89.73	728,000
1932.....	1,210	7.96	108.22	876,000	1,390	9.14	124.60	1,010,000
1933.....	1,440	9.47	128.69	1,040,000	1,590	10.5	141.64	1,150,000
1934.....	1,461	9.61	130.34	1,057,000	1,278	8.41	114.15	925,400
1935.....	1,229	8.09	109.97	889,900	-	-	-	-
Highest.....	1,461	9.61	130.34	1,057,000	1,590	10.5	141.69	1,150,000
Average.....	1,170	7.67	104.15	844,000	1,190	7.81	105.86	859,000
Lowest.....	763	5.02	68.02	552,000	712	4.68	63.56	516,000

Sauk River at Darrington, Wash.

Location.- Staff gage, lat. 48°14'40", long. 121°35'00", in SW $\frac{1}{4}$ sec. 24, T. 32 N., R. 9 E., half a mile southeast of Darrington.

Drainage area.- 293 square miles.

Records available.- June 1914 to October 1926, June 1928 to September 1932.

Extremes.- Maximum discharge observed, 36,000 second-feet Dec. 29, 1917, Dec. 12, 1921, Feb. 26, 1932; minimum observed, 252 second-feet Sept. 25, 1930 (may have been less during period of ice effect Jan. 11-25, 1930).

Remarks.- No diversion or regulation.

Monthly discharge of Sauk River at Darrington

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	900	498	582	1.99	2.29	35,800
November.....	16,900	710	2,960	10.1	11.27	176,000
December.....	8,300	471	2,710	9.25	10.66	167,000
January.....	10,800	588	2,830	9.66	11.14	174,000
February.....	3,290	664	1,500	5.12	5.52	86,300
March.....	3,480	624	1,130	3.86	4.45	69,500
April.....	1,860	710	1,030	3.52	3.93	61,300
May.....	4,950	1,150	2,080	7.10	8.19	128,000
June.....	4,080	1,240	2,770	9.45	10.54	165,000
July.....	4,510	1,060	2,290	7.82	9.02	141,000
August.....	2,090	588	999	3.41	3.93	61,400
September.....	9,800	588	2,690	9.18	10.24	160,000
The year.....	16,900	471	1,960	6.69	91.18	1,430,000
1920-21						
October.....	13,300	1,330	3,500	11.9	13.72	215,000
November.....	4,730	710	1,590	5.43	6.06	94,600
December.....	7,800	830	1,750	5.97	6.88	108,000
January.....	5,870	830	2,080	7.10	8.19	128,000
February.....	10,300	765	2,430	8.29	8.63	135,000
March.....	2,940	1,060	1,740	5.94	6.85	107,000
April.....	2,780	1,060	1,630	5.56	6.20	97,000
May.....	6,110	1,530	3,490	11.9	13.72	215,000
June.....	8,050	3,290	5,640	19.2	21.42	336,000
July.....	4,950	2,090	3,050	10.4	11.99	188,000
August.....	2,350	765	1,350	4.61	5.32	83,000
September.....	6,110	555	1,440	4.91	5.48	85,700
The year.....	13,300	555	2,470	8.43	114.46	1,790,000

Monthly discharge of Sauk River at Darrington--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1921-22						
October.....	18,600	664	2,640	9.01	10.39	162,000
November.....	9,860	1,150	2,680	9.15	10.21	159,000
December.....	27,000	985	4,510	15.4	17.75	277,000
January.....	1,400	520	808	2.76	3.18	49,700
February.....	613	478	531	1.81	1.88	29,500
March.....	666	315	479	1.63	1.88	29,500
April.....	1,820	732	1,240	4.23	4.72	73,800
May.....	6,380	1,360	3,140	10.7	12.34	193,000
June.....	7,320	3,190	4,410	15.1	16.85	262,000
July.....	3,510	1,050	1,880	6.42	7.40	116,000
August.....	1,360	854	980	3.34	3.85	60,300
September.....	2,220	562	920	3.14	3.50	54,700
The year.....	27,000	315	2,030	6.93	93.95	1,470,000
1922-23						
October.....	6,840	469	1,260	4.30	4.96	77,500
November.....	1,650	675	996	3.40	3.79	59,300
December.....	11,800	469	2,360	8.05	9.28	145,000
January.....	10,300	1,050	2,990	10.2	11.76	184,000
February.....	-	-	*1,010	3.45	3.59	56,100
March.....	1,980	854	1,060	3.62	4.17	65,200
April.....	2,740	1,760	2,150	7.34	8.19	128,000
May.....	5,940	1,760	2,980	10.2	11.76	183,000
June.....	5,940	2,340	3,490	11.9	13.28	208,000
July.....	5,310	1,210	2,560	8.74	10.08	157,000
August.....	1,370	780	963	3.29	3.79	59,200
September.....	980	505	641	2.19	2.44	38,100
The year.....	11,800	469	1,880	6.42	87.09	1,360,000
1923-24						
October.....	3,430	505	938	3.20	3.69	57,700
November.....	5,940	432	1,470	5.02	5.60	87,500
December.....	5,940	990	2,640	9.01	10.39	162,000
January.....	15,200	-	1,600	5.46	6.30	98,400
February.....	19,000	1,470	4,210	14.4	15.53	242,000
March.....	1,820	662	984	3.36	3.87	60,500
April.....	2,360	690	1,190	4.06	4.53	70,800
May.....	7,560	1,700	3,560	12.2	14.07	219,000
June.....	3,680	1,700	2,440	8.33	9.29	145,000
July.....	3,150	920	1,460	4.98	5.74	89,800
August.....	-	-	*821	2.80	3.23	50,500
September.....	-	-	*817	2.79	3.11	48,600
The year.....	19,000	432	1,830	6.25	85.35	1,330,000
1924-25						
October.....	-	-	*2,870	9.80	11.30	176,000
November.....	-	-	*2,360	8.05	8.98	140,000
December.....	10,500	840	2,860	9.76	11.25	178,000
January.....	8,040	875	2,590	8.84	10.19	159,000
February.....	10,800	990	2,980	10.2	10.62	166,000
March.....	2,080	840	1,170	3.99	4.60	71,900
April.....	5,060	805	2,340	7.99	8.91	139,000
May.....	7,320	2,510	4,350	14.8	17.06	267,000
June.....	5,270	2,080	3,490	11.9	13.28	208,000
July.....	3,860	1,470	2,320	7.92	9.13	143,000
August.....	1,360	548	881	3.01	3.47	54,200
September.....	635	398	506	1.73	1.93	30,100
The year.....	10,800	398	2,390	8.16	110.72	1,730,000
1925-26						
October.....	3,680	286	691	2.36	2.72	42,500
November.....	1,950	415	865	2.95	3.29	51,500
December.....	8,280	1,360	3,180	10.9	12.57	196,000
January.....	10,000	930	1,860	6.35	7.32	114,000
February.....	3,860	930	1,870	6.38	6.64	104,000
March.....	2,510	890	1,340	4.57	5.27	82,400
April.....	2,220	1,260	1,790	6.11	6.82	107,000
May.....	3,500	1,310	2,110	7.20	8.30	130,000
June.....	2,220	930	1,400	4.78	5.33	83,300
July.....	2,820	507	874	2.98	3.44	53,700
August.....	1,470	483	672	2.29	2.64	41,300
September.....	4,640	415	929	3.17	3.54	55,300
The year.....	10,000	286	1,460	4.98	67.88	1,060,000

Estimated.

Monthly discharge of Sauk River at Darrington--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926						
October 1-15.....	6,840	1,470	2,770	9.45	5.27	82,400
1928						
June 22-30.....	4,000	2,070	3,130	10.7	3.58	55,900
July.....	2,490	1,300	1,830	6.25	7.21	113,000
August.....	-	-	*684	2.33	2.69	42,100
September.....	1,420	295	470	1.60	1.78	28,000
The period.....	-	-	-	-	-	239,000
1928-29						
October.....	10,000	620	1,930	6.59	7.60	119,000
November.....	2,340	550	1,040	3.55	3.96	61,900
December.....	3,000	520	1,030	3.52	4.06	63,300
January.....	1,420	-	590	2.01	2.32	36,300
February.....	490	-	377	1.29	1.34	20,900
March.....	4,210	410	1,110	3.79	4.37	68,200
April.....	2,490	620	1,320	4.51	5.03	78,600
May.....	5,720	1,620	3,450	11.8	13.60	212,000
June.....	6,630	2,490	3,760	12.8	14.28	223,000
July.....	3,000	1,080	1,860	6.35	7.32	114,000
August.....	1,130	520	779	2.66	3.07	47,900
September.....	620	300	420	1.43	1.60	25,000
The year.....	10,000	300	1,480	5.05	68.55	1,070,000
1929-30						
October.....	1,040	300	497	1.70	1.96	30,600
November.....	1,420	300	417	1.42	1.58	24,800
December.....	5,650	300	1,320	4.51	5.20	81,200
January.....	2,600	-	651	2.22	2.56	40,000
February.....	7,280	1,270	3,890	13.3	13.85	216,000
March.....	3,500	680	1,440	4.91	5.66	88,500
April.....	4,550	1,940	2,670	9.80	10.93	171,000
May.....	3,710	1,720	2,220	7.58	8.74	136,000
June.....	3,920	1,630	2,500	8.53	9.52	149,000
July.....	2,600	905	1,600	5.46	6.30	98,400
August.....	1,270	390	689	2.35	2.71	42,400
September.....	1,220	262	507	1.73	1.93	30,200
The year.....	7,280	-	1,530	5.22	70.94	1,110,000
1930-31						
October.....	3,970	315	1,120	3.82	4.40	68,900
November.....	1,140	515	855	2.92	3.26	50,900
December.....	2,120	515	919	3.14	3.62	56,500
January.....	10,500	482	2,360	8.05	9.28	145,000
February.....	7,450	825	1,670	5.70	5.94	92,800
March.....	7,450	1,090	2,220	7.58	8.74	136,000
April.....	4,830	1,180	2,220	7.58	8.46	132,000
May.....	5,050	1,880	3,400	11.6	13.37	209,000
June.....	9,200	2,240	3,390	11.6	12.94	202,000
July.....	2,510	868	1,540	5.26	6.06	94,700
August.....	910	450	609	2.08	2.40	37,400
September.....	2,990	515	1,020	3.48	3.88	60,700
The year.....	10,500	315	1,780	6.08	82.35	1,290,000
1931-32						
October.....	2,510	450	1,140	3.89	4.48	70,100
November.....	6,210	782	2,130	7.27	8.11	127,000
December.....	7,450	585	1,570	5.36	6.18	96,500
January.....	7,990	760	1,550	5.29	6.10	95,300
February.....	25,000	470	2,770	9.45	10.19	159,000
March.....	6,950	1,350	2,710	9.25	10.66	167,000
April.....	4,390	1,670	2,750	9.32	10.40	162,000
May.....	4,390	2,150	3,270	11.2	12.91	201,000
June.....	7,470	2,410	4,240	14.5	16.18	252,000
July.....	6,700	1,560	2,870	9.80	11.30	176,000
August.....	1,780	500	1,190	4.06	4.68	73,200
September.....	1,560	500	755	2.51	2.80	43,700
The year.....	25,000	450	2,240	7.65	103.99	1,620,000

*Estimated.

SURFACE WATERS OF WASHINGTON, 1919-35

Yearly discharge of Sauk River at Darrington

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1915.....	1,410	4.81	65.37	1,020,000	1,380	4.71	63.67	996,000
1916.....	2,350	8.02	109.23	1,710,000	2,120	7.24	98.65	1,540,000
1917.....	1,930	6.59	89.46	1,400,000	2,460	8.40	113.83	1,780,000
1918.....	2,510	8.57	116.22	1,820,000	2,390	8.16	110.69	1,730,000
1919.....	2,550	8.70	118.15	1,850,000	2,410	8.23	111.82	1,750,000
1920.....	1,960	6.69	91.18	1,430,000	2,020	6.89	93.62	1,460,000
1921.....	2,470	8.43	114.46	1,790,000	2,720	9.28	126.15	1,970,000
1922.....	2,030	6.93	93.95	1,470,000	1,590	5.43	73.65	1,150,000
1923.....	1,880	6.42	87.09	1,360,000	1,910	6.52	88.74	1,390,000
1924.....	1,830	6.25	85.35	1,330,000	2,090	7.13	97.20	1,520,000
1925.....	2,390	8.16	110.72	1,730,000	2,110	7.20	97.77	1,530,000
1926.....	1,460	4.98	67.88	1,060,000	-	-	-	-
1929.....	1,480	5.05	68.55	1,070,000	1,330	4.54	61.67	962,000
1930.....	1,530	5.22	70.94	1,110,000	1,590	5.43	73.48	1,150,000
1931.....	1,780	6.08	82.35	1,290,000	1,940	6.62	89.84	1,400,000
1932.....	2,240	7.65	103.99	1,620,000	-	-	-	-
Highest.....	2,550	8.70	118.15	1,850,000	2,720	9.28	126.15	1,970,000
Average.....	1,900	6.78	92.18	1,440,000	2,000	6.84	92.91	1,450,000
Lowest.....	1,410	4.81	65.37	1,020,000	1,330	4.54	61.67	962,000

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.

Drainage area.- 714 square miles.

Records available.- July 1928 to September 1935.

Extremes.- Maximum discharge recorded, 68,500 second-feet about 10 p.m. Feb. 26, 1932; minimum recorded, 572 second-feet Dec. 5, 1929 (may have been less sometime during Jan. 10-27, 1930, when stage-discharge relation was affected by ice).

Remarks.- No diversion or regulation.

Monthly discharge of Sauk River near Sauk

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928						
July 24-31.....	4,340	2,810	3,780	5.29	1.57	60,000
August.....	2,610	1,500	2,000	2.80	3.23	123,000
September.....	3,440	1,030	1,410	1.97	2.20	83,900
The period.....	-	-	-	-	-	267,000
1928-29						
October.....	17,500	1,390	3,490	4.89	5.64	215,000
November.....	3,660	1,180	1,980	2.77	3.09	118,000
December.....	5,070	1,200	1,930	2.70	3.11	119,000
January.....	-	-	1,280	1.79	2.06	78,700
February.....	-	692	793	1.11	1.16	44,000
March.....	6,120	888	*2,030	2.84	3.27	125,000
April.....	4,940	1,420	2,630	3.68	4.11	156,000
May.....	11,800	3,440	6,650	9.31	10.73	409,000
June.....	11,800	5,200	7,810	10.9	12.16	465,000
July.....	6,880	2,810	4,450	6.23	7.18	274,000
August.....	3,010	1,620	2,210	3.10	3.57	136,000
September.....	1,750	676	1,220	1.71	1.91	72,600
The year.....	17,500	676	3,050	4.27	57.99	2,210,000
1929-30						
October.....	1,590	668	993	1.39	1.60	61,100
November.....	1,480	614	724	1.01	1.13	43,100
December.....	7,030	578	2,290	3.21	3.70	141,000
January.....	3,120	-	1,310	1.83	2.11	80,600
February.....	13,000	2,610	5,620	7.87	8.20	312,000
March.....	6,720	1,480	2,960	4.15	4.78	182,000
April.....	8,550	4,220	5,260	7.37	8.22	313,000
May.....	7,680	3,120	4,580	6.41	7.39	282,000
June.....	8,550	4,340	5,670	7.94	8.86	337,000
July.....	6,130	2,380	4,130	5.78	6.66	254,000
August.....	2,520	1,330	1,960	2.75	3.17	121,000
September.....	2,200	700	1,400	1.96	2.19	83,300
The year.....	13,000	-	3,050	4.27	58.01	2,210,000

*Estimated.

Monthly discharge of Sauk River near Sauk--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	7,000	896	2,090	2.93	3.38	129,000
November.....	2,090	1,220	1,700	2.38	2.66	101,000
December.....	2,830	1,130	1,740	2.44	2.81	107,000
January.....	19,200	1,120	4,300	6.02	6.94	264,000
February.....	8,310	1,770	3,390	4.75	4.95	188,000
March.....	9,780	2,410	4,050	5.67	6.54	249,000
April.....	8,550	2,500	4,250	5.95	6.64	253,000
May.....	10,600	4,200	6,830	9.57	11.03	420,000
June.....	14,300	5,160	7,230	10.1	11.27	430,000
July.....	5,420	2,410	3,700	5.18	5.97	228,000
August.....	2,790	1,350	1,820	2.55	2.94	112,000
September.....	4,280	1,140	2,150	3.01	3.36	128,000
The year.....	19,200	896	3,600	5.04	68.49	2,610,000
1931-32						
October.....	4,080	1,040	1,990	2.79	3.22	122,000
November.....	7,470	1,720	3,730	5.22	5.82	222,000
December.....	10,200	1,490	3,110	4.36	5.03	191,000
January.....	9,990	1,700	3,040	4.26	4.91	187,000
February.....	51,400	-	*6,090	8.53	9.20	350,000
March.....	9,230	3,300	5,690	7.97	9.19	350,000
April.....	7,980	3,680	5,610	7.72	8.61	328,000
May.....	8,960	4,630	6,750	9.45	10.90	415,000
June.....	14,300	5,130	8,990	12.6	14.06	535,000
July.....	11,400	3,570	6,040	8.46	9.75	371,000
August.....	4,140	1,840	2,970	4.16	4.80	183,000
September.....	2,470	1,330	1,700	2.38	2.66	101,000
The year.....	51,400	1,040	4,620	6.47	88.15	3,360,000
1932-33						
October.....	7,210	964	2,830	3.96	4.56	174,000
November.....	34,200	3,910	9,590	13.4	14.95	571,000
December.....	24,500	2,470	5,140	7.20	8.30	316,000
January.....	11,800	1,760	3,890	5.45	6.28	239,000
February.....	4,410	1,270	1,760	2.48	2.56	97,800
March.....	4,880	2,000	3,000	4.20	4.84	184,000
April.....	7,520	2,220	3,620	5.07	5.66	215,000
May.....	10,700	3,570	5,600	7.84	9.04	344,000
June.....	19,500	7,060	10,800	15.1	16.85	643,000
July.....	14,700	6,480	10,100	14.1	16.26	621,000
August.....	8,300	2,650	5,070	7.10	8.19	312,000
September.....	9,940	1,920	3,960	5.41	6.04	230,000
The year.....	34,200	964	5,450	7.63	103.53	3,950,000
1933-34						
October.....	15,200	2,000	6,203	8.69	10.02	381,400
November.....	19,900	2,740	5,819	8.15	9.09	346,200
December.....	35,900	2,940	11,580	16.2	18.68	711,700
January.....	18,800	4,880	8,156	11.4	13.14	500,300
February.....	6,480	2,740	4,287	6.00	6.25	238,100
March.....	15,000	3,250	6,503	8.83	10.18	387,800
April.....	11,000	5,000	7,575	10.3	11.49	438,900
May.....	14,300	5,000	7,505	10.2	11.78	449,100
June.....	8,140	3,800	5,519	7.73	8.62	328,400
July.....	6,570	2,740	3,934	5.51	6.35	241,900
August.....	3,140	2,000	2,422	3.39	3.91	148,900
September.....	4,260	1,120	1,897	2.66	2.97	112,900
The year.....	35,900	1,120	5,919	8.29	112.46	4,285,000
1934-35						
October.....	21,400	952	3,281	4.60	5.30	201,700
November.....	28,100	3,640	6,944	9.73	10.86	413,200
December.....	10,300	2,840	4,353	6.10	7.03	287,700
January.....	46,300	1,760	8,581	11.7	13.49	515,300
February.....	10,700	2,550	4,722	6.61	6.88	262,300
March.....	7,220	1,790	2,762	3.87	4.46	169,800
April.....	3,420	1,550	2,386	3.34	3.73	142,000
May.....	8,300	3,320	5,376	7.53	8.68	330,600
June.....	11,400	4,950	7,606	10.7	11.94	452,600
July.....	8,630	3,420	5,465	7.65	8.62	336,100
August.....	3,320	1,900	2,502	3.50	4.04	155,800
September.....	4,690	1,280	2,040	2.66	3.19	121,400
The year.....	46,300	952	4,650	6.51	88.42	3,366,000

*Estimated.

Yearly discharge of Sauk River near Sauk

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1929.....	3,050	4.27	57.99	2,210,000	2,770	3.88	52.58	2,010,000
1930.....	3,050	4.27	58.01	2,210,000	3,180	4.45	60.43	2,300,000
1931.....	3,600	5.04	68.49	2,610,000	3,880	5.43	73.71	2,810,000
1932.....	4,620	6.47	88.15	3,360,000	5,350	7.49	101.89	3,880,000
1933.....	5,450	7.63	103.53	3,950,000	5,970	8.36	113.51	4,320,000
1934.....	5,919	8.29	112.46	4,285,000	5,150	7.21	97.86	3,729,000
1935.....	4,650	6.51	88.42	3,366,000	-	-	-	-

South Fork of Sauk River near Barlow Pass, Wash.

Location.- Water-stage recorder, lat. 48°03'45" long. 121°24'20", in SW $\frac{1}{4}$ sec. 21, T. 30 N., R. 11 E., 2 $\frac{3}{4}$ miles above mouth and 4 miles northeast of Barlow Pass.

Drainage area.- 32.7 square miles.

Records available.- October 1917 to October 1921, October 1928 to October 1931.

Extremes.- Maximum discharge, 5,800 second-feet at 1:30 a.m. Dec. 29, 1917; minimum, 27 second-feet Oct. 3, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Sauk River near Barlow Pass

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	158	36	70.0	2.14	2.47	4,300
November.....	3,080	81	480	14.7	16.40	28,600
December.....	-	-	*291	8.90	10.26	17,900
January.....	2,440	63	431	13.2	15.22	26,500
February.....	435	43	163	4.98	5.37	9,380
March.....	817	37	134	4.10	4.73	8,240
April.....	555	58	126	3.85	4.30	7,500
May.....	638	150	291	8.90	10.26	17,900
June.....	614	160	410	12.5	13.95	24,400
July.....	614	152	326	9.97	11.49	20,000
August.....	302	58	133	4.07	4.69	8,180
September.....	1,850	57	487	14.9	16.62	29,000
The year.....	3,080	36	278	8.50	115.76	202,000
1920-21						
October.....	2,290	155	480	14.70	16.95	29,500
November.....	628	52	202	6.18	6.90	12,000
December.....	1,340	43	192	5.87	6.77	11,800
January.....	842	58	228	6.97	8.04	14,000
February 1-8.....	87	50	65.8	2.01	.60	1,040
August 20-31.....	210	110	143	4.37	1.95	3,400
September.....	1,200	55	294	8.99	10.03	17,500
October 1-16.....	572	83	198	6.06	3.61	6,280
1928-29						
October.....	258	109	160	4.89	2.36	4,130
November.....	289	91	159	4.86	5.42	9,460
December.....	516	86	149	4.56	5.26	9,160
January.....	132	-	62.9	1.92	2.21	3,870
February.....	-	-	30.8	.942	.98	1,710
March.....	406	35	129	3.94	4.54	7,930
April.....	406	77	164	5.02	5.60	9,760
May.....	906	240	454	13.9	16.03	27,900
June.....	978	316	578	17.7	19.75	34,400
July.....	505	209	335	10.2	11.76	20,600
August.....	230	84	133	4.07	4.69	8,180
September.....	91	31	60.6	1.85	2.06	3,610
The period.....	-	-	-	-	-	141,000

*Estimated.

Monthly discharge of South Fork of Sauk River near Barlow Pass--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	148	29	76.0	2.32	2.68	4,670
November.....	164	33	59.2	1.81	2.02	3,520
December.....	-	-	*195	5.96	6.87	12,000
January.....	178	-	72.7	2.22	2.56	4,470
February.....	1,450	152	475	14.5	15.10	26,400
March.....	517	80	195	5.96	6.87	12,000
April.....	879	-	376	11.5	12.83	22,400
May.....	497	-	317	9.69	11.17	19,500
June.....	584	252	351	10.7	11.94	20,900
July.....	358	142	233	7.13	8.22	14,300
August.....	142	54	90.3	2.76	3.18	5,550
September.....	180	44	82.2	2.51	2.80	4,890
The year.....	1,450	-	208	6.36	86.24	151,000
1930-31						
October.....	960	45	204	6.24	7.19	12,500
November.....	-	-	*135	4.13	4.61	8,030
December.....	-	-	*121	3.70	4.27	7,440
January.....	-	-	*493	15.1	17.41	30,300
February.....	-	-	*393	12.0	12.50	21,800
March.....	-	-	*430	13.1	15.10	26,400
April.....	784	140	296	9.05	10.10	17,600
May.....	818	256	468	14.3	16.49	28,800
June.....	1,150	281	503	15.4	17.18	29,900
July.....	330	124	218	6.67	7.69	13,400
August.....	137	93	105	3.21	3.70	6,460
September.....	473	95	180	5.50	6.14	10,700
The year.....	-	45	295	9.02	122.38	213,000
1931						
October.....	-	-	350	10.7	12.34	21,500

*Estimated.

Yearly discharge of South Fork of Sauk River near Barlow Pass

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1918.....	340	10.4	141.26	246,000	322	9.85	133.71	233,000
1919.....	345	10.6	143.19	250,000	325	9.94	134.92	235,000
1920.....	278	8.50	115.76	202,000	282	8.62	117.25	204,000
1929.....	-	-	-	-	191	5.84	79.19	138,000
1930.....	208	6.36	86.24	151,000	219	6.70	90.74	158,000
1931.....	295	9.02	122.38	213,000	-	-	-	-

Whitechuck River near Darrington, Wash.

Location.- Water-stage recorder, lat. 48°10'30", long. 121°23'00", in NW¼ sec. 16, T. 31 N., R. 11 E., at 4.5-mile post, 4½ miles above confluence with Sauk River and 11 miles southeast of Darrington.

Drainage area.- 75 square miles.

Records available.- October 1919 to December 1921 (fragmentary).

Extremes.- Maximum discharge, 4,540 second-feet about noon Dec. 12, 1921, when water-stage recorder was damaged and record terminated; minimum, 111 second-feet sometime during Nov. 4-14, 1919, when recorder was not operating properly (probably less in December 1919 when recorder was not operating).

Remarks.- No diversion or regulation.

Monthly discharge of Whitechuck River near Darrington

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October 19-31.....	264	156	185	2.47	1.19	4,770
January 1-7.....	348	270	310	4.13	1.08	4,300
June 17-30.....	1,200	605	853	11.4	5.94	23,700
July.....	1,540	545	950	12.7	14.64	58,400
August.....	605	275	488	6.51	7.50	30,000

Monthly discharge of Whitechuck River near Darrington--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920-21						
October.....	2,550	-	679	9.05	10.43	41,800
November.....	-	-	*325	4.31	4.81	19,200
December.....	836	184	278	3.71	4.28	17,100
January.....	610	222	306	4.08	4.70	18,800
February.....	-	-	*366	4.88	5.08	20,300
March.....	-	-	*300	4.00	4.61	18,400
April.....	-	-	*300	4.00	4.46	17,900
May.....	-	-	*727	9.69	11.17	44,700
June.....	2,480	832	1,410	18.8	20.98	83,900
July.....	1,380	-	*946	12.6	14.53	58,200
August.....	-	314	*591	7.88	9.08	36,300
September.....	878	202	362	4.83	5.39	21,500
The year.....	2,550	-	550	7.33	99.52	398,000
1921						
October.....	1,840	233	461	6.15	7.09	28,300
November.....	865	287	438	5.84	6.52	26,100
December 1-12.....	2,670	363	893	11.9	5.31	21,200
The period.....	-	-	-	-	-	75,600

*Estimated.

Suiattle River below Lime Creek, near Darrington, Wash.

Location.- Water-stage recorder, lat. 48°14'55", long. 121°18'10", in sec. 18, T. 32 N., R. 12 E. (unsurveyed), half a mile below Lime Creek, 1 mile above Suiattle ranger station, 2 miles below Buck Creek, and 14 miles east of Darrington.

Drainage area.- 213 square miles.

Records available.- October 1920 to November 1921.

Extremes.- Maximum discharge, 5,890 second-feet at 6 a.m. June 7, 1921; minimum, 469 second-feet Feb. 6, 1921.

Remarks.- No diversion or regulation.

Monthly discharge of Suiattle River below Lime Creek, near Darrington

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920-21						
October.....	4,530	900	1,490	7.00	8.07	91,600
November.....	1,250	600	802	3.77	4.21	47,700
December.....	1,700	513	690	3.24	3.74	42,400
January.....	1,320	517	744	3.49	4.02	45,700
February.....	2,820	473	924	4.34	4.52	51,300
March.....	1,100	622	775	3.64	4.20	47,700
April.....	960	600	741	3.48	3.88	44,100
May.....	-	690	1,840	8.64	9.96	113,000
June.....	5,330	2,300	3,380	15.9	17.74	201,000
July.....	3,030	1,990	2,390	11.2	12.91	147,000
August.....	2,190	872	1,410	6.62	7.63	86,700
September.....	1,620	558	827	3.88	4.33	49,200
The year.....	5,330	473	1,340	6.29	85.21	967,000
1921						
October.....	3,030	622	1,020	4.79	5.52	62,700
November 1-11.....	1,490	960	1,210	5.68	2.32	26,400
The period.....	-	-	-	-	-	89,100

Baker River below Anderson Creek, near Concrete, Wash.

Location.- Water-stage recorder, lat. 48°39'45", long. 121°40'40", in SE $\frac{1}{4}$ sec. 30, T. 37 N., R. 9 E., 350 feet below Anderson Creek and 11 miles northeast of Concrete.

Prior to Sept. 24, 1915, staff gage at same site.

Drainage area.- 184 square miles.

Records available.- September 1910 to October 1925, August 1928 to November 1931.

Extremes.- Maximum discharge recorded, 36,800 second-feet at 12:30 p.m. Dec. 29, 1917; minimum recorded, 219 second-feet Dec. 15, 16, 1919.

Remarks.- No diversion or regulation.

Monthly discharge of Baker River below Anderson Creek, near Concrete

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	808	448	603	3.28	3.78	37,100
November.....	16,000	408	2,650	14.4	16.07	158,000
December.....	-	220	*2,090	11.4	13.14	129,000
January.....	-	-	*2,290	12.4	14.30	141,000
February.....	-	616	1,370	7.45	8.04	78,800
March.....	2,640	575	980	5.33	6.14	60,300
April.....	-	782	998	5.42	6.05	59,400
May.....	3,400	1,190	1,910	10.4	11.99	117,000
June.....	5,030	1,640	3,160	17.2	19.19	188,000
July.....	5,160	1,840	3,170	17.2	19.33	195,000
August.....	2,260	1,150	1,740	9.46	10.91	107,000
September.....	7,350	998	3,030	16.5	18.41	180,000
The year.....	16,000	220	2,000	10.9	147.85	1,450,000
1920-21						
October.....	17,800	1,270	3,510	19.1	22.02	216,000
November.....	3,370	660	1,470	7.99	8.91	87,500
December.....	5,030	794	1,490	8.10	9.34	91,600
January.....	3,210	861	1,450	7.88	9.08	89,200
February.....	11,300	794	2,230	12.1	12.60	124,000
March.....	2,560	903	1,560	7.39	8.52	83,600
April.....	2,170	903	1,400	7.61	8.49	83,300
May.....	4,890	1,230	2,680	15.7	18.10	177,000
June.....	8,180	2,700	5,050	27.4	30.57	300,000
July.....	5,020	2,500	3,110	16.9	19.48	191,000
August.....	3,270	1,360	2,020	11.0	12.68	124,000
September.....	6,480	814	2,240	12.2	13.61	133,000
The year.....	17,800	660	2,350	12.8	173.40	1,700,000
1921-22						
October.....	17,400	1,020	3,350	18.2	20.98	206,000
November.....	4,900	854	2,050	11.1	12.38	122,000
December.....	19,600	722	3,070	16.7	19.25	189,000
January.....	879	450	604	3.28	3.78	37,100
February.....	590	408	465	2.58	2.64	25,800
March.....	636	398	471	2.56	2.95	29,000
April.....	1,620	595	1,100	5.98	6.67	65,500
May.....	6,200	1,160	2,700	14.7	16.95	166,000
June.....	7,380	3,120	4,290	23.3	26.00	255,000
July.....	4,670	1,540	2,540	13.8	15.91	156,000
August.....	2,900	1,360	1,830	9.95	11.47	113,000
September.....	3,180	950	1,790	9.73	10.86	107,000
The year.....	19,600	398	2,030	11.0	149.84	1,470,000
1922-23						
October.....	8,980	652	1,820	9.89	11.40	112,000
November.....	1,640	652	922	5.01	5.59	54,900
December.....	9,510	-	1,640	10.0	11.53	113,000
January.....	3,220	625	1,580	8.59	9.90	97,200
February.....	1,280	-	732	3.98	4.14	40,700
March.....	2,110	560	847	4.60	5.50	52,100
April.....	3,220	1,320	1,830	9.95	11.10	109,000
May.....	5,420	1,320	2,700	14.7	16.95	166,000
June.....	6,090	1,960	3,540	18.2	20.31	199,000
July.....	5,170	1,560	2,990	16.2	18.68	184,000
August.....	1,860	1,160	1,500	8.15	9.40	92,200
September.....	3,380	813	1,500	7.07	7.89	77,400
The year.....	9,510	-	1,790	9.73	132.19	1,300,000
1923-24						
October.....	1,730	471	1,000	5.43	6.26	61,500
November.....	2,430	460	952	5.17	5.77	56,600
December.....	3,370	746	1,590	8.64	9.96	97,800
January.....	16,700	610	1,470	7.99	9.21	90,400
February.....	15,500	1,360	3,510	18.0	19.41	190,000
March.....	2,220	840	1,110	6.03	6.95	68,200
April.....	2,120	874	1,560	7.39	8.24	80,900
May.....	6,940	1,480	3,460	18.8	21.67	213,000
June.....	4,840	1,840	2,720	14.8	16.51	162,000
July.....	3,730	1,400	2,010	10.9	12.57	124,000
August.....	2,270	1,040	1,510	8.21	9.46	92,800
September.....	5,450	923	1,480	8.04	8.97	88,100
The year.....	16,700	460	1,830	9.95	134.98	1,330,000

*Estimated.

Monthly discharge of Baker River below Anderson Creek, near Concrete--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	12,200	814	2,510	13.6	15.68	154,000
November.....	5,610	769	1,650	8.97	10.01	98,200
December.....	-	688	3,260	17.7	20.41	200,000
January.....	3,650	718	1,360	7.39	8.52	83,600
February.....	8,180	888	2,220	12.1	12.60	123,000
March.....	1,880	828	1,110	6.03	6.95	68,200
April.....	4,250	828	2,030	11.0	12.27	121,000
May.....	6,250	2,120	3,860	21.0	24.21	237,000
June.....	5,380	1,880	3,280	17.8	19.86	195,000
July.....	3,820	2,020	2,730	14.8	17.06	168,000
August.....	2,270	1,000	1,550	8.42	9.71	95,300
September.....	1,120	548	927	5.04	5.62	55,200
The year.....	-	548	2,210	12.0	162.90	1,600,000
1928						
September.....	3,590	655	1,030	5.60	6.25	61,300
1928-29						
October.....	15,000	718	2,430	13.2	15.22	149,000
November.....	2,640	625	1,260	6.85	7.64	75,000
December.....	2,580	575	960	5.22	6.02	59,000
January.....	1,000	-	558	3.03	3.49	34,300
February.....	470	-	387	2.10	2.19	21,500
March.....	2,640	470	883	4.80	5.53	54,300
April.....	2,580	570	1,140	6.20	6.92	67,800
May.....	4,840	1,510	3,070	16.7	19.25	189,000
June.....	5,740	2,220	3,370	18.3	20.42	201,000
July.....	3,068	1,460	2,120	11.5	13.26	130,000
August.....	1,880	909	1,390	7.55	8.70	85,500
September.....	1,200	432	832	4.52	5.04	49,500
The year.....	15,000	-	1,540	8.37	113.68	1,120,000
1929-30						
October.....	2,350	482	924	5.02	5.79	56,800
November.....	778	415	462	2.51	2.80	27,500
December.....	3,500	408	1,140	6.20	7.15	70,100
January.....	1,260	-	620	3.37	3.66	36,100
February.....	5,830	-	2,290	12.4	12.91	127,000
March.....	3,390	755	1,340	7.28	8.39	82,400
April.....	4,020	1,750	2,450	13.3	14.84	146,000
May.....	3,580	-	2,190	11.9	13.72	135,000
June.....	3,940	2,000	2,700	14.7	16.40	161,000
July.....	3,320	1,280	2,110	11.5	13.26	130,000
August.....	1,660	882	1,280	6.96	8.02	78,700
September.....	3,230	545	1,190	6.47	7.22	70,800
The year.....	5,830	408	1,550	8.42	114.38	1,120,000
1930-31						
October.....	3,660	595	1,460	7.93	9.14	89,800
November.....	3,010	690	1,140	6.20	6.92	67,800
December.....	1,800	575	935	5.08	5.86	57,500
January.....	14,900	575	2,540	13.8	15.91	156,000
February.....	2,520	741	1,250	6.79	7.07	69,400
March.....	5,270	1,040	1,820	9.99	11.40	112,000
April.....	4,100	1,120	1,960	10.7	11.94	117,000
May.....	-	1,730	2,960	16.1	18.56	182,000
June.....	13,200	2,340	3,660	19.9	22.20	218,000
July.....	2,820	1,460	2,050	11.1	12.60	126,000
August.....	1,730	814	1,070	5.82	6.71	65,800
September.....	4,690	640	1,750	9.51	10.61	104,000
The year.....	14,900	575	1,880	10.2	139.12	1,370,000
1931						
October.....	2,520	605	1,290	7.01	8.08	79,300
November 1-11.....	4,360	1,580	2,790	15.2	6.22	60,900
The period.....	-	-	-	-	-	140,000

Yearly discharge of Baker River below Anderson Creek, near Concrete

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	2,250	12.2	166.39	1,630,000	1,880	10.2	138.76	1,360,000
1912.....	1,940	10.5	143.28	1,410,000	1,940	10.5	143.68	1,410,000
1913.....	2,200	12.0	162.22	1,590,000	2,250	12.2	166.28	1,630,000
1914.....	1,970	10.7	145.77	1,430,000	2,000	10.9	147.72	1,450,000
1915.....	1,660	9.02	122.07	1,200,000	1,660	9.02	122.63	1,200,000
1916.....	2,190	11.9	161.69	1,590,000	1,960	10.7	144.72	1,420,000
1917.....	1,910	10.4	141.36	1,390,000	2,420	13.2	178.34	1,750,000
1918.....	2,600	14.1	191.74	1,880,000	2,390	13.0	176.54	1,730,000
1919.....	1,980	10.8	146.24	1,440,000	1,910	10.4	140.70	1,380,000
1920.....	2,000	10.9	147.85	1,450,000	2,100	11.4	155.13	1,520,000
1921.....	2,350	12.8	173.40	1,700,000	2,520	13.7	185.74	1,820,000
1922.....	2,030	11.0	149.84	1,470,000	1,700	9.24	125.75	1,230,000
1923.....	1,790	9.73	132.19	1,300,000	1,700	9.24	125.66	1,230,000
1924.....	1,830	9.95	134.98	1,330,000	2,150	11.7	159.09	1,560,000
1925.....	2,210	12.0	162.09	1,600,000	-	-	-	-
1929.....	1,540	8.37	113.68	1,120,000	1,360	7.39	100.54	987,000
1930.....	1,550	8.42	114.38	1,120,000	1,640	8.91	120.56	1,180,000
1931.....	1,880	10.2	139.12	1,370,000	-	-	-	-
Highest.....	2,600	14.1	191.74	1,880,000	2,520	13.7	185.74	1,820,000
Average.....	1,990	10.8	147.17	1,450,000	1,970	10.7	145.74	1,430,000
Lowest.....	1,540	8.37	113.68	1,120,000	1,360	7.39	100.54	987,000

NOOKSACK RIVER BASIN

Nooksack River at Excelsior, Wash.

Location.- Staff gage, lat. 48°54'40", long. 121°49'30", in sec. 31, T. 40 N., R. 8 E. (unsurveyed), at bridge 600 feet below Nooksack Falls (Excelsior) power plant, half a mile below Wells Creek, and 6 miles east of Glacier.

Drainage area.- 96 square miles.

Records available.- August 1920 to September 1921.

Extremes.- Maximum discharge observed, 4,650 second-feet at 3:45 p.m. Oct. 4, 1920; minimum observed, 186 second-feet Feb. 5-9, 1921.

Remarks.- At extreme low water the entire flow above Nooksack Falls, half a mile above gage, is diverted through the power plant and returned to river 600 feet above gage. Pondage above diversion dam too slight to affect flow appreciably.

Monthly discharge of Nooksack River at Excelsior

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920						
August 26-31.....	1,350	426	804	8.38	1.87	9,570
September.....	1,720	426	885	9.22	10.29	52,700
The period.....	-	-	-	-	-	62,300
1920-21						
October.....	4,410	426	1,190	12.4	14.30	73,200
November.....	1,440	230	512	5.33	5.95	30,500
December.....	1,170	206	374	3.90	4.50	23,000
January.....	850	206	339	3.53	4.07	20,800
February.....	2,770	186	537	5.59	5.82	29,800
March.....	715	206	326	3.40	3.92	20,000
April.....	590	206	345	3.59	4.00	20,500
May.....	1,920	314	1,010	10.5	12.11	62,100
June.....	2,770	1,170	1,990	20.7	23.09	116,000
July.....	1,720	1,090	1,290	13.4	15.45	79,500
August.....	1,350	590	928	9.67	11.15	57,100
September.....	2,220	276	698	7.27	8.11	41,500
The year.....	4,410	186	796	8.29	112.47	576,000

Nooksack River near Glacier, Wash.

(Formerly called North Fork of Nooksack River near Glacier)

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. Prior to Oct. 1, 1911, staff gage 1,000 feet below Canyon Creek.

Drainage area.- 195 square miles.

Records available.- September 1910 to September 1911 (fragmentary), October 1933 to September 1935.

Extremes.- Maximum discharge recorded, 8,810 second-feet at 11:45 a.m. Nov. 5, 1934; minimum recorded, 130 second-feet Oct. 17, 1934.

Remarks.- Water diverted for Excelsior power plant of Puget Sound Power & Light Co. returned to river above gage. Regulation caused by operation of plant produces only slight effect at gage.

Monthly discharge of Nooksack River near Glacier

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1933.....	-	-	*1,750	8.97	10.34	107,600
November.....	-	-	*1,500	7.69	8.58	89,260
December.....	-	-	*2,150	11.0	12.68	132,200
January 1934.....	-	-	*1,500	7.69	8.87	92,230
February.....	-	-	*754	3.87	4.03	41,880
March.....	3,230	450	1,111	5.70	6.57	68,300
April.....	3,230	1,100	1,941	9.95	11.10	115,500
May.....	4,740	1,210	1,961	10.1	11.64	120,600
June.....	2,020	642	1,371	7.03	7.84	81,560
July.....	3,900	700	1,230	6.31	7.28	75,640
August.....	1,500	850	1,130	5.79	6.68	69,480
September.....	1,800	282	801	4.11	4.59	47,680
Water year 1933-34.....	-	-	1,439	7.38	100.20	1,042,000
October 1934.....	2,200	160	792	4.06	4.68	48,670
November.....	5,470	687	1,584	8.12	9.06	94,230
December.....	2,160	577	1,001	5.13	5.91	61,530
Calendar year 1934.....	-	-	160	1.267	6.50	88.25
January 1935.....	7,290	270	1,657	8.50	9.80	101,900
February.....	3,830	455	1,101	5.65	5.88	61,160
March.....	1,050	372	512	2.63	3.03	31,460
April.....	687	310	471	2.42	2.70	28,040
May.....	2,060	604	1,215	6.23	7.18	74,740
June.....	2,760	1,360	1,996	10.2	11.38	119,800
July.....	2,680	1,050	1,637	8.39	9.67	100,700
August.....	1,270	688	901	4.62	5.33	55,420
September.....	3,640	454	988	5.07	5.66	58,800
Water year 1934-35.....	7,290	160	1,154	5.92	80.28	835,400

*Estimated on basis of records for Cascade River near Marblemount.

Middle Fork of Nooksack River near Deming, Wash.

Location.- Staff gage and water-stage recorder, 48°46'45", long. 122°06'20", in SW 1/4 sec. 13, T. 38 N., R. 5 E., half a mile above Heisler's Creek and 6 miles southeast of Deming. Prior to Oct. 1, 1921, staff gage just below mouth of Heisler's Creek, records equivalent.

Drainage area.- 70 square miles; 72 square miles at former location.

Records available.- October 1910 to March 1911 (fragmentary gage heights), August 1920 to September 1921, February 1934 to September 1935.

Extremes.- Maximum discharge, not determined, probably occurred Nov. 5, 1934; minimum, 127 second-feet Apr. 9, 1935.

Remarks.- No diversion or regulation. Large diurnal fluctuation in summer caused by melting of glaciers.

Monthly discharge of Middle Fork of Nooksack River near Deming

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920						
September.....	4,560	221	796	11.1	12.38	47,400
1920-21						
October.....	7,500	323	1,270	17.6	20.29	78,100
November.....	1,190	195	585	8.12	9.06	34,800
December.....	2,500	221	559	7.76	8.95	34,400
January.....	1,640	266	499	6.93	7.99	30,700
February.....	6,000	236	855	11.9	12.39	47,500
March.....	670	236	363	5.04	5.81	22,300
April.....	750	200	380	5.28	5.89	22,600
May.....	2,000	323	780	10.8	12.45	48,000
June.....	1,880	670	1,200	16.7	18.63	71,400
July.....	1,200	443	654	9.08	10.47	40,200
August.....	750	236	417	5.79	6.68	25,600
September.....	1,520	208	434	6.03	6.73	25,800
The year.....	7,500	195	665	9.24	125.34	481,000

Monthly discharge of Middle Fork of Nooksack River near Deming--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
February.....	-	218	*531	7.59	7.90	29,500
March.....	1,800	200	603	8.61	9.93	37,060
April.....	850	355	553	7.90	8.81	32,930
May.....	2,760	317	688	9.83	11.33	42,300
June.....	630	281	418	5.97	6.66	24,840
July.....	1,480	281	440	6.29	7.25	27,040
August.....	416	281	332	4.74	5.46	20,420
September.....	1,170	248	397	5.67	6.33	23,640
The period.....	-	-	-	-	-	237,700
1934-35						
October.....	-	130	*484	6.91	7.97	29,750
November.....	7,500	317	*924	13.2	14.73	54,950
December.....	1,630	200	*574	8.20	9.45	35,290
January.....	4,540	178	*867	12.4	14.30	53,340
February.....	2,000	249	*671	9.59	9.99	37,240
March.....	700	178	*247	3.53	4.07	15,190
April.....	300	127	*208	2.97	3.31	12,360
May.....	680	248	*458	6.54	7.54	28,160
June.....	820	310	*506	7.23	8.07	30,090
July.....	578	240	*366	5.23	6.03	22,500
August.....	370	191	*250	3.57	4.12	15,350
September.....	1,300	160	*350	5.00	5.68	20,840
The year.....	7,500	127	*490	7.00	95.16	355,060

*Estimated.

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.- October 1933 to September 1935.

Extremes.- Maximum discharge recorded, 11,200 second-feet at 11:10 p.m. Nov. 5, 1934; minimum recorded, 102 second-feet Sept. 12, 1935.

Remarks.- No diversion or regulation.

Monthly discharge of South Fork of Nooksack River near Wickersham

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1933.....	-	-	*1,200	11.7	13.49	73,790
November.....	-	-	*1,000	9.71	10.83	69,500
December.....	-	-	*2,200	21.4	24.67	135,300
January 1934.....	-	-	*1,900	18.4	21.21	116,800
February.....	-	-	*900	8.74	9.10	49,900
March.....	-	-	*1,000	9.71	11.20	61,490
April.....	-	-	*800	7.77	8.67	47,600
May.....	1,900	430	714	6.93	7.99	43,910
June.....	537	206	308	2.99	3.34	18,340
July.....	2,070	146	281	2.73	3.15	17,260
August.....	213	113	138	1.34	1.54	8,460
September.....	1,640	111	306	2.97	3.31	18,230
Water year 1933-34.....	-	-	899	8.73	118.50	650,700
October 1934.....	2,400	112	506	4.91	5.66	31,130
November.....	6,360	451	1,449	14.1	15.73	86,230
December.....	3,050	537	1,138	11.0	12.68	69,960
Calendar year 1934.....	-	-	787	7.64	103.68	569,400
January 1935.....	8,500	290	1,688	16.4	18.91	103,800
February.....	2,530	468	961	9.33	9.72	53,390
March.....	1,990	272	531	5.16	5.95	32,650
April.....	778	232	475	4.61	5.14	28,280
May.....	1,480	560	962	9.34	10.77	59,140
June.....	1,520	475	911	8.84	9.86	54,190
July.....	931	188	411	3.99	4.60	25,240
August.....	220	116	141	1.37	1.58	8,670
September.....	2,390	103	309	3.00	3.35	18,410
Water year 1934-35.....	8,550	103	789	7.66	103.95	571,100

*Estimated on basis of records for South Fork of Nooksack River at Saxon Bridge.

South Fork of Nooksack River at Saxon Bridge, Wash.

Location.— Staff gage, lat. 48°40'40", long. 122°09'55", in SE $\frac{1}{4}$ sec. 21, T. 37 N., R. 5 E., at Saxon Bridge, 1 mile below Skookum Creek, and 2 $\frac{1}{2}$ miles northeast of Wickersham.

Drainage area.— 129 square miles.

Records available.— August 1920 to September 1921, July 1933 to September 1934.

Extremes.— Maximum discharge observed, 13,100 second-feet at 5 p.m. Feb. 11, 1921; minimum observed, 111 second-feet Sept. 4, 1934.

Remarks.— No diversion or regulation.

Monthly discharge of South Fork of Nooksack River at Saxon Bridge

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920						
September.....	9,920	121	1,800	14.0	15.62	107,000
1920-21						
October.....	6,150	526	1,890	14.6	16.83	116,000
November.....	3,200	332	1,020	7.91	8.82	60,700
January.....	-	282	1,160	8.99	10.36	71,300
May.....	1,630	685	1,050	8.14	9.38	64,600
June.....	2,150	745	1,120	8.68	9.68	66,600
August.....	303	178	244	1.89	2.18	15,000
September.....	8,400	178	1,080	8.37	9.34	64,300
1933						
July.....	-	530	1,120	8.68	10.01	68,900
August.....	555	220	370	2.87	3.31	22,800
September.....	3,670	160	941	7.29	8.13	56,000
The period.....	-	-	-	-	-	148,000
1933-34						
October.....	4,460	314	1,341	10.4	11.99	82,470
November.....	4,880	314	1,118	8.67	9.67	66,550
December.....	5,620	505	2,418	18.7	21.56	148,700
January.....	4,370	1,020	2,125	16.5	19.02	130,600
February.....	2,410	484	1,041	8.07	8.40	57,800
March.....	2,860	466	1,176	9.12	10.51	72,310
April.....	1,920	580	947	7.34	8.19	56,370
May.....	2,410	540	841	6.52	7.52	51,690
June.....	580	254	373	2.89	3.22	22,170
July.....	2,190	205	352	2.73	3.15	21,660
August.....	317	129	186	1.44	1.66	11,460
September.....	1,640	114	361	2.80	3.12	21,490
The year.....	5,620	114	1,027	7.96	108.01	743,300

COLUMBIA RIVER MAIN STEM

Columbia River at Trail, British Columbia

Location.- Cable gage, lat. 49°06', long. 117°42', on highway bridge at Trail, 12 miles above international boundary and mouth of Clark Fork.

Drainage area.- 34,000 square miles.

Records available.- April 1913 to September 1935.

Extremes.- Maximum discharge observed, 312,000 second-feet June 14, 15, 1913; minimum, 9,600 second-feet Mar. 28, 1917.

Remarks.- Small amount of water diverted above station for irrigation. Slight fluctuation caused by operation of power plant on Kootenai River. Natural storage in numerous lakes affects flow. This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Monthly discharge of Columbia River at Trail, British Columbia

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	50,600	25,900	34,700	1.02	1.18	2,130,000
November.....	25,600	18,500	21,800	.64	.71	1,300,000
December.....	19,000	14,200	15,700	.46	.53	965,000
January.....	16,800	14,500	15,200	.45	.52	935,000
February.....	14,500	11,900	15,300	.39	.42	765,000
March.....	13,000	11,000	11,700	.34	.39	719,000
April.....	21,000	13,000	15,400	.45	.50	918,000
May.....	107,000	21,500	74,100	2.18	2.51	4,550,000
June.....	193,000	98,000	145,000	4.29	4.79	8,690,000
July.....	283,000	198,000	240,000	7.03	8.14	14,800,000
August.....	199,000	94,400	144,000	4.23	4.88	8,850,000
September.....	90,800	59,400	71,300	2.10	2.34	4,240,000
The year.....	263,000	11,000	66,900	1.97	26.91	48,900,000
1920-21						
October.....	81,100	54,500	70,900	2.09	2.41	4,560,000
November.....	53,100	35,100	40,700	1.20	1.34	2,420,000
December.....	34,600	23,900	29,700	.84	.97	1,760,000
January.....	24,300	19,700	22,400	.66	.76	1,380,000
February.....	22,500	19,600	21,400	.63	.66	1,190,000
March.....	23,900	22,000	22,700	.67	.77	1,400,000
April.....	54,800	23,600	36,600	1.08	1.20	2,180,000
May.....	207,000	65,600	117,000	3.44	3.97	7,190,000
June.....	270,000	207,000	245,000	7.21	8.04	14,600,000
July.....	246,000	160,000	190,000	5.59	6.45	11,700,000
August.....	169,000	93,000	127,000	3.74	4.31	7,810,000
September.....	90,600	44,100	61,200	1.80	2.01	3,640,000
The year.....	270,000	19,700	82,300	2.42	32.89	59,600,000
1921-22						
October.....	46,000	40,400	42,500	1.25	1.44	2,610,000
November.....	51,200	39,500	46,900	1.38	1.54	2,790,000
December.....	38,800	23,500	29,200	.86	.99	1,800,000
January.....	23,200	18,500	20,800	.61	.70	1,280,000
February.....	18,400	15,000	16,700	.49	.51	928,000
March.....	15,000	14,200	14,600	.43	.50	898,000
April.....	29,500	15,100	20,700	.61	.68	1,230,000
May.....	149,000	51,600	79,400	2.34	2.70	4,680,000
June.....	244,000	158,000	221,000	6.50	7.25	13,100,000
July.....	209,000	122,000	168,000	4.94	5.70	10,300,000
August.....	124,000	98,400	115,000	3.52	3.83	6,950,000
September.....	101,000	61,600	82,200	2.42	2.70	4,890,000
The year.....	244,000	14,200	71,300	2.10	28.54	51,700,000
1922-23						
October.....	60,000	36,900	46,700	1.37	1.58	2,870,000
November.....	37,900	23,900	31,200	.92	1.03	1,860,000
December.....	23,600	16,100	19,800	.65	.63	1,160,000
January.....	20,000	18,200	19,400	.67	.66	1,190,000
February.....	17,800	13,000	15,800	.46	.48	878,000
March.....	14,500	13,000	13,400	.39	.45	824,000
April.....	50,900	15,100	29,000	.85	.95	1,730,000
May.....	163,000	55,200	109,000	3.21	3.70	6,700,000
June.....	253,000	159,000	220,000	6.47	7.22	13,100,000
July.....	228,000	159,000	188,000	5.53	6.38	11,600,000
August.....	157,000	102,000	118,000	3.58	3.90	7,070,000
September.....	104,000	52,600	80,300	2.38	2.63	4,780,000
The year.....	253,000	13,000	73,900	2.17	29.61	53,800,000

Monthly discharge of Columbia River at Trail, British Columbia--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24						
October.....	50,900	30,400	38,900	1.15	1.33	2,390,000
November.....	29,500	19,200	23,200	.68	.76	1,380,000
December.....	19,300	16,100	17,700	.52	.60	1,090,000
January.....	15,800	13,000	13,900	.41	.47	855,000
February.....	18,600	14,000	16,900	.50	.54	972,000
March.....	18,600	16,100	17,700	.52	.60	1,090,000
April.....	25,300	16,000	19,300	.57	.64	1,150,000
May.....	199,000	27,100	115,000	3.38	3.90	7,070,000
June.....	176,000	130,000	158,000	4.65	5.19	9,400,000
July.....	168,000	104,000	134,000	3.94	4.54	8,240,000
August.....	114,000	94,700	103,000	3.03	3.49	6,330,000
September.....	93,500	50,900	74,400	2.19	2.44	4,430,000
The year.....	199,000	13,000	61,000	1.80	24.50	44,400,000
1924-25						
October.....	49,200	35,200	40,600	1.19	1.37	2,500,000
November.....	43,200	29,200	37,000	1.09	1.22	2,200,000
December.....	32,700	24,200	28,100	.83	.96	1,730,000
January.....	29,100	23,500	25,300	.74	.85	1,580,000
February.....	27,200	23,500	25,200	.74	.77	1,400,000
March.....	26,200	24,000	25,000	.74	.85	1,540,000
April.....	90,600	26,000	63,900	1.88	2.10	3,800,000
May.....	245,000	59,800	164,000	4.82	5.66	10,100,000
June.....	240,000	194,000	215,000	6.32	7.05	12,800,000
July.....	238,000	158,000	181,000	5.32	6.13	11,100,000
August.....	138,000	80,300	114,000	3.35	3.86	7,010,000
September.....	76,900	48,800	60,900	1.78	1.99	3,620,000
The year.....	245,000	23,300	81,700	2.40	32.71	59,400,000
1925-26						
October.....	48,000	24,500	34,100	1.00	1.16	2,100,000
November.....	24,200	18,400	20,600	.608	.68	1,230,000
December.....	17,900	16,500	17,400	.512	.59	1,070,000
January.....	16,100	12,700	14,000	.412	.47	861,000
February.....	12,700	12,400	12,600	.371	.39	700,000
March.....	15,100	12,500	13,400	.394	.45	824,000
April.....	89,600	15,200	37,400	1.10	1.23	2,230,000
May.....	109,000	92,600	102,000	3.00	3.46	6,270,000
June.....	118,000	96,100	103,000	3.03	3.38	6,130,000
July.....	138,000	97,000	121,000	3.56	4.10	7,440,000
August.....	95,700	79,300	85,000	2.44	2.81	5,100,000
September.....	80,000	49,800	65,400	1.92	2.15	3,890,000
The year.....	138,000	12,400	52,300	1.54	20.90	37,800,000
1926-27						
October.....	56,200	37,600	47,000	1.38	1.59	2,890,000
November.....	52,000	37,900	44,200	1.30	1.45	2,630,000
December.....	36,700	23,200	29,300	.86	.99	1,800,000
January.....	22,700	13,200	19,700	.58	.67	1,210,000
February.....	16,200	14,200	15,300	.46	.47	850,000
March.....	16,200	14,700	15,400	.46	.52	947,000
April.....	44,000	16,400	23,000	.68	.76	1,370,000
May.....	132,000	47,400	87,100	2.56	2.95	5,360,000
June.....	258,000	152,000	217,000	6.38	7.12	12,900,000
July.....	246,000	168,000	199,000	5.85	6.74	12,200,000
August.....	162,000	102,000	127,000	3.74	4.31	7,810,000
September.....	112,000	87,600	101,000	2.97	3.31	6,010,000
The year.....	258,000	13,200	77,400	2.28	30.90	56,000,000
1927-28						
October.....	87,000	67,600	76,700	2.28	2.61	4,720,000
November.....	77,400	47,400	60,600	1.78	1.99	3,610,000
December.....	46,800	29,900	37,600	1.11	1.28	2,310,000
January.....	29,500	24,200	26,700	.79	.91	1,640,000
February.....	24,100	19,600	22,200	.66	.70	1,280,000
March.....	32,100	18,100	22,500	.66	.76	1,380,000
April.....	50,500	32,800	40,700	1.20	1.34	2,420,000
May.....	306,000	52,300	152,000	4.47	5.15	9,350,000
June.....	295,000	191,000	223,000	6.56	7.32	13,300,000
July.....	219,000	158,000	187,000	5.50	6.34	11,600,000
August.....	155,000	76,400	112,000	3.29	3.78	6,890,000
September.....	75,800	42,500	60,700	1.79	2.00	3,610,000
The year.....	306,000	18,100	85,400	2.51	34.16	62,000,000

Monthly discharge of Columbia River at Trail, British Columbia--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	42,400	32,800	37,800	1.11	1.28	2,320,000
November.....	32,200	22,500	26,500	.78	.87	1,580,000
December.....	22,500	16,400	19,000	.56	.65	1,170,000
January.....	16,000	12,400	14,500	.43	.50	892,000
February.....	12,000	10,000	11,000	.32	.33	611,000
March.....	14,400	10,000	11,800	.35	.40	726,000
April.....	24,500	14,400	16,700	.49	.55	994,000
May.....	135,000	25,600	65,300	1.92	2.21	4,020,000
June.....	224,000	138,000	190,000	5.59	6.24	11,300,000
July.....	159,000	105,000	128,000	3.76	4.34	7,870,000
August.....	104,000	74,400	94,400	2.77	3.19	5,800,000
September.....	74,400	45,400	58,900	1.73	1.93	3,500,000
The year.....	224,000	10,000	56,200	1.65	22.49	40,800,000
1929-30						
October.....	41,500	24,800	31,100	.915	1.05	1,910,000
November.....	24,400	16,500	20,200	.594	.66	1,200,000
December.....	16,600	14,100	15,100	.444	.61	928,000
January.....	15,300	12,300	13,900	.409	.47	855,000
February.....	14,100	11,600	12,700	.374	.39	705,000
March.....	16,000	14,100	14,500	.426	.49	892,000
April.....	81,300	16,300	38,600	1.14	1.27	2,300,000
May.....	122,000	84,600	103,000	3.03	3.49	6,330,000
June.....	189,000	123,000	164,000	4.82	5.38	9,760,000
July.....	171,000	126,000	157,000	4.62	5.33	9,650,000
August.....	124,000	82,500	107,000	3.15	3.63	6,580,000
September.....	80,800	46,000	63,400	1.86	2.08	3,770,000
The year.....	189,000	11,600	62,000	1.82	24.75	44,900,000
1930-31						
October.....	43,500	23,800	32,000	.94	1.08	1,970,000
November.....	23,600	17,400	20,200	.59	.66	1,200,000
December.....	17,200	13,000	14,900	.44	.51	916,000
January.....	12,900	11,700	12,200	.36	.42	750,000
February.....	12,600	11,700	12,000	.35	.36	666,000
March.....	14,800	11,500	15,000	.38	.44	787,000
April.....	30,600	15,200	20,400	.60	.67	1,210,000
May.....	139,000	33,800	95,300	2.92	3.37	6,110,000
June.....	189,000	122,000	167,000	4.91	5.48	9,940,000
July.....	159,000	117,000	135,000	3.97	4.58	8,300,000
August.....	115,000	72,900	89,000	2.62	3.02	5,470,000
September.....	87,700	43,200	66,600	1.96	2.19	3,960,000
The year.....	189,000	11,600	57,000	1.68	22.80	41,300,000
1931-32						
October.....	44,800	27,200	35,100	1.03	1.19	2,160,000
November.....	27,100	23,200	25,900	.76	.85	1,540,000
December.....	22,900	18,200	19,900	.59	.69	1,220,000
January.....	19,900	16,700	18,800	.55	.63	1,160,000
February.....	17,000	13,400	14,500	.43	.46	834,000
March.....	27,800	17,300	24,200	.71	.82	1,490,000
April.....	68,800	28,400	45,000	1.32	1.47	2,680,000
May.....	189,000	70,100	143,000	4.21	4.85	8,790,000
June.....	270,000	178,000	234,000	6.80	7.68	13,900,000
July.....	234,000	136,000	180,000	5.30	6.11	11,100,000
August.....	135,000	98,000	109,000	3.21	3.70	6,700,000
September.....	95,900	43,700	64,700	1.90	2.12	3,650,000
The year.....	270,000	13,400	76,300	2.24	30.49	55,400,000
1932-33						
October.....	41,700	31,300	35,090	1.03	1.19	2,157,000
November.....	31,300	29,000	30,090	.895	.99	1,791,000
December.....	34,700	23,300	28,950	.851	.98	1,780,000
January.....	22,800	18,400	21,370	.689	.73	1,314,000
February.....	18,000	14,800	16,030	.471	.49	890,000
March.....	16,500	15,200	15,540	.457	.53	955,500
April.....	52,500	16,900	28,450	.749	.84	1,515,000
May.....	165,000	56,700	103,800	3.05	3.52	6,384,000
June.....	288,000	170,000	239,800	7.05	7.87	14,270,000
July.....	280,000	184,000	238,000	7.00	8.07	14,630,000
August.....	174,000	99,800	132,800	3.91	4.51	8,165,000
September.....	99,800	55,300	74,980	2.21	2.47	4,462,000
The year.....	288,000	14,800	80,550	2.37	32.19	58,310,000

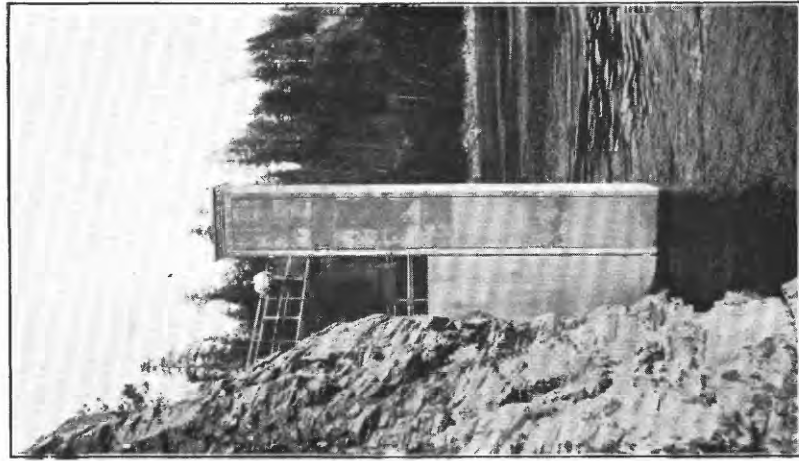
Monthly discharge of Columbia River at Trail, British Columbia--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	56,700	41,700	47,750	1.40	1.61	2,936,000
November.....	61,800	42,900	52,490	1.54	1.72	3,124,000
December.....	43,600	35,800	39,510	1.18	1.34	2,429,000
January.....	41,700	31,900	37,050	1.09	1.26	2,278,000
February.....	31,900	25,500	28,500	.838	.87	1,583,000
March.....	34,100	25,500	28,470	.779	.90	1,628,000
April.....	186,000	34,700	78,050	2.30	2.57	4,644,000
May.....	284,000	181,000	202,400	5.95	6.86	12,440,000
June.....	274,000	163,000	226,100	6.65	7.42	13,450,000
July.....	161,000	120,000	159,500	4.10	4.73	8,563,000
August.....	129,000	76,800	97,880	2.88	3.32	6,024,000
September.....	78,300	41,700	61,920	1.82	2.03	3,684,000
The year.....	274,000	23,300	86,730	2.55	34.63	62,780,000
1934-35						
October.....	40,200	31,300	34,300	1.01	1.16	2,110,000
November.....	39,000	33,100	37,000	1.09	1.22	2,200,000
December.....	35,700	22,800	28,900	.85	.98	1,770,000
January.....	23,000	17,800	20,700	.61	.70	1,270,000
February.....	26,200	21,400	23,600	.69	.72	1,310,000
March.....	22,600	18,800	20,200	.59	.68	1,240,000
April.....	42,200	19,100	25,200	.74	.85	1,500,000
May.....	168,000	42,600	89,700	2.64	3.04	5,520,000
June.....	238,000	173,000	212,000	6.24	6.96	12,600,000
July.....	215,000	184,000	199,000	5.85	6.74	12,300,000
August.....	180,000	76,800	119,000	3.50	4.04	7,290,000
September.....	76,100	46,800	65,900	1.94	2.16	3,920,000
The year.....	238,000	17,800	73,200	2.15	29.18	53,000,000

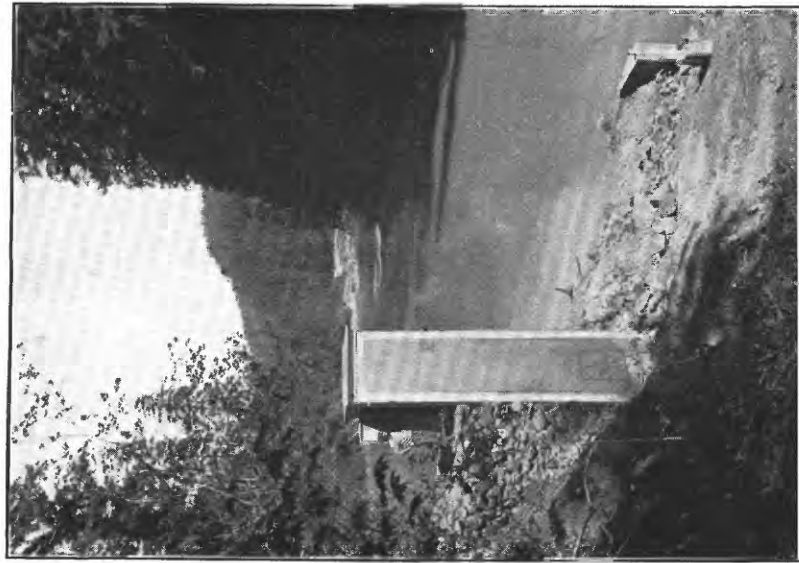
Note.-- Records for the water year 1934-35 computed in accordance with Canadian computation rules.

Yearly discharge of Columbia River at Trail, British Columbia

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1914.....	74,900	2.20	29.82	54,200,000	76,800	2.26	30.62	55,600,000
1915.....	87,600	1.99	26.98	48,900,000	65,300	1.92	26.08	47,300,000
1916.....	81,300	2.39	32.54	59,000,000	80,700	2.37	32.28	58,500,000
1917.....	87,900	2.00	27.10	49,200,000	69,600	2.05	27.75	50,400,000
1918.....	75,900	2.23	30.29	54,900,000	76,200	2.24	30.42	55,100,000
1919.....	73,200	2.15	29.37	53,200,000	69,900	2.06	27.96	50,600,000
1920.....	68,900	1.97	26.91	48,900,000	73,000	2.15	29.21	53,000,000
1921.....	82,500	2.42	32.89	59,600,000	80,500	2.37	32.14	58,300,000
1922.....	71,300	2.10	28.54	51,700,000	69,500	2.04	27.81	50,300,000
1923.....	73,900	2.17	29.61	53,800,000	72,800	2.14	29.06	52,700,000
1924.....	61,000	1.80	24.50	44,400,000	63,300	1.86	25.36	46,000,000
1925.....	81,700	2.40	32.71	59,400,000	79,200	2.33	31.59	57,300,000
1926.....	52,500	1.54	20.90	37,800,000	56,300	1.66	22.47	40,800,000
1927.....	77,400	2.28	30.90	56,000,000	81,900	2.41	32.73	59,300,000
1928.....	85,400	2.51	34.16	62,000,000	77,700	2.29	31.11	56,400,000
1929.....	66,200	1.65	22.49	40,800,000	54,900	1.61	21.91	39,800,000
1930.....	62,000	1.82	24.75	44,900,000	62,100	1.83	24.78	44,900,000
1931.....	57,000	1.68	22.80	41,300,000	58,200	1.71	23.25	42,100,000
1932.....	76,500	2.24	30.49	55,400,000	77,500	2.28	31.00	56,200,000
1933.....	80,550	2.37	32.19	58,310,000	84,360	2.48	33.70	61,070,000
1934.....	86,730	2.55	34.63	62,780,000	85,390	2.45	33.32	60,370,000
1935.....	73,200	2.15	29.18	53,000,000	-	-	-	-
Highest.....	86,730	2.55	34.63	62,780,000	84,360	2.48	33.70	61,070,000
Average.....	72,000	2.12	28.81	52,200,000	72,100	2.12	28.79	52,800,000
Lowest.....	52,300	1.54	20.90	37,800,000	54,900	1.61	21.91	39,800,000



A. COLUMBIA RIVER AT KETTLE FALLS, WASH.
RECORDER INSTALLATIONS.



B. COWLITZ RIVER NEAR MAYFIELD, WASH.
RECORDER INSTALLATIONS.

Columbia River at Kettle Falls, Wash.

Location.- Water-stage recorder, lat. $48^{\circ}37'20''$, long. $118^{\circ}07'00''$, in northwest corner lot 1, sec. 14, T. 36 N., R. 37 E., $3\frac{1}{2}$ miles above mouth of Colville River at Kettle Falls. June 5, 1921, to May 2, 1931, staff gages $1\frac{1}{2}$ miles downstream. Prior to June 5, 1921 and during part of winter 1922-23, staff gage $4\frac{1}{2}$ miles upstream.

Drainage area.- 64,500 square miles.

Records available.- April 1913 to September 1935, including estimated monthly discharge for part of period; determined as described in footnote on page 67 of Water-Supply Paper 572.

Extremes.- Maximum discharge recorded, 468,000 second-feet during night of June 14-15, 1913 (gage height determined from floodmarks referred to U. S. Weather Bureau gage at Marcus); minimum (estimated), 13,000 second-feet Jan. 18-21, 1930, when stage-discharge relation was affected by ice.

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

Remarks.- Numerous diversions above gage for irrigation, but amount very small in proportion to flow past gage. Slight fluctuation at extreme low-water caused by operation of power plant on Kootenai River. Natural storage in numerous lakes affects flow at station.

Monthly discharge of Columbia River at Kettle Falls

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acres-feet
1913						
April.....	-	-	*42,500	0.659	0.74	2,530,000
May.....	-	-	*160,000	2.48	2.86	9,840,000
June.....	468,000	-	*412,000	6.39	7.13	24,500,000
July.....	-	-	*272,000	4.22	4.86	16,700,000
August.....	-	-	*153,000	2.37	2.75	9,410,000
September.....	-	-	*97,500	1.51	1.68	5,790,000
The period.....	-	-	-	-	-	68,800,000
1913-14						
October.....	-	-	*58,200	.902	1.04	3,580,000
November.....	-	-	*47,000	.729	.81	2,800,000
December.....	-	-	*34,700	.538	.62	2,130,000
January.....	-	-	*31,500	.488	.56	1,940,000
February.....	-	-	*27,200	.422	.44	1,510,000
March.....	-	-	*34,900	.541	.62	2,150,000
April.....	-	-	*79,200	1.23	1.37	4,710,000
May.....	-	-	*201,000	3.12	3.60	12,400,000
June.....	-	-	*285,000	4.42	4.93	17,000,000
July.....	-	-	*249,000	3.86	4.45	15,300,000
August.....	-	-	*129,000	2.00	2.31	7,930,000
September.....	-	-	*74,400	1.15	1.28	4,430,000
The year.....	-	-	*105,000	1.63	22.03	75,900,000
1914-15						
October.....	-	-	*59,800	.927	1.07	3,680,000
November.....	-	-	*61,700	.957	1.07	3,670,000
December.....	-	-	*45,100	.699	.81	2,770,000
January.....	-	-	*29,800	.462	.53	1,830,000
February.....	-	-	*25,700	.398	.41	1,430,000
March.....	-	-	*29,500	.457	.53	1,810,000
April.....	-	-	*72,300	1.12	1.25	4,300,000
May.....	-	-	*164,000	2.54	2.93	10,100,000
June.....	-	-	*181,000	2.81	3.14	10,800,000
July.....	-	-	*180,000	2.79	3.22	11,100,000
August.....	-	-	*153,000	2.37	2.73	9,410,000
September.....	-	-	*88,500	1.37	1.53	5,270,000
The year.....	-	-	*91,400	1.42	19.22	66,200,000
1915-16						
October.....	-	-	*47,900	.743	.86	2,950,000
November.....	-	-	*46,000	.713	.80	2,740,000
December.....	-	-	*36,000	.558	.64	2,210,000
January.....	-	-	*24,600	.381	.44	1,510,000
February.....	-	-	*24,600	.381	.41	1,420,000
March.....	-	-	*44,800	.695	.80	2,750,000
April.....	110,000	68,700	86,400	1.34	1.50	5,140,000
May.....	197,000	114,000	175,000	2.71	3.12	10,800,000
June.....	458,000	200,000	298,000	4.62	5.16	17,700,000
July.....	458,000	278,000	402,000	6.23	7.18	24,700,000
August.....	272,000	129,000	185,000	2.87	3.31	11,400,000
September.....	128,000	77,200	107,000	1.66	1.85	6,370,000
The year.....	458,000	-	124,000	1.92	26.07	89,700,000

*Estimated.

Monthly discharge of Columbia River at Kettle Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1916-17						
October.....	76,300	47,600	57,600	0.891	1.03	3,540,000
November.....	46,900	37,300	42,900	.665	.74	2,550,000
December.....	-	-	*29,000	.450	.52	1,780,000
January.....	-	-	*22,900	.355	.41	1,410,000
February.....	-	-	*22,100	.343	.36	1,230,000
March.....	-	-	*20,200	.313	.36	1,240,000
April.....	59,200	21,600	36,600	.567	.63	2,180,000
May.....	293,000	60,000	146,000	2.28	2.61	8,980,000
June.....	367,000	300,000	337,000	5.22	5.82	20,100,000
July.....	346,000	222,000	304,000	4.71	5.43	18,700,000
August.....	215,000	113,000	145,000	2.25	2.59	8,920,000
September.....	118,000	61,500	77,600	1.20	1.34	4,620,000
The year.....	367,000	-	104,000	1.61	21.84	75,200,000
1917-18						
October.....	67,100	47,600	57,800	.896	1.03	3,550,000
November.....	48,300	32,600	37,200	.577	.64	2,210,000
December.....	-	-	*35,200	.546	.63	2,160,000
January.....	-	-	*57,800	.896	1.03	3,550,000
February.....	-	-	*41,100	.637	.66	2,280,000
March.....	38,500	32,000	35,700	.553	.64	2,200,000
April.....	109,000	37,900	72,000	1.12	1.25	4,280,000
May.....	228,000	111,000	190,000	2.95	3.40	11,700,000
June.....	396,000	184,000	297,000	4.60	5.13	17,700,000
July.....	355,000	179,000	253,000	3.92	4.52	15,600,000
August.....	174,000	97,500	133,000	2.06	2.38	8,180,000
September.....	97,500	83,400	88,100	1.37	1.53	5,240,000
The year.....	396,000	-	109,000	1.69	22.84	78,600,000
1918-19						
October.....	-	-	*62,300	.966	1.11	3,830,000
November.....	-	-	*44,700	.695	.77	2,660,000
December.....	-	-	*53,200	.515	.59	2,040,000
January.....	-	-	*29,200	.453	.52	1,800,000
February.....	-	-	*35,500	.547	.57	1,960,000
March.....	32,600	29,900	31,200	.494	.56	1,920,000
April.....	110,000	32,600	53,500	.981	1.09	3,770,000
May.....	302,000	113,000	181,000	2.81	3.24	11,100,000
June.....	309,000	252,000	283,000	4.39	4.90	16,800,000
July.....	293,000	158,000	222,000	3.44	3.97	13,600,000
August.....	157,000	111,000	135,000	2.09	2.41	8,300,000
September.....	-	-	77,900	1.21	1.35	4,640,000
The year.....	309,000	-	100,000	1.55	21.08	72,400,000
1919-20						
October.....	75,400	32,000	43,600	.676	.78	2,680,000
November.....	51,500	24,900	27,400	.425	.47	1,630,000
December.....	-	-	*20,200	.313	.36	1,240,000
January.....	-	-	*20,400	.316	.36	1,250,000
February.....	-	-	*21,700	.336	.36	1,250,000
March.....	24,000	19,600	21,600	.335	.39	1,330,000
April.....	43,600	24,000	30,300	.470	.52	1,800,000
May.....	161,000	44,200	121,000	1.88	2.17	7,440,000
June.....	289,000	163,000	227,000	3.52	3.93	13,500,000
July.....	352,000	256,000	311,000	4.82	5.56	19,100,000
August.....	252,000	122,000	174,000	2.70	3.11	10,700,000
September.....	121,000	81,600	89,300	1.37	1.53	5,250,000
The year.....	332,000	-	92,500	1.43	19.54	67,200,000
1920-21						
October.....	86,100	78,900	83,200	1.29	1.49	5,120,000
November.....	78,000	47,600	59,300	.919	1.03	3,550,000
December.....	-	-	*40,400	.626	.72	2,480,000
January.....	-	-	*35,900	.557	.64	2,210,000
February.....	-	-	*34,100	.529	.65	1,890,000
March.....	51,800	37,300	43,700	.678	.78	2,690,000
April.....	96,400	51,800	70,200	1.09	1.22	4,180,000
May.....	327,000	97,500	195,000	3.02	3.48	12,000,000
June.....	420,000	332,000	376,000	5.83	6.50	22,400,000
July.....	350,000	184,000	246,000	3.81	4.39	15,100,000
August.....	181,000	99,700	135,000	2.09	2.41	8,300,000
September.....	95,300	49,700	67,600	1.05	1.17	4,020,000
The year.....	420,000	-	116,000	1.80	24.38	83,900,000

*Estimated.

Monthly discharge of Columbia River at Kettle Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1921-22						
October.....	51,100	46,200	48,500	0.752	0.87	2,980,000
November.....	57,000	41,000	50,500	.783	.87	3,000,000
December.....	44,200	34,300	39,400	.611	.70	2,420,000
January.....	34,300	26,900	30,500	.473	.55	1,880,000
February.....	27,900	21,600	24,600	.381	.40	1,370,000
March.....	24,000	20,900	22,000	.341	.39	1,350,000
April.....	57,000	24,000	37,200	.577	.64	2,210,000
May.....	242,000	59,200	132,000	2.05	2.36	8,120,000
June.....	373,000	256,000	339,000	5.26	5.87	20,200,000
July.....	298,000	141,000	218,000	3.33	3.84	13,200,000
August.....	140,000	104,000	124,000	1.92	2.21	7,620,000
September.....	105,000	66,300	86,100	1.33	1.48	5,120,000
The year.....	373,000	20,900	95,900	1.49	20.18	69,500,000
1922-23						
October.....	64,700	42,300	52,200	.809	.93	3,210,000
November.....	43,600	29,400	36,600	.567	.63	2,180,000
December.....	28,900	-	23,500	.361	.42	1,430,000
January.....	31,500	25,400	29,400	.466	.53	1,810,000
February.....	25,900	-	22,200	.344	.36	1,230,000
March.....	24,500	21,200	22,100	.343	.40	1,360,000
April.....	90,000	25,900	53,200	.825	.92	3,170,000
May.....	244,000	92,000	166,000	2.57	2.96	10,200,000
June.....	371,000	244,000	324,000	5.02	5.60	19,500,000
July.....	325,000	189,000	247,000	3.83	4.42	15,200,000
August.....	187,000	113,000	150,000	2.02	2.33	7,990,000
September.....	111,000	58,500	86,300	1.34	1.60	5,140,000
The year.....	371,000	-	99,700	1.55	21.00	72,200,000
1923-24						
October.....	57,000	36,100	44,300	.687	.79	2,720,000
November.....	36,500	26,400	29,600	.457	.51	1,760,000
December.....	26,400	-	24,600	.381	.44	1,510,000
January.....	20,500	-	19,600	.304	.35	1,210,000
February.....	32,200	21,400	28,000	.434	.47	1,610,000
March.....	31,700	26,600	29,700	.460	.53	1,830,000
April.....	47,000	25,600	32,900	.510	.57	1,960,000
May.....	287,000	50,600	173,000	2.68	3.09	10,600,000
June.....	258,000	177,000	220,000	3.41	3.80	13,100,000
July.....	207,000	122,000	163,000	2.53	2.92	10,000,000
August.....	125,000	102,000	112,000	1.74	2.01	6,890,000
September.....	101,000	54,300	78,700	1.22	1.36	4,680,000
The year.....	287,000	-	79,800	1.24	16.84	57,900,000
1924-25						
October.....	53,600	38,000	44,500	.690	.80	2,740,000
November.....	48,400	35,600	42,700	.662	.74	2,540,000
December.....	38,600	31,700	34,400	.533	.61	2,120,000
January.....	37,400	34,400	35,900	.557	.64	2,210,000
February.....	49,100	35,000	43,900	.681	.71	2,440,000
March.....	43,600	39,200	41,700	.647	.75	2,660,000
April.....	162,000	44,200	115,000	1.78	1.99	6,840,000
May.....	373,000	162,000	261,000	4.05	4.67	16,000,000
June.....	359,000	298,000	339,000	4.95	5.52	19,000,000
July.....	332,000	169,000	240,000	3.72	4.29	14,800,000
August.....	168,000	94,300	133,000	2.06	2.38	8,180,000
September.....	91,000	59,600	72,600	1.12	1.25	4,310,000
The year.....	373,000	31,700	116,000	1.80	24.35	83,700,000
1925-26						
October.....	58,900	32,800	43,400	.673	.78	2,670,000
November.....	33,300	26,600	29,600	.459	.51	1,760,000
December.....	26,100	24,600	25,800	.400	.46	1,590,000
January.....	24,100	21,000	22,600	.349	.40	1,580,000
February.....	22,800	21,000	22,200	.344	.36	1,230,000
March.....	29,600	22,400	24,600	.381	.44	1,510,000
April.....	126,000	30,200	56,700	.879	.98	3,370,000
May.....	168,000	134,000	159,000	2.47	2.85	9,780,000
June.....	144,000	128,000	136,000	2.11	2.35	8,090,000
July.....	157,000	107,000	138,000	2.14	2.47	8,480,000
August.....	106,000	77,500	86,900	1.35	1.66	5,340,000
September.....	82,200	49,100	68,000	1.05	1.17	4,050,000
The year.....	168,000	21,000	68,000	1.05	14.33	49,200,000

Monthly discharge of Columbia River at Kettle Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926-27						
October.....	71,100	44,900	57,100	0.885	1.02	3,510,000
November.....	68,500	47,700	56,100	.870	.97	3,540,000
December.....	53,600	39,300	47,400	.735	.85	2,910,000
January.....	39,300	-	33,800	.524	.60	2,080,000
February.....	30,000	27,100	28,700	.445	.46	1,690,000
March.....	32,200	29,500	30,200	.468	.54	1,860,000
April.....	89,000	32,700	47,600	.738	.82	2,830,000
May.....	227,000	93,200	161,000	2.50	2.88	9,900,000
June.....	413,000	227,000	351,000	5.44	6.07	20,900,000
July.....	392,000	218,000	291,000	4.51	5.20	17,900,000
August.....	213,000	117,000	156,000	2.42	2.79	9,690,000
September.....	138,000	110,000	121,000	1.88	2.10	7,200,000
The year.....	413,000	-	115,000	1.78	24.30	83,600,000
1927-28						
October.....	110,000	92,100	99,900	1.55	1.79	6,140,000
November.....	105,000	82,200	91,400	1.42	1.58	5,440,000
December.....	84,200	53,600	71,100	1.10	1.27	4,770,000
January.....	51,300	44,900	47,900	.743	.86	2,950,000
February.....	46,600	35,600	41,300	.640	.69	2,380,000
March.....	65,200	33,300	44,000	.682	.79	2,710,000
April.....	105,000	67,700	74,300	1.15	1.28	4,420,000
May.....	466,000	107,000	259,000	4.02	4.64	15,900,000
June.....	466,000	278,000	341,000	5.29	5.90	20,500,000
July.....	307,000	197,000	252,000	3.91	4.51	15,600,000
August.....	194,000	90,000	136,000	2.11	2.43	8,560,000
September.....	89,000	52,000	72,000	1.12	1.25	4,280,000
The year.....	466,000	33,300	128,000	1.98	26.99	92,800,000
1928-29						
October.....	50,600	38,700	46,200	.716	.83	2,840,000
November.....	38,700	31,100	35,100	.644	.61	2,090,000
December.....	31,100	24,400	26,900	.417	.48	1,650,000
January.....	24,000	-	21,200	.329	.38	1,500,000
February.....	-	-	18,000	.279	.29	1,000,000
March.....	24,400	18,600	21,100	.327	.38	1,300,000
April.....	43,700	24,900	29,100	.451	.50	1,730,000
May.....	202,000	45,100	105,000	1.63	1.88	6,460,000
June.....	313,000	210,000	264,000	4.09	4.56	15,700,000
July.....	217,000	124,000	164,000	2.54	2.93	10,100,000
August.....	122,000	82,200	105,000	1.63	1.88	6,460,000
September.....	81,300	49,800	64,000	.992	1.11	3,810,000
The year.....	313,000	-	75,200	1.17	15.83	54,400,000
1929-30						
October.....	48,400	30,500	36,500	.566	.65	2,240,000
November.....	30,000	21,000	25,100	.389	.43	1,490,000
December.....	21,400	19,800	20,800	.322	.37	1,280,000
January.....	21,400	-	15,900	.247	.28	978,000
February.....	23,200	-	18,600	.288	.30	1,030,000
March.....	24,000	20,400	21,700	.336	.39	1,330,000
April.....	125,000	24,900	60,000	.930	1.04	3,570,000
May.....	170,000	129,000	155,000	2.40	2.77	9,530,000
June.....	246,000	172,000	217,000	3.36	3.75	12,900,000
July.....	215,000	146,000	189,000	2.93	3.38	11,600,000
August.....	142,000	91,000	119,000	1.84	2.12	7,320,000
September.....	89,000	55,100	71,700	1.11	1.24	4,270,000
The year.....	246,000	-	79,500	1.23	16.72	57,500,000
1930-31						
October.....	53,600	33,000	41,500	.643	.74	2,550,000
November.....	33,000	26,400	29,400	.456	.51	1,750,000
December.....	25,900	20,300	23,400	.363	.42	1,440,000
January.....	20,700	18,400	19,200	.298	.34	1,180,000
February.....	20,700	19,100	20,100	.312	.32	1,120,000
March.....	29,500	19,500	23,500	.364	.42	1,440,000
April.....	58,900	29,000	40,700	.631	.70	2,420,000
May.....	196,000	62,800	150,000	2.33	2.69	9,220,000
June.....	240,000	183,000	218,000	3.38	3.77	13,000,000
July.....	205,000	134,000	165,000	2.53	2.92	10,000,000
August.....	132,000	80,800	101,000	1.67	1.81	6,210,000
September.....	95,400	50,800	74,900	1.16	1.29	4,460,000
The year.....	240,000	18,400	75,700	1.17	15.93	54,800,000

Monthly discharge of Columbia River at Kettle Falls--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	47,600	32,300	39,300	0.609	0.70	2,420,000
November.....	32,300	26,600	31,100	.482	.54	1,850,000
December.....	27,100	23,300	25,300	.392	.45	1,560,000
January.....	28,100	-	25,100	.389	.45	1,540,000
February.....	28,600	-	20,100	.312	.34	1,160,000
March.....	49,400	30,600	39,600	.614	.71	2,450,000
April.....	130,000	51,300	87,200	1.35	1.61	5,190,000
May.....	290,000	132,000	226,000	3.50	4.04	13,900,000
June.....	351,000	273,000	321,000	4.98	5.56	19,100,000
July.....	327,000	161,000	227,000	4.32	4.06	14,000,000
August.....	158,000	111,000	127,000	1.97	2.27	7,810,000
September.....	108,000	51,300	74,100	1.15	1.28	4,410,000
The year.....	351,000	-	104,000	1.61	21.91	75,400,000
1932-33						
October.....	52,100	40,800	44,300	.687	.79	2,720,000
November.....	46,600	39,400	42,000	.651	.73	2,500,000
December.....	52,100	38,800	45,600	.676	.78	2,680,000
January.....	39,400	28,400	35,300	.547	.63	2,170,000
February.....	32,800	23,400	25,700	.598	.41	1,430,000
March.....	52,200	24,700	26,900	.417	.48	1,650,000
April.....	105,000	33,400	52,800	.819	.91	3,140,000
May.....	253,000	107,000	169,000	2.62	3.02	10,400,000
June.....	435,000	259,000	370,000	5.74	6.40	22,000,000
July.....	416,000	224,000	326,000	5.05	5.82	20,000,000
August.....	216,000	116,000	169,000	2.47	2.85	9,780,000
September.....	115,000	68,500	88,900	1.38	1.54	5,290,000
The year.....	435,000	23,400	116,000	1.80	24.36	83,800,000
1933-34						
October.....	72,700	53,400	59,890	.929	1.07	3,683,000
November.....	85,300	68,000	78,230	1.21	1.35	4,655,000
December.....	99,000	62,800	73,840	1.14	1.31	4,522,000
January.....	96,000	69,500	82,660	1.28	1.48	5,082,000
February.....	68,800	53,400	61,400	.952	.99	3,410,000
March.....	78,300	51,300	57,890	.893	1.03	3,541,000
April.....	287,000	81,700	148,500	2.50	2.57	8,837,000
May.....	359,000	287,000	304,700	4.72	5.44	18,740,000
June.....	369,000	211,000	302,200	4.69	5.23	17,980,000
July.....	206,000	138,000	169,300	2.62	3.02	10,410,000
August.....	144,000	88,000	112,100	1.74	2.01	6,895,000
September.....	88,000	49,600	70,420	1.09	1.22	4,190,000
The year.....	369,000	49,900	127,000	1.97	26.72	91,940,000
1934-35						
October.....	48,600	38,800	42,880	.665	.77	2,636,000
November.....	56,200	43,400	52,650	.816	.91	3,133,000
December.....	53,100	37,600	45,060	.699	.81	2,771,000
January.....	40,800	27,500	34,640	.537	.62	2,130,000
February.....	42,700	38,200	40,950	.635	.66	2,274,000
March.....	38,800	33,400	36,830	.571	.66	2,264,000
April.....	86,200	36,400	51,470	.798	.89	3,062,000
May.....	262,000	88,000	154,400	2.39	2.76	9,495,000
June.....	335,000	271,000	308,000	4.78	5.33	18,330,000
July.....	296,000	215,000	253,300	3.93	4.53	15,580,000
August.....	211,000	91,000	139,500	2.16	2.49	8,577,000
September.....	90,000	56,200	76,830	1.19	1.33	4,572,000
The year.....	335,000	27,500	103,300	1.60	21.76	74,820,000

Yearly discharge of Columbia River at Kettle Falls

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1914.....	105,000	1.63	22.03	75,900,000	107,000	1.66	22.51	77,500,000
1915.....	91,400	1.42	19.22	66,200,000	88,300	1.37	18.57	64,000,000
1916.....	124,000	1.92	26.07	89,700,000	124,000	1.92	26.06	89,700,000
1917.....	104,000	1.61	21.84	75,200,000	104,000	1.61	21.85	75,300,000
1918.....	109,000	1.69	22.84	78,600,000	109,000	1.69	23.01	79,300,000
1919.....	100,000	1.55	21.08	72,400,000	95,900	1.49	20.22	69,400,000
1920.....	92,500	1.43	19.54	67,200,000	100,000	1.55	21.17	72,800,000
1921.....	116,000	1.80	24.38	83,900,000	112,000	1.74	23.58	81,200,000
1922.....	95,900	1.49	20.18	69,500,000	93,800	1.45	19.72	67,900,000
1923.....	99,700	1.55	21.00	72,200,000	98,600	1.53	20.76	71,400,000
1924.....	79,800	1.24	16.84	57,900,000	81,700	1.27	17.25	59,300,000
1925.....	116,000	1.80	24.35	83,700,000	114,000	1.77	23.95	82,400,000
1926.....	68,000	1.05	14.33	49,200,000	73,200	1.13	15.42	53,000,000
1927.....	116,000	1.78	24.30	83,600,000	124,000	1.92	26.10	89,800,000
1928.....	128,000	1.98	26.99	92,800,000	115,000	1.78	24.27	83,400,000
1929.....	75,200	1.17	15.83	54,400,000	73,000	1.13	15.36	52,900,000
1930.....	75,500	1.23	16.72	57,500,000	80,600	1.25	16.94	58,300,000
1931.....	75,700	1.17	15.93	54,800,000	75,800	1.18	15.95	54,900,000
1932.....	104,000	1.61	21.91	75,400,000	107,000	1.66	22.52	77,400,000
1933.....	116,000	1.80	24.36	83,800,000	123,000	1.91	25.79	88,700,000
1934.....	127,000	1.97	26.72	91,940,000	121,000	1.88	25.48	87,620,000
1935.....	103,300	1.60	21.76	74,820,000	-	-	-	-
Highest.....	128,000	1.98	26.99	92,800,000	124,000	1.92	26.10	89,800,000
Average.....	101,000	1.57	21.28	73,200,000	101,000	1.57	21.26	73,200,000
Lowest.....	68,000	1.05	14.33	49,200,000	73,000	1.13	15.36	52,900,000

Columbia River at Grand Coulee, Wash.

(Formerly called Columbia River at Grand Coulee, near Nespelem)

Location.- Water-stage recorder, lat. 47°58'00", long. 118°58'45", in lot 6, sec. 36, T. 29 N., R. 30 E., 4,000 feet below Grand Coulee Dam site at Grand Coulee. Prior to Feb. 15, 1931, staff gage opposite the upper end of Grand Coulee.

Drainage area.- 74,100 square miles.

Records available.- June to December 1923, and June 1928 to September 1935 at the Grand Coulee gaging station. Records for April 1913 to June 1923 and January 1924 to May 1928 were determined from records at gaging stations on Columbia River at Kettle Falls, Spokane River below Little Falls, Colville River at Meyers Falls, Hall and Stranger Creeks at Inchellium, and Sanpoil River at Keller; the maximum and minimum daily discharges for these periods were estimated by comparison with results at other gaging stations on Columbia River. As the flow of Columbia River is quite uniform, the estimated maximum and minimum days are probably correct within 5 percent for discharges above 100,000 second-feet and well within 10 percent for discharges below 100,000 second-feet.

Extremes.- Maximum discharge, 492,000 second-feet June 15, 1913 (determined from records at other gaging stations); minimum (estimated), less than 16,000 second-feet in January 1930, when stage-discharge relation was affected by ice. Maximum discharge during flood of June 1894 estimated at 725,000 second-feet.

Remarks.- Diversions for irrigation above station are small in comparison with flow past gage. Some diurnal fluctuation owing to operation of power plants on Spokane River.

Monthly discharge of Columbia River at Grand Coulee

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1913						
April.....	91,000	46,000	67,700	0.914	1.02	4,030,000
May.....	306,000	135,000	190,000	2.56	2.95	11,700,000
June.....	492,000	325,000	436,000	5.88	6.56	25,900,000
July.....	410,000	200,000	279,000	3.77	4.35	17,200,000
August.....	206,000	125,000	166,000	2.11	2.43	9,590,000
September.....	110,000	73,000	100,000	1.36	1.61	5,950,000
The period.....	-	-	-	-	-	70,300,000



A. RECORDING-GAGE SHELTER AND STILLING WELL.

Capable of accommodating a range in stage of 74 feet; known natural range, 68 feet.



B. GAGING CAR AND REEL.

Designed for use of 150-pound sounding weights.

COLUMBIA RIVER AT GRAND COULEE, WASII.

Monthly discharge of Columbia River at Grand Coulee--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1913-14						
October.....	73,000	56,000	61,800	0.834	0.96	3,800,000
November.....	55,000	48,500	51,700	.698	.78	3,080,000
December.....	47,000	32,500	38,500	.520	.60	2,370,000
January.....	38,500	33,500	36,200	.489	.56	2,230,000
February.....	39,500	32,000	34,700	.468	.49	1,930,000
March.....	58,000	41,000	49,300	.652	.75	2,970,000
April.....	145,000	53,000	99,600	1.34	1.50	5,930,000
May.....	280,000	140,000	220,000	2.97	3.42	13,500,000
June.....	300,000	270,000	293,000	3.95	4.41	17,400,000
July.....	270,000	185,000	258,000	3.40	3.92	15,500,000
August.....	180,000	98,000	132,000	1.78	2.05	8,120,000
September.....	95,000	62,000	76,900	1.04	1.16	4,580,000
The year.....	300,000	32,000	112,000	1.51	20.60	81,400,000
1914-15						
October.....	64,000	61,000	62,500	.843	.97	3,840,000
November.....	68,000	62,000	65,700	.887	.99	3,910,000
December.....	61,000	33,000	48,300	.652	.75	2,970,000
January.....	36,000	28,000	32,700	.441	.51	2,010,000
February.....	30,500	28,500	28,900	.390	.41	1,600,000
March.....	48,500	31,000	36,700	.495	.57	2,260,000
April.....	120,000	50,000	86,600	1.17	1.30	5,150,000
May.....	215,000	130,000	175,000	2.36	2.72	10,800,000
June.....	210,000	175,000	188,000	2.54	2.83	11,200,000
July.....	195,000	170,000	184,000	2.48	2.86	11,500,000
August.....	170,000	135,000	155,000	2.11	2.43	9,690,000
September.....	130,000	57,000	91,200	1.23	1.37	5,430,000
The year.....	215,000	28,000	96,800	1.31	17.71	70,100,000
1915-16						
October.....	60,000	47,000	50,800	.686	.79	3,120,000
November.....	51,000	46,500	49,000	.661	.74	2,920,000
December.....	44,500	33,500	39,600	.534	.62	2,430,000
January.....	36,000	-	28,400	.383	.44	1,750,000
February.....	39,500	28,000	31,600	.426	.46	1,820,000
March.....	98,000	39,000	62,800	.848	.98	3,860,000
April.....	135,000	90,500	115,000	1.52	1.70	6,720,000
May.....	220,000	135,000	201,000	2.71	3.12	12,400,000
June.....	477,000	220,000	320,000	4.32	4.82	19,000,000
July.....	476,000	290,000	419,000	5.65	6.51	25,800,000
August.....	273,000	133,000	189,000	2.65	2.94	11,600,000
September.....	132,000	80,000	110,000	1.48	1.65	6,550,000
The year.....	477,000	-	135,000	1.82	24.77	98,000,000
1916-17						
October.....	79,000	50,000	60,600	.818	.94	3,730,000
November.....	50,000	40,000	46,200	.623	.70	2,750,000
December.....	37,000	26,000	32,300	.436	.50	1,990,000
January.....	28,000	-	26,200	.364	.41	1,610,000
February.....	27,500	23,000	26,000	.351	.37	1,440,000
March.....	29,000	23,000	25,400	.343	.40	1,560,000
April.....	85,000	32,000	55,900	.754	.84	3,330,000
May.....	330,000	88,000	183,000	2.47	2.85	11,300,000
June.....	400,000	330,000	368,000	4.97	5.54	21,900,000
July.....	355,000	230,000	313,000	4.22	4.86	19,200,000
August.....	218,000	116,000	149,000	2.01	2.32	9,160,000
September.....	115,000	64,000	80,900	1.09	1.22	4,810,000
The year.....	400,000	-	114,000	1.54	20.95	82,800,000
1917-18						
October.....	70,000	50,000	61,000	.823	.95	3,750,000
November.....	50,000	35,500	40,300	.544	.61	2,400,000
December.....	74,000	35,000	41,800	.564	.65	2,670,000
January.....	100,000	62,000	83,800	1.13	1.30	5,150,000
February.....	60,000	42,500	52,100	.703	.73	2,890,000
March.....	49,000	41,000	45,600	.615	.71	2,800,000
April.....	125,000	54,000	92,600	1.25	1.40	5,510,000
May.....	245,000	125,000	209,000	2.82	3.25	12,900,000
June.....	405,000	190,000	307,000	4.14	4.62	18,300,000
July.....	357,000	182,000	266,000	3.45	3.98	15,700,000
August.....	177,000	100,000	136,000	1.84	2.12	8,360,000
September.....	100,000	86,000	90,400	1.22	1.36	5,380,000
The year.....	405,000	35,000	118,000	1.59	21.68	85,700,000

Monthly discharge of Columbia River at Grand Coulee--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1918-19						
October.....	76,000	56,000	64,800	0.874	1.01	3,980,000
November.....	56,000	40,000	47,800	.642	.72	2,830,000
December.....	40,500	34,500	37,800	.510	.59	2,320,000
January.....	49,500	23,000	35,500	.479	.55	2,180,000
February.....	52,000	36,000	43,400	.586	.61	2,410,000
March.....	45,000	40,000	42,600	.575	.66	2,620,000
April.....	135,000	52,000	88,500	1.19	1.33	5,250,000
May.....	325,000	130,000	204,000	2.75	3.17	12,500,000
June.....	320,000	260,000	294,000	3.97	4.43	17,500,000
July.....	297,000	161,000	226,000	3.05	3.52	13,900,000
August.....	160,000	114,000	138,000	1.86	2.14	8,480,000
September.....	105,000	61,000	80,700	1.09	1.22	4,800,000
The year.....	325,000	23,000	109,000	1.47	19.95	78,800,000
1919-20						
October.....	79,500	34,000	46,400	.626	.72	2,850,000
November.....	34,000	27,500	30,300	.409	.46	1,800,000
December.....	29,000	-	23,200	.313	.36	1,430,000
January.....	26,000	-	23,400	.316	.36	1,440,000
February.....	27,500	23,000	25,400	.343	.37	1,460,000
March.....	32,500	26,000	29,200	.394	.45	1,800,000
April.....	57,000	34,000	43,900	.592	.66	2,610,000
May.....	200,000	58,000	140,000	1.89	2.18	8,610,000
June.....	300,000	170,000	237,000	3.20	3.57	14,100,000
July.....	335,000	260,000	315,000	4.25	4.90	19,400,000
August.....	255,000	125,000	177,000	2.39	2.76	10,900,000
September.....	123,000	84,000	90,700	1.22	1.36	5,400,000
The year.....	335,000	-	98,900	1.33	18.15	71,800,000
1920-21						
October.....	89,000	82,000	86,800	1.17	1.35	5,340,000
November.....	85,000	51,000	64,300	.868	.97	3,830,000
December.....	54,000	39,000	46,100	.622	.72	2,830,000
January.....	53,000	41,000	47,300	.638	.74	2,910,000
February.....	55,000	37,000	46,400	.626	.65	2,580,000
March.....	74,000	53,000	62,300	.841	.97	3,830,000
April.....	120,000	69,000	92,600	1.25	1.40	5,510,000
May.....	350,000	120,000	222,000	3.00	3.46	13,600,000
June.....	440,000	340,000	390,000	5.26	5.87	23,200,000
July.....	354,000	190,000	250,000	3.37	3.88	15,400,000
August.....	183,000	102,000	138,000	1.86	2.14	8,480,000
September.....	98,000	52,000	70,100	.946	1.06	4,170,000
The year.....	440,000	37,000	127,000	1.71	23.21	91,700,000
1921-22						
October.....	53,500	48,500	51,200	.691	.80	3,150,000
November.....	60,000	43,500	53,500	.720	.80	3,180,000
December.....	53,000	41,000	46,900	.633	.73	2,880,000
January.....	38,500	30,000	34,200	.462	.53	2,100,000
February.....	30,000	24,000	27,300	.368	.38	1,520,000
March.....	29,500	26,000	27,200	.367	.42	1,670,000
April.....	74,000	34,500	53,600	.723	.81	3,190,000
May.....	267,000	77,000	157,000	2.12	2.44	9,650,000
June.....	390,000	270,000	354,000	4.78	5.33	21,100,000
July.....	302,000	145,000	218,000	2.94	3.39	13,400,000
August.....	142,000	107,000	127,000	1.71	1.97	7,810,000
September.....	107,000	69,000	88,500	1.19	1.33	5,270,000
The year.....	390,000	24,000	103,000	1.39	18.93	74,900,000
1922-23						
October.....	67,000	44,500	54,700	.738	.85	3,360,000
November.....	46,000	31,500	39,200	.529	.59	2,330,000
December.....	32,500	-	26,300	.355	.41	1,620,000
January.....	41,000	33,000	38,300	.517	.60	2,360,000
February.....	31,000	-	26,300	.355	.37	1,460,000
March.....	31,500	26,000	28,300	.382	.44	1,740,000
April.....	110,000	38,500	74,300	1.00	1.12	4,420,000
May.....	265,000	112,000	189,000	2.55	2.94	11,600,000
June.....	395,000	255,000	342,000	4.62	5.16	20,400,000
July.....	333,000	196,000	257,000	3.47	4.00	15,800,000
August.....	194,000	117,000	136,000	1.84	2.12	8,360,000
September.....	116,000	63,800	92,500	1.25	1.40	5,500,000
The year.....	395,000	-	109,000	1.47	20.00	79,000,000

Monthly discharge of Columbia River at Grand Coulee--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24						
October.....	62,000	39,500	48,200	0.650	0.75	2,960,000
November.....	39,000	29,200	32,800	.443	.49	1,950,000
December.....	31,000	25,800	28,300	.382	.44	1,740,000
January.....	32,000	-	23,200	.313	.36	1,430,000
February.....	47,000	33,000	40,200	.543	.59	2,310,000
March.....	45,000	33,000	38,600	.521	.60	2,370,000
April.....	59,000	31,000	44,500	.601	.67	2,650,000
May.....	305,000	62,000	191,000	2.58	2.97	11,700,000
June.....	269,000	182,000	225,000	3.04	3.39	13,400,000
July.....	212,000	126,000	166,000	2.24	2.58	10,200,000
August.....	130,000	106,000	115,000	1.55	1.79	7,070,000
September.....	107,000	61,000	81,200	1.10	1.25	4,830,000
The year.....	305,000	-	86,200	1.16	15.86	62,600,000
1924-25						
October.....	59,000	41,400	47,000	.634	.73	2,890,000
November.....	52,000	40,000	46,000	.621	.69	2,740,000
December.....	50,000	35,000	40,600	.548	.63	2,600,000
January.....	56,000	40,000	41,900	.565	.65	2,680,000
February.....	75,000	53,000	62,700	.846	.88	3,480,000
March.....	60,000	51,000	55,100	.744	.86	3,390,000
April.....	191,000	60,000	143,000	1.93	2.15	8,610,000
May.....	395,000	182,000	285,000	3.85	4.44	17,600,000
June.....	387,000	306,000	330,000	4.45	4.96	19,600,000
July.....	340,000	175,000	244,000	3.29	3.79	15,000,000
August.....	174,000	102,000	136,000	1.84	2.12	8,560,000
September.....	99,000	66,000	75,300	1.02	1.14	4,480,000
The year.....	395,000	35,000	126,000	1.70	23.04	91,000,000
1925-26						
October.....	64,000	38,000	46,200	.623	.72	2,840,000
November.....	37,000	29,000	32,300	.436	.49	1,920,000
December.....	30,000	28,000	28,700	.387	.45	1,760,000
January.....	29,000	25,000	26,000	.351	.40	1,600,000
February.....	34,000	26,000	30,600	.413	.43	1,700,000
March.....	40,000	31,000	34,200	.462	.53	2,100,000
April.....	130,000	39,000	70,700	.954	1.06	4,210,000
May.....	183,000	142,000	169,000	2.28	2.63	10,400,000
June.....	150,000	133,000	140,000	1.89	2.11	8,330,000
July.....	162,000	113,000	141,000	1.90	2.19	8,670,000
August.....	110,000	81,000	89,400	1.21	1.40	5,600,000
September.....	87,000	54,000	70,400	.950	1.06	4,190,000
The year.....	183,000	25,000	73,500	.992	13.47	53,200,000
1926-27						
October.....	78,000	49,000	60,300	.814	.94	3,710,000
November.....	76,000	54,000	61,700	.833	.93	3,670,000
December.....	73,000	47,000	59,400	.802	.92	3,650,000
January.....	51,000	-	40,900	.552	.64	2,510,000
February.....	49,000	35,000	39,400	.532	.55	2,190,000
March.....	46,000	41,000	42,800	.578	.67	2,630,000
April.....	114,000	44,000	64,500	.870	.97	3,840,000
May.....	253,000	118,000	190,000	2.56	2.95	11,700,000
June.....	434,000	251,000	372,000	5.02	5.60	22,100,000
July.....	410,000	228,000	296,000	3.99	4.60	18,200,000
August.....	222,000	122,000	159,000	2.15	2.48	9,780,000
September.....	143,000	114,000	124,000	1.67	1.86	7,380,000
The year.....	434,000	-	126,000	1.70	23.11	91,400,000
1927-28						
October.....	120,000	102,000	107,000	1.44	1.66	6,580,000
November.....	116,000	104,000	107,000	1.44	1.61	6,370,000
December.....	114,000	66,000	89,700	1.21	1.40	5,520,000
January.....	66,000	54,000	59,800	.807	.93	3,680,000
February.....	58,000	43,000	50,600	.683	.74	2,910,000
March.....	88,000	40,000	59,700	.806	.93	3,670,000
April.....	125,000	85,000	94,900	1.28	1.43	5,650,000
May.....	490,000	126,000	286,000	3.86	4.45	17,600,000
June.....	490,000	286,000	355,000	4.79	5.34	21,100,000
July.....	310,000	202,000	260,000	3.51	4.05	16,000,000
August.....	200,000	99,000	144,000	1.94	2.24	8,850,000
September.....	96,900	57,700	78,600	1.06	1.18	4,680,000
The year.....	490,000	40,000	141,000	1.90	25.96	103,000,000

Monthly discharge of Columbia River at Grand Coulee--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	56,600	48,400	52,000	0.702	0.81	3,200,000
November.....	47,800	36,000	41,500	.567	.62	2,460,000
December.....	36,500	28,600	32,100	.433	.50	1,970,000
January.....	29,100	-	25,200	.340	.39	1,550,000
February.....	-	-	21,300	.287	.30	1,180,000
March.....	34,000	21,200	25,600	.345	.40	1,570,000
April.....	58,800	33,200	38,800	.524	.58	2,310,000
May.....	209,000	60,400	116,000	1.57	1.81	7,130,000
June.....	318,000	213,000	270,000	3.64	4.06	16,100,000
July.....	223,000	129,000	168,000	2.27	2.62	10,300,000
August.....	128,000	87,100	111,100	1.50	1.73	6,820,000
September.....	86,400	55,000	69,500	.938	1.05	4,140,000
The year.....	318,000	-	81,100	1.09	14.87	58,700,000
1929-30						
October.....	53,800	34,500	41,100	.555	.64	2,530,000
November.....	34,500	22,800	29,200	.394	.44	1,740,000
December.....	26,000	20,800	23,700	.320	.37	1,460,000
January.....	24,200	-	18,800	.254	.29	1,160,000
February.....	30,900	-	23,000	.310	.32	1,280,000
March.....	44,000	24,600	28,500	.385	.44	1,750,000
April.....	132,000	39,000	71,000	.958	1.07	4,220,000
May.....	174,000	139,000	160,000	2.16	2.49	9,840,000
June.....	251,000	178,000	222,000	3.00	3.35	13,200,000
July.....	221,000	155,000	195,000	2.63	3.03	12,000,000
August.....	147,000	97,000	124,000	1.67	1.92	7,620,000
September.....	94,100	60,400	77,000	1.04	1.16	4,680,000
The year.....	251,000	-	84,900	1.15	15.52	61,400,000
1930-31						
October.....	58,300	36,400	45,100	.609	.70	2,770,000
November.....	36,000	29,200	32,600	.440	.49	1,940,000
December.....	28,800	24,400	26,800	.362	.42	1,650,000
January.....	24,000	21,600	22,600	.305	.35	1,390,000
February.....	27,600	23,000	24,300	.328	.34	1,350,000
March.....	43,000	24,400	32,100	.438	.50	1,970,000
April.....	66,900	40,800	55,500	.749	.84	3,500,000
May.....	206,000	71,700	158,000	2.13	2.46	9,720,000
June.....	242,000	186,000	221,000	2.96	3.32	13,200,000
July.....	211,000	138,000	166,000	2.24	2.58	10,800,000
August.....	135,000	84,100	104,000	1.40	1.61	6,400,000
September.....	96,400	53,700	77,900	1.05	1.17	4,640,000
The year.....	242,000	21,600	80,800	1.09	14.78	58,500,000
1931-32						
October.....	52,500	35,400	43,000	.580	.67	2,640,000
November.....	35,400	30,400	34,100	.460	.51	2,030,000
December.....	29,900	26,300	28,200	.381	.44	1,730,000
January.....	36,400	24,500	29,900	.404	.47	1,840,000
February.....	45,900	-	26,900	.350	.38	1,490,000
March.....	71,700	45,400	56,300	.760	.88	3,460,000
April.....	160,000	72,900	115,000	1.55	1.73	6,840,000
May.....	319,000	162,000	254,000	3.43	3.95	15,600,000
June.....	360,000	299,000	334,000	4.51	5.03	19,900,000
July.....	334,000	168,000	237,000	3.20	3.69	14,600,000
August.....	166,000	112,000	130,000	1.75	2.02	7,990,000
September.....	111,000	56,900	78,800	1.06	1.18	4,690,000
The year.....	360,000	-	114,000	1.54	20.95	62,800,000
1932-33						
October.....	55,600	44,000	47,500	.641	.74	2,920,000
November.....	54,000	43,000	48,200	.650	.73	2,870,000
December.....	61,600	44,000	51,200	.691	.80	3,150,000
January.....	53,400	34,600	42,600	.575	.66	2,680,000
February.....	37,600	-	30,800	.416	.43	1,710,000
March.....	46,200	30,100	37,500	.506	.58	2,310,000
April.....	131,000	48,400	68,700	.927	1.03	4,090,000
May.....	272,000	141,000	194,000	2.62	3.02	11,900,000
June.....	467,000	280,000	392,000	5.29	5.90	23,500,000
July.....	432,000	235,000	337,000	4.55	5.25	20,700,000
August.....	229,000	124,000	167,000	2.25	2.59	10,300,000
September.....	121,000	71,000	93,100	1.26	1.41	5,540,000
The year.....	467,000	-	126,000	1.70	23.14	91,400,000

Monthly discharge of Columbia River at Grand Coulee--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	79,900	56,200	63,280	0.854	0.98	3,891,000
November.....	98,600	72,800	86,630	1.17	1.30	5,155,000
December.....	145,000	68,000	98,430	1.33	1.53	6,052,000
January.....	135,000	96,200	113,900	1.54	1.78	7,004,000
February.....	94,800	66,600	79,670	1.08	1.12	4,425,000
March.....	98,600	63,800	72,430	.977	1.13	4,454,000
April.....	299,000	103,000	168,600	2.28	2.54	10,030,000
May.....	357,000	302,000	315,200	4.25	4.90	19,380,000
June.....	378,000	220,000	311,700	4.21	4.70	18,550,000
July.....	215,000	145,000	176,100	2.58	2.74	10,830,000
August.....	150,000	91,100	117,200	1.58	1.82	7,204,000
September.....	91,100	54,000	73,800	.996	1.11	4,392,000
The year.....	378,000	54,000	140,000	1.89	25.65	101,400,000
1934-35						
October.....	51,400	41,600	45,170	.610	.70	2,778,000
November.....	61,900	44,600	56,900	.768	.86	3,386,000
December.....	59,700	45,000	51,010	.688	.79	3,136,000
January.....	50,900	31,400	42,770	.577	.67	2,630,000
February.....	53,600	47,600	50,190	.677	.70	2,788,000
March.....	52,000	41,600	47,800	.645	.74	2,939,000
April.....	112,000	47,000	67,330	.909	1.01	4,007,000
May.....	283,000	115,000	178,100	2.40	2.77	10,950,000
June.....	352,000	290,000	322,000	4.35	4.85	19,160,000
July.....	303,000	221,000	259,400	3.50	4.04	15,950,000
August.....	216,000	95,400	145,000	1.96	2.26	8,918,000
September.....	95,400	60,200	80,610	1.09	1.22	4,797,000
The year.....	352,000	31,400	112,500	1.52	20.61	81,440,000

Yearly discharge of Columbia River at Grand Coulee

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1914.....	112,000	1.51	20.60	81,400,000	114,000	1.54	20.97	82,900,000
1915.....	96,800	1.31	17.71	70,100,000	93,700	1.26	17.15	67,800,000
1916.....	135,000	1.82	24.77	98,000,000	135,000	1.82	24.76	98,000,000
1917.....	114,000	1.54	20.95	82,800,000	115,000	1.55	21.02	83,000,000
1918.....	118,000	1.59	21.68	85,700,000	119,000	1.61	21.79	86,100,000
1919.....	106,000	1.47	19.95	78,800,000	105,000	1.42	19.17	78,700,000
1920.....	98,900	1.33	18.15	71,800,000	107,000	1.44	19.65	77,700,000
1921.....	127,000	1.71	23.21	91,700,000	123,000	1.66	22.50	88,900,000
1922.....	103,000	1.39	18.93	74,900,000	101,000	1.36	18.45	73,000,000
1923.....	109,000	1.47	20.00	79,000,000	108,000	1.46	19.83	78,300,000
1924.....	86,200	1.16	15.86	62,600,000	88,300	1.19	16.23	64,100,000
1925.....	126,000	1.70	23.04	91,000,000	124,000	1.67	22.65	89,400,000
1926.....	73,500	.992	13.47	53,200,000	79,700	1.08	14.60	57,700,000
1927.....	126,000	1.70	23.11	91,400,000	136,000	1.84	24.99	98,800,000
1928.....	141,000	1.90	25.96	103,000,000	126,000	1.70	23.22	81,800,000
1929.....	81,100	1.09	14.87	58,700,000	78,500	1.06	14.39	56,800,000
1930.....	84,900	1.15	15.52	61,400,000	85,700	1.16	15.68	62,000,000
1931.....	80,800	1.09	14.78	58,500,000	80,900	1.09	14.79	58,600,000
1932.....	114,000	1.54	20.95	82,800,000	118,000	1.59	21.60	85,400,000
1933.....	126,000	1.70	23.14	91,400,000	135,000	1.82	24.68	97,600,000
1934.....	140,000	1.89	25.65	101,400,000	132,000	1.78	24.19	95,570,000
1935.....	112,500	1.52	20.61	81,440,000	-	-	-	-
Highest....	141,000	1.90	25.96	103,000,000	136,000	1.84	24.99	98,800,000
Average....	110,000	1.48	20.13	79,600,000	110,000	1.48	20.11	79,500,000
Lowest.....	73,500	.992	13.47	53,200,000	78,500	1.06	14.39	56,800,000

Columbia River at Trinidad, Wash.

(Formerly called Columbia River at Wenatchee and at Vernita)

Location.-- Water-stage recorder, lat. $47^{\circ}13'30''$, long. $120^{\circ}00'50''$, in SE $\frac{1}{4}$ sec. 13, T. 20 N., R. 22 E., half a mile southwest of Trinidad and 12 miles below Rock Island Dam. Prior to Oct. 1, 1930, staff-gage records were obtained at Wenatchee or Vernita, where the flow is practically the same as at Trinidad.

Drainage areas.-- 89,700 square miles at Trinidad; 88,500 square miles at Wenatchee; 95,600 square miles at Vernita.

Records available.-- 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; October 1930 to September 1935 at Trinidad.

Extremes.-- Maximum discharge recorded, 528,000 second-feet June 15, 16, 1913; minimum, 4,120 second-feet Feb. 10, 1932, result of regulation.

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

Remarks.-- Considerable water diverted for irrigation above gage but amount small in proportion to flow past gage. Some diurnal fluctuation at low stage as result of operation of Rock Island power plant. Natural storage in numerous lakes as well as artificial regulation of tributaries in Coeur d'Alene and Chelan Lakes.

Monthly discharge of Columbia River at Trinidad

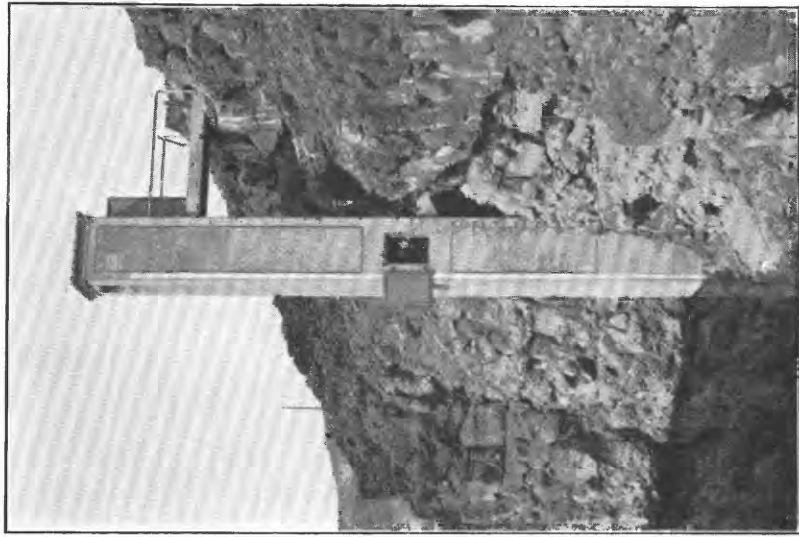
Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	68,800	37,500	49,700	0.520	0.60	3,060,000
November.....	37,500	33,900	36,400	.381	.43	2,170,000
December.....	35,100	23,900	28,100	.294	.34	1,730,000
January.....	-	-	27,500	.288	.33	1,690,000
February.....	-	-	31,100	.326	.35	1,790,000
March.....	41,200	27,200	32,100	.336	.39	1,970,000
April.....	60,500	33,900	44,400	.465	.52	2,640,000
May.....	211,000	64,600	146,000	1.53	1.76	8,980,000
June.....	323,000	194,000	253,000	2.65	2.96	15,100,000
July.....	359,000	282,000	338,000	3.54	4.08	20,800,000
August.....	274,000	128,000	192,000	2.01	2.32	11,600,000
September.....	126,000	91,100	99,500	1.04	1.16	5,920,000
The year.....	359,000	23,900	107,000	1.12	15.24	77,600,000
1920-21						
October.....	108,000	82,900	97,600	1.02	1.18	6,000,000
November.....	81,100	56,500	65,600	.687	.77	3,900,000
December.....	62,900	44,500	53,100	.556	.64	3,280,000
January.....	59,700	46,400	53,300	.568	.64	3,280,000
February.....	62,100	41,900	52,700	.552	.57	2,930,000
March.....	82,900	59,700	69,400	.727	.84	4,270,000
April.....	136,000	80,200	101,000	1.06	1.18	6,010,000
May.....	405,000	133,000	246,000	2.58	2.97	15,100,000
June.....	484,000	403,000	439,000	4.60	5.13	26,100,000
July.....	396,000	210,000	286,000	2.99	3.45	17,600,000
August.....	206,000	111,000	153,000	1.60	1.84	9,410,000
September.....	109,000	59,700	81,900	.858	.99	4,870,000
The year.....	484,000	41,900	142,000	1.49	20.20	103,000,000
1921-22						
October.....	62,100	52,700	56,100	.687	.69	3,450,000
November.....	68,000	49,800	61,300	.842	.72	3,650,000
December.....	80,200	49,100	58,300	.610	.70	3,580,000
January.....	47,100	-	38,600	.404	.47	2,370,000
February.....	-	-	29,700	.311	.32	1,650,000
March.....	36,300	27,200	31,100	.326	.38	1,910,000
April.....	82,000	35,700	54,800	.574	.64	3,260,000
May.....	282,000	83,800	165,000	1.73	1.99	10,100,000
June.....	424,000	300,000	391,000	4.09	4.56	23,300,000
July.....	339,000	160,000	245,000	2.67	2.96	15,100,000
August.....	166,000	116,000	136,000	1.42	1.64	8,360,000
September.....	116,000	77,500	97,900	1.02	1.14	5,830,000
The year.....	424,000	27,200	114,000	1.19	16.20	82,600,000
1922-23						
October.....	76,600	49,800	61,300	.642	.74	3,770,000
November.....	50,500	37,500	44,900	.470	.52	2,670,000
December.....	37,500	-	31,600	.331	.38	1,940,000
January.....	51,200	35,100	44,100	.462	.53	2,710,000
February.....	-	-	30,200	.316	.33	1,680,000
March.....	38,100	30,500	31,900	.334	.39	1,960,000
April.....	124,000	40,000	79,000	.827	.92	4,700,000
May.....	290,000	128,000	208,000	2.18	2.51	12,800,000
June.....	429,000	292,000	375,000	3.93	4.38	22,300,000
July.....	377,000	208,000	287,000	3.01	3.47	17,600,000
August.....	206,000	126,000	148,000	1.65	1.79	9,100,000
September.....	125,000	71,400	99,400	1.05	1.17	5,940,000
The year.....	429,000	-	120,000	1.26	17.13	87,200,000

Monthly discharge of Columbia River at Trinidad--Continued

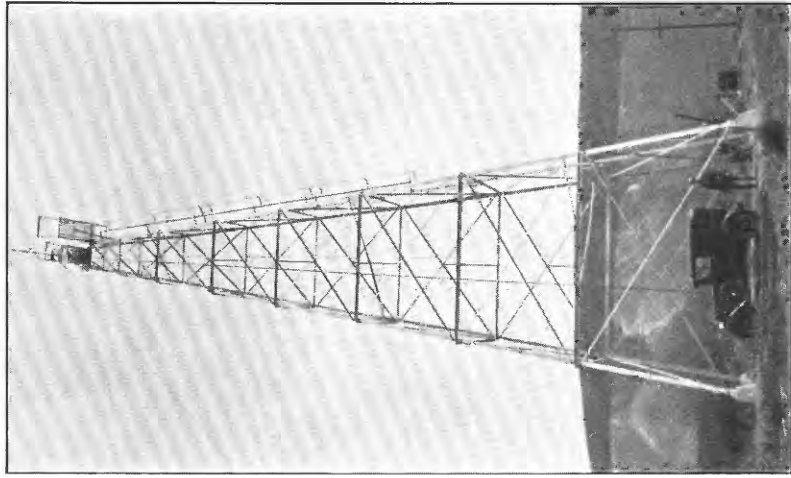
Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24						
October.....	68,800	44,500	53,800	0.563	0.65	3,310,000
November.....	44,500	33,900	37,800	.396	.44	2,250,000
December.....	36,300	30,500	33,000	.346	.40	2,030,000
January.....	27,800	-	26,200	.274	.32	1,610,000
February.....	54,200	32,700	47,100	.493	.53	2,710,000
March.....	50,500	40,000	45,800	.480	.55	2,820,000
April.....	62,900	36,500	47,500	.497	.55	2,850,000
May.....	337,000	66,500	208,000	2.18	2.51	12,800,000
June.....	311,000	194,000	261,000	2.73	2.93	14,900,000
July.....	214,000	128,000	175,000	1.83	2.11	10,800,000
August.....	131,000	107,000	119,000	1.25	1.44	7,320,000
September.....	109,000	63,800	88,300	.925	1.03	5,250,000
The year.....	337,000	-	94,600	.991	13.46	68,600,000
1924-25						
October.....	62,100	45,200	51,700	.541	.62	3,180,000
November.....	55,000	43,800	50,700	.531	.59	3,020,000
December.....	57,300	39,300	47,700	.499	.58	2,950,000
January.....	52,700	43,200	46,900	.491	.57	2,880,000
February.....	85,600	53,400	69,400	.727	.76	3,850,000
March.....	65,400	57,300	61,400	.643	.74	3,780,000
April.....	203,000	64,600	145,000	1.52	1.70	8,650,000
May.....	434,000	196,000	309,000	3.24	3.74	19,000,000
June.....	424,000	339,000	366,000	3.83	4.27	21,800,000
July.....	364,000	184,000	269,000	2.82	3.25	16,500,000
August.....	179,000	112,000	145,000	1.52	1.75	8,920,000
September.....	108,000	68,800	83,400	.873	.97	4,960,000
The year.....	434,000	39,300	137,000	1.43	19.54	99,400,000
1925-26						
October.....	68,500	43,400	53,800	.563	.65	3,310,000
November.....	42,800	33,800	37,600	.394	.44	2,240,000
December.....	37,000	33,200	34,600	.362	.42	2,130,000
January.....	35,000	29,000	31,100	.326	.38	1,910,000
February.....	37,600	29,000	34,400	.360	.37	1,910,000
March.....	49,600	35,600	39,600	.415	.48	2,430,000
April.....	144,000	48,200	75,300	.788	.88	4,480,000
May.....	195,000	153,000	181,000	1.90	2.19	11,100,000
June.....	165,000	140,000	149,000	1.56	1.74	8,870,000
July.....	165,000	117,000	149,000	1.56	1.80	9,160,000
August.....	116,000	84,400	96,300	1.01	1.16	5,920,000
September.....	88,800	58,600	77,300	.809	.90	4,600,000
The year.....	195,000	29,000	80,200	.840	11.41	58,100,000
1926-27						
October.....	82,600	53,200	64,600	.676	.78	3,970,000
November.....	80,800	59,400	69,000	.723	.81	4,110,000
December.....	77,200	53,900	67,100	.703	.81	4,130,000
January.....	56,200	36,300	48,300	.506	.58	2,970,000
February.....	53,200	39,600	44,600	.467	.49	2,480,000
March.....	51,000	48,200	49,500	.518	.60	3,040,000
April.....	116,000	50,200	66,900	.701	.78	3,980,000
May.....	275,000	122,000	199,000	2.08	2.40	12,200,000
June.....	471,000	277,000	406,000	4.25	4.74	24,200,000
July.....	445,000	240,000	329,000	3.45	3.98	20,200,000
August.....	235,000	129,000	172,000	1.80	2.08	10,600,000
September.....	149,000	120,000	132,000	1.38	1.54	7,860,000
The year.....	471,000	36,300	138,000	1.45	19.59	99,700,000
1927-28						
October.....	128,000	114,000	120,000	1.26	1.45	7,380,000
November.....	123,000	112,000	119,000	1.25	1.40	7,080,000
December.....	127,000	73,600	103,000	1.08	1.24	6,330,000
January.....	79,000	65,100	72,100	.755	.87	4,430,000
February.....	67,600	51,600	61,200	.641	.69	3,520,000
March.....	96,400	48,800	65,700	.688	.79	4,040,000
April.....	135,000	95,400	102,000	1.07	1.19	6,070,000
May.....	523,000	140,000	303,000	3.17	3.66	18,600,000
June.....	523,000	322,000	396,000	4.15	4.63	23,600,000
July.....	338,000	214,000	284,000	2.97	3.42	17,500,000
August.....	212,000	106,000	155,000	1.62	1.87	9,530,000
September.....	104,000	65,100	85,600	.896	1.00	5,090,000
The year.....	523,000	48,800	156,000	1.63	22.21	113,000,000

Monthly discharge of Columbia River at Trinidad--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	63,400	53,900	57,800	0.605	0.70	3,550,000
November.....	53,200	42,200	47,000	.492	.55	2,800,000
December.....	40,800	33,200	37,100	.398	.45	2,280,000
January.....	33,800	-	30,100	.315	.36	1,850,000
February.....	-	-	25,300	.265	.28	1,410,000
March.....	30,800	-	28,200	.295	.34	1,730,000
April.....	57,000	32,600	40,300	.422	.47	2,400,000
May.....	220,000	61,000	122,000	1.28	1.46	7,500,000
June.....	547,000	225,000	294,000	3.08	3.44	17,500,000
July.....	246,000	157,000	183,000	1.92	2.21	11,300,000
August.....	135,000	93,600	117,000	1.23	1.42	7,190,000
September.....	91,600	61,800	75,300	.768	.88	4,480,000
The year.....	347,000	-	88,300	.925	12.58	64,000,000
1929-30						
October.....	60,200	40,200	47,200	.494	.57	2,900,000
November.....	39,600	29,000	34,600	.362	.40	2,060,000
December.....	29,000	25,600	27,600	.289	.33	1,700,000
January.....	27,200	-	23,300	.244	.28	1,430,000
February.....	35,600	-	25,600	.268	.28	1,420,000
March.....	47,400	27,200	31,500	.330	.38	1,940,000
April.....	139,000	46,000	76,600	.802	.89	4,560,000
May.....	188,000	142,000	173,000	1.81	2.09	10,600,000
June.....	270,000	188,000	239,000	2.50	2.79	14,200,000
July.....	235,000	167,000	206,000	2.16	2.49	12,700,000
August.....	160,000	104,000	130,000	1.36	1.57	7,990,000
September.....	102,000	66,800	82,900	.868	.97	4,930,000
The year.....	270,000	-	91,900	.962	13.04	66,400,000
1930-31						
October.....	62,000	39,000	48,200	.537	.62	2,960,000
November.....	39,600	31,900	35,600	.397	.44	2,120,000
December.....	31,900	27,200	29,500	.329	.38	1,810,000
January.....	27,200	23,800	25,100	.280	.32	1,540,000
February.....	29,000	25,000	26,500	.295	.31	1,470,000
March.....	44,500	25,800	35,100	.369	.43	2,040,000
April.....	75,200	42,600	57,600	.642	.72	3,430,000
May.....	217,000	81,600	172,000	1.92	2.21	10,600,000
June.....	257,000	202,000	235,000	2.60	2.90	13,900,000
July.....	220,000	146,000	175,000	1.93	2.22	10,600,000
August.....	144,000	89,600	111,000	1.24	1.43	6,820,000
September.....	100,000	59,200	82,800	.923	1.03	4,930,000
The year.....	257,000	23,800	85,900	.958	13.01	62,200,000
1931-32						
October.....	56,700	38,200	46,000	.513	.59	2,830,000
November.....	39,000	34,800	37,100	.414	.46	2,210,000
December.....	33,300	26,700	30,600	.341	.39	1,880,000
January.....	38,000	27,200	32,400	.361	.42	1,990,000
February.....	63,600	22,900	29,000	.323	.35	1,670,000
March.....	74,400	52,200	61,900	.690	.80	3,610,000
April.....	168,000	77,600	120,000	1.34	1.50	7,140,000
May.....	336,000	173,000	271,000	3.02	3.48	16,700,000
June.....	385,000	314,000	356,000	3.97	4.43	21,200,000
July.....	354,000	171,000	247,000	2.75	3.17	15,200,000
August.....	168,000	117,000	134,000	1.49	1.72	8,240,000
September.....	115,000	60,800	85,000	.925	1.03	4,940,000
The year.....	385,000	22,900	121,000	1.35	18.34	87,800,000
1932-33						
October.....	59,400	47,200	50,600	.564	.65	3,110,000
November.....	66,400	43,400	54,600	.609	.68	3,250,000
December.....	71,300	51,600	58,700	.654	.75	3,610,000
January.....	58,800	39,800	47,200	.526	.61	2,900,000
February.....	42,200	31,500	35,400	.395	.41	1,970,000
March.....	45,900	33,600	40,700	.454	.52	2,600,000
April.....	139,000	47,200	71,100	.793	.88	4,230,000
May.....	293,000	147,000	203,000	2.26	2.61	12,500,000
June.....	508,000	304,000	430,000	4.79	5.34	25,600,000
July.....	476,000	250,000	367,000	4.09	4.72	22,600,000
August.....	240,000	128,000	174,000	1.94	2.24	10,700,000
September.....	124,000	76,600	97,700	1.09	1.22	5,810,000
The year.....	508,000	31,500	136,000	1.52	20.63	98,800,000



A. RECORDING-GAGE SHELTER AND STILLING WELL.
Capable of accommodating a range in stage of 56 feet; known natural range, 47 feet.



B. EAST CABLE TOWER.
Tower, 84 feet high; cable span, 1,654 feet.

Monthly discharge of Columbia River at Trinidad--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	92,000	64,300	71,000	0.792	0.91	4,366,000
November.....	111,000	84,600	99,380	1.11	1.24	5,914,000
December.....	155,000	75,800	108,100	1.21	1.40	6,644,000
January.....	149,000	108,000	122,900	1.37	1.58	7,557,000
February.....	104,000	76,600	89,390	.997	1.04	4,985,000
March.....	110,000	74,200	82,510	.920	1.06	5,073,000
April.....	344,000	117,000	196,500	2.19	2.44	11,690,000
May.....	388,000	232,000	348,500	3.89	4.48	21,430,000
June.....	401,000	236,000	334,200	3.73	4.16	19,890,000
July.....	228,000	146,000	182,400	2.03	2.34	11,210,000
August.....	151,000	94,300	120,800	1.35	1.56	7,428,000
September.....	94,300	58,800	78,110	.871	.97	4,648,000
The year.....	401,000	58,800	153,100	1.71	23.18	110,800,000
1934-35						
October.....	56,800	45,300	49,810	.555	.64	3,063,000
November.....	69,200	51,600	63,680	.710	.79	3,789,000
December.....	65,000	50,300	56,300	.628	.72	3,462,000
January.....	72,000	-	49,420	.551	.64	3,039,000
February.....	69,900	56,200	62,180	.693	.72	3,453,000
March.....	58,100	48,400	54,450	.607	.70	3,348,000
April.....	117,000	51,600	71,650	.799	.89	4,264,000
May.....	314,000	121,000	192,700	2.15	2.48	11,850,000
June.....	376,000	316,000	352,100	3.93	4.38	20,950,000
July.....	314,000	229,000	272,500	3.04	3.50	16,750,000
August.....	226,000	102,000	153,800	1.71	1.97	9,455,000
September.....	101,000	67,100	85,670	.955	1.07	5,098,000
The year.....	376,000	-	122,300	1.36	18.50	88,520,000

Yearly discharge of Columbia River at Trinidad

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1914.....	127,000	1.44	19.53	91,600,000	128,000	1.45	19.79	92,800,000
1915.....	106,000	1.20	16.30	76,900,000	103,000	1.16	15.77	74,400,000
1916.....	153,000	1.73	23.64	112,000,000	153,000	1.73	23.59	111,000,000
1917.....	127,000	1.34	18.20	91,900,000	128,000	1.34	18.24	92,800,000
1918.....	133,000	1.39	18.90	96,200,000	133,000	1.39	18.94	96,400,000
1919.....	123,000	1.29	17.45	88,800,000	118,000	1.24	16.77	85,300,000
1920.....	107,000	1.12	15.24	77,600,000	116,000	1.21	16.46	83,800,000
1921.....	142,000	1.49	20.20	103,000,000	138,000	1.45	19.71	100,000,000
1922.....	114,000	1.19	16.20	82,600,000	111,000	1.16	15.74	80,300,000
1923.....	120,000	1.26	17.13	87,200,000	119,000	1.25	16.98	86,400,000
1924.....	94,600	.991	13.46	68,600,000	96,700	1.01	13.76	70,200,000
1925.....	137,000	1.43	19.54	99,400,000	135,000	1.41	19.28	98,000,000
1926.....	80,200	.840	11.41	58,100,000	86,500	.906	12.30	62,600,000
1927.....	138,000	1.45	19.59	99,700,000	150,000	1.57	21.28	108,000,000
1928.....	156,000	1.63	22.21	113,000,000	139,000	1.46	19.82	101,000,000
1929.....	88,300	.925	12.58	64,000,000	85,700	.897	12.18	62,000,000
1930.....	91,900	.962	13.04	66,400,000	92,100	.980	13.18	66,700,000
1931.....	85,900	.958	13.01	62,200,000	86,000	.959	13.01	62,200,000
1932.....	121,000	1.36	18.34	87,800,000	125,000	1.39	18.98	90,900,000
1933.....	136,000	1.52	20.63	98,800,000	146,000	1.63	22.10	106,000,000
1934.....	153,100	1.71	23.18	110,800,000	143,900	1.60	21.78	104,200,000
1935.....	122,300	1.36	18.50	88,520,000	-	-	-	-
Highest.....	156,000	1.73	23.64	113,000,000	153,000	1.73	23.59	111,000,000
Average.....	121,000	1.30	17.65	87,500,000	121,000	1.29	17.60	87,400,000
Lowest.....	80,200	.840	11.41	58,100,000	85,700	.897	12.18	62,000,000

Columbia River at The Dalles, Oreg.

Location.- Water-stage recorder, lat. 45°39', long. 120°58', in NE¼ sec. 20, T. 2 N., R. 15 E., just above Celilo Falls and 11 miles east of The Dalles. Prior to May 2, 1935, records were obtained from staff gages at the following sites: June 1 to Dec. 11, 1878, at Umatilla, Oreg., 100 miles upstream from The Dalles; Dec. 12, 1878, to Oct. 9, 1879, just above the Cascades, 42 miles downstream from The Dalles; Oct. 10, 1879, to June 30, 1881, at The Dalles; July 1, 1881, to Jan. 31, 1892, just above the Cascades; Feb. 1, 1892, to Sept. 30, 1931, at The Dalles; Oct. 1, 1931, to May 1, 1935, just above Celilo Falls. The Umatilla, John Day, and Deschutes Rivers enter between Umatilla and Celilo Falls; Hood, Klickitat, and White Salmon Rivers enter between The Dalles and the Cascades.

Drainage area.- 237,000 square miles (above The Dalles).

Records available.- June 1878 to September 1935; 1858 to 1877, maximum stages only.

Extremes.- Maximum discharge observed, 1,170,000 second-feet June 6, 1894; minimum observed, 40,000 second-feet Jan. 18, 21, 1930, Feb. 3, 4, 1932.

Remarks.- Storage and diversion for irrigation only a small part of total run-off.

Monthly discharge of Columbia River at The Dalles

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	86,600	66,200	75,400	0.318	0.37	4,640,000
November.....	75,400	63,600	70,300	.297	.33	4,180,000
December.....	101,000	47,000	69,000	.291	.34	4,240,000
January.....	130,000	60,600	81,600	.344	.40	5,020,000
February.....	114,000	66,800	79,400	.335	.36	4,570,000
March.....	100,000	65,600	80,600	.340	.39	4,960,000
April.....	147,000	83,800	118,000	.498	.56	7,020,000
May.....	342,000	144,000	252,000	1.06	1.22	15,500,000
June.....	428,000	284,000	362,000	1.53	1.71	21,500,000
July.....	599,000	325,000	376,000	1.59	1.83	23,100,000
August.....	511,000	146,000	314,000	.903	1.04	13,200,000
September.....	146,000	110,000	120,000	.506	.56	7,140,000
The year.....	428,000	47,000	158,000	.667	9.11	115,000,000
1920-21						
October.....	144,000	121,000	133,000	.561	.65	8,180,000
November.....	131,000	92,200	111,000	.468	.52	6,600,000
December.....	117,000	86,600	98,500	.416	.48	6,060,000
January.....	183,000	96,400	125,000	.527	.61	7,690,000
February.....	185,000	92,200	129,000	.544	.57	7,160,000
March.....	251,000	144,000	193,000	.814	.94	11,900,000
April.....	295,000	176,000	219,000	.924	1.03	13,000,000
May.....	702,000	251,000	450,000	1.90	2.19	27,700,000
June.....	773,000	520,000	661,000	2.79	3.11	39,300,000
July.....	509,000	242,000	347,000	1.46	1.68	21,300,000
August.....	237,000	143,000	182,000	.768	.89	11,200,000
September.....	140,000	89,800	109,000	.460	.51	6,490,000
The year.....	773,000	86,600	230,000	.970	13.18	167,000,000
1921-22						
October.....	90,400	81,000	86,300	.364	.42	5,310,000
November.....	111,000	89,500	99,700	.421	.47	5,930,000
December.....	169,000	94,000	124,000	.523	.60	7,620,000
January.....	91,300	65,300	78,600	.332	.38	4,830,000
February.....	82,600	68,000	74,300	.313	.33	4,130,000
March.....	135,000	64,400	87,200	.368	.42	5,360,000
April.....	212,000	124,000	164,000	.692	.77	9,760,000
May.....	479,000	209,000	329,000	1.39	1.60	20,200,000
June.....	677,000	447,000	579,000	2.44	2.72	34,500,000
July.....	430,000	191,000	292,000	1.23	1.42	18,000,000
August.....	187,000	137,000	161,000	.679	.78	9,900,000
September.....	136,000	100,000	119,000	.502	.56	7,080,000
The year.....	677,000	64,400	183,000	.772	10.47	133,000,000
1922-23						
October.....	98,000	77,500	86,500	.365	.42	5,320,000
November.....	79,600	71,000	77,100	.325	.36	4,590,000
December.....	85,900	56,000	70,000	.295	.34	4,300,000
January.....	163,000	82,600	109,000	.456	.53	6,640,000
February.....	79,600	61,400	71,400	.301	.31	3,970,000
March.....	116,000	77,500	84,000	.354	.41	5,160,000
April.....	215,000	129,000	176,000	.743	.83	10,500,000
May.....	445,000	205,000	321,000	1.35	1.56	19,700,000
June.....	561,000	412,000	507,000	2.14	2.39	30,200,000
July.....	505,000	239,000	359,000	1.49	1.72	21,600,000
August.....	234,000	143,000	174,000	.734	.85	10,700,000
September.....	150,000	95,000	121,000	.511	.57	7,200,000
The year.....	561,000	56,000	179,000	.755	10.29	130,000,000

Monthly discharge of Columbia River at The Dalles--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24						
October.....	94,000	79,600	85,500	0.351	0.42	5,260,000
November.....	79,600	69,800	73,400	.310	.35	4,370,000
December.....	86,500	68,600	75,200	.317	.37	4,620,000
January.....	77,500	60,800	67,400	.284	.33	4,140,000
February.....	136,000	82,600	119,000	.502	.54	6,840,000
March.....	112,000	80,500	94,000	.397	.46	5,780,000
April.....	123,000	75,000	103,000	.435	.49	6,130,000
May.....	433,000	131,000	301,000	1.27	1.46	18,500,000
June.....	381,000	220,000	292,000	1.23	1.37	17,400,000
July.....	230,000	145,000	195,000	.823	.95	12,000,000
August.....	145,000	117,000	132,000	.557	.64	8,120,000
September.....	118,000	83,400	103,000	.435	.49	6,130,000
The year.....	433,000	60,800	137,000	.578	7.87	99,300,000
1924-25						
October.....	84,500	68,000	74,000	.312	.36	4,550,000
November.....	107,000	71,000	85,700	.362	.40	5,100,000
December.....	87,500	74,100	78,700	.332	.38	4,840,000
January.....	115,000	81,000	95,200	.402	.46	5,850,000
February.....	233,000	122,000	159,000	.671	.70	8,830,000
March.....	141,000	111,000	126,000	.532	.61	7,750,000
April.....	363,000	147,000	270,000	1.14	1.27	16,100,000
May.....	642,000	291,000	467,000	1.97	2.27	28,700,000
June.....	616,000	416,000	472,000	1.99	2.22	28,100,000
July.....	435,000	199,000	315,000	1.33	1.53	19,400,000
August.....	198,000	132,000	167,000	.705	.81	10,300,000
September.....	131,000	94,100	106,000	.447	.50	6,310,000
The year.....	642,000	68,000	201,000	.848	11.51	146,000,000
1925-26						
October.....	94,100	73,400	84,100	.355	.41	5,170,000
November.....	78,200	68,000	71,700	.303	.34	4,270,000
December.....	83,400	68,000	73,500	.310	.36	4,520,000
January.....	72,800	63,200	66,900	.282	.33	4,110,000
February.....	123,000	63,800	91,000	.384	.40	5,050,000
March.....	114,000	86,800	97,300	.411	.47	5,980,000
April.....	202,000	97,000	140,000	.591	.66	8,330,000
May.....	269,000	219,000	245,000	1.03	1.19	15,100,000
June.....	216,000	162,000	181,000	.764	.85	10,800,000
July.....	181,000	129,000	164,000	.692	.80	10,100,000
August.....	126,000	97,000	108,000	.456	.53	6,640,000
September.....	102,000	78,200	91,800	.387	.43	5,460,000
The year.....	269,000	63,200	118,000	.498	6.77	85,500,000
1926-27						
October.....	106,000	74,000	85,100	.359	.41	5,230,000
November.....	137,000	92,200	102,000	.430	.48	6,070,000
December.....	168,000	91,300	123,000	.519	.60	7,560,000
January.....	113,000	82,500	97,800	.413	.48	6,010,000
February.....	190,000	88,600	121,000	.511	.53	6,720,000
March.....	129,000	112,000	120,000	.506	.58	7,380,000
April.....	276,000	120,000	147,000	.620	.69	8,750,000
May.....	433,000	243,000	329,000	1.39	1.60	20,200,000
June.....	690,000	428,000	598,000	2.52	2.81	35,600,000
July.....	602,000	266,000	401,000	1.69	1.95	24,700,000
August.....	260,000	145,000	193,000	.814	.94	11,900,000
September.....	172,000	136,000	153,000	.646	.72	9,100,000
The year.....	690,000	74,000	206,000	.869	11.79	149,000,000
1927-28						
October.....	165,000	150,000	156,000	.658	.76	9,590,000
November.....	278,000	155,000	201,000	.848	.95	12,000,000
December.....	269,000	111,000	184,000	.776	.89	11,300,000
January.....	230,000	104,000	150,000	.633	.73	9,220,000
February.....	143,000	98,500	121,000	.511	.55	6,960,000
March.....	237,000	96,300	164,000	.692	.80	10,100,000
April.....	264,000	178,000	204,000	.861	.96	12,100,000
May.....	766,000	275,000	495,000	2.09	2.41	30,400,000
June.....	741,000	379,000	504,000	2.13	2.38	30,000,000
July.....	377,000	234,000	314,000	1.32	1.52	19,300,000
August.....	230,000	122,000	173,000	.730	.84	10,600,000
September.....	120,000	86,800	104,000	.439	.49	6,190,000
The year.....	766,000	86,800	231,000	.975	13.28	168,000,000

Monthly discharge of Columbia River at The Dalles--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	92,200	83,800	87,200	0.368	0.42	5,360,000
November.....	88,400	69,000	79,700	.336	.37	4,740,000
December.....	70,600	60,700	65,600	.277	.32	4,030,000
January.....	69,800	43,200	58,800	.248	.29	3,620,000
February.....	74,800	44,100	58,100	.245	.26	3,230,000
March.....	102,000	76,600	86,600	.365	.42	5,320,000
April.....	142,000	90,300	105,000	.443	.49	6,250,000
May.....	340,000	150,000	215,000	.907	1.05	13,200,000
June.....	460,000	300,000	384,000	1.62	1.81	22,800,000
July.....	320,000	162,000	220,000	.928	1.07	13,500,000
August.....	158,000	113,000	137,000	.578	.67	8,420,000
September.....	111,000	81,800	94,400	.398	.44	5,620,000
The year.....	460,000	43,200	133,000	.561	7.61	96,100,000
1929-30						
October.....	83,800	62,700	69,400	.293	.38	4,270,000
November.....	67,100	58,200	62,700	.265	.30	3,730,000
December.....	78,400	55,000	62,900	.265	.31	3,870,000
January.....	60,700	40,000	48,700	.205	.24	2,990,000
February.....	97,200	52,100	83,200	.351	.37	4,620,000
March.....	110,000	64,700	75,600	.319	.37	4,650,000
April.....	225,000	106,000	147,000	.620	.69	8,750,000
May.....	268,000	226,000	248,000	1.05	1.21	15,200,000
June.....	332,000	268,000	297,000	1.25	1.40	17,700,000
July.....	268,000	189,000	231,000	.975	1.12	14,200,000
August.....	186,000	124,000	149,000	.629	.73	9,160,000
September.....	120,000	89,400	101,000	.426	.48	6,010,000
The year.....	332,000	40,000	131,000	.553	7.60	95,200,000
1930-31						
October.....	86,600	65,400	76,500	.323	.37	4,700,000
November.....	68,200	62,000	64,400	.272	.30	3,830,000
December.....	62,700	52,100	59,400	.251	.29	3,650,000
January.....	62,000	50,800	54,900	.232	.27	3,380,000
February.....	60,000	52,300	56,900	.240	.25	3,160,000
March.....	109,000	56,700	76,200	.322	.37	4,690,000
April.....	207,000	114,000	133,000	.561	.63	7,910,000
May.....	308,000	135,000	246,000	1.04	1.20	15,100,000
June.....	292,000	255,000	273,000	1.15	1.28	16,200,000
July.....	247,000	162,000	196,000	.827	.95	12,100,000
August.....	159,000	101,000	127,000	.536	.62	7,810,000
September.....	114,000	82,000	99,500	.420	.47	5,920,000
The year.....	308,000	50,800	122,000	.515	7.00	88,400,000
1931-32						
October.....	84,100	63,400	70,700	.298	.34	4,350,000
November.....	67,100	63,400	66,000	.278	.31	3,930,000
December.....	65,200	53,500	59,300	.250	.29	3,650,000
January.....	77,300	56,600	64,800	.273	.31	3,980,000
February.....	121,000	43,200	59,500	.251	.27	3,420,000
March.....	250,000	110,000	169,000	.671	.77	9,780,000
April.....	286,000	190,000	237,000	1.00	1.12	14,100,000
May.....	565,000	289,000	442,000	1.86	2.14	27,200,000
June.....	540,000	430,000	480,000	2.03	2.26	28,600,000
July.....	456,000	206,000	308,000	1.30	1.50	18,900,000
August.....	206,000	139,000	165,000	.696	.80	10,100,000
September.....	139,000	91,000	113,000	.477	.53	6,720,000
The year.....	565,000	43,200	186,000	.785	10.64	135,000,000
1932-33						
October.....	88,700	77,300	78,800	.332	.38	4,850,000
November.....	126,000	77,300	93,200	.393	.44	5,550,000
December.....	110,000	73,100	95,000	.401	.46	5,840,000
January.....	121,000	71,100	90,500	.382	.44	5,560,000
February.....	95,600	47,200	70,200	.296	.31	3,900,000
March.....	116,000	69,100	94,700	.400	.46	5,820,000
April.....	279,000	121,000	182,000	.641	.72	9,040,000
May.....	427,000	261,000	311,000	1.31	1.61	19,100,000
June.....	722,000	453,000	620,000	2.62	2.92	36,900,000
July.....	565,000	289,000	423,000	1.78	2.05	26,000,000
August.....	282,000	167,000	212,000	.895	1.03	13,000,000
September.....	168,000	113,000	131,000	.553	.62	7,800,000
The year.....	722,000	47,200	198,000	.835	11.34	143,400,000

Monthly discharge of Columbia River at The Dalles--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	128,000	91,000	103,200	0.435	0.50	6,347,000
November.....	181,000	126,000	146,400	.618	.69	8,713,000
December.....	368,000	118,000	191,300	.807	.93	11,760,000
January.....	268,000	173,000	214,900	.907	1.05	13,220,000
February.....	181,000	131,000	156,200	.659	.69	8,676,000
March.....	212,000	128,000	156,100	.659	.76	9,600,000
April.....	438,000	223,000	295,900	1.25	1.40	17,610,000
May.....	453,000	394,000	422,900	1.78	2.05	26,010,000
June.....	442,000	282,000	379,900	1.60	1.79	22,610,000
July.....	275,000	175,000	216,900	.915	1.05	13,330,000
August.....	175,000	121,000	148,300	.626	.72	9,116,000
September.....	121,000	86,400	102,900	.434	.48	6,121,000
The year.....	453,000	86,400	211,500	.892	12.11	153,100,000
1934-35						
October.....	91,200	63,400	74,480	.314	.36	4,580,000
November.....	106,000	79,500	97,960	.413	.46	5,829,000
December.....	103,000	81,800	93,170	.393	.45	5,729,000
January.....	126,000	61,600	85,800	.362	.42	5,276,000
February.....	118,000	93,600	108,800	.446	.46	5,878,000
March.....	121,000	81,800	97,650	.412	.48	6,004,000
April.....	200,000	93,600	143,600	.606	.68	8,547,000
May.....	427,000	206,000	288,100	1.22	1.41	17,770,000
June.....	476,000	368,000	440,000	1.86	2.08	26,180,000
July.....	365,000	264,000	312,300	1.32	1.52	19,200,000
August.....	261,000	131,000	188,000	.793	.91	11,560,000
September.....	126,000	94,800	112,200	.473	.53	6,672,000
The year.....	476,000	61,600	170,200	.718	9.76	123,200,000

Yearly discharge of Columbia River at The Dalles

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1879.....	242,000	1.02	13.85	175,000,000	243,000	1.03	13.93	176,000,000
1880.....	264,000	1.11	15.18	192,000,000	267,000	1.13	15.35	194,000,000
1881.....	252,000	1.06	14.46	183,000,000	252,000	1.06	14.42	182,000,000
1882.....	232,000	.979	13.30	168,000,000	234,000	.987	13.38	169,000,000
1883.....	212,000	.895	12.14	154,000,000	205,000	.865	11.75	149,000,000
1884.....	215,000	.907	12.34	156,000,000	224,000	.945	12.86	163,000,000
1885.....	214,000	.903	12.28	155,000,000	212,000	.895	12.17	154,000,000
1886.....	211,000	.890	12.07	153,000,000	203,000	.857	11.64	147,000,000
1887.....	261,000	1.10	14.96	189,000,000	267,000	1.13	15.31	194,000,000
1888.....	203,000	.857	11.63	147,000,000	200,000	.844	11.49	145,000,000
1889.....	135,000	.569	7.72	97,000,000	131,000	.553	7.51	94,800,000
1890.....	197,000	.831	11.29	143,000,000	197,000	.831	11.29	143,000,000
1891.....	167,000	.705	9.55	121,000,000	172,000	.726	9.83	124,000,000
1892.....	198,000	.835	11.38	144,000,000	198,000	.835	11.37	144,000,000
1893.....	220,000	.928	12.59	159,000,000	231,000	.975	13.24	167,000,000
1894.....	311,000	1.31	17.77	225,000,000	307,000	1.30	17.54	222,000,000
1895.....	194,000	.819	11.13	140,000,000	183,000	.772	10.50	132,000,000
1896.....	229,000	.966	13.15	166,000,000	239,000	1.01	13.73	174,000,000
1897.....	243,000	1.03	13.87	176,000,000	241,000	1.02	13.78	174,000,000
1898.....	230,000	.970	13.19	167,000,000	222,000	.937	12.71	161,000,000
1899.....	236,000	.996	13.50	171,000,000	250,000	1.05	14.33	181,000,000
1900.....	224,000	.945	12.85	163,000,000	220,000	.928	12.61	160,000,000
1901.....	219,000	.924	12.53	158,000,000	209,000	.882	11.99	151,000,000
1902.....	198,000	.835	11.32	143,000,000	197,000	.831	11.27	143,000,000
1903.....	211,000	.890	12.09	153,000,000	224,000	.945	12.84	162,000,000
1904.....	242,000	1.02	13.89	176,000,000	227,000	.958	13.06	158,000,000
1905.....	141,000	.595	8.10	102,000,000	143,000	.603	8.19	103,000,000
1906.....	158,000	.667	9.04	114,000,000	166,000	.700	9.50	120,000,000
1907.....	229,000	.966	13.12	166,000,000	224,000	.945	12.84	162,000,000
1908.....	197,000	.831	11.30	143,000,000	194,000	.819	11.13	141,000,000
1909.....	192,000	.810	11.02	139,000,000	202,000	.852	11.56	146,000,000
1910.....	213,000	.899	12.21	154,000,000	210,000	.886	12.05	152,000,000

Yearly discharge of Columbia River at The Dalles--Continued

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	188,000	.793	10.78	136,000,000	180,000	.759	10.31	130,000,000
1912.....	184,000	.776	10.56	134,000,000	186,000	.785	10.68	136,000,000
1913.....	214,000	.903	12.23	155,000,000	216,000	.911	12.37	156,000,000
1914.....	187,000	.789	10.69	135,000,000	189,000	.797	10.80	137,000,000
1915.....	147,000	.620	8.45	107,000,000	142,000	.599	8.13	103,000,000
1916.....	238,000	1.00	13.80	173,000,000	240,000	1.01	13.87	174,000,000
1917.....	210,000	.886	12.03	152,000,000	214,000	.903	12.24	155,000,000
1918.....	205,000	.865	11.72	148,000,000	201,000	.848	11.51	146,000,000
1919.....	172,000	.726	9.86	125,000,000	168,000	.709	9.63	122,000,000
1920.....	158,000	.667	9.11	115,000,000	169,000	.713	9.72	123,000,000
1921.....	230,000	.970	13.18	167,000,000	227,000	.958	13.02	165,000,000
1922.....	183,000	.772	10.47	133,000,000	177,000	.747	10.10	128,000,000
1923.....	179,000	.755	10.29	130,000,000	179,000	.755	10.31	130,000,000
1924.....	137,000	.578	7.87	99,300,000	137,000	.578	7.87	99,500,000
1925.....	201,000	.848	11.51	146,000,000	201,000	.848	11.48	145,000,000
1926.....	118,000	.498	6.77	85,500,000	125,000	.527	7.15	90,400,000
1927.....	206,000	.869	11.79	149,000,000	225,000	.949	12.90	163,000,000
1928.....	231,000	.975	13.28	168,000,000	205,000	.865	11.79	149,000,000
1929.....	133,000	.561	7.61	96,100,000	150,000	.549	7.49	93,800,000
1930.....	131,000	.553	7.60	95,200,000	132,000	.557	7.57	95,500,000
1931.....	122,000	.515	7.00	88,400,000	122,000	.515	6.98	88,200,000
1932.....	186,000	.785	10.64	135,000,000	192,000	.810	10.98	139,000,000
1933.....	198,000	.835	11.34	143,400,000	212,700	.899	12.18	154,000,000
1934.....	211,500	.892	12.11	153,100,000	196,700	.830	11.26	142,400,000
1935.....	170,200	.718	9.76	123,200,000	-	-	-	-
Highest.....	311,000	1.31	17.77	225,000,000	307,000	1.30	17.54	222,000,000
Average.....	201,000	.846	11.50	145,000,000	201,000	.849	11.53	146,000,000
Lowest.....	118,000	.498	6.77	85,500,000	122,000	.515	6.98	88,200,000

CLARK FORK (PEND OREILLE RIVER) BASIN

Clark Fork at Priest River, Idaho

(Formerly called Clark Fork at Newport, Wash.)

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. Prior to May 1, 1905, wire gage. Discharge measurements made at highway bridge at Newport, Wash., 6 miles downstream. May 1, 1905, to Sept. 21, 1928, discharge computed from staff-gage records at Newport or at Metaline Falls.

Drainage area.— 24,200 square miles.

Records available.— June 1903 to September 1935.

Extremes.— Maximum discharge observed, 136,000 second-feet June 15, 1913, June 21, 1933; minimum observed, 2,200 second-feet Dec. 12, 1919.

Maximum discharge known, 217,000 second-feet, estimated, in June 1894 (stage determined from floodmarks referred to Newport gage).

Remarks.— Several small diversions from upper tributaries for irrigation probably affect flow at gage by less than 2 percent. Flow subject to natural regulation in several lakes and to slight artificial regulation during log-driving seasons, owing to operation of flash dam on tributary of Priest River.

This report contains all records adjusted for natural storage in Pend Oreille Lake.

Monthly discharge of Clark Fork at Priest River

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	
1903									
July.....	102,000	44,800	71,400	4,390,000	-879,000	3,510,000	*57,100	2.36	2.72
August...	44,200	19,000	28,600	1,760,000	-439,000	1,320,000	21,500	.888	1.02
September	18,500	14,100	15,500	922,000	-89,800	832,000	14,000	.579	.65
Period..	-	-	-	7,070,000	-1,410,000	5,660,000	-	-	-

*Estimated.

Monthly discharge of Clark Fork at Priest River--Continued

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	
1903-4									
October..	16,200	14,100	15,200	935,000	+29,800	965,000	15,700	.649	.75
November..	17,100	14,900	15,700	934,000	-4,200	930,000	15,600	.645	.72
December..	16,600	14,900	16,100	990,000	-8,600	981,000	16,000	.661	.76
January..	14,500	11,700	13,000	799,000	-59,400	740,000	12,000	.496	.57
February..	11,700	10,300	10,900	627,000	-29,400	598,000	10,400	.430	.46
March....	14,900	10,700	13,300	818,000	+59,100	877,000	14,300	.591	.68
April.....	58,400	13,300	31,300	1,860,000	+757,000	2,620,000	44,000	1.82	2.03
May.....	87,500	60,400	73,200	4,500,000	+434,000	4,930,000	80,200	3.31	3.82
June.....	88,200	69,700	82,000	4,880,000	-261,000	4,620,000	77,600	3.21	3.58
July.....	68,300	32,000	50,000	3,070,000	-602,000	2,470,000	40,200	1.66	1.91
August....	31,400	14,100	21,100	1,300,000	-316,000	984,000	16,000	.661	.76
September	14,100	9,700	11,800	702,000	-80,200	622,000	10,500	.434	.48
The year	88,200	9,700	29,500	21,400,000	-80,900	21,300,000	29,400	1.21	16.52
1904-5									
October..	9,700	8,510	9,030	555,000	-25,200	530,000	8,620	.356	.41
November..	9,100	7,940	8,420	501,000	+8,400	509,000	8,550	.353	.39
December..	8,510	7,940	8,140	501,000	-12,600	488,000	7,940	.328	.38
January..	8,510	4,260	7,640	470,000	+4,200	474,000	7,710	.319	.37
February..	8,510	4,690	7,170	398,000	-4,200	394,000	7,090	.293	.31
March....	11,700	8,220	9,980	614,000	+67,200	681,000	11,100	.459	.53
April.....	16,600	11,400	12,600	750,000	+89,200	839,000	14,100	.583	.65
May.....	29,700	16,100	21,700	1,330,000	+230,000	1,560,000	25,400	1.05	1.21
June.....	50,800	30,200	44,500	2,650,000	+230,000	2,880,000	48,400	2.00	2.23
July.....	42,800	19,400	30,300	1,860,000	-408,000	1,450,000	23,600	.975	1.12
August....	19,400	10,300	13,900	855,000	-149,000	706,000	11,500	.475	.55
September	10,300	8,160	9,030	537,000	-54,600	482,000	8,100	.335	.37
The year	50,800	4,260	15,200	11,000,000	-24,600	11,000,000	15,200	.628	8.52
1905-6									
October..	10,100	8,390	9,500	584,000	+25,200	609,000	9,900	.409	.47
November..	9,820	9,340	9,640	574,000	-8,400	566,000	9,510	.393	.44
December..	9,340	7,940	8,710	536,000	-25,200	511,000	8,310	.343	.40
January..	8,160	7,500	7,700	473,000	+4,200	477,000	7,760	.321	.37
February..	10,100	7,720	8,420	468,000	+37,800	506,000	9,110	.376	.39
March....	10,600	6,870	9,430	580,000	+8,400	588,000	9,560	.395	.46
April.....	28,200	10,600	17,500	1,040,000	+313,000	1,350,000	22,700	.938	1.05
May.....	41,200	28,700	36,700	2,260,000	+221,000	2,480,000	40,300	1.67	1.92
June.....	43,800	36,900	42,200	2,510,000	-71,200	2,440,000	41,000	1.69	1.89
July.....	36,900	19,000	28,700	1,760,000	-310,000	1,450,000	23,600	.975	1.12
August....	18,600	11,800	13,900	855,000	-132,000	723,000	11,800	.488	.56
September	11,800	9,100	10,300	613,000	-50,400	563,000	9,460	.391	.44
The year	43,800	6,870	16,900	12,300,000	+12,400	12,300,000	16,900	.698	9.51
1906-7									
October..	9,100	8,620	8,810	542,000	-8,400	534,000	8,680	.359	.41
November..	22,100	8,620	15,400	916,000	+238,000	1,150,000	19,300	.798	.89
December..	-	-	18,900	1,160,000	-73,100	1,090,000	*17,700	.731	.84
January..	-	-	16,500	1,000,000	-47,000	953,000	*15,500	.640	.74
February..	-	-	14,500	805,000	+38,400	843,000	*15,200	.628	.65
March....	19,000	15,100	17,000	1,050,000	+34,400	1,080,000	17,600	.727	.84
April.....	39,000	18,600	28,400	1,690,000	+336,000	2,030,000	34,100	1.41	1.57
May.....	83,200	38,000	57,300	3,520,000	+692,000	4,210,000	68,500	2.83	3.26
June.....	95,200	83,200	90,200	5,370,000	+89,300	5,460,000	91,800	3.79	4.23
July.....	90,100	48,100	73,700	4,530,000	-625,000	3,900,000	63,400	2.62	3.02
August....	54,700	31,600	45,200	2,780,000	-275,000	2,500,000	40,700	1.68	1.94
September	30,200	15,400	22,000	1,310,000	-281,000	1,030,000	17,300	.715	.80
The year	92,200	8,620	34,100	24,700,000	+119,000	24,800,000	34,200	1.41	19.19
1907-8									
October..	-	-	14,200	873,000	-34,000	839,000	*13,600	.562	.65
November..	-	-	12,800	762,000	-12,800	749,000	*12,600	.521	.58
December..	-	-	13,200	812,000	-17,000	795,000	*12,900	.533	.61
January..	-	-	10,800	664,000	-33,600	630,000	*10,200	.421	.49
February..	-	-	9,600	552,000	-16,800	535,000	*9,300	.384	.41
March....	13,900	9,340	11,500	707,000	+84,400	791,000	12,900	.533	.61
April.....	44,300	13,900	22,200	1,320,000	+524,000	1,840,000	30,900	1.25	1.43
May.....	68,700	44,900	59,400	3,650,000	+380,000	4,030,000	65,500	2.71	3.12
June.....	124,000	69,200	103,000	6,130,000	+464,000	6,590,000	111,000	4.69	5.12
July.....	94,500	41,200	60,600	3,750,000	-893,000	2,840,000	46,200	1.91	2.20
August....	40,200	16,500	25,800	1,890,000	-424,000	1,470,000	19,000	.785	.90
September	16,500	10,600	13,300	791,000	-110,000	681,000	11,400	.471	.53
The year	124,000	-	29,700	21,600,000	-88,800	21,500,000	29,600	1.22	16.65

*Estimated.

Monthly discharge of Clark Fork at Priest River--Continued

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	
1908-9									
October..	13,000	9,710	11,300	695,000	+42,200	737,000	12,000	0.496	0.57
November.	13,000	11,600	12,400	738,000	-12,800	725,000	12,200	.504	.56
December.	11,000	8,700	9,770	601,000	-58,900	542,000	8,810	.364	.42
January..	15,400	5,760	9,580	589,000	+118,000	707,000	11,500	.475	.55
February.	15,400	9,980	12,000	666,000	-80,600	585,000	10,500	.454	.45
March....	13,700	11,300	12,000	738,000	+50,800	789,000	12,800	.529	.61
April.....	22,000	13,700	17,300	1,030,000	+146,000	1,180,000	19,800	.818	.91
May.....	53,400	21,000	32,300	1,990,000	+526,000	2,520,000	41,000	1.69	1.95
June.....	104,000	57,400	91,100	5,420,000	+653,000	6,070,000	102,000	4.21	4.70
July.....	97,100	42,300	67,000	4,120,000	-832,000	3,290,000	55,500	2.21	2.55
August....	41,100	18,300	28,500	1,750,000	-412,000	1,340,000	21,800	.901	1.04
September	17,900	12,000	14,200	845,000	-107,000	738,000	12,400	.512	.57
The year	104,000	5,760	26,500	19,200,000	+32,800	19,200,000	26,600	1.10	14.88
1909-10									
October..	12,000	10,300	11,200	689,000	-33,700	655,000	10,700	.442	.51
November.	24,700	10,600	15,000	893,000	+253,000	1,150,000	19,300	.798	.89
December.	26,600	17,900	22,800	1,400,000	-39,200	1,360,000	22,100	.913	1.05
January..	20,600	13,500	17,500	1,080,000	-154,000	926,000	15,100	.624	.72
February.	13,500	8,400	10,400	578,000	-25,500	552,000	9,940	.411	.43
March....	41,100	12,400	27,400	1,680,000	+500,000	2,180,000	35,500	1.47	1.70
April.....	66,500	38,800	47,000	2,800,000	+397,000	3,200,000	53,800	2.22	2.48
May.....	75,500	68,700	72,600	4,460,000	+69,000	4,530,000	73,700	3.05	3.52
June.....	71,000	45,900	59,800	3,560,000	-390,000	3,170,000	53,300	2.20	2.46
July.....	44,700	20,600	31,500	1,940,000	-431,000	1,510,000	24,600	1.02	1.13
August....	22,000	11,300	15,900	978,000	-166,000	812,000	13,200	.545	.63
September	11,000	10,000	10,400	619,000	-25,200	594,000	9,980	.412	.46
The year	75,500	8,400	28,600	20,700,000	-45,600	20,600,000	28,500	1.18	16.03
1910-11									
October..	12,000	9,110	10,600	652,000	-16,800	635,000	10,300	.426	.49
November.	22,400	9,110	15,300	910,000	+226,000	1,140,000	19,200	.793	.88
December.	21,200	15,700	18,900	1,160,000	-103,000	1,060,000	17,200	.711	.82
January..	15,300	11,000	12,200	750,000	-80,600	669,000	10,900	.450	.52
February.	11,700	9,340	10,400	578,000	-37,800	540,000	9,720	.402	.42
March....	15,400	8,400	10,700	658,000	+114,000	772,000	12,600	.521	.60
April.....	29,000	16,200	20,200	1,200,000	+238,000	1,440,000	24,200	1.00	1.12
May.....	60,100	30,600	49,300	3,030,000	+509,000	3,540,000	57,600	2.38	2.74
June.....	77,400	54,700	68,900	4,100,000	+220,000	4,320,000	72,600	3.00	3.35
July.....	73,700	33,700	54,000	3,320,000	-646,000	2,670,000	45,400	1.79	2.06
August....	32,600	15,800	23,700	1,460,000	-313,000	1,150,000	18,700	.773	.89
September	16,100	12,300	14,000	833,000	-68,000	765,000	12,900	.533	.59
The year	77,400	8,400	25,800	18,700,000	+41,800	18,700,000	25,800	1.07	14.48
1911-12									
October..	12,400	9,340	10,000	615,000	-37,800	577,000	9,380	.388	.45
November.	10,900	8,760	9,760	581,000	+12,600	594,000	9,980	.412	.46
December.	12,000	6,700	10,000	615,000	-79,500	536,000	8,720	.360	.42
January..	-	-	8,200	504,000	+66,900	571,000	9,290	.384	.44
February.	11,300	10,000	10,500	604,000	+16,800	621,000	10,800	.446	.48
March....	11,000	8,280	9,090	559,000	-33,600	525,000	8,540	.353	.41
April.....	32,200	10,000	21,500	1,280,000	+409,000	1,690,000	28,400	1.17	1.30
May.....	83,600	33,000	53,300	3,280,000	+802,000	4,080,000	66,400	2.74	3.16
June.....	89,000	71,700	84,100	5,000,000	-177,000	4,820,000	81,000	3.35	3.74
July.....	70,600	33,500	50,200	3,090,000	-604,000	2,490,000	40,500	1.67	1.92
August....	33,000	18,200	24,700	1,520,000	-265,000	1,260,000	20,500	.847	.98
September	18,200	15,300	16,500	982,000	-51,300	931,000	15,600	.645	.72
The year	89,000	-	25,700	18,600,000	+59,100	18,700,000	25,800	1.07	14.48
1912-13									
October..	15,300	12,600	13,900	855,000	-38,300	817,000	13,300	.550	.63
November.	17,700	13,000	15,800	940,000	+72,400	1,010,000	17,000	.702	.78
December.	17,500	-	15,500	953,000	-68,100	885,000	14,400	.595	.69
January..	-	-	10,700	658,000	-29,800	628,000	10,200	.421	.49
February.	13,600	7,430	10,800	600,000	+29,800	630,000	11,300	.467	.49
March....	13,600	11,400	12,500	769,000	-12,800	756,000	12,300	.508	.59
April.....	45,500	13,200	25,900	1,540,000	+562,000	2,100,000	35,300	1.46	1.63
May.....	87,000	45,700	58,300	3,580,000	+633,000	4,210,000	68,500	2.83	3.26
June.....	136,000	91,700	122,000	7,260,000	+300,000	7,560,000	127,000	5.25	5.86
July.....	108,000	42,400	70,900	4,360,000	-986,000	3,370,000	54,800	2.26	2.61
August....	41,600	20,900	29,000	1,780,000	-364,000	1,420,000	23,100	.955	1.10
September	20,700	12,800	15,900	946,000	-145,000	801,000	13,500	.558	.62
The year	136,000	-	33,500	24,200,000	-46,800	24,200,000	33,400	1.38	18.75

Monthly discharge of Clark Fork at Priest River--Continued

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	
1913-14									
October..	12,600	11,400	11,800	726,000	-26,000	700,000	11,400	0.471	0.54
November..	14,300	11,600	13,000	774,000	+51,000	825,000	13,900	.574	.64
December..	14,300	9,390	11,800	726,000	-84,000	642,000	10,400	.430	.50
January..	12,500	9,920	11,800	726,000	+42,000	768,000	12,500	.517	.60
February..	11,600	7,600	10,200	566,000	-13,000	553,000	9,960	.412	.43
March....	18,200	11,600	14,700	904,000	+72,000	976,000	15,900	.657	.76
April.....	38,800	18,400	27,000	1,610,000	+374,000	1,980,000	33,300	1.38	1.54
May.....	67,400	39,200	52,900	3,250,000	+578,000	3,830,000	62,300	2.57	2.96
June.....	67,300	53,000	62,100	3,700,000	-310,000	3,390,000	57,000	2.36	2.63
July.....	52,600	26,700	39,200	2,410,000	-470,000	1,940,000	31,600	1.31	1.51
August....	26,200	12,500	18,000	1,110,000	-231,000	879,000	14,300	.591	.68
September	12,500	10,000	10,700	637,000	-42,000	595,000	10,000	.413	.46
The year	67,400	7,600	23,700	17,100,000	-59,000	17,100,000	23,600	.975	13.25
1914-15									
October..	18,000	10,400	12,200	750,000	+152,000	902,000	14,700	.607	.70
November..	21,400	14,900	19,200	1,140,000	+52,000	1,190,000	20,000	.826	.92
December..	20,900	12,200	16,000	984,000	-145,000	839,000	13,600	.562	.65
January..	13,400	8,570	11,000	676,000	-72,000	604,000	9,820	.406	.47
February..	9,950	9,080	9,410	523,000	-21,000	502,000	9,040	.374	.39
March....	13,100	9,220	10,600	652,000	+55,000	707,000	11,500	.475	.55
April.....	29,900	13,400	19,800	1,180,000	+322,000	1,500,000	25,200	1.04	1.16
May.....	42,500	30,000	35,900	2,210,000	+216,000	2,430,000	39,500	1.63	1.88
June.....	42,500	40,300	41,900	2,490,000	-27,000	2,460,000	41,300	1.71	1.91
July.....	40,000	29,900	35,300	2,170,000	-189,000	1,980,000	32,200	1.33	1.53
August....	29,500	16,400	22,900	1,410,000	-234,000	1,180,000	19,200	.793	.91
September	15,900	11,900	13,100	780,000	-72,000	708,000	11,900	.492	.55
The year	42,500	8,570	20,700	15,000,000	+37,000	15,000,000	20,700	.855	11.62
1915-16									
October..	11,800	11,200	11,500	707,000	-11,000	696,000	11,300	.467	.54
November..	12,200	10,900	11,500	684,000	+11,000	695,000	11,700	.483	.54
December..	12,200	10,500	11,700	719,000	-8,000	711,000	11,600	.479	.55
January..	9,730	6,760	8,290	510,000	-84,000	426,000	6,930	.286	.33
February..	14,000	7,180	10,800	621,000	+135,000	756,000	13,100	.541	.58
March....	36,500	13,600	22,100	1,360,000	+359,000	1,720,000	28,000	1.16	1.34
April.....	47,600	36,500	41,400	2,460,000	+241,000	2,700,000	45,400	1.88	2.10
May.....	70,500	50,100	64,800	3,980,000	+276,000	4,260,000	69,300	2.86	3.30
June.....	119,000	65,500	86,000	5,120,000	+803,000	5,920,000	99,500	4.11	4.59
July.....	131,000	71,600	113,000	6,950,000	-752,000	6,200,000	101,000	4.17	4.81
August....	70,300	29,000	45,000	2,770,000	-664,000	2,110,000	34,300	1.42	1.64
September	28,100	19,800	23,200	1,380,000	-161,000	1,220,000	20,500	.847	.94
The year	131,000	6,760	37,500	27,300,000	+145,000	27,400,000	37,800	1.56	21.26
1916-17									
October..	19,800	13,500	16,500	1,010,000	-115,000	895,000	14,600	.603	.70
November..	13,600	11,500	12,900	768,000	-38,000	730,000	12,300	.508	.57
December..	12,300	5,730	10,500	646,000	-42,000	604,000	9,820	.406	.47
January..	10,400	8,030	9,260	569,000	-21,000	548,000	8,910	.368	.42
February..	9,940	8,010	9,380	521,000	+21,000	542,000	9,760	.403	.42
March....	9,420	8,010	8,630	531,000	-17,000	514,000	8,360	.345	.40
April.....	27,700	9,570	17,800	1,060,000	+347,000	1,410,000	23,700	.979	1.09
May.....	101,000	28,200	54,300	3,340,000	+1,200,000	4,540,000	73,800	3.05	3.52
June.....	119,000	104,000	112,000	6,660,000	+126,000	6,790,000	114,000	4.71	5.26
July.....	115,000	49,200	83,700	5,150,000	-993,000	4,160,000	67,700	2.80	3.23
August....	47,200	18,400	29,700	1,830,000	-492,000	1,340,000	21,800	.901	1.04
September	18,000	11,600	14,200	845,000	-132,000	713,000	12,000	.496	.55
The year	119,000	5,730	31,700	22,900,000	-156,000	22,800,000	31,500	1.30	17.67
1917-18									
October..	11,400	9,310	10,400	640,000	-52,000	588,000	9,560	.395	.46
November..	9,630	8,690	9,140	544,000	-17,000	527,000	8,360	.366	.41
December..	21,100	8,700	11,300	695,000	+244,000	939,000	15,300	.632	.73
January..	38,100	24,300	31,000	1,910,000	+95,000	2,000,000	32,500	1.34	1.54
February..	22,900	15,200	18,900	1,050,000	-168,000	882,000	15,900	.657	.68
March....	20,600	14,600	16,000	984,000	+107,000	1,090,000	17,700	.731	.84
April.....	40,700	21,000	29,800	1,770,000	+370,000	2,140,000	36,000	1.49	1.66
May.....	74,800	41,400	63,900	3,930,000	+312,000	4,240,000	69,000	2.85	3.29
June.....	98,200	59,500	79,200	4,710,000	+338,000	5,050,000	84,900	3.51	3.92
July.....	87,600	29,500	52,500	3,230,000	-906,000	2,320,000	37,700	1.56	1.80
August....	28,500	16,500	20,800	1,280,000	-157,000	1,120,000	18,200	.752	.87
September	16,500	10,800	12,900	768,000	-174,000	594,000	9,980	.412	.46
The year	98,200	8,690	29,700	21,500,000	-8,000	21,500,000	29,700	1.23	16.66

Monthly discharge of Clark Fork at Priest River--Continued

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	
1918-19									
October..	10,600	9,560	10,100	621,000	+4,000	625,000	10,200	0.421	0.49
November..	10,900	9,210	10,200	607,000	0	607,000	10,200	.421	.47
December..	10,200	8,700	9,550	587,000	-46,000	541,000	8,800	.364	.42
January..	15,700	7,220	10,000	615,000	+126,000	741,000	12,100	.500	.53
February..	15,000	11,400	12,900	716,000	-76,000	640,000	11,500	.475	.49
March....	14,300	10,400	11,600	713,000	+46,000	759,000	12,300	.508	.59
April.....	34,000	14,700	23,000	1,370,000	+312,000	1,680,000	28,200	1.17	1.30
May.....	68,900	36,500	48,800	3,000,000	+620,000	3,620,000	58,900	2.43	2.80
June.....	76,900	49,300	65,800	3,920,000	-323,000	3,600,000	60,500	2.50	2.79
July.....	47,900	18,600	31,100	1,910,000	-506,000	1,400,000	22,800	.942	1.09
August....	18,100	9,490	13,300	818,000	-183,000	635,000	10,300	.426	.49
September	9,480	6,870	7,990	475,000	+5,000	480,000	8,070	.333	.37
The year	76,900	6,870	21,200	15,400,000	-21,000	15,300,000	21,200	.876	11.88
1919-20									
October..	6,830	6,150	6,470	398,000	-67,000	331,000	5,380	.222	.26
November..	7,210	6,450	6,730	400,000	+9,000	409,000	6,860	.283	.32
December..	7,110	2,200	5,160	317,000	+8,000	325,000	5,290	.219	.25
January..	8,400	4,780	6,460	397,000	+25,000	422,000	6,860	.293	.33
February..	8,940	7,490	8,330	479,000	-29,000	450,000	7,820	.323	.35
March....	9,600	6,780	8,010	493,000	+50,000	543,000	8,830	.365	.42
April.....	17,700	8,800	12,400	738,000	+174,000	912,000	15,300	.632	.71
May.....	64,200	18,400	40,800	2,510,000	+737,000	3,250,000	52,900	2.19	2.52
June.....	81,800	60,800	69,200	4,120,000	+184,000	4,300,000	72,300	2.99	3.34
July.....	75,300	34,800	54,600	3,360,000	-659,000	2,700,000	43,900	1.81	2.09
August....	33,500	14,200	21,600	1,330,000	-347,000	983,000	16,000	.661	.76
September	-	-	13,000	774,000	-30,000	744,000	12,500	.517	.58
The year	81,800	2,200	21,100	15,300,000	+54,000	15,400,000	21,200	.876	11.93
1920-21									
October..	14,900	12,300	13,900	855,000	+39,000	894,000	14,500	.599	.69
November..	14,800	12,500	13,400	797,000	0	797,000	13,400	.554	.62
December..	15,000	11,700	13,300	818,000	-56,000	762,000	12,400	.512	.59
January..	15,300	12,100	13,900	855,000	+13,000	868,000	14,100	.583	.67
February..	15,100	11,400	14,300	794,000	+102,000	896,000	16,100	.665	.69
March....	24,900	16,600	19,900	1,220,000	+121,000	1,340,000	21,800	.901	1.04
April.....	38,100	23,400	28,000	1,670,000	+246,000	1,920,000	32,300	1.33	1.48
May.....	101,000	38,400	62,300	3,830,000	+939,000	4,770,000	77,600	3.21	3.70
June.....	109,000	83,300	101,000	6,010,000	-261,000	5,750,000	96,600	3.99	4.45
July.....	80,300	30,000	52,000	3,200,000	-828,000	2,370,000	38,500	1.59	1.83
August....	28,800	13,700	19,800	1,220,000	-276,000	944,000	15,400	.636	.73
September	13,300	9,060	10,900	649,000	-77,000	572,000	9,610	.397	.44
The year	109,000	9,060	30,300	21,900,000	-38,000	21,900,000	30,200	1.25	16.93
1921-22									
October..	9,880	8,650	9,150	563,000	-36,000	527,000	8,570	.354	.41
November..	9,330	8,490	8,880	528,000	+12,000	540,000	9,080	.375	.42
December..	14,300	9,650	11,300	695,000	+62,000	757,000	12,300	.508	.59
January..	12,400	8,680	10,800	664,000	-72,000	592,000	9,630	.398	.46
February..	10,100	7,020	9,160	509,000	-27,000	482,000	8,680	.359	.37
March....	9,940	7,730	8,510	523,000	+30,000	553,000	8,990	.371	.43
April.....	20,800	10,100	15,100	898,000	+209,000	1,110,000	18,700	.773	.86
May.....	81,700	21,100	43,100	2,650,000	+1,030,000	3,680,000	59,800	2.47	2.85
June.....	106,000	52,800	96,200	5,720,000	-84,000	5,640,000	94,800	3.92	4.37
July.....	80,200	26,800	47,500	2,920,000	-820,000	2,100,000	34,200	1.41	1.63
August....	26,100	13,400	18,200	1,120,000	-233,000	887,000	14,400	.595	.62
September	13,200	9,320	11,100	660,000	-79,000	581,000	9,760	.403	.45
The year	106,000	7,020	24,100	17,400,000	-8,000	17,400,000	24,100	.996	13.53
1922-23									
October..	9,160	8,070	8,530	524,000	-24,000	500,000	8,130	.356	.39
November..	8,470	7,440	7,890	469,000	-23,000	446,000	7,500	.310	.35
December..	9,420	3,460	6,880	423,000	+37,000	460,000	7,480	.309	.36
January..	12,700	8,860	11,600	713,000	+21,000	734,000	11,900	.492	.57
February..	9,320	4,710	8,090	449,000	-35,000	414,000	7,450	.308	.32
March....	10,500	8,550	9,090	559,000	+19,000	578,000	9,400	.388	.45
April.....	27,600	11,000	19,300	1,150,000	+317,000	1,470,000	24,700	1.02	1.14
May.....	76,000	28,800	49,800	3,060,000	+792,000	3,850,000	62,600	2.59	2.99
June.....	90,700	77,200	84,100	5,000,000	+32,000	5,030,000	84,500	3.49	3.89
July.....	79,000	32,700	54,500	3,350,000	-719,000	2,630,000	42,800	1.77	2.04
August....	31,500	15,600	21,800	1,340,000	-308,000	1,030,000	16,800	.694	.80
September	15,100	9,100	11,600	690,000	-120,000	570,000	9,580	.396	.44
The year	90,700	3,460	24,500	17,700,000	-11,000	17,700,000	24,500	1.01	13.74

Monthly discharge of Clark Fork at Priest River--Continued

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	
1923-24									
October..	8,960	8,130	8,520	524,000	-21,000	503,000	8,180	0.338	0.39
November..	8,400	7,700	8,050	479,000	+3,000	482,000	8,100	.335	.37
December..	8,450	7,400	8,100	498,000	-12,000	486,000	7,900	.326	.38
January..	7,360	3,820	6,240	384,000	-14,000	370,000	6,020	.249	.29
February..	13,800	8,310	11,500	662,000	+109,000	771,000	13,400	.554	.60
March....	13,600	10,700	12,000	738,000	-53,000	685,000	11,100	.459	.53
April.....	17,400	10,200	12,900	768,000	+168,000	936,000	15,700	.649	.72
May.....	80,300	17,900	50,300	3,090,000	+935,000	4,020,000	65,400	2.70	3.11
June.....	78,600	47,400	61,400	3,650,000	-456,000	3,190,000	53,600	2.21	2.47
July.....	46,700	21,800	32,500	2,000,000	-440,000	1,560,000	25,400	1.05	1.21
August....	20,900	11,000	15,000	922,000	-179,000	743,000	12,100	.500	.58
September	11,100	7,780	9,100	541,000	-66,000	475,000	7,980	.330	.37
The year	80,300	3,820	19,600	14,300,000	-26,000	14,200,000	19,600	.810	11.02
1924-25									
October..	8,170	7,460	7,700	473,000	-2,000	471,000	7,660	.317	.37
November..	9,300	8,080	8,680	528,000	+18,000	546,000	9,180	.379	.42
December..	10,500	6,380	8,780	540,000	+58,000	598,000	9,730	.402	.46
January..	13,700	10,300	11,800	726,000	+44,000	770,000	12,500	.517	.60
February..	21,900	12,600	18,500	1,030,000	+58,000	1,090,000	19,600	.810	.84
March....	18,600	15,600	17,000	1,050,000	+17,000	1,070,000	17,400	.719	.83
April.....	62,700	18,300	41,500	2,470,000	+713,000	3,180,000	53,400	2.21	2.47
May.....	112,000	61,900	81,600	5,020,000	+709,000	5,730,000	93,200	3.85	4.44
June.....	112,000	77,500	93,200	5,550,000	-521,000	5,030,000	84,500	3.49	3.89
July.....	76,000	29,900	52,500	3,230,000	-684,000	2,550,000	41,500	1.71	1.97
August....	29,400	15,000	20,700	1,270,000	-268,000	1,000,000	16,500	.674	.78
September	14,700	11,800	12,900	768,000	-73,000	695,000	11,700	.463	.54
The year	112,000	6,380	31,300	22,700,000	+69,000	22,700,000	31,400	1.30	17.61
1925-26									
October..	11,400	9,300	10,300	633,000	-36,000	597,000	9,710	.401	.46
November..	9,500	8,500	9,110	542,000	-20,000	522,000	8,770	.362	.40
December..	9,520	8,510	9,550	550,000	+9,000	559,000	9,090	.376	.43
January..	9,230	8,270	8,650	532,000	-26,000	506,000	8,230	.340	.39
February..	9,880	8,080	9,160	509,000	+25,000	534,000	9,620	.398	.41
March....	12,200	9,480	10,400	640,000	+53,000	693,000	11,500	.467	.54
April.....	34,900	11,900	17,900	1,070,000	+466,000	1,540,000	25,900	1.07	1.19
May.....	49,400	35,500	45,300	2,790,000	+122,000	2,910,000	47,500	1.95	2.25
June.....	46,100	24,900	33,800	2,010,000	-331,000	1,680,000	28,200	1.17	1.30
July.....	24,500	12,900	17,600	1,080,000	-230,000	850,000	13,800	.570	.66
August....	12,500	7,900	9,500	584,000	-75,000	509,000	8,280	.342	.39
September	9,570	8,310	8,750	521,000	+14,000	535,000	9,990	.371	.41
The year	49,400	7,900	15,800	11,500,000	-29,000	11,400,000	15,800	.653	8.83
1926-27									
October..	15,000	9,470	12,000	738,000	+117,000	855,000	13,900	.574	.66
November..	16,000	14,100	15,200	904,000	+6,000	910,000	15,500	.632	.71
December..	20,200	15,700	17,900	1,100,000	0	1,100,000	17,900	.740	.85
January..	16,700	11,600	14,500	879,000	-88,000	791,000	12,900	.533	.61
February..	14,300	10,800	12,500	683,000	+36,000	719,000	12,900	.533	.56
March....	14,900	13,900	14,500	879,000	+5,000	884,000	14,400	.595	.69
April.....	29,400	15,100	18,400	1,090,000	+334,000	1,420,000	23,900	.988	1.10
May.....	83,500	33,400	59,500	3,660,000	+808,000	4,470,000	72,700	3.00	3.46
June.....	131,000	84,800	113,000	6,720,000	+484,000	7,200,000	121,000	5.00	5.58
July.....	122,000	47,500	82,200	5,050,000	-1,070,000	3,980,000	64,700	2.67	3.08
August....	45,500	19,900	29,800	1,830,000	-429,000	1,400,000	22,800	.942	1.09
September	20,700	18,100	19,400	1,150,000	-21,000	1,130,000	19,000	.785	.88
The year	131,000	9,470	34,100	24,700,000	+182,000	24,900,000	34,300	1.42	19.27
1927-28									
October..	22,000	18,700	20,500	1,260,000	+51,000	1,310,000	21,300	.880	1.01
November..	32,900	21,700	27,900	1,660,000	+197,000	1,860,000	31,500	1.23	1.44
December..	34,700	22,600	29,900	1,840,000	-197,000	1,640,000	26,700	1.10	1.27
January..	21,800	19,400	20,600	1,270,000	-43,000	1,230,000	20,000	.826	.95
February..	20,000	15,000	17,800	1,020,000	-102,000	918,000	16,000	.661	.75
March....	26,300	14,100	18,300	1,130,000	+205,000	1,340,000	21,800	.901	1.04
April.....	32,000	27,000	27,900	1,660,000	+187,000	1,850,000	31,100	1.23	1.44
May.....	130,000	34,800	80,600	4,960,000	+1,420,000	6,380,000	104,000	4.30	4.96
June.....	135,000	74,200	104,000	6,190,000	-397,000	5,790,000	88,900	3.67	4.10
July.....	73,500	40,600	59,200	3,640,000	-480,000	3,160,000	51,400	2.12	2.44
August....	39,600	18,300	27,200	1,670,000	-380,000	1,290,000	21,000	.868	1.00
September	18,100	10,800	14,400	857,000	-125,000	732,000	12,500	.508	.57
The year	135,000	10,800	37,400	27,200,000	-164,000	27,000,000	37,200	1.54	20.93

*Estimated.

Monthly discharge of Clark Fork at Priest River--Continued

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	
1928-29									
October..	11,700	10,300	10,700	658,000	-7,000	651,000	10,600	0.438	0.50
November..	11,000	9,880	10,500	625,000	-19,000	606,000	10,200	.421	.47
December..	10,100	8,080	8,870	545,000	-30,000	515,000	8,380	.346	.40
January..	8,450	-	6,550	403,000	-30,000	373,000	6,070	.251	.29
February..	-	-	6,400	355,000	-3,000	352,000	6,340	.262	.27
March....	10,500	-	8,390	516,000	+68,000	584,000	9,500	.393	.45
April....	16,600	10,500	12,100	720,000	+125,000	845,000	14,200	.587	.65
May.....	62,000	17,600	33,600	2,070,000	+747,000	2,820,000	45,900	1.90	2.19
June.....	72,400	57,500	67,100	3,990,000	-56,000	3,930,000	66,000	2.73	3.05
July.....	56,000	21,300	35,600	2,190,000	-579,000	1,610,000	26,200	1.08	1.24
August....	20,800	9,880	14,600	898,000	-225,000	673,000	10,900	.450	.52
September	9,670	6,880	8,000	476,000	-68,000	408,000	6,860	.283	.32
The year	72,400	-	18,600	13,400,000	-77,000	13,400,000	18,500	.764	10.35
1929-30									
October..	7,040	6,410	6,660	410,000	-18,000	392,000	6,380	.264	.30
November..	6,560	5,700	6,220	370,000	-27,000	343,000	5,760	.238	.27
December..	7,540	5,570	6,680	411,000	+40,000	451,000	7,330	.303	.35
January..	7,370	-	5,490	338,000	-47,000	291,000	4,730	.195	.22
February..	10,100	5,440	7,320	407,000	+101,000	508,000	9,150	.378	.39
March....	10,100	7,370	8,730	537,000	-3,000	534,000	8,680	.359	.41
April....	41,000	10,600	22,200	1,320,000	+569,000	1,890,000	31,800	1.31	1.46
May.....	49,400	42,400	47,400	2,910,000	+108,000	3,020,000	49,100	2.03	2.34
June.....	50,100	38,000	46,400	2,760,000	-144,000	2,620,000	44,000	1.82	2.03
July.....	37,400	17,300	26,500	1,630,000	-365,000	1,260,000	20,500	.847	.98
August....	16,800	9,330	12,800	787,000	-158,000	629,000	10,200	.421	.49
September	8,540	7,140	7,810	465,000	-47,000	418,000	7,020	.290	.32
The year	50,100	-	17,100	12,300,000	+9,000	12,400,000	17,100	.707	9.56
1930-31									
October..	7,900	7,140	7,570	465,000	+11,000	476,000	7,740	.320	.37
November..	8,300	7,510	7,950	474,000	-7,000	467,000	7,850	.324	.36
December..	7,900	6,790	7,600	467,000	-35,000	432,000	7,030	.290	.33
January..	7,510	6,460	6,660	410,000	+11,000	421,000	6,850	.283	.33
February..	8,100	6,960	7,350	410,000	+11,000	421,000	7,580	.313	.33
March....	11,600	7,140	9,380	557,000	+66,000	623,000	10,100	.417	.48
April....	19,000	11,700	15,200	904,000	+134,000	1,040,000	17,500	.723	.81
May.....	50,800	20,000	38,600	2,370,000	+563,000	2,930,000	47,700	1.97	2.27
June.....	50,100	31,400	42,100	2,510,000	-294,000	2,220,000	37,300	1.54	1.72
July.....	30,800	13,800	21,000	1,290,000	-337,000	953,000	15,500	.640	.74
August....	13,400	6,960	9,860	606,000	-122,000	484,000	7,870	.325	.37
September	6,960	6,150	6,350	378,000	-28,000	350,000	5,880	.243	.27
The year	50,800	6,150	15,000	10,800,000	-27,000	10,800,000	14,900	.616	8.38
1931-32									
October..	6,450	5,990	6,210	382,000	-11,000	371,000	6,030	.249	.29
November..	7,130	5,990	6,500	387,000	-5,000	382,000	6,420	.265	.30
December..	6,950	5,710	6,170	379,000	+16,000	395,000	6,420	.265	.31
January..	7,310	4,880	6,680	411,000	-2,000	409,000	6,650	.275	.32
February..	10,400	4,100	6,370	366,000	+82,000	448,000	7,790	.322	.35
March....	19,400	11,500	14,700	904,000	+158,000	1,060,000	17,200	.711	.82
April....	39,200	20,000	29,400	1,750,000	+362,000	2,110,000	35,500	1.47	1.64
May.....	97,200	40,600	70,700	4,350,000	+746,000	5,100,000	82,900	3.43	3.95
June.....	90,500	75,500	84,300	5,020,000	-213,000	4,810,000	80,800	3.34	3.73
July.....	74,000	28,400	48,200	2,960,000	-703,000	2,260,000	36,800	1.52	1.75
August....	27,800	12,800	18,700	1,150,000	-290,000	860,000	14,000	.579	.67
September	12,800	8,490	10,200	607,000	-89,000	518,000	8,710	.360	.40
The year	97,200	4,100	25,700	18,700,000	+51,000	18,700,000	25,800	1.07	14.53
1932-33									
October..	8,540	7,290	7,920	487,000	-14,000	473,000	7,680	.318	.37
November..	12,500	8,110	10,400	619,000	+83,000	702,000	11,800	.488	.54
December..	14,300	-	12,700	781,000	+13,000	794,000	12,800	.533	.61
January..	13,900	-	11,700	719,000	-47,000	672,000	10,900	.450	.52
February..	-	-	8,780	488,000	-34,000	454,000	8,170	.338	.35
March....	12,100	9,200	10,200	627,000	+53,000	680,000	11,100	.459	.53
April....	29,200	12,500	17,000	1,010,000	+344,000	1,350,000	22,700	.938	1.05
May.....	70,200	31,700	48,800	3,000,000	+629,000	3,630,000	59,000	2.44	2.81
June.....	135,000	73,000	115,000	6,840,000	+628,000	7,470,000	126,000	5.21	5.81
July.....	114,000	38,200	71,700	4,410,000	-1,110,000	3,300,000	53,700	2.22	2.56
August....	36,200	16,200	23,700	1,460,000	-400,000	1,060,000	17,200	.711	.82
September	15,700	11,000	12,800	762,070	-88,000	674,000	11,300	.467	.52
The year	135,000	7,290	29,300	21,200,000	+57,000	21,300,000	29,400	1.21	16.49

Monthly discharge of Clark Fork at Priest River--Continued

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	
1933-34									
October..	16,200	10,100	11,430	702,500	+85,760	788,300	12,820	.530	.61
November..	26,300	16,600	23,890	1,421,000	+135,200	1,556,000	26,150	1.08	1.20
December..	52,700	21,300	32,120	1,975,000	+447,000	2,422,000	39,390	1.63	1.88
January..	49,200	32,300	40,010	2,460,000	-268,100	2,192,000	35,650	1.47	1.70
February..	31,700	23,000	27,600	1,533,000	-172,000	1,361,000	24,510	1.01	1.05
March....	32,300	22,400	24,760	1,523,000	+170,600	1,694,000	27,550	1.14	1.31
April.....	85,600	34,900	54,830	3,262,000	+771,600	4,034,000	67,790	2.80	3.12
May.....	91,200	80,700	87,470	5,379,000	-51,370	5,328,000	86,650	3.58	4.13
June.....	80,700	42,900	63,580	3,770,000	-648,200	3,222,000	54,150	2.24	2.50
July.....	41,500	18,600	27,960	1,719,000	-425,900	1,293,000	21,060	.870	1.00
August....	18,100	10,300	13,660	833,700	-175,000	658,400	10,710	.443	.51
September..	9,860	6,550	7,997	475,900	-61,060	414,800	6,971	.288	.32
The year	91,200	6,550	34,610	25,050,000	-89,670	24,970,000	34,480	1.42	19.33
1934-35									
October..	9,860	6,550	7,563	465,000	+38,380	503,400	8,187	.338	.39
November..	14,800	8,980	13,200	785,400	+110,600	896,000	15,060	.622	.69
December..	14,800	13,000	13,710	843,000	-43,350	799,600	13,000	.537	.62
January..	14,300	9,420	12,000	737,800	+24,650	762,400	12,400	.512	.59
February..	14,300	13,000	13,800	766,200	-28,050	738,200	13,290	.549	.57
March....	14,800	12,100	13,290	817,200	+26,350	843,600	13,720	.567	.65
April.....	26,900	13,400	17,650	1,050,000	+260,300	1,310,000	22,020	.910	1.02
May.....	75,100	28,000	47,610	2,927,000	+726,500	3,654,000	59,430	2.46	2.84
June.....	83,500	63,200	77,920	4,637,000	-154,400	4,483,000	75,340	3.11	3.47
July.....	62,500	26,900	43,230	2,658,000	-565,000	2,093,000	34,040	1.41	1.63
August....	25,800	13,400	18,420	1,133,000	-272,400	860,000	14,000	.579	.67
September..	13,000	7,690	9,909	589,600	-103,600	486,000	8,168	.338	.38
The year	83,500	6,550	24,050	17,410,000	+19,980	17,430,000	24,080	.995	13.52

Yearly discharge of Clark Fork at Priest River

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1904.....	29,400	1.21	16.52	21,300,000	27,500	1.14	15.47	20,000,000
1905.....	15,200	.628	8.52	11,000,000	15,400	.636	8.65	11,200,000
1906.....	16,900	.698	9.51	12,300,000	18,400	.760	10.34	13,400,000
1907.....	34,200	1.41	19.19	24,800,000	33,700	1.39	18.99	24,400,000
1908.....	29,600	1.22	16.65	21,500,000	29,100	1.20	16.56	21,100,000
1909.....	26,600	1.10	14.88	19,200,000	28,200	1.17	15.78	20,400,000
1910.....	26,800	1.18	16.03	20,600,000	28,100	1.16	15.77	20,300,000
1911.....	25,800	1.07	14.48	18,700,000	24,300	1.00	13.62	17,600,000
1912.....	25,800	1.07	14.48	18,700,000	27,100	1.12	15.25	19,700,000
1913.....	33,400	1.38	18.75	24,200,000	32,700	1.35	16.33	23,600,000
1914.....	23,600	.975	13.25	17,100,000	24,600	1.02	13.64	17,800,000
1915.....	20,700	.855	11.62	15,000,000	24,600	1.01	10.98	14,200,000
1916.....	37,800	1.56	21.67	27,400,000	37,900	1.57	21.37	27,500,000
1917.....	31,600	1.30	17.67	22,800,000	31,200	1.29	17.53	22,600,000
1918.....	29,700	1.23	16.66	21,500,000	29,300	1.21	16.44	21,200,000
1919.....	21,200	.876	11.88	15,500,000	20,200	.835	11.33	14,500,000
1920.....	20,200	.876	11.93	15,400,000	23,100	.955	13.00	16,800,000
1921.....	30,100	1.25	16.93	21,900,000	29,400	1.21	16.45	21,300,000
1922.....	24,000	.996	13.53	17,400,000	23,500	1.02	13.21	17,000,000
1923.....	24,600	1.01	13.74	17,700,000	24,600	1.02	13.78	17,800,000
1924.....	19,600	.810	11.02	14,200,000	19,800	.818	11.13	14,400,000
1925.....	31,400	1.30	17.61	22,700,000	31,500	1.30	17.65	22,800,000
1926.....	15,800	.653	8.83	11,400,000	17,400	.719	9.76	15,600,000
1927.....	34,500	1.42	19.27	24,900,000	37,000	1.53	20.77	26,800,000
1928.....	37,200	1.54	20.93	27,000,000	33,000	1.36	18.68	24,000,000
1929.....	18,500	.764	10.35	13,400,000	17,700	.731	9.90	12,800,000

Yearly discharge of Clark Fork at Priest River--Continued

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	17,100	0.707	9.56	12,400,000	17,300	0.715	9.70	12,500,000
1931.....	14,900	.616	8.38	10,800,000	14,600	.603	8.22	10,600,000
1932.....	25,800	1.07	14.53	18,700,000	26,900	1.11	15.15	19,500,000
1933.....	29,400	1.21	16.49	21,300,000	33,200	1.37	18.66	24,100,000
1934.....	34,480	1.42	19.33	24,970,000	30,940	1.28	17.34	22,400,000
1935.....	24,080	.995	13.52	17,430,000	-	-	-	-
Highest....	37,800	1.56	21.26	27,400,000	37,900	1.57	21.37	27,500,000
Average....	26,000	1.07	14.60	18,800,000	26,000	1.08	14.62	18,900,000
Lowest.....	14,900	.616	8.38	10,800,000	14,600	.603	8.22	10,600,000

Note.- The figures of discharge contained in the above table are adjusted for natural storage in Pend Oreille Lake.

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

(Formerly called Clark Fork at Metaline Falls)

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. Prior to Oct. 1, 1928, staff gage at Metaline Falls. Flow of Sullivan Creek included in records and discharge practically the same as that at Z Canyon.

Drainage area.- 25,200 square miles (revised).

Records available.- November 1908 to September 1910 (gage heights only), October 1912 to September 1935.

Extremes.- Maximum discharge recorded, 139,000 second-feet June 16, 1913; minimum recorded, 2,500 second-feet Dec. 12, 1919.

Remarks.- Several small diversions from upper tributaries for irrigation probably affect flow at gage by less than 2 percent. No artificial regulation of any consequence. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

This report contains all records adjusted for natural storage in Pend Oreille Lake.

Monthly discharge of Clark Fork below Z Canyon, near Metaline Falls

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	
1912-13									
October..	15,700	12,900	14,200	873,000	-38,300	835,000	13,600	0.540	0.62
November..	18,100	13,300	16,100	958,000	+72,400	1,030,000	17,300	.687	.77
December..	17,900	-	15,800	972,000	-68,100	904,000	14,700	.583	.67
January..	-	-	11,000	676,000	-29,800	646,000	10,500	.417	.48
February..	13,900	7,720	11,100	616,000	+29,800	646,000	11,600	.460	.48
March....	13,900	11,700	12,800	787,000	-12,800	774,000	12,600	.500	.58
April.....	46,200	13,500	26,500	1,580,000	+562,000	2,140,000	36,000	1.43	1.60
May.....	90,000	46,400	59,900	3,680,000	+633,000	4,310,000	70,100	2.78	3.20
June.....	139,000	95,800	126,000	7,500,000	+300,000	7,800,000	131,000	5.20	5.80
July.....	109,000	42,900	71,600	4,400,000	-986,000	3,410,000	55,500	2.20	2.54
August....	42,100	21,300	29,500	1,810,000	-364,000	1,450,000	23,600	.937	1.08
September	21,100	13,200	16,300	970,000	-145,000	825,000	13,900	.552	.62
The year	139,000	-	34,300	24,800,000	-46,800	24,800,000	34,200	1.36	18.44
1913-14									
October..	13,000	11,700	12,100	744,000	-26,000	718,000	11,700	.464	.53
November..	14,600	11,900	13,300	791,000	+51,000	842,000	14,200	.563	.63
December..	14,600	9,670	12,100	744,000	-84,000	660,000	10,700	.425	.49
January..	12,800	10,200	12,100	744,000	+42,000	786,000	12,800	.508	.59
February..	11,900	7,800	10,500	583,000	-13,000	570,000	10,300	.409	.43
March....	18,400	11,900	15,000	922,000	+72,000	994,000	16,200	.643	.74
April.....	39,900	18,600	27,900	1,660,000	+374,000	2,030,000	34,100	1.35	1.51
May.....	69,800	40,400	55,600	3,420,000	+578,000	4,000,000	65,100	2.58	2.97
June.....	70,100	54,300	64,200	3,820,000	-310,000	3,510,000	59,000	2.34	2.61
July.....	54,000	27,000	39,900	2,450,000	-470,000	1,980,000	32,200	1.28	1.48
August....	26,500	12,800	18,300	1,130,000	-231,000	899,000	14,600	.679	.67
September	12,800	10,400	11,100	660,000	-42,000	618,000	10,400	.413	.46
The year	70,100	7,800	24,400	17,700,000	-59,000	17,600,000	24,300	.964	13.11

Monthly discharge of Clark Fork below Z canyon, near Metaline Falls--Continued

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	
1914-15									
October..	18,400	10,800	12,500	769,000	+152,000	921,000	15,000	0.595	0.69
November..	21,800	15,400	19,700	1,170,000	+52,000	1,220,000	20,500	.813	.91
December..	21,300	12,400	16,300	1,000,000	-145,000	855,000	13,900	.552	.64
January..	13,700	8,760	11,300	695,000	-72,000	623,000	10,100	.401	.46
February..	10,200	9,330	9,680	538,000	-21,000	517,000	9,310	.369	.38
March....	13,500	9,500	10,900	670,000	+55,000	725,000	11,800	.468	.54
April.....	30,800	13,900	20,800	1,240,000	+322,000	1,560,000	26,200	1.04	1.16
May.....	44,000	31,300	37,200	2,290,000	+216,000	2,510,000	40,800	1.62	1.87
June.....	44,000	40,700	42,700	2,540,000	-27,000	2,510,000	42,200	1.67	1.86
July.....	40,400	30,300	35,700	2,200,000	-189,000	2,010,000	32,700	1.30	1.50
August....	29,900	16,700	23,200	1,430,000	-234,000	1,200,000	19,500	.774	.89
September	16,300	12,200	13,400	797,000	-72,000	725,000	12,200	.484	.54
The year	44,000	8,760	21,200	15,300,000	+37,000	15,400,000	21,200	.841	11.44
1915-16									
October..	12,100	11,600	11,800	726,000	-11,000	715,000	11,600	.460	.53
November..	12,500	11,300	11,800	702,000	+11,000	713,000	12,000	.476	.53
December..	12,500	10,800	12,000	738,000	-8,000	730,000	11,900	.472	.54
January..	9,980	6,980	8,540	525,000	-84,000	441,000	7,170	.285	.33
February..	14,300	7,400	11,100	638,000	+135,000	773,000	13,400	.532	.57
March....	36,900	13,900	22,500	1,380,000	+359,000	1,740,000	28,300	1.12	1.29
April.....	48,500	36,900	42,000	2,500,000	+241,000	2,740,000	46,000	1.83	2.04
May.....	72,100	51,000	66,200	4,070,000	+276,000	4,350,000	70,700	2.81	3.24
June.....	122,000	67,100	88,500	5,270,000	+503,000	6,070,000	102,000	4.05	4.52
July.....	133,000	72,100	114,000	7,010,000	-752,000	6,260,000	102,000	4.05	4.67
August....	70,800	29,400	45,400	2,790,000	-664,000	2,130,000	34,600	1.37	1.58
September	28,400	20,200	23,600	1,400,000	-161,000	1,240,000	20,800	.825	.92
The year	133,000	6,980	38,200	27,700,000	+145,000	27,900,000	38,400	1.52	20.76
1916-17									
October..	20,200	13,900	16,800	1,030,000	-115,000	915,000	14,900	.591	.68
November..	13,900	11,800	13,200	786,000	-38,000	748,000	12,600	.500	.56
December..	12,600	5,960	10,800	664,000	-42,000	622,000	10,100	.401	.46
January..	10,600	8,240	9,490	584,000	-21,000	563,000	9,160	.363	.42
February..	10,200	8,240	9,620	534,000	+21,000	555,000	9,990	.396	.41
March....	9,650	8,240	8,970	545,000	-17,000	528,000	8,590	.341	.39
April.....	28,100	9,800	18,100	1,080,000	+347,000	1,430,000	24,000	.952	1.06
May.....	103,000	28,600	55,700	3,420,000	+1,200,000	4,620,000	75,100	2.98	3.44
June.....	122,000	106,000	115,000	6,840,000	+126,000	6,970,000	117,000	4.64	5.18
July.....	117,000	49,900	84,900	5,220,000	-993,000	4,230,000	68,800	2.73	3.15
August....	47,800	18,700	30,100	1,850,000	-492,000	1,360,000	22,100	.877	1.01
September	18,300	11,900	14,500	863,000	-132,000	731,000	12,300	.488	.54
The year	122,000	5,960	32,400	23,400,000	-156,000	23,300,000	32,100	1.27	17.30
1917-18									
October..	11,700	9,650	10,700	658,000	-52,000	606,000	9,860	.391	.45
November..	9,950	9,070	9,450	562,000	-17,000	545,000	9,160	.363	.40
December..	21,500	9,070	11,600	713,000	+244,000	957,000	15,600	.619	.71
January..	38,500	24,600	31,500	1,920,000	+95,000	2,020,000	32,900	1.31	1.51
February..	23,200	15,500	19,200	1,070,000	-168,000	902,000	16,200	.643	.67
March....	21,000	14,900	16,300	1,000,000	+107,000	1,110,000	18,100	.718	.83
April.....	41,200	21,400	30,300	1,800,000	+370,000	2,170,000	36,500	1.45	1.62
May.....	75,500	41,900	64,900	3,990,000	+312,000	4,300,000	69,900	2.77	3.19
June.....	99,100	60,400	80,300	4,780,000	+338,000	5,120,000	86,000	3.41	3.80
July.....	88,100	29,800	53,000	3,260,000	-906,000	2,350,000	38,200	1.52	1.75
August....	28,800	16,800	21,100	1,300,000	-157,000	1,140,000	18,500	.734	.85
September	16,800	11,000	13,100	780,000	-174,000	606,000	10,200	.405	.45
The year	99,100	9,070	30,200	21,800,000	-8,000	21,800,000	30,100	1.19	16.23
1918-19									
October..	10,800	9,800	10,400	640,000	+4,000	644,000	10,500	.417	.48
November..	11,100	9,500	10,400	619,000	0	619,000	10,400	.413	.46
December..	10,400	8,900	9,780	601,000	-46,000	555,000	9,030	.358	.41
January..	16,000	7,460	10,500	633,000	+126,000	759,000	12,300	.488	.56
February..	15,300	11,700	13,200	733,000	-76,000	657,000	11,800	.468	.49
March....	14,500	10,600	11,800	726,000	+46,000	772,000	12,600	.500	.58
April.....	35,600	14,900	23,700	1,410,000	+312,000	1,720,000	28,900	1.15	1.28
May.....	72,300	38,100	51,000	3,140,000	+620,000	3,760,000	61,200	2.43	2.80
June.....	79,100	50,400	67,700	4,030,000	-323,000	3,710,000	62,300	2.47	2.76
July.....	49,000	18,900	31,700	1,950,000	-506,000	1,440,000	23,400	.929	1.07
August....	18,400	9,800	13,600	836,000	-183,000	653,000	10,600	.421	.49
September	9,800	7,200	8,340	496,000	+5,000	501,000	8,420	.334	.37
The year	79,100	7,200	21,800	15,800,000	-21,000	15,800,000	21,800	.865	11.75

Monthly discharge of Clark Fork below Z Canyon, near Metaline Falls--Continued

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	
1919-20									
October..	7,140	6,440	6,760	416,000	-67,000	349,000	5,680	0.225	.26
November.	7,580	6,720	7,090	422,000	+8,000	430,000	7,230	.287	.32
December.	7,430	2,500	5,470	336,000	+8,000	344,000	5,590	.222	.26
January..	8,810	5,190	6,800	418,000	+25,000	443,000	7,200	.286	.33
February.	9,290	7,730	8,640	497,000	-29,000	468,000	8,140	.323	.35
March....	9,770	7,000	8,200	504,000	+50,000	554,000	9,010	.358	.41
April.....	18,000	8,970	12,600	750,000	+174,000	924,000	15,500	.615	.69
May.....	64,800	18,600	41,400	2,550,000	+737,000	3,290,000	53,500	2.12	2.44
June.....	82,600	61,800	70,200	4,180,000	+184,000	4,360,000	73,300	2.91	3.25
July.....	75,800	35,200	55,000	3,380,000	-659,000	2,720,000	44,200	1.75	2.02
August....	33,900	15,400	22,200	1,360,000	-347,000	1,010,000	16,400	.651	.75
September	-	-	13,500	803,000	-30,000	773,000	*13,000	.516	.58
The year	82,600	2,500	21,500	15,600,000	+54,000	15,700,000	21,600	.857	11.66
1920-21									
October..	15,200	12,600	14,200	873,000	+39,000	912,000	14,800	.587	.68
November.	15,200	12,800	13,800	821,000	0	821,000	13,800	.548	.61
December.	15,400	12,000	13,600	836,000	-56,000	780,000	12,700	.504	.58
January..	15,600	12,400	14,200	873,000	+13,000	886,000	14,400	.571	.66
February.	18,400	11,700	14,600	811,000	+102,000	913,000	16,400	.651	.68
March....	25,300	17,000	20,300	1,250,000	+121,000	1,370,000	22,300	.885	1.02
April.....	38,900	23,900	28,700	1,710,000	+246,000	1,960,000	32,900	1.31	1.46
May.....	103,000	39,200	64,300	3,960,000	+939,000	4,900,000	79,700	3.16	3.64
June.....	111,000	84,400	103,000	6,130,000	-261,000	5,870,000	98,600	3.91	4.36
July.....	81,700	30,400	52,700	3,240,000	-828,000	2,410,000	39,200	1.56	1.80
August....	29,200	14,000	20,200	1,240,000	-276,000	964,000	15,700	.623	.72
September	13,600	9,290	11,200	666,000	-77,000	589,000	9,900	.393	.44
The year	111,000	9,290	30,900	22,400,000	-38,000	22,400,000	30,900	1.23	16.65
1921-22									
October..	10,100	8,880	9,380	577,000	-36,000	541,000	8,800	.349	.40
November.	9,600	8,740	9,130	543,000	+12,000	555,000	9,330	.370	.41
December.	14,500	9,920	11,500	707,000	+62,000	769,000	12,500	.496	.57
January..	12,600	8,880	11,000	676,000	-72,000	604,000	9,820	.390	.45
February.	10,400	7,780	9,540	530,000	-27,000	503,000	9,060	.360	.37
March....	10,200	8,320	9,020	555,000	+30,000	585,000	9,510	.377	.43
April.....	21,100	10,400	15,300	910,000	+209,000	1,120,000	18,800	.746	.83
May.....	83,500	21,300	44,000	2,710,000	+1,030,000	3,740,000	60,800	2.41	2.78
June.....	107,000	83,500	97,600	5,810,000	-84,000	5,730,000	96,300	3.82	4.26
July.....	80,800	27,100	47,900	2,950,000	-820,000	2,130,000	34,600	1.37	1.58
August....	26,400	13,700	18,500	1,140,000	-233,000	907,000	14,800	.587	.68
September	13,500	9,600	11,400	678,000	-79,000	599,000	10,100	.401	.45
The year	107,000	7,780	24,500	17,800,000	-8,000	17,800,000	24,600	.976	13.21
1922-23									
October..	9,440	8,320	8,800	541,000	-24,000	517,000	8,410	.334	.39
November.	8,740	7,780	8,180	487,000	-23,000	464,000	7,800	.310	.35
December.	9,760	3,800	7,230	445,000	+37,000	482,000	7,840	.311	.36
January..	13,000	9,160	11,900	732,000	+21,000	753,000	12,200	.484	.56
February.	9,600	4,960	8,350	464,000	-35,000	429,000	7,720	.306	.32
March....	10,700	8,740	9,290	571,000	+19,000	590,000	9,600	.381	.44
April.....	28,200	11,200	19,600	1,170,000	+317,000	1,490,000	25,000	.992	1.11
May.....	77,100	29,400	51,100	3,140,000	+792,000	3,930,000	63,900	2.54	2.93
June.....	91,900	78,500	85,400	5,080,000	+32,000	5,110,000	85,900	3.41	3.80
July.....	79,800	33,000	55,000	3,380,000	-719,000	2,660,000	43,300	1.72	1.98
August...	31,800	15,900	22,100	1,360,000	-308,000	1,050,000	17,100	.679	.78
September	15,300	9,300	11,800	702,000	-120,000	582,000	9,780	.388	.43
The year	91,900	3,800	25,000	18,100,000	-11,000	18,100,000	24,900	.988	13.45
1923-24									
October..	9,160	8,320	8,700	535,000	-21,000	514,000	8,360	.332	.38
November.	8,600	7,900	8,250	491,000	+3,000	494,000	8,300	.329	.37
December.	8,740	7,660	8,390	516,000	-12,000	504,000	8,200	.325	.37
January..	7,660	4,120	6,540	402,000	-14,000	388,000	6,310	.250	.29
February.	14,100	8,740	11,900	684,000	+109,000	793,000	13,800	.548	.59
March....	13,900	11,000	12,300	756,000	-53,000	703,000	11,400	.452	.52
April.....	18,100	10,500	13,200	786,000	+168,000	954,000	16,000	.635	.71
May.....	81,000	18,700	51,300	3,150,000	+935,000	4,080,000	66,400	2.63	3.03
June.....	79,200	47,600	61,800	3,680,000	-456,000	3,220,000	54,100	2.15	2.40
July.....	46,900	23,800	32,700	2,010,000	-440,000	1,570,000	25,500	1.01	1.16
August....	21,000	11,200	15,200	935,000	-179,000	756,000	12,300	.488	.56
September	11,200	7,940	9,210	548,000	-66,000	482,000	8,100	.321	.36
The year	81,000	4,120	20,000	14,500,000	-26,000	14,500,000	19,900	.790	10.74

*Estimated.

Monthly discharge of Clark Fork below Z Canyon, near Metaline Falls--Continued

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	
1924-25									
October..	8,360	7,680	7,900	486,000	-2,000	484,000	7,870	0.312	0.36
November.	9,550	8,360	9,140	544,000	+18,000	562,000	9,440	.375	.42
December.	10,800	6,600	9,020	555,000	+58,000	613,000	9,970	.396	.46
January..	14,000	10,600	12,100	744,000	+44,000	788,000	12,800	.508	.59
February.	22,400	13,100	19,000	1,060,000	+58,000	1,120,000	20,200	.802	.84
March....	18,900	16,000	17,400	1,070,000	+17,000	1,090,000	17,700	.702	.81
April.....	64,200	18,700	42,400	2,520,000	+713,000	3,230,000	54,300	2.15	2.40
May.....	114,000	63,400	83,700	5,150,000	+709,000	5,860,000	95,300	3.78	4.36
June.....	114,000	78,700	95,000	5,650,000	-521,000	5,130,000	86,200	3.42	3.82
July.....	76,900	30,200	53,000	3,260,000	-684,000	2,580,000	42,000	1.67	1.92
August....	29,700	15,400	21,000	1,290,000	-268,000	1,020,000	16,600	.659	.76
September	15,000	12,100	13,200	786,000	-73,000	713,000	12,000	.476	.53
The year	114,000	6,600	31,900	23,100,000	+69,000	23,200,000	32,000	1.27	17.27
1925-26									
October..	11,700	9,580	10,600	652,000	-36,000	616,000	10,000	.397	.46
November.	9,750	8,800	9,370	558,000	-20,000	538,000	9,040	.359	.40
December.	9,750	8,800	9,200	566,000	+9,000	575,000	9,350	.371	.43
January..	9,420	8,510	8,850	544,000	-26,000	518,000	8,420	.354	.39
February.	10,100	8,370	9,400	522,000	+25,000	547,000	9,850	.391	.41
March....	12,400	9,750	10,600	652,000	+53,000	705,000	11,500	.456	.53
April.....	35,700	12,100	18,300	1,090,000	+466,000	1,560,000	26,200	1.04	1.16
May.....	50,400	36,500	46,500	2,860,000	+122,000	2,980,000	48,500	1.92	2.21
June.....	46,900	25,500	34,500	2,050,000	-331,000	1,720,000	28,900	1.15	1.28
July.....	24,800	13,000	17,800	1,090,000	-230,000	860,000	14,000	.556	.64
August....	12,600	8,090	9,640	593,000	-75,000	518,000	8,420	.334	.39
September	9,750	8,510	8,960	533,000	+14,000	547,000	9,190	.365	.41
The year	50,400	8,090	16,200	11,700,000	-29,000	11,700,000	16,100	.639	8.71
1926-27									
October..	15,400	9,750	12,300	756,000	+117,000	873,000	14,200	.563	.65
November.	16,400	14,600	15,600	928,000	+6,000	934,000	15,700	.623	.70
December.	20,700	16,200	18,400	1,130,000	0	1,130,000	18,400	.730	.84
January..	17,000	11,900	14,600	898,000	-88,000	810,000	13,200	.524	.60
February.	14,600	11,200	12,600	700,000	+36,000	736,000	13,300	.528	.55
March....	15,200	14,300	14,600	898,000	+5,000	903,000	14,700	.583	.67
April.....	30,100	15,400	18,800	1,120,000	+334,000	1,450,000	24,400	.968	1.08
May.....	85,200	34,200	61,000	3,750,000	+808,000	4,560,000	74,200	2.94	3.39
June.....	133,000	86,100	115,000	6,840,000	+484,000	7,320,000	123,000	4.88	5.44
July.....	123,000	48,000	83,000	5,100,000	-1,070,000	4,030,000	65,500	2.60	3.00
August....	46,000	20,400	30,300	1,860,000	-429,000	1,430,000	23,300	.925	1.07
September	21,100	18,500	19,900	1,180,000	-21,000	1,160,000	19,500	.774	.86
The year	133,000	9,750	34,800	25,200,000	+182,000	25,300,000	35,000	1.39	18.85
1927-28									
October..	22,500	19,300	21,000	1,290,000	+51,000	1,340,000	21,800	.865	1.00
November.	33,800	22,500	28,700	1,710,000	+197,000	1,910,000	32,100	1.27	1.42
December.	35,600	23,400	30,700	1,890,000	-197,000	1,690,000	27,500	1.09	1.26
January..	22,200	20,000	21,100	1,500,000	-43,000	1,260,000	20,500	.813	.94
February.	20,400	15,500	18,300	1,050,000	-102,000	948,000	16,500	.655	.71
March....	26,800	14,500	18,700	1,150,000	+205,000	1,360,000	22,100	.877	1.01
April.....	32,800	27,600	28,500	1,700,000	+187,000	1,890,000	31,800	1.26	1.41
May.....	133,000	35,600	82,700	5,080,000	+1,420,000	6,500,000	106,000	4.21	4.85
June.....	137,000	75,300	106,000	6,310,000	-897,000	5,410,000	90,900	3.61	4.03
July.....	74,400	41,100	59,800	3,680,000	-480,000	3,200,000	52,000	2.06	2.38
August....	40,100	18,800	27,600	1,700,000	-380,000	1,320,000	21,500	.853	.98
September	18,400	12,100	14,700	875,000	-125,000	750,000	12,600	.500	.56
The year	137,000	12,100	38,200	27,700,000	-164,000	27,600,000	38,100	1.51	20.55
1928-29									
October..	11,600	10,400	11,000	676,000	-7,000	669,000	10,900	.433	.50
November.	11,600	10,200	11,000	655,000	-19,000	636,000	10,700	.425	.47
December.	10,200	8,350	9,100	560,000	-30,000	530,000	8,620	.342	.39
January..	8,550	-	6,800	418,000	-30,000	388,000	6,310	.250	.29
February.	7,190	5,470	6,630	368,000	-3,000	365,000	6,570	.261	.27
March....	10,600	7,190	8,650	532,000	+68,000	600,000	9,760	.387	.45
April.....	16,200	10,900	12,400	738,000	+125,000	863,000	14,500	.575	.64
May.....	62,100	17,200	33,400	2,050,000	+747,000	2,800,000	45,500	1.81	2.09
June.....	74,500	60,700	69,100	4,110,000	-56,000	4,050,000	68,100	2.70	3.01
July.....	59,300	24,400	39,200	2,410,000	-579,000	1,830,000	29,800	1.18	1.36
August....	23,600	10,900	15,900	978,000	-225,000	753,000	12,200	.484	.56
September	10,600	7,010	8,280	493,000	-68,000	425,000	7,140	.283	.32
The year	74,500	-	19,300	14,000,000	-77,000	13,900,000	19,200	.762	10.35

Monthly discharge of Clark Fork below Z Canyon, near Metaline Falls--Continued

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	
1929-30									
October..	7,220	6,600	6,830	420,000	-18,000	402,000	6,540	0.260	0.30
November..	6,720	5,880	6,350	378,000	-27,000	351,000	5,900	.234	.26
December..	7,550	5,630	6,730	414,000	+40,000	454,000	7,380	.293	.34
January..	7,190	4,350	5,550	341,000	-47,000	294,000	4,780	.190	.22
February..	10,000	5,310	7,380	410,000	+101,000	511,000	9,200	.365	.38
March....	10,600	7,800	8,840	544,000	-3,000	541,000	8,800	.349	.40
April....	39,900	10,800	21,500	1,280,000	+569,000	1,850,000	31,100	1.23	1.37
May.....	50,300	41,400	48,100	2,960,000	+108,000	3,070,000	49,900	1.98	2.28
June.....	50,900	40,500	47,900	2,850,000	-144,000	2,710,000	45,500	1.81	2.02
July.....	39,600	18,500	28,100	1,730,000	-365,000	1,360,000	22,100	.877	1.01
August....	17,900	9,540	13,200	812,000	-158,000	654,000	10,600	.421	.49
September	9,540	7,390	7,980	475,000	-47,000	428,000	7,190	.285	.32
The year	50,900	4,350	17,400	12,600,000	+9,000	12,600,000	17,400	.690	9.39
1930-31									
October..	7,980	7,390	7,740	476,000	+11,000	487,000	7,920	.314	.36
November..	8,400	7,580	8,050	479,000	-7,000	472,000	7,930	.315	.35
December..	8,190	7,010	7,710	474,000	-35,000	439,000	7,140	.283	.33
January..	7,580	6,450	6,770	416,000	+11,000	427,000	6,940	.275	.32
February..	8,190	7,200	7,680	427,000	+11,000	438,000	7,890	.313	.33
March....	12,200	7,780	9,430	580,000	+66,000	646,000	10,500	.417	.48
April....	18,200	11,900	15,400	916,000	+134,000	1,050,000	17,600	.698	.78
May.....	51,200	18,900	37,700	2,320,000	+563,000	2,880,000	46,800	1.86	2.14
June.....	51,500	33,700	44,000	2,620,000	-294,000	2,330,000	39,200	1.56	1.74
July.....	33,100	14,900	22,600	1,390,000	-337,000	1,050,000	17,100	.679	.78
August....	14,600	7,200	10,200	627,000	-122,000	505,000	8,210	.326	.38
September	7,200	6,270	6,640	395,000	-28,000	367,000	6,170	.245	.27
The year	51,500	6,270	15,400	11,100,000	-27,000	11,100,000	15,300	.607	8.26
1931-32									
October..	6,560	6,050	6,290	387,000	-11,000	376,000	6,120	.243	.28
November..	7,090	5,540	6,600	393,000	-5,000	388,000	6,520	.259	.29
December..	7,670	5,200	6,270	386,000	+16,000	402,000	6,540	.260	.30
January..	7,470	5,900	6,790	418,000	-2,000	416,000	6,770	.269	.31
February..	11,000	5,000	6,690	385,000	+82,000	467,000	8,120	.322	.35
March....	20,500	12,100	15,500	953,000	+158,000	1,110,000	18,100	.718	.83
April....	42,300	21,500	31,300	1,660,000	+362,000	2,220,000	37,300	1.48	1.65
May.....	98,000	42,900	71,900	4,420,000	+746,000	5,170,000	84,100	3.34	3.85
June.....	94,200	80,400	87,500	5,210,000	-213,000	5,000,000	84,000	3.33	3.72
July.....	79,100	30,400	52,000	3,200,000	-703,000	2,500,000	40,700	1.62	1.87
August....	29,400	13,600	19,800	1,220,000	-290,000	930,000	15,100	.599	.69
September	13,300	8,960	10,600	631,000	-89,000	542,000	9,110	.362	.40
The year	98,000	5,000	26,800	19,500,000	+51,000	19,500,000	26,900	1.07	14.54
1932-33									
October..	8,740	8,050	8,330	512,000	-14,000	498,000	8,100	.321	.37
November..	13,700	8,050	10,700	637,000	+83,000	720,000	12,100	.480	.54
December..	16,400	11,400	14,200	873,000	+13,000	886,000	14,400	.571	.66
January..	15,200	10,300	13,400	824,000	-47,000	777,000	12,600	.500	.58
February..	13,400	7,840	10,200	566,000	-34,000	532,000	9,580	.380	.40
March....	13,700	9,230	10,600	552,000	+53,000	705,000	11,500	.456	.53
April....	30,700	13,700	18,800	1,120,000	+344,000	1,460,000	24,500	.972	1.08
May.....	69,400	32,500	50,300	3,090,000	+629,000	3,720,000	60,500	2.40	2.77
June.....	137,000	71,800	116,000	6,900,000	+628,000	7,530,000	127,000	5.04	5.62
July.....	122,000	41,500	77,900	4,790,000	-1,110,000	3,680,000	59,800	2.37	2.73
August....	40,000	16,100	25,800	1,590,000	-400,000	1,190,000	19,400	.770	.89
September	16,100	11,100	13,200	786,000	-88,000	698,000	11,700	.464	.52
The year	137,000	7,840	30,800	22,300,000	+57,000	22,400,000	30,900	1.23	16.69
1933-34									
October..	15,200	10,600	11,620	714,200	+85,760	800,000	13,010	.516	.59
November..	27,200	16,100	24,510	1,458,000	+135,200	1,593,000	26,770	1.06	1.18
December..	53,700	22,200	32,580	2,003,000	+447,400	2,450,000	39,850	1.58	1.82
January..	51,200	35,500	42,960	2,642,000	-268,100	2,374,000	38,610	1.53	1.76
February..	34,900	26,100	30,460	1,692,000	-172,300	1,520,000	27,370	1.09	1.14
March....	34,000	25,100	27,050	1,664,000	+170,600	1,835,000	29,840	1.18	1.36
April....	84,600	35,800	55,740	3,517,000	+771,600	4,089,000	68,720	2.73	3.05
May.....	94,400	43,300	90,600	5,571,000	-51,370	5,520,000	89,770	3.56	4.10
June.....	82,700	46,000	66,610	3,964,000	-548,200	3,416,000	57,410	2.28	2.54
July.....	44,800	19,500	30,460	1,873,000	-423,900	1,449,000	23,570	.935	1.08
August....	18,800	10,500	14,120	868,200	-175,500	692,900	11,270	.447	.52
September	10,000	6,710	8,254	491,100	-61,060	430,000	7,226	.287	.32
The year	94,400	6,710	36,270	26,280,000	-89,670	26,170,000	36,150	1.43	19.46

Monthly discharge of Clark Fork below Z Canyon, near Meteline Falls--Continued

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	
1934-35									
October..	10,000	6,710	7,744	476,200	+38,380	514,600	8,369	0.332	0.38
November.	15,500	9,770	13,600	809,300	+110,600	919,900	15,460	.613	.68
December.	15,500	13,300	14,270	877,300	-43,350	834,000	13,560	.538	.62
January..	15,000	7,500	12,460	765,800	+24,650	790,400	12,850	.510	.59
February.	15,200	13,800	14,460	803,100	-28,050	775,000	13,950	.554	.58
March....	15,200	12,700	14,110	867,400	+26,350	893,800	14,540	.577	.67
April.....	30,400	14,700	19,470	1,159,000	+260,300	1,419,000	23,850	.946	1.06
May.....	76,000	30,700	48,800	3,000,000	+726,500	3,726,000	60,600	2.40	2.77
June.....	35,500	67,600	80,470	4,788,000	-154,400	4,634,000	77,880	3.09	3.45
July.....	66,400	29,800	46,700	2,871,000	-565,000	2,306,000	37,600	1.49	1.72
August...	28,800	13,800	19,820	1,219,000	-272,400	946,600	15,390	.611	.70
September	13,600	8,020	10,300	612,600	-103,600	509,000	8,554	.339	.38
The year	85,500	6,710	25,210	18,250,000	+19,980	18,270,000	25,230	1.00	13.60

Yearly discharge of Clark Fork below Z Canyon, near Meteline Falls

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1913.....	34,200	1.36	18.44	24,800,000	33,500	1.33	18.03	24,200,000
1914.....	24,300	.964	13.11	17,600,000	25,400	1.01	13.70	18,400,000
1915.....	23,200	.841	11.44	15,400,000	20,100	.798	10.80	14,500,000
1916.....	38,400	1.82	20.76	27,900,000	38,600	1.53	20.86	28,000,000
1917.....	32,100	1.27	17.30	23,300,000	31,900	1.27	17.16	23,100,000
1918.....	30,100	1.19	16.23	21,800,000	29,700	1.18	16.02	21,500,000
1919.....	23,800	.865	11.76	15,800,000	20,900	.829	11.24	15,100,000
1920.....	21,600	.857	11.66	15,700,000	23,500	.933	12.69	17,100,000
1921.....	30,900	1.23	16.65	22,400,000	30,000	1.19	16.15	21,700,000
1922.....	24,600	.976	13.21	17,800,000	24,000	.952	12.93	17,400,000
1923.....	24,900	.988	13.45	18,100,000	25,000	.992	13.47	18,100,000
1924.....	19,900	.790	10.74	14,500,000	20,100	.798	10.85	14,600,000
1925.....	32,000	1.27	17.27	23,200,000	32,100	1.27	17.32	23,300,000
1926.....	16,100	.639	8.71	11,700,000	17,800	.706	9.61	12,900,000
1927.....	35,000	1.39	18.95	25,300,000	37,800	1.50	20.34	27,300,000
1928.....	35,100	1.41	20.55	27,600,000	35,700	1.34	18.23	24,500,000
1929.....	19,200	.762	10.35	13,900,000	18,500	.726	9.89	13,300,000
1930.....	17,400	.690	9.39	12,600,000	17,700	.702	9.53	12,800,000
1931.....	15,300	.607	8.26	11,100,000	15,000	.595	8.09	10,900,000
1932.....	26,900	1.07	14.54	19,500,000	29,200	1.12	15.24	20,500,000
1933.....	30,900	1.23	16.69	22,400,000	34,700	1.38	18.71	25,100,000
1934.....	35,150	1.43	19.46	26,170,000	32,590	1.29	17.55	23,590,000
1935.....	28,230	1.00	13.60	18,270,000	-	-	-	-
Highest.....	38,400	1.82	20.76	27,900,000	38,600	1.53	20.86	28,000,000
Average.....	25,800	1.06	14.45	19,400,000	26,800	1.07	14.47	19,400,000
Lowest.....	15,300	.607	8.26	11,100,000	15,000	.595	8.09	10,900,000

Sullivan Creek near Meteline Falls, Wash.

Location.— Staff gage, lat. 48°51'10", long. 117°17'20", in sec. 30, T. 39 N., R. 44 E., an eighth of a mile below Outlet Creek, half a mile below Sullivan Lake, and 4 miles east of Meteline Falls.

Drainage area.— 125 square miles.

Records available.— May 1912 to December 1924.

Extremes.— Maximum discharge observed, 1,650 second-feet June 2, 1913; minimum observed, 15 second-feet Aug. 27, 28, Sept. 14-17, 1924.

Remarks.— Flow regulated by storage in Sullivan Lake for power purposes.

Monthly discharge of Sullivan Creek near Metaline Falls

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	109	87	97.1	5,970
November.....	144	84	119	7,080
December.....	113	100	105	6,460
January.....	138	89	113	6,950
February.....	118	75	103	5,920
March.....	75	57	64.5	3,970
April.....	94	56	72.6	4,320
May.....	318	59	188	11,600
June.....	495	138	325	19,500
July.....	166	128	144	8,850
August.....	405	92	184	11,500
September.....	361	111	181	10,800
The year.....	495	56	141	103,000
1920-21				
October.....	116	100	109	6,700
November.....	188	109	131	7,800
December.....	126	100	114	7,010
January.....	105	78	95.3	5,860
February.....	116	87	98.9	5,490
March.....	170	121	135	8,300
April.....	350	142	232	13,800
May.....	1,000	272	663	40,800
June.....	1,540	382	767	45,600
July.....	516	148	222	13,600
August.....	142	102	118	7,260
September.....	113	77	101	6,010
The year.....	1,540	77	232	168,000
1921-22				
October.....	82	75	77.1	4,740
November.....	92	75	82.5	4,910
December.....	102	75	83.3	5,120
January.....	75	68	72.0	4,430
February.....	382	72	153	8,500
March.....	434	85	205	12,600
April.....	126	41	82.9	4,930
May.....	693	80	297	18,300
June.....	850	236	461	27,400
July.....	213	96	129	7,930
August.....	102	61	85.5	5,260
September.....	102	74	87.8	5,220
The year.....	850	41	151	109,000
1922-23				
October.....	107	82	89.7	5,520
November.....	113	78	95.9	5,710
December.....	131	109	117	7,190
January.....	118	100	113	6,950
February.....	96	75	86.4	4,800
March.....	74	56	66.2	4,070
April.....	206	61	114	6,780
May.....	682	199	433	26,600
June.....	545	276	419	24,900
July.....	268	113	160	9,840
August.....	118	84	93.8	5,770
September.....	83	68	73.9	4,400
The year.....	682	56	155	113,000
1923-24				
October.....	69	-	60.0	3,690
November.....	71	57	65.6	3,900
December.....	126	62	95.3	5,860
January.....	139	116	127	7,810
February.....	147	108	121	6,960
March.....	113	84	103	6,330
April.....	236	84	114	6,780
May.....	495	84	338	20,800
June.....	193	73	126	7,500
July.....	69	35	56.7	3,490
August.....	78	15	52.8	3,250
September.....	54	15	37.8	2,250
The year.....	495	15	108	78,600
1924				
October.....	88	45	58.5	3,600
November.....	93	35	65.7	3,910
December.....	93	58	76.6	4,710
The period.....	-	-	-	12,200

Yearly discharge of Sullivan Creek near Metaline Falls

Year	. Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1914	246	178,000	251	181,000
1915	169	123,000	166	120,000
1916	235	170,000	232	168,000
1917	216	166,000	219	159,000
1918	153	111,000	146	106,000
1919	212	154,000	219	158,000
1920	141	103,000	144	105,000
1921	232	168,000	223	161,000
1922	151	109,000	156	113,000
1923	155	113,000	149	108,000
1924	108	78,600	107	77,400
Highest	246	178,000	251	181,000
Average	183	133,000	183	132,000
Lowest	108	78,600	107	77,400

SHEEP CREEK BASIN

Sheep Creek near Velvet, Wash.

Location.- Water-stage recorder, lat. 48°57'10", long. 117°52'50", in SE¼ sec. 20, T. 40 N., R. 39 E., about 3½ miles above confluence with Little Sheep Creek and 4 miles southwest of Velvet.

Drainage area.- 171 square miles.

Records available.- August 1929 to September 1932.

Extremes.- Maximum discharge, 1,470 second-feet at noon Apr. 15, 1932; minimum, 1.7 second-feet Nov. 24, 1930.

Remarks.- Flow partly regulated by operation of flash dam half a mile above gage. No diversions.

Monthly discharge of Sheep Creek near Velvet

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
August 1929	37	21	27.6	0.161	0.19	1,700
September	26	17	20.4	.119	.13	1,210
The period	-	-	-	-	-	2,910
October 1929	81	7.3	18.4	.108	.12	1,150
November	76	-	12.3	.072	.08	732
December	-	3.9	5.92	.035	.04	364
January 1930	-	-	3.71	.022	.03	225
February	-	-	9.93	.058	.06	551
March	130	-	25.5	.148	.17	1,580
April	483	46	263	1.54	1.72	15,600
May	438	83	231	1.35	1.56	14,200
June	466	106	202	1.18	1.32	12,000
July	158	5.8	58.9	.344	.40	3,620
August	84	2.6	20.5	.120	.14	1,260
September	115	2.8	18.2	.106	.12	1,080
Water year 1929-30	483	-	72.4	.423	5.76	52,300
October 1930	165	3.6	22.8	.133	.15	1,400
November	42	3.3	16.8	.098	.11	1,000
December	36	-	16.6	.097	.11	1,020
Calendar year 1930	483	-	73.9	.432	5.89	53,500
January 1931	-	-	13	.076	.09	799
February	19	-	14.4	.084	.09	800
March	171	18	64.5	1.377	.43	3,970
April	666	126	321	1.878	2.10	19,100
May	954	151	548	3.20	3.69	33,700
June	418	39	204	1.19	1.33	12,100
July	250	6.9	121	.708	.82	7,440
August	-	-	28.4	.225	.26	2,360
September	29	16	24.3	.142	.16	1,450
Water year 1930-31	954	3.3	118	.690	9.34	85,100

*Estimated.

Monthly discharge of Sheep Creek near Velvet--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1931.....	30	20	23.0	0.135	0.16	1,410
November.....	32	-	25.1	.147	.16	1,490
April 1932.....	1,430	-	834	4.88	5.44	49,600
May.....	1,390	560	1,030	6.02	6.94	63,300
June.....	648	121	389	2.27	2.53	23,100
July.....	112	37	65.4	.382	.44	4,020
August.....	37	25	29.9	.175	.20	1,840
September.....	26	-	20.7	.121	.14	1,230

Sheep Creek near Northport, Wash.

Location.- Water-stage recorder, lat. 48°56'40", long. 117°46'40", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 40 N., R. 39 E., at county highway bridge 1 mile above mouth and 1 $\frac{1}{2}$ miles north of Northport.

Drainage area.- 225 square miles.

Records available.- June 1929 to September 1935.

Extremes.- Maximum discharge recorded, 2,450 second-feet at 9:40 a.m. Apr. 29, 1933; minimum, probably less than 8 second-feet, occurred during period Dec. 25, 1929, to Apr. 7, 1930.

Remarks.- Flow partly regulated by operation of flash dam 6 $\frac{1}{2}$ miles upstream. No diversions.

Monthly discharge of Sheep Creek near Northport

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929						
June.....	520	190	*331	1.47	1.64	19,700
July.....	180	48	90.5	.402	.46	5,560
August.....	47	30	37.8	.168	.19	2,320
September.....	31	28	29.0	.129	.14	1,730
The year.....	-	-	-	-	-	29,300
1929-30						
October.....	55	13	25.0	.111	.13	1,540
November.....	-	-	16.0	.071	.08	952
December.....	-	-	11.9	.053	.06	732
January.....	-	-	9.32	.041	.05	573
February.....	-	-	15.0	.067	.07	833
March.....	-	-	30.2	.134	.15	1,860
April.....	507	-	286	1.27	1.42	17,000
May.....	454	124	248	1.10	1.27	15,200
June.....	474	123	213	.947	1.06	12,700
July.....	145	15	69.2	.308	.36	4,250
August.....	79	12	28.9	.128	.15	1,780
September.....	109	11	25.0	.111	.12	1,490
The year.....	507	-	81.4	.362	4.92	58,900
1930-31						
October.....	137	11	29.1	.129	.15	1,790
November.....	42	11	24.0	.107	.12	1,430
December.....	42	14	22.5	.100	.12	1,380
January.....	25	19	22.4	.100	.12	1,380
February.....	25	-	22.4	.100	.10	1,240
March.....	191	24	73.5	.327	.38	4,520
April.....	840	161	390	1.73	1.93	23,200
May.....	1,260	163	669	2.97	3.42	41,100
June.....	460	54	235	1.04	1.16	14,000
July.....	303	23	140	.622	.72	8,610
August.....	120	21	45.5	.202	.23	2,800
September.....	40	23	31.0	.138	.15	1,840
The year.....	1,260	11	143	.636	8.60	103,000

*Estimated.

Monthly discharge of Sheep Creek near Northport--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	36	27	30.4	0.135	0.16	1,870
November.....	41	-	30.1	.134	.15	1,790
December.....	35	-	28.1	.125	.14	1,730
January.....	-	-	26.5	.118	.14	1,630
February.....	-	-	29.0	.129	.14	1,670
March.....	440	-	125	.556	.64	7,690
April.....	2,060	529	1,180	5.24	5.85	70,200
May.....	-	641	1,380	6.13	7.07	84,800
June.....	740	150	440	1.96	2.19	26,200
July.....	141	52	86.5	.384	.44	5,320
August.....	51	35	41.8	.186	.21	2,570
September.....	38	29	31.7	.141	.16	1,890
The year.....	2,060	-	286	1.27	17.29	207,000
1932-33						
October.....	-	28	32.5	.144	.17	2,000
November.....	-	-	*42.8	.190	.21	2,550
December.....	120	-	76.5	.340	.39	4,700
January.....	65	-	59.0	.262	.30	3,630
February.....	-	-	41.2	.183	.19	2,230
March.....	143	40	61.6	.274	.32	3,790
April.....	2,210	156	759	3.37	3.76	45,200
May.....	1,920	1,040	1,400	6.22	7.17	86,100
June.....	1,400	280	715	3.18	3.55	42,500
July.....	276	45	125	.556	.64	7,690
August.....	47	28	35.8	.159	.18	2,200
September.....	42	27	31.8	.141	.16	1,890
The year.....	2,210	27	282	1.25	17.04	205,000
1933-34						
October.....	146	30	44.6	.198	.23	2,740
November.....	150	80	113	.502	.56	6,730
December.....	190	80	*122	.542	.62	7,490
January.....	165	105	131	.582	.67	8,030
February.....	213	105	164	.729	.76	9,100
March.....	760	181	360	1.60	1.84	22,130
April.....	1,780	820	1,300	5.78	6.45	77,330
May.....	1,010	242	491	2.18	2.51	30,170
June.....	231	75	131	.582	.65	7,790
July.....	74	35	53.8	.239	.28	3,310
August.....	35	25	29.5	.131	.15	1,820
September.....	27	23	24.4	.108	.12	1,450
The year.....	1,780	23	246	1.09	14.84	178,100
1934-35						
October.....	33	24	27.2	.121	.14	1,670
November.....	87	29	57.7	.256	.29	3,430
December.....	80	50	69.6	.309	.36	4,280
January.....	104	20	58.5	.260	.30	3,600
February.....	141	107	122	.542	.56	6,750
March.....	118	100	110	.489	.56	6,760
April.....	1,220	111	*544	2.42	2.70	32,340
May.....	1,600	822	1,124	5.00	5.76	69,120
June.....	810	167	396	1.76	1.96	23,530
July.....	209	75	125	.556	.64	7,690
August.....	75	40	53.7	.239	.28	3,300
September.....	40	29	33.6	.149	.17	2,000
The year.....	1,600	20	227	1.01	13.72	164,500

*Estimated.

Yearly discharge of Sheep Creek near Northport

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	81.4	0.362	4.92	58,900	83.3	0.370	5.04	60,300
1931.....	143	.636	8.60	103,000	144	.640	8.66	104,000
1932.....	286	1.27	17.29	207,000	291	1.29	17.61	211,000
1933.....	282	1.25	17.04	205,000	293	1.30	17.68	212,000
1934.....	246	1.09	14.84	178,100	236	1.05	14.22	170,500
1935.....	227	1.01	13.72	164,500	-	-	-	-

KETTLE RIVER BASIN

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.

Drainage area.- 2,220 square miles.

Records available.- August 1928 to September 1935.

Extremes.- Maximum discharge recorded, 14,000 second-feet at 1 a.m. June 17, 1933; minimum observed, 14 second-feet Jan. 23, 1930, result of current-meter measurement; may have been less during period Jan. 18-23, 1930.

Remarks.- Several small diversions above station for irrigation. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Monthly discharge of Kettle River near Ferry

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1928				
August 27-31	340	302	326	3,230
September.....	293	-	214	12,700
The period	-	-	-	15,900
1928-29				
October.....	-	-	*220	13,500
November.....	-	157	*183	10,900
December.....	170	86	126	7,750
January.....	-	-	85.3	5,240
February.....	102	-	87.2	4,640
March.....	131	96	118	7,260
April.....	1,260	114	300	17,900
May.....	6,800	1,180	2,950	181,000
June.....	6,200	1,360	3,930	234,000
July.....	1,260	207	571	35,100
August.....	199	92	123	7,560
September.....	94	80	86.7	5,160
The year.....	6,800	-	733	530,000
1929-30				
October.....	112	87	96.0	5,900
November.....	102	69	84.3	5,020
December.....	81	68	78.2	4,810
January.....	79	-	40.3	2,480
February.....	98	-	72.5	4,030
March.....	164	80	110	6,760
April.....	3,380	200	1,570	93,400
May.....	3,650	1,620	2,220	136,000
June.....	5,490	1,620	2,730	162,000
July.....	1,460	270	664	40,800
August.....	236	106	147	9,040
September.....	104	84	90.7	5,400
The year.....	5,490	-	659	476,000
1930-31				
October.....	120	87	107	6,580
November.....	126	83	110	6,550
December.....	113	61	90.6	5,570
January.....	108	65	88.2	5,420
February.....	108	70	92.9	5,160
March.....	242	94	144	8,850
April.....	2,560	230	851	50,600
May.....	8,560	3,060	4,830	297,000
June.....	4,410	1,560	2,770	165,000
July.....	2,300	331	964	89,300
August.....	300	104	178	10,900
September.....	308	95	202	12,000
The year.....	8,560	61	875	633,000

*Estimated.

Monthly discharge of Kettle River near Ferry--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1931-32				
October.....	174	142	159	9,780
November.....	230	94	179	10,700
December.....	180	115	150	9,220
January.....	154	80	126	7,750
February.....	222	-	121	6,960
March.....	518	216	307	18,900
April.....	7,140	602	3,450	205,000
May.....	10,100	4,710	7,560	465,000
June.....	8,780	2,300	5,580	332,000
July.....	2,060	345	922	56,700
August.....	602	208	298	18,300
September.....	336	151	208	12,400
The year.....	10,100	-	1,590	1,150,000
1932-33				
October.....	428	174	247	15,200
November.....	632	287	413	24,600
December.....	687	-	404	24,800
January.....	-	-	284	17,500
February.....	245	-	201	11,200
March.....	440	215	281	17,300
April.....	8,500	445	2,380	142,000
May.....	10,600	5,560	7,410	456,000
June.....	13,800	5,390	8,140	484,000
July.....	6,790	642	2,530	156,000
August.....	616	182	349	21,500
September.....	325	172	227	13,500
The year.....	13,800	-	1,910	1,380,000
1933-34				
October.....	1,400	238	410	25,230
November.....	1,080	484	731	43,500
December.....	648	184	473	29,070
January.....	513	140	327	20,090
February.....	397	297	356	19,800
March.....	2,740	353	821	50,500
April.....	11,100	2,420	6,351	377,900
May.....	8,120	3,700	5,454	335,300
June.....	4,160	603	1,834	109,100
July.....	578	181	346	21,290
August.....	234	89	149	9,150
September.....	181	81	132	7,850
The year.....	11,100	81	1,449	1,049,000
1934-35				
October.....	323	168	220	13,510
November.....	944	301	730	43,470
December.....	621	160	410	25,230
January.....	674	140	326	20,030
February.....	738	511	626	34,740
March.....	546	404	462	28,390
April.....	4,480	389	1,672	99,490
May.....	10,600	3,850	6,386	392,700
June.....	9,310	2,480	5,668	337,300
July.....	8,500	904	2,754	169,300
August.....	952	292	544	33,450
September.....	409	185	249	14,830
The year.....	10,600	140	1,675	1,212,000

Yearly discharge of Kettle River near Ferry

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1929.....	733	530,000	710	514,000
1930.....	659	476,000	661	479,000
1931.....	875	633,000	889	644,000
1932.....	1,590	1,150,000	1,640	1,190,000
1933.....	1,910	1,380,000	1,960	1,420,000
1934.....	1,449	1,049,000	1,427	1,035,000
1935.....	1,675	1,212,000	-	-

Kettle River at Cascade, British Columbia

(International gaging station)

Location.- Staff gage, lat. $49^{\circ}02'$, long. $118^{\circ}12'$, at highway bridge half a mile below Cascade Falls, at Cascade.Drainage area.- 3,550 square miles.Records available.- October 1930 to September 1934. April 1916 to September 1930 in reports of Department of Mines and Resources, Canada.Extremes.- Maximum discharge observed, 29,300 second-feet June 8, 1921; minimum observed, 60 second-feet Jan. 24, 25, 1930.Remarks.- Flow regulated by storage on North Fork at Grand Forks, British Columbia.

Several small diversions for irrigation and domestic use. This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Monthly discharge of Kettle River at Cascade, British Columbia

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1930.....	230	172	205	12,600
November.....	246	196	221	13,200
December.....	230	130	202	12,400
January 1931.....	218	175	189	11,600
February.....	238	160	206	11,400
March.....	1,160	230	554	34,100
April.....	5,680	901	2,400	143,000
May.....	12,800	5,170	8,000	492,000
June.....	7,080	2,880	4,510	268,000
July.....	4,350	637	1,910	117,000
August.....	617	222	358	22,000
September.....	482	206	356	21,200
Water year 1930-31.....	12,800	130	1,600	1,160,000
October 1931.....	360	295	324	19,900
November.....	440	295	363	21,600
December.....	328	259	302	18,600
Calendar year 1931.....	12,800	160	1,630	1,180,000
January 1932.....	300	189	219	13,500
February.....	400	188	236	13,600
March.....	1,400	313	589	36,200
April.....	11,500	1,580	6,150	366,000
May.....	17,400	7,720	12,800	787,000
June.....	12,800	4,140	9,020	537,000
July.....	3,760	665	1,700	105,000
August.....	807	375	463	28,500
September.....	458	295	351	20,900
Water year 1931-32.....	17,400	188	2,710	1,970,000
October 1932.....	539	300	367	22,600
November.....	1,020	470	650	38,700
December.....	1,720	650	909	55,900
Calendar year 1932.....	17,400	188	2,790	2,020,000
January 1933.....	640	520	569	36,600
February.....	560	400	467	25,900
March.....	1,440	415	570	35,000
April.....	14,800	588	4,500	288,000
May.....	18,400	9,080	12,000	738,000
June.....	22,500	8,370	13,100	780,000
July.....	9,320	993	4,060	250,000
August.....	1,080	345	630	38,700
September.....	484	318	383	22,800
Water year 1932-33.....	22,500	300	3,190	2,310,000
October 1933.....	2,840	492	797	49,000
November.....	2,560	1,020	1,490	88,700
December.....	1,200	546	1,010	62,100
Calendar year 1933.....	22,500	318	3,310	2,390,000
January 1934.....	1,130	492	781	48,000
February.....	998	670	873	48,500
March.....	5,760	878	1,850	114,000
April.....	20,700	5,280	11,600	690,000
May.....	14,000	6,230	8,960	551,000
June.....	7,430	1,190	3,380	201,000
July.....	1,190	320	643	39,500
August.....	350	200	263	16,200
September.....	285	182	228	13,600
Water year 1933-34.....	20,700	182	2,650	1,920,000

Kettle River near Laurier, Wash.
(International gaging station)

Location.- Water-stage recorder, lat. 48°50'50", long. 118°13'00", in SW $\frac{1}{4}$ sec. 11, T. 40 N., R. 36 E., 500 feet below Deep Creek and $1\frac{1}{2}$ miles southeast of Laurier.

Drainage area.- 3,800 square miles.

Records available.- September 1929 to September 1935.

Extremes.- Maximum discharge recorded, 23,800 second-feet at 3 a.m. June 17, 1933; minimum, not determined, occurred during winter of 1929-30.

Maximum stage known, about 22 feet in 1894.

Remarks.- Flow regulated by storage on North Fork at Grand Forks, British Columbia. Several small diversions for irrigation and domestic use. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Monthly discharge of Kettle River near Laurier

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1929				
September.....	-	158	174	10,400
1929-30				
October.....	232	158	184	11,300
November.....	270	-	202	12,000
December.....	185	124	154	9,470
January.....	-	-	76.5	4,700
February.....	-	-	97.9	5,440
March.....	306	-	212	13,000
April.....	6,600	360	3,500	208,000
May.....	5,600	3,180	4,250	261,000
June.....	7,260	2,910	4,450	265,000
July.....	2,780	618	1,340	82,400
August.....	590	223	348	21,400
September.....	223	165	194	11,500
The year.....	7,260	-	1,250	905,000
1930-31				
October.....	232	173	210	12,900
November.....	241	205	225	13,400
December.....	236	-	208	12,800
January.....	236	-	194	11,900
February.....	255	-	222	12,300
March.....	1,180	255	575	35,400
April.....	6,400	985	2,680	159,000
May.....	14,000	5,800	8,890	547,000
June.....	7,610	3,180	5,310	316,000
July.....	4,660	760	2,110	130,000
August.....	736	246	437	26,900
September.....	548	232	398	23,700
The year.....	14,000	-	1,800	1,300,000
1931-32				
October.....	388	318	340	20,900
November.....	512	-	400	23,800
December.....	605	-	339	20,800
January.....	-	-	230	14,100
February.....	-	-	338	19,400
March.....	1,500	-	705	43,300
April.....	13,200	1,740	6,940	413,000
May.....	18,900	8,450	14,200	873,000
June.....	13,500	4,300	9,590	571,000
July.....	3,960	760	1,850	114,000
August.....	750	-	540	33,200
September.....	-	306	388	23,100
The year.....	18,900	-	2,990	2,170,000
1932-33				
October.....	585	300	390	24,000
November.....	950	548	692	41,200
December.....	1,600	-	916	56,300
January.....	-	-	636	39,100
February.....	-	-	519	28,800
March.....	1,650	-	670	41,200
April.....	16,300	819	4,790	285,000
May.....	19,000	10,200	13,500	830,000
June.....	22,900	8,960	14,000	833,000
July.....	10,200	1,160	4,440	273,000
August.....	1,240	402	766	47,100
September.....	565	381	458	27,300
The year.....	22,900	300	3,490	2,530,000

Monthly discharge of Kettle River near Laurier--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1933-34				
October.....	2,820	504	800	49,190
November.....	2,350	1,160	1,562	92,950
December.....	1,230	682	1,101	67,700
January.....	1,270	490	890	54,740
February.....	1,120	805	975	54,170
March.....	6,000	1,020	2,041	125,500
April.....	20,800	5,800	12,170	724,200
May.....	15,100	7,000	9,898	608,600
June.....	8,200	1,510	3,783	225,100
July.....	1,430	416	759	46,660
August.....	410	224	307	18,890
September.....	285	178	231	13,730
The year.....	20,800	178	2,875	2,081,000
1934-35				
October.....	464	250	322	19,790
November.....	1,890	500	1,551	92,300
December.....	1,310	450	971	59,700
January.....	1,650	300	807	49,640
February.....	1,650	1,200	1,407	78,150
March.....	1,560	990	1,163	71,500
April.....	8,600	1,020	3,766	224,100
May.....	18,400	7,800	11,570	711,600
June.....	15,700	4,660	9,683	576,200
July.....	10,800	1,560	4,555	267,700
August.....	1,790	620	1,089	66,960
September.....	608	366	462	27,490
The year.....	18,400	250	3,101	2,245,000

Yearly discharge of Kettle River near Laurier

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1930.....	1,250	905,000	1,260	912,000
1931.....	1,800	1,300,000	1,830	1,350,000
1932.....	2,990	2,170,000	3,070	2,250,000
1933.....	3,490	2,550,000	3,610	2,610,000
1934.....	2,875	2,081,000	2,823	2,045,000
1935.....	3,101	2,245,000	-	-

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 1935. May 1923 to September 1929 in reports of Department of Mines and Resources.

Extremes.- Maximum discharge recorded, 99 second-feet June 14, 1923; no flow July 16-18, 25, 1926.

Remarks.- Diversions above station for irrigation. No records during winters. This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Monthly discharge of Myers Creek near Myncaster, British Columbia

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1929-30				
October.....	2.6	2.1	2.4	148
April.....	5.7	2.9	4.3	256
May.....	4.7	1.5	2.5	141
June.....	5.0	1.5	2.8	167
July.....	2.0	.5	1.0	61.5
August.....	.8	.3	.5	30.7
September.....	1.4	.4	.7	41.7

Monthly discharge of Myers Creek near Myncaster, British Columbia--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1930-31				
October.....	2.3	1.0	1.8	111
November 1-15.....	2.6	1.9	2.3	68.4
April.....	5.7	3.1	3.9	232
May.....	8.4	2.6	5.7	350
June.....	9.1	1.0	3.0	179
July.....	3.3	.7	1.5	92.2
August.....	.8	.2	.4	24.6
September.....	1.6	.3	1.0	59.5
1931-32				
October.....	2.7	.7	1.7	105
November 1-10.....	2.6	2.3	2.4	43
April.....	16.7	8.4	11.1	660
May.....	43.6	17.4	29.3	1,800
June.....	20.4	4.8	13.3	791
July.....	4.8	1.2	2.7	166
August.....	2.2	1.1	1.5	92
September.....	1.7	.8	1.2	71
1932-33				
October.....	3.6	1.3	2.1	129
November.....	8.4	2.7	3.9	232
April.....	16.6	8.1	12.4	738
May.....	40.2	14.9	23.8	1,460
June.....	41.6	13.9	27.2	1,620
July.....	15.2	2.0	6.7	412
August.....	2.8	1.1	1.8	111
September.....	3.0	1.2	2.0	119
1933-34				
October.....	5.6	2.3	3.2	197
November 1-28.....	5.1	3.6	4.3	239
March 25-31.....	16.3	8.4	11.7	162
April.....	18.7	10.6	12.8	762
May.....	17.8	5.0	10.8	664
June.....	7.9	1.4	4.7	280
July.....	1.6	.4	1.1	68
August.....	2.0	.2	.6	37
September.....	2.6	.2	1.3	77
1934-35				
October.....	3.1	1.7	2.2	135
November.....	4.7	2.8	3.8	228
April 3-30.....	13.1	6.0	9.4	524
May.....	25.5	9.7	16.8	1,030
June.....	17.6	5.7	10.4	615
July.....	6.9	2.4	4.1	252
August.....	4.3	.9	1.8	112
September.....	1.8	.9	1.3	78

Curlew Creek near Curlew, Wash.

Location.-- Staff gage, lat. 48°46'20", long. 118°38'50", in sec. 21, T. 38 N., R. 33 E., 400 feet below mouth of Lambert Creek, half a mile below outlet of Curlew Lake, and 9 miles above Curlew.

Drainage area.-- 95 square miles.

Records available.-- May 1917 to June 1921.

Extremes.-- Maximum discharge observed, 65 second-feet May 30, June 2, 6, 1917; no flow Dec. 12, 13, 1919, Sept. 22-26, 29, 30, 1920.

Remarks.-- Diversions above station for irrigation. Flow regulated by natural storage in Curlew Lake.

Monthly discharge of Curlew Creek near Curlew

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1919.....	1.0	0.7	0.81	49.8
November.....	3.0	.9	1.97	117
December.....	2.2	0	.85	52.3
January 1920.....	-	-	1.69	104
February.....	3.2	1.8	2.48	143
March.....	3.3	1.9	2.39	147
April.....	6.0	2.1	3.77	224
May.....	12	6.1	8.72	536
June.....	9.4	4.4	6.61	393
July.....	5.2	1.7	2.83	174
August.....	1.6	.3	.64	39.4
September.....	.5	0	.21	12.5
Water year 1919-20.....	12	0	2.74	1,990

Monthly discharge of Curlew Creek near Curlew--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1920.....	0.3	0.1	0.14	8.6
November.....	.7	.2	.42	25.0
December.....	1.1	.5	.75	46.1
Calendar year 1920.....	12	0	2.55	1,850
January 1921.....	1.6	.7	1.09	67.0
February.....	15.5	1.4	3.22	179
March.....	8.1	3.5	5.96	366
April.....	36	8.1	20.5	1,220
May.....	60	36	50.1	3,080
June.....	53	13.5	35.0	2,080
The period.....	-	-	-	7,070

COLVILLE RIVER BASIN

Colville River at Blue Creek, Wash.

Location.- Staff gage, lat. 48°19'10", long. 117°49'10", in sec. 31, T. 33 N., R. 40 E., above small dam at sawmill, just below mouth of Blue Creek, and a quarter of a mile above Great Northern Railway crossing at village of Blue Creek.

Records available.- October 1922 to September 1924.

Extremes.- Maximum discharge observed, 468 second-feet Apr. 8, 1923; minimum observed, 5.3 second-feet Aug. 13, 1924.

Remarks.- A large part of summer flow diverted for irrigation above the station. No regulation.

Monthly discharge of Colville River at Blue Creek

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1922-23				
October 28-31.....	81	58	68.8	546
November.....	65	52	56.0	3,350
December.....	202	-	71.9	4,420
January.....	291	-	172	10,600
February.....	-	-	*110	6,110
March.....	316	-	186	11,400
April.....	468	-	377	22,400
May.....	-	119	*175	10,800
June.....	163	86	125	7,440
July.....	110	23	60.4	3,710
August.....	97	24	41.6	2,560
September.....	52	23	40.1	2,390
The period.....	468	-	-	85,700
1923-24				
April.....	138	81	126	7,500
May.....	99	12	40.8	2,510
June.....	47	11	22.8	1,360
July.....	21	8.8	15.7	965
August.....	38	6.0	22.3	1,370
September.....	38	20	28.0	1,670
The period.....	-	-	-	15,400

*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., at foot of Meyers Falls, 300 feet below Stevens County Light & power Co.'s plant.

Records available.- October 1922 to September 1935.

Extremes.- Maximum discharge observed, 1,760 second-feet at 3 p.m. Apr. 27, 1932; minimum observed, 0.5 second-foot Aug. 15, 1930.

Remarks.- Several small ditches divert water for irrigation above station. Regulation probably slight in small reservoir above falls.

Monthly discharge of Colville River at Meyers Falls

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1922-23				
October.....	-	-	*106	6,520
November.....	116	95	111	6,600
December.....	240	-	107	6,580
January.....	338	110	243	14,900
February.....	192	-	151	8,390
March.....	422	171	254	15,600
April.....	916	404	718	42,700
May.....	683	322	533	32,800
June.....	404	250	345	20,500
July.....	307	95	184	11,300
August.....	116	78	90.4	5,560
September.....	83	68	76.7	4,560
The year.....	916	-	243	176,000
1923-24				
October.....	123	78	96.5	5,930
November.....	161	102	122	7,260
December.....	171	-	125	7,690
January.....	-	-	86.9	5,340
February.....	404	238	324	18,600
March.....	307	214	244	15,000
April.....	277	214	239	14,200
May.....	250	81	167	10,300
June.....	100	47	74.7	4,440
July.....	41	19	28.7	1,760
August.....	55	18	33.7	2,070
September.....	51	17	39.3	2,340
The year.....	404	17	131	94,900
1924-25				
October.....	94	46	65.6	4,030
November.....	192	-	139	8,270
December.....	192	-	91.0	5,600
January.....	-	-	87.7	5,390
February.....	-	-	502	27,900
March.....	683	422	545	35,500
April.....	1,270	557	979	58,300
May.....	716	295	453	27,900
June.....	295	93	219	13,000
July.....	91	44	63.7	3,920
August.....	98	38	47.9	2,950
September.....	69	31	51.1	3,040
The year.....	1,270	31	268	194,000
1925-26				
October.....	98	65	78.4	4,820
November.....	125	84	104	6,190
December.....	174	111	138	8,480
January.....	154	94	122	7,500
February.....	271	121	222	12,300
March.....	244	196	219	13,500
April.....	285	185	239	14,200
May.....	174	68	119	7,320
June.....	88	28	48.4	2,880
July.....	35	13	25.3	1,560
August.....	68	15	29.0	1,780
September.....	102	44	68.7	4,090
The year.....	285	13	117	84,600
1926-27				
October.....	116	74	90.7	5,580
November.....	200	80	111	6,600
December.....	357	-	173	10,600
January.....	246	-	148	9,100
February.....	386	-	217	12,100
March.....	415	372	406	25,000
April.....	1,200	445	739	44,000
May.....	1,230	625	880	54,100
June.....	730	402	571	34,000
July.....	386	93	225	13,800
August.....	93	62	77.1	4,740
September.....	417	87	237	14,100
The year.....	1,230	-	323	234,000

*Estimated.

Monthly discharge of Colville River at Meyers Falls--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1927-28				
October.....	356	245	301	18,500
November.....	555	258	401	23,900
December.....	625	-	394	24,200
January.....	417	-	354	21,800
February.....	485	258	383	22,000
March.....	970	299	617	37,900
April.....	1,260	960	1,080	64,500
May.....	1,260	520	850	52,500
June.....	500	250	348	20,700
July.....	324	115	209	12,900
August.....	132	92	108	6,640
September.....	102	46	89.4	5,320
The year.....	1,260	46	428	310,000
1928-29				
October.....	132	84	115	7,070
November.....	178	123	148	8,810
December.....	212	82	138	8,480
January.....	-	-	92.6	5,690
February.....	140	-	73.6	4,090
March.....	356	132	239	14,700
April.....	340	168	249	14,800
May.....	324	115	214	13,200
June.....	178	101	132	7,860
July.....	100	28	52.2	3,210
August.....	37	24	29.3	1,800
September.....	51	23	38.2	2,270
The year.....	356	23	127	92,000
1929-30				
October.....	70	38	54.2	3,330
November.....	86	43	68.1	4,050
December.....	132	64	95.5	5,870
January.....	-	-	32.9	2,020
February.....	-	-	96.5	5,560
March.....	158	107	127	7,810
April.....	158	101	128	7,620
May.....	140	56	93.8	5,770
June.....	132	51	80.5	4,790
July.....	59	18	33.2	2,040
August.....	22	.5	14.0	861
September.....	36	17	24.2	1,440
The year.....	-	.5	70.5	51,000
1930-31				
October.....	56	33	43.2	2,660
November.....	84	36	64.6	3,840
December.....	78	52	68.1	4,190
January.....	115	63	84.6	5,200
February.....	132	-	90.3	5,020
March.....	237	88	151	9,280
April.....	237	178	205	12,200
May.....	189	54	112	6,890
June.....	86	31	49.5	2,950
July.....	53	10	27.8	1,710
August.....	16	10	12.0	738
September.....	33	12	22.7	1,350
The year.....	237	10	77.3	56,000
1931-32				
October.....	70	21	35.8	2,200
November.....	72	28	49.5	2,950
December.....	89	-	56.3	3,460
January.....	97	-	77.7	4,780
February.....	279	-	93.4	5,370
March.....	775	205	408	25,100
April.....	1,710	820	1,410	83,900
May.....	-	-	*900	55,300
June.....	-	-	*450	26,800
July.....	-	-	*100	6,150
August.....	-	-	*45.0	2,770
September.....	-	-	*35.0	2,080
The year.....	1,710	21	304	221,000

*Estimated.

Monthly discharge of Colville River at Meyers Falls--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1932-33				
October.....	100	-	*64.7	3,980
November.....	175	90	145	8,630
December.....	172	-	89.5	5,500
January.....	196	-	126	7,750
February.....	167	-	99.6	5,530
March.....	575	175	376	23,100
April.....	1,540	600	888	52,800
May.....	1,480	575	956	58,800
June.....	575	178	336	20,000
July.....	210	60	113	6,950
August.....	106	41	53.1	3,260
September.....	118	44	78.2	4,650
The year.....	1,540	-	278	201,000
1933-34				
October.....	160	76	103	6,310
November.....	195	70	139	8,290
December.....	-	120	346	21,300
January.....	820	378	557	34,260
February.....	770	552	663	36,840
March.....	925	529	653	40,160
April.....	1,040	552	815	48,500
May.....	552	195	364	22,390
June.....	220	88	148	8,800
July.....	89	34	62.7	3,850
August.....	53	34	41.3	2,540
September.....	85	43	59.1	3,510
The year.....	1,040	34	327	236,800
1934-35				
October.....	172	72	102	6,270
November.....	195	136	166	9,880
December.....	232	120	169	10,370
January.....	348	70	184	11,300
February.....	453	330	368	20,450
March.....	528	388	470	28,910
April.....	1,380	478	886	52,720
May.....	1,260	453	818	50,270
June.....	430	188	277	16,510
July.....	239	76	147	9,030
August.....	107	51	80.8	4,970
September.....	76	53	65.7	3,910
The year.....	1,380	51	310	224,600

*Estimated.

Yearly discharge of Colville River at Meyers Falls

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1923.....	243	176,000	245	177,000
1924.....	131	94,900	127	92,000
1925.....	268	194,000	270	195,000
1926.....	117	84,600	121	87,900
1927.....	323	234,000	383	278,000
1928.....	428	310,000	369	268,000
1929.....	127	92,000	112	80,900
1930.....	70.5	51,000	66.9	48,400
1931.....	77.3	56,000	74.5	53,900
1932.....	304	221,000	317	230,000
1933.....	278	201,000	302	219,000
1934.....	327	236,800	314	227,400
1935.....	310	224,600	-	-
Highest.....	428	310,000	383	278,000
Average.....	231	167,000	225	163,000
Lowest.....	70.5	51,000	66.9	48,400

HALL CREEK BASIN

Hall Creek at Inchellium, Wash.

Location.- Water-stage recorder, lat. 48°18', long. 118°11', in NE $\frac{1}{4}$ sec. 6, T. 32 N., R. 37 E., three-quarters of a mile above mouth and northwest of Inchellium; May 16, 1913, to July 31, 1915, staff gage 3 miles above mouth, July 31, 1915, to Aug. 27, 1916, staff gage at present site.

Drainage area.- 163 square miles, 160 square miles at former site.

Records available.- December 1912 to September 1929.

Extremes.- Maximum discharge observed, 965 second-feet at 6:20 a.m. Apr. 16, 1914; minimum, 4 second-feet (estimated) Jan. 1, 1919, when stage-discharge relation was affected by ice.

Remarks.- Storage in mill pond above during 1929.

Monthly discharge of Hall Creek at Inchellium

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	22	16	18.5	1,140
November.....	23	-	18.9	1,120
December.....	-	-	*17.0	1,050
January.....	-	-	*18.0	1,110
February.....	-	-	*15.0	863
March.....	17	-	15.7	965
April.....	69	17	34.5	2,050
May.....	85	48	66.9	4,110
June.....	60	26	41.4	2,460
July.....	24	10	15.5	953
August.....	15	7.6	9.51	585
September.....	24	9.3	13.0	774
The year.....	85	7.6	23.7	17,200
1920-21				
October.....	26	13	18.4	1,130
November.....	65	14	29.7	1,770
December.....	42	-	29.2	1,800
January.....	44	-	*29.6	1,820
February.....	54	-	*41.4	2,300
March.....	166	56	109	6,700
April.....	466	180	334	19,900
May.....	548	255	419	25,900
June.....	244	72	141	8,390
July.....	72	22	41.7	2,560
August.....	22	15	17.7	1,090
September.....	23	16	18.0	1,070
The year.....	548	13	103	74,300
1921-22				
October.....	-	-	*22.9	1,410
November.....	-	-	*25.0	1,490
December.....	-	-	*27.0	1,660
January.....	-	-	*24.0	1,480
February.....	-	-	*22.0	1,220
March.....	-	-	*30.0	1,840
April.....	269	-	130	7,740
May.....	498	233	316	19,400
June.....	228	54	121	7,200
July.....	52	22	31.6	1,940
August.....	27	15	19.7	1,210
September.....	21	15	16.6	988
The year.....	498	-	65.8	47,600
1922-23				
March 8-31.....	101	18	30.6	1,460
April.....	299	118	205	12,200
May.....	230	122	176	10,900
June.....	190	96	146	8,690
July.....	136	35	69.2	4,250
August.....	65	22	30.3	1,860
September.....	22	16	19.5	1,160
The period.....	-	-	-	40,400
1923-24				
October.....	26	15	19.7	1,210
November.....	27	17	20.2	1,200
April.....	156	55	110	6,550
May.....	147	59	101	6,210
June.....	56	20	36.6	2,180
July.....	18	9.2	12.7	781
August.....	12	8.2	9.83	604
September.....	11	8.2	9.30	553

*Estimated.

Monthly discharge of Hall Creek at Inchelium--Continued

Month		Discharge in second-feet			Run-off in acre-feet
		Maximum	Minimum	Mean	
1924-25					
March 17-31.....		127	63	99.9	2,970
April.....		676	142	427	25,400
May.....		311	120	224	13,800
June.....		114	36	76.3	4,540
July.....		35	14	23.1	1,420
August.....		16	12	13.5	830
September.....		15	11	12.1	720
The period.....		-	-	-	49,700
1925-26					
March 22-31.....		79	48	55.6	1,100
April.....		152	54	99.5	5,920
May.....		94	29	59.5	3,660
June.....		29	14	21.2	1,260
July.....		13	6.4	9.05	556
August.....		16	6.2	7.41	456
September.....		16	8.8	12.1	720
The period.....		-	-	-	13,700
1926-27					
April.....		-	120	281	16,700
May.....		520	223	342	21,000
June.....		213	89	158	9,400
July.....		97	29	57.5	3,540
August.....		29	20	23.4	1,440
September.....		70	24	39.3	2,340
The period.....		-	-	-	54,400
1927-28					
October 1-28.....		63	42	52.1	2,890
April.....		415	168	232	13,800
May.....		396	134	264	16,200
June.....		126	54	81.9	4,870
July.....		75	24	44.3	2,720
August.....		24	15	19.1	1,170
September.....		-	-	*15.0	893
1928-29					
April.....		-	17	55.1	3,280
May.....		-	-	64.9	3,990
June.....		53	20	34.6	2,060
July.....		18	6.8	11.5	707
August.....		8.0	5.6	6.59	405
September.....		6.6	5.6	6.07	361
The period.....		-	-	-	10,800

*Estimated.

Yearly discharge of Hall Creek at Inchelium

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1913.....	-	-	83.0	60,100
1914.....	121	87,500	120	86,700
1915.....	90.5	66,500	86.9	62,900
1916.....	114	83,200	116	84,100
1917.....	78.3	56,700	76.9	55,700
1918.....	33.4	24,200	32.4	23,500
1919.....	103	74,600	104	75,100
1920.....	23.7	17,200	25.6	18,600
1921.....	103	74,300	102	74,200
1922.....	66.8	47,600	-	-

STRANGER CREEK BASIN

Stranger Creek at Meteor, Wash.

Location.-- Staff gage, lat. 48°15', long. 118°17', in sec. 21, T. 32 N., R. 36 E., at highway bridge at Meteor, 8 miles southwest of Inchellium.

Drainage area.-- 54 square miles.

Records available.-- August 1916 to September 1929.

Extremes.-- Maximum discharge observed, 180 second-feet Apr. 19, 20, 1925; no flow during periods in 1919, 1924, 1926, 1929.

Remarks.-- Large part of flow diverted above gage for irrigation.

Monthly discharge of Stranger Creek at Meteor

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	2.1	1.4	1.68	103
November.....	2.6	-	1.96	117
December.....	-	-	*2.0	123
January.....	-	-	*2.0	123
February.....	-	-	*2.0	115
March.....	-	-	*5.65	347
April.....	13.3	7.6	10.1	601
May.....	10.7	8.4	9.75	600
June.....	9.2	5.0	7.10	422
July.....	5.0	1.4	2.96	182
August.....	1.3	.5	.70	43.0
September.....	2.1	.6	1.17	69.6
The year.....	13.3	-	3.92	2,850
1920-21				
October.....	2.1	1.0	1.44	88.5
November.....	5.6	.9	2.83	168
December.....	6.9	-	6.20	381
January.....	-	-	*6.00	369
February.....	-	-	*10.0	555
March.....	59	12.0	25.7	1,580
April.....	140	61	102	6,070
May.....	105	55	91.2	5,610
June.....	52	19.0	31.7	1,890
July.....	18.4	7.6	12.4	762
August.....	7.6	2.0	4.13	254
September.....	2.0	1.6	1.78	106
The year.....	140	.9	24.6	17,800
1921-22				
October.....	3.5	1.6	1.85	114
November.....	-	2.5	2.91	173
December.....	-	-	*4.0	246
January.....	-	-	*4.0	246
February.....	-	-	*3.0	166
March.....	-	-	*5.0	307
April.....	67	-	24.9	1,480
May.....	125	67	94.5	5,810
June.....	63	13	29.8	1,770
July.....	13	4.3	7.84	482
August.....	4.3	2.0	3.25	200
September.....	2.6	1.7	1.95	116
The year.....	125	-	15.4	11,100
1922-23				
March 11-31.....	-	1.7	2.89	120
April.....	54	20	37.5	2,230
May.....	52	25	39.6	2,430
June.....	28	15.6	20.8	1,240
July.....	17.6	7.4	12.4	762
August.....	8.1	4.0	5.58	343
September.....	4.0	2.3	2.98	177
The period.....	-	-	-	7,300
1923-24				
April.....	14	10	11.7	696
May.....	13	8.4	11.0	676
June.....	8.1	2.5	5.84	348
July.....	2.6	.6	1.73	106
August.....	.7	0	.23	14.1
September.....	0	0	0	0
The period.....	-	-	-	1,840

*Estimated.

Monthly discharge of Stranger Creek at Meteor--Continued

Month		Discharge in second-feet			Run-off in
		Maximum	Minimum	Mean	acre-feet
1924-25					
April.....	180	29	108	6,430	
May.....	91	23	50.2	3,090	
June.....	21	8.8	15.0	893	
July.....	8.8	2.1	5.33	328	
August.....	1.8	.2	.61	37.5	
September.....	1.4	.2	.50	29.8	
The period.....		-	-	-	10,800
1925-26					
March 22-31.....	6.6	5.0	5.82	115	
April.....	11.6	6.3	8.74	520	
May.....	11.8	5.0	8.94	550	
June.....	5.0	1.0	2.68	159	
July.....	3.8	0	1.03	63.3	
August.....	1.0	0	.07	4.3	
September.....	.8	0	.26	15.5	
The period.....		-	-	-	1,430
1926-27					
April.....	147	17.0	52.1	3,100	
May.....	147	46	93.4	5,740	
June.....	43	13.4	24.7	1,470	
July.....	13.4	5.6	8.96	551	
August.....	5.3	1.9	3.42	210	
September.....	5.3	1.6	2.79	166	
The period.....		-	-	-	11,200
1927-28					
April.....	56	30	38.2	2,270	
May.....	60	21	41.9	2,580	
June.....	21	9.4	13.2	786	
July.....	10.2	3.4	6.76	416	
August.....	3.8	.9	1.96	121	
September.....	1.1	.4	.57	33.9	
The period.....		-	-	-	6,210
1928-29					
April.....	5.9	2.9	3.62	215	
May.....	4.5	2.9	3.69	227	
June.....	3.7	2.4	2.96	176	
July.....	2.7	.1	1.28	78.7	
August.....	1.4	.1	.45	27.7	
September.....	.2	0	.12	7.1	
The period.....		-	-	-	732

Yearly discharge of Stranger Creek at Meteor

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1917.....	22.4	16,200	21.9	15,800
1918.....	6.94	5,020	6.69	4,840
1919.....	26.7	19,300	26.6	19,300
1920.....	3.92	2,850	4.33	3,140
1921.....	24.6	17,800	24.5	17,700
1922.....	15.4	11,100	-	-

SPOKANE RIVER BASIN

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., a quarter of a mile below power plant of Washington Water Power Co. and 1 mile west of Post Falls, Idaho. Prior to Nov. 22, 1920 staff gage.

Drainage area.- 3,880 square miles.

Records available.- October 1912 to September 1935.

Extremes.- Maximum discharge recorded, 50,100 second-feet Dec. 25, 1933; minimum recorded, 480 second-feet Oct. 3, 1934.

Remarks.- Spokane Valley Farms Co.'s irrigation canal diverts water three-quarters of a mile above gage. Flow regulated by storage in Coeur d'Alene Lake.

The following table contains all the records for this station adjusted for diversion by canal and for regulation in Coeur d'Alene Lake.

Monthly discharge of Spokane River at Post Falls

Month	Observed			Run-off in acre-feet	Gain or loss in storage in Coeur d'Alene Lake (acre-feet)	Diverted by Spokane Valley Farms Co.'s canal (acre-feet)	Adjusted for storage and diversions			
	Discharge in second-feet		Run-off in acre-feet				Discharge in second-feet		Run-off in inches	
	Maxi- mum	Mini- mum					Mean	Per square mile		
1912-13										
October..	-	-	1,980	122,000	-34,600	2,760	90,200	1,470	0.379	0.44
November..	-	-	3,980	237,000	+52,200	2,620	292,000	4,910	1.27	1.42
December..	-	-	3,460	213,000	-46,000	2,580	170,000	2,760	.711	.82
January..	4,880	2,520	3,920	241,000	+23,000	2,370	266,000	4,330	1.12	1.29
February..	5,090	2,760	3,710	206,000	+16,200	2,290	224,000	4,030	1.04	1.08
March....	7,880	4,290	5,650	347,000	+47,800	2,870	398,000	6,470	1.67	1.92
April.....	28,700	8,160	19,600	1,170,000	+331,000	3,580	1,500,000	25,200	6.49	7.24
May.....	31,500	19,900	25,600	1,570,000	+114,000	4,270	1,690,000	27,500	7.09	8.17
June.....	31,500	10,400	20,800	1,240,000	-380,000	4,170	864,000	14,500	3.74	4.17
July.....	10,400	4,470	4,540	279,000	-21,200	4,300	262,000	4,260	1.10	1.27
August....	1,560	1,380	1,480	91,000	-5,580	4,300	89,700	1,460	.376	.43
September	1,770	1,300	1,410	83,900	-23,400	3,930	64,400	1,080	.278	.31
The year	31,500	1,300	8,010	5,800,000	+73,400	40,000	5,910,000	8,160	2.10	28.56
1913-14										
October..	4,900	1,380	2,320	143,000	-37,200	3,740	110,000	1,790	.461	.53
November..	5,290	1,560	3,590	214,000	-28,300	2,980	189,000	3,180	.820	.91
December..	4,170	1,300	2,270	140,000	-23,800	3,200	119,000	1,940	.500	.58
January..	7,490	1,560	2,700	166,000	+102,000	3,500	272,000	4,420	1.14	1.31
February..	6,780	3,200	5,310	295,000	-23,800	3,230	274,000	4,930	1.27	1.32
March....	13,500	6,780	10,000	615,000	+35,600	3,840	654,000	10,600	2.73	3.15
April.....	20,600	2,240	16,300	970,000	+127,000	4,310	1,100,000	18,500	4.77	5.32
May.....	17,600	8,760	15,200	935,000	-112,000	4,730	828,000	13,500	3.48	4.01
June.....	7,740	1,470	4,520	269,000	-13,800	4,580	260,000	4,370	1.13	1.26
July.....	2,240	1,220	1,510	92,800	-7,220	4,730	90,300	1,470	.379	.44
August....	1,560	1,080	1,390	85,500	-36,600	4,730	53,600	872	.225	.26
September	1,660	884	1,200	71,400	-12,600	4,580	63,400	1,070	.276	.31
The year	20,600	884	5,520	4,000,000	-30,700	48,200	4,010,000	5,540	1.43	19.40
1914-15										
October..	1,660	875	1,220	75,000	+7,660	2,750	85,400	1,390	.358	.41
November..	5,090	920	4,130	246,000	+21,300	2,270	270,000	4,540	1.17	1.30
December..	4,710	1,300	3,130	192,000	-59,800	2,150	134,000	2,180	.562	.65
January..	2,770	1,150	1,750	108,000	-35,900	2,080	74,200	1,210	.312	.36
February..	1,770	970	1,310	72,800	+36,200	1,740	111,000	2,000	.515	.54
March....	10,100	1,150	5,470	336,000	+63,400	2,330	402,000	6,540	1.69	1.95
April.....	11,900	8,240	10,900	649,000	-6,640	3,350	646,000	10,900	2.81	3.14
May.....	11,300	1,770	6,670	410,000	+34,600	4,480	449,000	7,300	1.88	2.17
June.....	9,290	1,880	4,320	257,000	-1,880	5,240	260,000	4,370	1.13	1.26
July.....	2,770	1,380	2,050	126,000	-25,000	5,410	106,000	1,720	.443	.51
August....	1,770	1,380	1,560	95,900	-36,300	5,580	63,200	1,030	.265	.31
September	1,560	1,380	1,490	88,700	-37,000	5,380	57,100	960	.247	.28
The year	11,900	875	3,670	2,660,000	-41,400	42,800	2,660,000	3,670	.946	12.88
1915-16										
October..	1,560	1,220	1,440	88,500	-30,800	2,290	60,000	976	.252	.29
November..	2,370	1,380	1,520	90,400	+5,440	2,780	93,700	1,570	.405	.45
December..	3,050	2,000	2,180	134,000	+55,200	2,610	192,000	3,120	.804	.93
January..	4,710	2,120	2,570	158,000	-26,600	1,500	133,000	2,160	.557	.64
February..	7,490	2,770	5,030	289,000	+36,600	1,590	329,000	5,720	1.47	1.58
March....	25,200	5,900	14,300	879,000	+302,000	3,540	1,180,000	19,200	4.95	5.71
April.....	23,600	19,500	21,400	1,270,000	-3,180	4,270	1,270,000	21,300	5.49	6.12
May.....	27,900	13,000	22,300	1,370,000	-104,000	5,710	1,270,000	20,700	5.34	6.16
June.....	19,800	16,900	18,300	1,090,000	-22,400	6,010	1,070,000	18,000	4.64	5.18
July.....	16,600	2,370	10,700	658,000	-149,000	5,870	515,000	8,380	2.16	2.49
August....	2,240	1,560	1,680	103,000	+11,500	6,520	121,000	1,970	.508	.59
September	1,560	1,470	1,530	91,000	-8,740	4,680	86,900	1,460	.376	.42
The year	27,900	1,220	8,580	6,220,000	+63,100	47,400	6,320,000	8,710	2.24	30.56

Note.- Mean discharge for October, November, and December 1912 partly estimated.

Monthly discharge of Spokane River at Post Falls--Continued

Month	Observed			Gain or loss in storage in Coeur d'Alene Lake (acre-feet)	Diverted by Spokane Valley Farms Co.'s canal (acre- feet)	Adjusted for storage and diversions				
	Discharge in second-feet					Run-off in acre-feet	Run-off in acre-feet	Discharge in second-feet		Run- off in inches
	Maxi- mum	Mini- mum	Mean					Mean	Per square mile	
1916-17										
October..	1,620	1,440	1,490	91,600	-21,400	3,600	73,800	1,200	0.309	0.36
November.	2,160	1,420	1,730	103,000	0	2,350	105,000	1,760	.454	.51
December.	1,920	1,690	1,800	111,000	-20,700	1,720	92,000	1,500	.387	.45
January..	1,880	1,770	1,860	114,000	-10,400	-	104,000	1,690	.436	.50
February.	3,400	1,770	2,680	149,000	-9,720	2,240	142,000	2,560	.660	.69
March....	3,710	2,040	2,650	163,000	-25,400	2,360	140,000	2,280	.588	.68
April.....	25,200	2,080	14,100	839,000	+380,000	2,360	1,220,000	20,600	5.28	5.89
May.....	39,900	23,300	31,800	1,960,000	+195,000	5,100	2,160,000	35,100	9.05	10.43
June.....	37,100	16,400	25,600	1,520,000	-352,000	6,130	1,170,000	19,700	5.08	5.67
July.....	15,800	2,390	5,890	362,000	-107,000	7,130	262,000	4,260	1.10	1.27
August....	2,500	2,010	2,130	131,000	-17,900	5,980	119,000	1,940	.500	.58
September	2,120	1,760	1,840	109,000	-65,600	3,660	47,100	792	.204	.23
The year	39,900	1,420	7,800	5,650,000	-55,100	42,600	5,630,000	7,780	2.01	27.26
1917-18										
October..	1,980	1,420	1,610	99,000	-45,900	†3,070	56,200	914	.236	.27
November.	1,730	960	1,330	79,100	-24,600	†2,380	56,900	956	.246	.27
December.	29,200	960	6,340	390,000	+495,000	†2,460	887,000	14,400	3.71	4.28
January..	39,200	10,400	23,500	1,440,000	-340,000	†1,840	1,100,000	17,900	4.61	5.32
February.	10,700	6,210	8,850	492,000	-56,500	†2,220	438,000	7,890	2.03	2.11
March....	15,100	5,070	7,570	465,000	+148,000	†3,070	616,000	10,000	2.68	2.97
April.....	19,400	14,700	17,200	1,020,000	+40,500	†3,570	1,060,000	17,800	4.59	5.12
May.....	19,400	11,300	15,800	972,000	-120,000	†5,530	858,000	14,000	3.61	4.16
June.....	11,000	1,620	7,350	437,000	-10,400	†6,550	433,000	7,280	1.88	2.10
July.....	2,390	1,090	1,590	97,800	-7,920	†7,380	97,300	1,580	.407	.47
August....	1,420	1,090	1,210	74,400	-19,500	†6,760	61,700	1,000	.258	.30
September	1,520	1,090	1,240	73,800	-31,700	†4,170	46,300	778	.201	.22
The year	39,200	960	7,810	5,640,000	+27,000	†49,000	5,710,000	7,890	2.03	27.59
1918-19										
October..	1,850	1,160	1,280	78,700	-9,780	†3,070	72,000	1,170	.302	.35
November.	2,110	1,240	1,760	105,000	-7,660	†2,380	99,700	1,680	.433	.48
December.	7,050	1,850	3,600	221,000	-15,200	†2,460	208,000	3,380	.871	1.00
January..	14,400	1,420	5,170	318,000	+110,000	†1,840	430,000	6,990	1.80	2.08
February.	11,600	2,110	5,840	324,000	-53,200	†2,220	273,000	4,920	1.27	1.32
March....	13,800	5,070	7,990	491,000	+77,900	†3,070	572,000	9,300	2.40	2.77
April.....	24,500	14,400	19,800	1,180,000	+210,000	†3,570	1,390,000	23,400	6.03	6.73
May.....	25,800	16,100	19,200	1,180,000	-143,000	†5,530	1,040,000	16,900	4.36	5.03
June.....	16,100	2,390	7,580	451,000	-130,000	†7,140	328,000	5,510	1.42	1.58
July.....	3,120	1,330	1,700	105,000	-21,300	†7,990	91,700	1,490	.384	.44
August....	1,520	1,020	1,180	72,600	-30,600	†7,380	49,400	803	.207	.24
September	1,330	1,020	1,130	67,200	-27,600	†4,520	44,100	741	.191	.21
The year	25,800	1,020	6,340	4,590,000	-40,400	51,200	4,600,000	6,350	1.64	22.23
1919-20										
October..	1,240	960	1,140	70,100	-26,500	3,260	46,900	763	.197	.23
November.	1,330	1,090	1,160	69,000	-2,700	2,290	68,600	1,150	.296	.33
December.	1,330	1,090	1,230	75,600	+2,700	405	78,700	1,280	.330	.38
January..	1,420	1,160	1,270	78,100	+70,000	0	148,000	2,410	.621	.72
February.	4,130	1,240	1,970	113,000	+21,300	0	134,000	2,330	.601	.65
March....	11,300	1,240	5,660	348,000	+560	2,880	351,000	5,710	1.47	1.70
April.....	13,100	5,070	9,740	580,000	+56,000	4,160	640,000	10,800	2.78	3.10
May.....	19,400	12,500	15,700	965,000	+20,000	5,930	991,000	16,100	4.15	4.78
June.....	12,800	2,820	7,910	471,000	-38,800	7,260	439,000	7,380	1.90	2.12
July.....	4,500	860	1,730	106,000	+620	8,240	115,000	1,870	.482	.56
August....	1,420	1,020	1,230	75,600	-27,000	7,870	56,500	919	.237	.27
September	1,420	960	1,100	65,500	+6,720	3,580	75,800	1,270	.327	.36
The year	19,400	860	4,150	3,020,000	+82,900	45,900	3,140,000	4,330	1.12	15.20
1920-21										
October..	4,310	960	2,500	154,000	-7,840	2,580	149,000	2,420	.624	.72
November.	8,380	1,090	3,850	229,000	-16,000	2,290	215,000	3,610	.930	1.04
December.	8,280	1,650	4,210	259,000	+10,900	1,920	272,000	4,420	1.14	1.31
January..	13,700	6,160	9,680	595,000	-33,600	2,020	563,000	9,160	2.36	2.72
February.	13,300	4,420	8,720	484,000	+53,300	1,600	539,000	9,710	2.50	2.60
March....	16,800	9,560	14,000	961,000	+122,000	1,670	985,000	16,000	4.12	4.75
April.....	20,200	14,100	16,500	982,000	+43,200	2,050	1,030,000	17,300	4.46	4.98
May.....	25,400	17,400	21,900	1,350,000	+31,300	3,720	1,390,000	22,600	5.82	6.71
June.....	19,200	1,840	10,100	601,000	-180,000	8,870	430,000	7,230	1.86	2.08
July.....	4,240	940	1,430	87,900	-3,100	8,790	93,600	1,520	.392	.45
August....	1,820	1,020	1,150	70,700	-25,800	8,180	53,100	864	.223	.26
September	1,160	940	1,050	62,500	-20,500	5,350	47,400	797	.205	.23
The year	25,400	940	7,920	5,740,000	-26,100	49,000	5,770,000	7,970	2.05	27.85

†Discharge of canal estimated on basis of records for months for which records are available. Accuracy of figures doubtful.

Monthly discharge of Spokane River at Post Falls--Continued

Month	Observed			Run-off in acre-feet	Gain or loss in storage in Coeur d'Alene Lake (acre-feet)	Diverted by Spokane Valley Farms Co.'s canal (acre- feet)	Adjusted for storage and diversions			
	Discharge in second-feet		Run-off in acre-feet				Discharge in second-feet		Run-off in inches	
	Maxi- mum	Mini- mum					Mean	Mean		Per square mile
1921-22										
October..	-	990	1,110	68,200	-15,000	2,420	55,600	904	0.233	0.27
November..	3,380	-	1,550	92,200	-12,300	1,200	81,100	1,360	.351	.39
December..	8,820	4,780	6,420	395,000	-13,600	812	382,000	6,210	1.60	1.84
January..	4,550	1,190	2,220	136,000	-37,300	0	98,700	1,610	.415	.48
February..	1,540	1,080	1,270	70,500	-3,780	0	66,700	1,200	.309	.32
March....	4,210	1,380	2,280	140,000	+31,900	0	172,000	2,800	.722	.85
April.....	14,100	4,550	10,500	615,000	+167,000	1,450	781,000	13,100	3.38	3.77
May.....	24,900	14,100	19,600	1,210,000	+109,000	5,720	1,320,000	21,500	5.54	6.39
June.....	18,800	1,350	1,800	702,000	-180,000	8,570	531,000	8,920	2.30	2.57
July.....	4,080	950	1,320	81,200	-6,060	9,530	84,700	1,380	.356	.41
August....	1,080	908	992	61,000	-18,900	8,610	50,700	825	.213	.25
September	1,040	908	973	57,900	-23,000	4,920	39,800	669	.172	.19
The year	24,900	908	5,010	3,630,000	-2,040	43,200	3,660,000	5,060	1.30	17.71
1922-23										
October..	1,200	951	1,030	63,300	-15,600	2,320	50,000	813	.210	.24
November..	1,530	1,220	1,350	80,300	-24,500	845	56,600	951	.245	.27
December..	5,040	1,090	1,570	96,500	-6,580	0	103,000	1,680	.433	.50
January..	9,920	3,540	6,770	416,000	-1,920	0	414,000	6,730	1.73	1.99
February..	4,310	-	2,370	132,000	-32,200	0	99,800	1,800	.464	.48
March....	7,000	2,210	3,410	210,000	+74,500	0	284,000	4,620	1.19	1.37
April.....	20,000	9,000	15,900	946,000	+207,000	0	1,150,000	19,300	4.97	5.54
May.....	21,000	16,200	19,000	1,170,000	-59,800	1,750	1,210,000	18,100	4.66	5.37
June.....	17,400	3,500	3,400	797,000	-102,000	10,700	706,000	11,900	3.07	3.42
July.....	5,930	918	2,250	138,000	-630	13,700	151,000	2,460	.634	.73
August....	1,400	878	1,070	65,800	-10,000	12,500	68,300	1,110	.286	.33
September	-	-	1,270	75,600	-37,200	5,380	43,800	736	.190	.21
The year	21,000	878	5,780	4,190,000	+4,230	47,200	4,240,000	5,850	1.51	20.45
1923-24										
October..	1,220	943	1,100	67,600	-14,000	861	54,500	886	.228	.26
November..	-	1,140	1,380	82,100	-4,370	0	77,700	1,310	.338	.38
December..	5,230	1,160	2,330	143,000	-11,700	0	131,000	2,130	.549	.63
January..	2,660	1,440	1,730	106,000	-17,900	0	88,100	1,430	.369	.43
February..	12,600	4,700	9,920	571,000	+73,900	0	645,000	11,200	2.89	3.12
March....	9,170	1,890	6,490	399,000	-68,200	0	331,000	5,380	1.39	1.60
April.....	12,000	2,050	7,960	474,000	+112,000	4,820	591,000	9,930	2.56	2.86
May.....	17,400	3,670	14,500	892,000	-24,100	11,600	880,000	14,300	3.69	4.25
June.....	4,340	1,050	2,420	144,000	-12,170	14,200	160,000	2,690	.693	.77
July.....	1,480	980	1,180	72,600	-21,200	14,200	65,600	1,070	.276	.32
August....	1,380	950	1,150	70,700	-37,700	13,600	46,600	758	.195	.22
September	1,090	895	974	58,000	-19,400	5,650	44,200	743	.191	.21
The year	17,400	895	4,240	3,080,000	-30,500	64,900	3,110,000	4,290	1.11	15.05
1924-25										
October..	1,080	845	948	58,300	-9,500	0	48,800	794	.205	.24
November..	6,760	870	1,950	115,000	+32,800	0	149,000	2,500	.644	.72
December..	8,790	1,340	4,970	306,000	-7,930	0	298,000	4,850	1.25	1.44
January..	6,930	-	3,780	232,000	+2,160	0	234,000	3,810	.982	1.13
February..	22,800	8,790	14,700	816,000	+64,300	0	880,000	15,800	4.07	4.24
March....	12,700	7,920	10,200	627,000	+26,300	0	653,000	10,600	2.73	3.15
April.....	30,600	13,100	20,200	1,380,000	+141,000	6,310	1,530,000	25,700	6.62	7.39
May.....	20,000	16,600	19,100	1,170,000	-41,100	11,200	1,140,000	18,500	4.77	5.50
June.....	15,800	2,680	6,320	495,000	-132,000	11,300	374,000	6,290	1.62	1.81
July.....	2,680	840	1,410	86,700	-4,030	15,500	98,200	1,600	.412	.48
August....	1,710	1,190	1,490	91,600	-42,200	14,800	64,200	1,040	.268	.31
September	1,410	1,130	1,280	76,200	-34,700	6,660	48,200	810	.209	.23
The year	30,600	840	7,530	5,450,000	-4,900	65,800	5,520,000	7,620	1.96	26.64
1925-26										
October..	1,520	1,000	1,230	75,600	-24,400	0	51,200	833	.215	.25
November..	1,580	1,030	1,170	69,600	-11,300	0	58,300	980	.253	.28
December..	2,450	1,010	1,380	84,800	+52,100	0	137,000	2,230	.575	.66
January..	3,440	1,260	2,030	125,000	-18,800	0	106,000	1,720	.443	.51
February..	7,540	2,840	5,440	330,000	+21,800	0	352,000	6,340	1.63	1.70
March....	8,520	5,930	7,150	440,000	+33,800	2,460	476,000	7,740	1.99	2.29
April.....	14,800	6,470	10,200	607,000	+87,100	8,270	702,000	11,800	3.04	3.39
May.....	13,100	1,590	6,620	407,000	-34,500	13,300	386,000	6,280	1.62	1.87
June.....	2,110	1,320	1,580	94,000	-760	14,600	108,000	1,820	.469	.52
July.....	1,880	1,080	1,460	89,800	-55,600	14,400	48,600	790	.204	.24
August....	1,480	672	991	60,900	-24,800	14,100	50,200	816	.210	.24
September	1,420	630	1,010	60,100	+1,960	5,590	67,600	1,140	.294	.33
The year	14,800	630	3,370	2,440,000	+26,600	72,700	2,540,000	3,510	.905	12.28

Monthly discharge of Spokane River at Post Falls--Continued

Month	Observed			Gain or loss in storage in Coeur d'Alene Lake (acre-feet)	Diverted by Spokane Valley Farms Co.'s canal (acre- feet)	Adjusted for storage and diversions				
	Discharge in second-feet		Run-off in acre-feet			Run-off in acre-feet	Discharge in second-feet		Run- off in inches	
	Maxi- mum	Mini- mum					Mean	Mean		Per square mile
1926-27										
October..	4,180	1,140	1,740	107,000	+30,400	0	137,000	2,230	0.575	0.66
November..	10,400	2,440	4,610	274,000	+23,100	0	297,000	4,990	1.29	1.44
December..	16,200	4,100	10,400	640,000	-78,300	0	562,000	9,140	2.36	2.72
January....	6,710	2,280	4,970	306,000	-5,140	0	301,000	4,900	1.26	1.45
February....	-	3,910	7,040	391,000	+76,800	0	468,000	8,430	2.17	2.52
March.....	-	7,610	8,750	537,000	-17,800	3,470	523,000	8,510	2.19	2.82
April.....	23,800	9,080	12,200	726,000	+280,000	5,500	1,010,000	17,000	4.38	4.89
May.....	27,900	20,000	23,900	1,470,000	-76,500	9,900	1,400,000	22,800	5.88	6.78
June.....	21,400	11,000	17,600	1,050,000	-166,000	14,300	898,000	15,100	3.89	4.34
July.....	9,290	1,150	2,560	157,000	-12,800	14,700	159,000	2,590	.668	.77
August....	1,740	1,310	1,580	97,200	-39,900	15,100	72,400	1,180	.304	.35
September	-	1,150	1,420	84,500	+21,200	5,370	111,000	1,870	.482	.54
The year	27,900	1,140	8,060	5,840,000	+35,100	68,300	5,940,000	8,200	2.11	28.72
1927-28										
October..	9,970	1,660	5,460	336,000	-25,800	0	310,000	5,040	1.30	1.50
November..	22,400	4,200	13,100	780,000	+253,000	0	1,030,000	17,300	4.46	4.98
December..	23,300	6,660	14,900	916,000	-264,000	0	652,000	10,600	2.73	3.15
January....	12,900	4,940	8,730	537,000	+14,200	0	551,000	8,960	2.31	2.66
February....	7,390	3,550	6,220	358,000	-42,300	0	316,000	5,490	1.41	1.52
March.....	17,400	1,890	10,900	670,000	+195,000	575	866,000	14,100	3.63	4.18
April.....	19,600	12,400	15,200	904,000	-3,060	4,010	905,000	15,200	3.92	4.37
May.....	26,300	18,200	22,600	1,390,000	+65,500	11,700	1,470,000	23,900	6.16	7.10
June.....	18,900	2,060	7,810	465,000	-173,000	14,900	307,000	5,160	1.33	1.48
July.....	2,740	1,090	1,520	93,500	-9,060	15,600	100,000	1,630	.420	.48
August....	1,190	813	1,000	61,500	-31,500	14,200	44,200	719	.185	.21
September	1,120	853	913	54,300	-22,900	6,130	37,500	630	.162	.18
The year	26,300	813	9,050	6,570,000	-43,900	67,100	6,590,000	9,080	2.34	31.81
1928-29										
October..	1,320	820	1,100	67,600	-13,900	0	53,700	873	.225	.26
November..	1,320	965	1,150	68,400	-4,860	0	63,500	1,070	.276	.31
December..	1,650	795	1,190	73,200	-18,200	0	55,000	994	.230	.27
January....	1,420	900	1,090	67,000	-20,800	0	46,200	751	.194	.22
February....	1,110	-	1,020	56,600	-14,600	0	42,000	756	.195	.20
March.....	8,000	1,040	1,750	108,000	+107,000	0	215,000	3,500	.902	1.04
April.....	12,600	3,400	7,060	420,000	+69,300	1,310	491,000	8,250	2.13	2.38
May.....	14,000	11,300	13,100	806,000	-26,800	9,350	789,000	12,800	3.30	3.80
June.....	10,700	1,780	5,060	301,000	-10,900	12,400	302,000	5,080	1.31	1.46
July.....	2,450	795	1,190	73,200	-7,440	12,900	78,700	1,280	.330	.38
August....	1,590	770	1,110	68,200	-40,200	13,600	41,600	677	.174	.20
September	1,530	1,070	1,240	73,800	-41,500	5,590	37,900	637	.164	.18
The year	14,000	770	3,010	2,180,000	-22,900	55,200	2,220,000	3,060	.789	10.70
1929-30										
October..	1,230	820	960	59,000	-16,200	0	42,800	696	.179	.21
November..	1,320	900	972	57,800	-23,000	0	34,800	585	.151	.17
December..	1,150	845	935	57,500	+34,500	0	91,800	1,490	.384	.44
January....	1,650	900	1,310	80,600	-32,700	0	47,900	779	.201	.23
February....	6,910	965	2,490	138,000	+81,000	0	219,000	3,940	1.02	1.06
March.....	10,200	2,040	3,870	238,000	+32,700	430	271,000	4,410	1.14	1.31
April.....	12,000	10,200	11,300	672,000	+25,400	6,780	704,000	11,800	3.04	3.39
May.....	11,300	3,830	7,060	434,000	+2,880	12,000	449,000	7,500	1.88	2.17
June.....	6,250	1,370	3,530	210,000	-350	12,000	222,000	3,730	.961	1.07
July.....	1,840	770	1,020	62,700	-10,400	13,100	65,400	1,060	.273	.31
August....	1,230	965	1,110	68,200	-42,400	14,400	40,200	654	.169	.19
September	1,190	1,000	1,070	63,700	-30,500	5,710	39,100	657	.169	.19
The year	12,000	770	2,960	2,140,000	+20,900	64,400	2,230,000	3,080	.794	10.74
1930-31										
October..	1,110	900	1,020	62,700	-13,500	0	49,400	803	.207	.24
November..	1,110	900	965	57,400	+5,410	0	62,800	1,060	.273	.30
December..	1,190	965	1,010	62,100	-14,100	0	48,000	781	.201	.23
January....	1,190	930	996	61,200	+22,900	0	84,100	1,370	.353	.41
February....	4,320	930	1,910	106,000	+21,800	0	128,000	2,300	.593	.62
March.....	12,000	1,910	6,790	417,000	+42,000	553	460,000	7,480	1.93	2.22
April.....	15,600	10,900	13,500	803,000	+30,900	5,160	839,000	14,100	3.63	4.05
May.....	14,800	3,500	11,300	676,000	-17,100	12,900	672,000	10,900	2.81	3.24
June.....	3,500	1,000	2,000	119,000	+4,160	14,200	137,000	2,300	.593	.66
July.....	1,070	820	955	57,500	-23,800	15,100	48,800	794	.205	.24
August....	1,420	820	1,070	65,800	-45,800	15,600	35,600	579	.149	.17
September	1,280	820	1,020	60,700	-24,500	6,430	42,600	716	.185	.21
The year	15,600	820	3,530	2,550,000	-11,400	69,900	2,610,000	3,600	.928	12.59

Monthly discharge of Spokane River at Post Falls--Continued

Month	Observed			Gain or loss in storage in Coeur d'Alene Lake (acre-feet)	Diverted by Spokane Valley Farms Co.'s canal (acre-feet)	Adjusted for storage and diversions				
	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
1931-32										
October..	1,370	820	1,040	64,000	-18,700	0	45,300	737	0.190	0.22
November.	965	795	882	52,500	+9,720	0	62,200	1,050	.271	.30
December.	965	900	910	56,000	+18,600	0	74,600	1,210	.312	.36
January..	4,320	1,190	2,580	159,000	-22,900	0	136,000	2,210	.570	.66
February.	8,900	1,480	2,430	140,000	+72,600	0	213,000	3,700	.954	1.03
March....	16,400	7,830	11,800	726,000	+120,000	0	946,000	13,800	3.56	4.10
April.....	28,900	17,300	23,800	1,420,000	+178,000	1,310	1,600,000	26,900	6.93	7.73
May.....	32,400	22,700	29,000	1,780,000	-4,600	10,600	1,750,000	28,500	7.35	8.47
June.....	21,300	2,820	12,500	744,000	-232,000	14,900	527,000	8,860	2.28	2.54
July.....	3,310	950	1,640	101,000	-310	15,600	116,000	1,890	.487	.56
August....	965	795	847	52,100	-20,300	14,800	46,600	758	.195	.22
September	965	795	848	50,500	-22,000	7,910	36,400	612	.158	.18
The year	32,400	795	7,360	5,350,000	+38,100	65,100	5,450,000	7,510	1.94	26.37
1932-33										
October..	1,150	820	988	60,800	-7,930	0	52,900	860	.222	.26
November.	9,450	795	4,930	293,000	-270	0	293,000	4,920	1.27	1.42
December.	8,900	1,150	4,670	287,000	-12,900	0	274,000	4,460	1.15	1.33
January..	7,450	1,650	4,530	279,000	-11,500	0	268,000	4,360	1.12	1.29
February.	3,400	1,480	2,480	138,000	-29,000	0	109,000	1,960	.505	.53
March....	9,550	1,910	5,590	344,000	+86,300	984	431,000	7,010	1.81	2.09
April.....	27,400	9,880	14,200	845,000	+319,000	4,340	1,170,000	19,700	5.08	5.67
May.....	28,900	20,000	22,700	1,400,000	-107,000	13,200	1,310,000	21,300	5.49	6.33
June.....	27,000	12,400	21,800	1,300,000	-158,000	14,800	1,160,000	19,500	5.03	5.61
July.....	11,700	845	3,120	192,000	-37,600	13,600	168,000	2,730	.704	.81
August....	1,040	795	839	51,600	-8,420	14,800	58,000	943	.243	.28
September	1,150	770	916	54,500	-6,280	7,080	55,300	929	.239	.27
The year	28,900	770	7,230	5,240,000	+26,400	68,800	5,350,000	7,390	1.90	25.89
1933-34										
October..	8,290	965	2,720	167,300	-2,800	0	164,500	2,675	.689	.79
November.	12,000	2,170	6,537	389,000	-26,150	0	362,800	6,097	1.57	1.75
December.	49,800	2,040	23,660	1,455,000	+468,800	0	1,924,000	31,290	8.06	9.29
January..	33,500	17,700	24,930	1,533,000	-255,000	0	1,278,000	20,780	5.36	6.18
February.	19,800	9,220	3,750	763,600	-192,400	0	571,200	10,290	2.65	2.76
March....	20,400	8,900	12,730	792,500	+195,000	0	977,500	15,900	4.10	4.73
April.....	26,300	17,400	21,170	1,260,000	-48,680	4,320	1,216,000	20,440	5.27	5.88
May.....	17,000	3,500	9,156	563,000	-123,100	15,860	455,800	7,413	1.91	2.20
June.....	4,880	745	2,113	125,700	-1,240	15,860	140,300	2,358	.608	.68
July.....	1,190	720	914	56,200	-19,430	15,270	52,040	846	.218	.25
August....	989	610	822	50,540	-33,190	14,670	32,020	521	.134	.15
September	948	632	721	42,910	-17,480	6,860	32,290	543	.140	.16
The year	49,800	610	9,929	7,189,000	-55,680	72,840	7,206,000	9,954	2.57	34.82
1934-35										
October..	1,070	628	793	48,780	+33,880	0	82,660	1,344	.346	.40
November.	6,320	1,030	4,113	244,700	-9,590	0	235,100	3,951	1.02	1.14
December.	8,010	908	4,355	287,800	-7,080	0	280,700	4,240	1.09	1.26
January..	7,550	3,820	5,470	336,300	+11,440	0	347,700	5,655	1.46	1.68
February.	7,550	5,260	6,517	361,900	-24,330	0	337,600	6,079	1.57	1.64
March....	11,100	4,000	7,888	485,000	+32,530	561	518,100	8,426	2.17	2.50
April.....	23,800	7,780	14,670	873,100	+261,300	4,080	1,138,000	19,120	4.93	5.50
May.....	25,500	20,200	23,050	1,417,000	-55,070	14,950	1,377,000	22,390	5.77	6.65
June.....	19,500	1,810	9,810	583,700	-169,600	16,620	430,700	7,238	1.87	2.09
July.....	2,960	752	1,453	89,360	-2,480	16,580	103,500	16,850	4.34	5.00
August....	1,400	808	1,004	61,710	-29,860	15,950	47,800	7,774	2.00	2.31
September	1,450	1,000	1,246	74,140	-42,790	7,570	38,920	6,541	1.69	1.89
The year	25,500	628	6,691	4,843,000	-1,650	76,310	4,918,000	6,793	1.75	32.06

Note.- Mean discharge for November 1932 partly estimated.

Yearly discharge of Spokane River at Post Falls

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1913.....	8,160	2.10	28.56	5,910,000	7,980	2.06	27.90	5,780,000
1914.....	5,540	1.43	19.40	4,010,000	5,640	1.45	19.74	4,080,000
1915.....	3,670	.946	12.88	2,660,000	3,470	.894	12.19	2,510,000
1916.....	8,710	2.24	30.56	6,320,000	8,600	2.22	30.21	6,250,000
1917.....	7,780	2.01	27.26	5,630,000	8,790	2.27	30.76	6,360,000
1918.....	7,890	2.03	27.59	5,710,000	7,030	1.81	24.60	5,090,000
1919.....	6,360	1.64	22.23	4,600,000	6,090	1.57	21.34	4,410,000
1920.....	4,330	1.12	15.20	3,140,000	4,940	1.27	17.33	3,590,000
1921.....	7,970	2.05	27.85	5,770,000	7,800	2.01	27.28	5,650,000
1922.....	5,060	1.30	17.71	3,660,000	4,630	1.19	16.22	3,350,000
1923.....	5,850	1.51	20.45	4,240,000	5,930	1.53	20.71	4,290,000
1924.....	4,290	1.11	15.05	3,110,000	4,610	1.19	16.18	3,350,000
1925.....	7,620	1.96	26.64	5,520,000	7,280	1.88	25.43	5,270,000
1926.....	3,510	.905	12.28	2,540,000	4,550	1.17	15.91	3,290,000
1927.....	8,200	2.11	28.72	5,940,000	9,580	2.47	33.53	6,930,000
1928.....	9,080	2.34	31.81	6,590,000	6,570	1.69	23.02	4,770,000
1929.....	3,060	.789	10.70	2,220,000	3,060	.789	10.68	2,210,000
1930.....	3,080	.794	10.74	2,230,000	3,060	.789	10.69	2,220,000
1931.....	3,600	.928	12.59	2,610,000	3,630	.936	12.70	2,630,000
1932.....	7,510	1.94	26.37	5,450,000	8,110	2.09	28.50	5,890,000
1933.....	7,390	1.90	25.89	5,350,000	9,910	2.55	34.71	7,180,000
1934.....	9,954	2.57	34.82	7,206,000	7,367	1.90	25.79	5,334,000
1935.....	6,793	1.75	32.06	4,918,000	-	-	-	-
Highest....	9,954	2.57	34.82	7,206,000	9,910	2.55	34.71	7,180,000
Average....	6,320	1.63	22.49	4,580,000	6,300	1.62	22.06	4,570,000
Lowest.....	3,060	.789	10.70	2,220,000	3,060	.789	10.68	2,210,000

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, 1 mile below Spokane Falls. Prior to July 1, 1921, staff or wire gages, or water-stage recorder, at various points in city of Spokane, above Spokane Falls.

Drainage area.- 4,350 square miles.

Records available.- April 1891 to September 1935.

Extremes.- Maximum discharge observed, 49,000 second-feet May 31, 1894; minimum discharge, 425 second-feet Sept. 30, 1931; minimum daily discharge, 1,120 second-feet Oct. 30, 1931.

Remarks.- Water diverted above station by Spokane Valley Farms Co. for irrigation.

Flow partly regulated by storage and release at Coeur d'Alene Lake and by pondage at Spokane.

The following table contains all the records for this station adjusted for storage in Coeur d'Alene Lake.

Monthly discharge of Spokane River at Spokane

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	
1891									
April.....	11,700	2,740	6,700	399,000	+142,000	541,000	9,090	2.09	2.33
May.....	12,300	8,460	11,100	682,000	-47,100	635,000	10,300	2.37	2.73
June.....	8,720	3,960	5,640	336,000	-73,300	263,000	4,410	1.01	1.13
July.....	3,960	1,860	3,010	185,000	-37,600	147,000	2,400	.552	.64
August....	1,860	-	*1,660	102,000	-5,300	96,700	*1,570	.361	.42
September	-	-	*1,560	92,800	-5,400	87,400	*1,470	.338	.38
Period..	-	-	-	1,800,000	-26,700	1,770,000	-	-	-

*Partly estimated.

Monthly discharge of Spokane River at Spokane--Continued

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	
1891-92									
October..	-	-	*1,510	92,800	+2,700	95,500	*1,550	0.356	0.41
November.	3,070	1,500	2,680	159,000	+29,500	188,000	3,170	.729	.81
December.	3,600	3,070	3,530	217,000	+10,700	228,000	3,700	.851	.98
January..	3,600	2,740	2,980	183,000	-16,100	167,000	2,710	.623	.72
February.	4,540	2,900	3,160	182,000	+29,600	212,000	3,680	.846	.91
March....	11,200	4,540	8,480	521,000	+106,000	627,000	10,200	2.34	2.70
April.....	10,600	8,460	9,210	548,000	-19,500	528,000	8,880	2.04	2.28
May.....	21,800	10,300	15,000	922,000	+233,000	1,160,000	18,800	4.32	4.98
June.....	21,800	10,300	15,900	946,000	-228,000	718,000	12,100	2.78	3.10
July.....	9,760	3,600	6,540	402,000	-106,000	296,000	4,810	1.11	1.28
August....	-	-	*2,940	181,000	-26,800	154,000	*2,510	.577	.67
September	-	1,300	*1,600	95,200	-16,100	79,100	*1,330	.306	.34
The year	21,800	1,300	6,140	4,450,000	-1,000	4,450,000	6,130	1.41	19.18
1892-93									
October..	1,300	1,300	1,300	79,900	0	79,900	1,300	.299	.34
November.	2,430	1,300	1,580	94,000	+21,400	115,000	1,940	.446	.50
December.	2,900	2,280	2,690	165,000	+5,400	170,000	2,770	.637	.73
January..	3,600	2,430	3,060	188,000	-5,400	183,000	2,970	.683	.79
February.	2,430	1,990	2,090	116,000	-8,000	108,000	1,940	.446	.46
March....	4,740	1,990	2,400	148,000	+48,400	196,000	3,190	.733	.85
April.....	15,500	5,360	11,000	655,000	+177,000	832,000	14,000	3.22	3.59
May.....	37,500	16,100	25,100	1,540,000	+197,000	1,740,000	28,200	6.48	7.47
June.....	23,400	13,200	19,400	1,150,000	-240,000	910,000	15,300	3.52	3.93
July.....	12,900	4,540	8,380	515,000	-136,000	379,000	6,160	1.42	1.64
August....	4,540	1,860	3,140	193,000	-48,400	145,000	2,350	.540	.62
September	1,860	1,400	1,530	91,000	-10,700	80,300	1,350	.310	.35
The year	37,500	1,300	6,820	4,930,000	+700	4,940,000	6,820	1.57	21.27
1893-94									
October..	4,740	1,500	3,810	234,000	+59,100	293,000	4,770	1.10	1.27
November.	8,460	3,960	5,950	354,000	-2,700	351,000	5,900	1.36	1.52
December.	8,980	3,960	6,250	384,000	+27,000	411,000	6,680	1.54	1.78
January..	10,600	3,780	6,640	408,000	0	408,000	6,640	1.53	1.76
February.	5,800	2,280	3,430	190,000	-64,700	125,000	2,260	.520	.54
March....	6,520	2,280	3,230	199,000	+72,900	272,000	4,420	1.02	1.18
April.....	22,200	7,720	14,800	881,000	+290,000	1,170,000	19,700	4.53	5.05
May.....	49,000	22,200	28,900	1,780,000	+371,000	2,150,000	35,000	8.05	9.28
June.....	47,600	16,400	29,900	1,780,000	-495,000	1,280,000	21,600	4.97	5.54
July.....	16,100	6,760	10,400	640,000	-164,000	476,000	7,750	1.78	2.05
August....	6,520	2,740	4,360	268,000	-67,500	200,000	3,260	.749	.86
September	2,740	2,280	2,580	142,000	-8,100	134,000	2,250	.517	.58
The year	49,000	1,500	10,000	7,260,000	+18,000	7,270,000	10,000	2.30	31.41
1894-95									
October..	3,070	2,130	2,350	144,000	+13,500	158,000	2,560	.589	.68
November.	5,140	3,240	4,370	260,000	+37,700	298,000	5,000	1.15	1.28
December.	5,580	3,420	4,670	287,000	-29,700	257,000	4,180	.961	1.11
January..	7,480	2,900	5,090	315,000	+35,100	348,000	5,660	1.30	1.50
February.	8,200	3,420	4,520	251,000	+43,500	294,000	5,300	1.22	1.27
March....	9,240	5,800	7,550	452,000	-27,200	425,000	6,910	1.59	1.83
April.....	14,800	7,000	10,100	601,000	+133,000	734,000	12,300	2.83	3.16
May.....	17,100	11,700	14,400	885,000	-55,600	829,000	13,500	3.10	3.57
June.....	11,700	5,360	8,120	483,000	-96,100	387,000	6,500	1.49	1.66
July.....	4,940	2,280	3,390	208,000	-53,900	154,000	2,510	.577	.67
August....	2,280	1,500	1,790	110,000	-16,000	94,000	1,550	.352	.41
September	1,500	1,300	1,350	80,300	-2,700	77,600	1,300	.299	.36
The year	17,100	1,300	5,630	4,070,000	-18,400	4,060,000	5,600	1.29	17.47
1895-96									
October..	1,300	1,300	1,300	79,900	0	79,900	1,300	.299	.34
November.	1,610	1,300	1,470	87,500	+5,400	92,900	1,560	.359	.40
December.	2,280	1,860	2,050	126,000	+13,500	139,000	2,270	.522	.60
January..	6,520	2,280	3,800	234,000	+72,900	307,000	4,990	1.15	1.33
February.	12,600	6,520	7,070	407,000	+92,900	500,000	8,690	2.00	2.16
March....	17,100	10,900	12,700	781,000	+88,400	869,000	14,100	3.24	3.74
April.....	17,100	13,900	15,400	916,000	-54,400	862,000	14,800	3.40	3.79
May.....	18,800	15,800	17,000	1,050,000	+75,200	1,130,000	18,300	4.21	4.85
June.....	21,400	18,800	20,300	1,210,000	0	1,210,000	20,300	4.67	5.21
July.....	18,100	4,940	9,960	612,000	-249,000	363,000	5,900	1.36	1.57
August....	4,740	2,430	3,490	215,000	-43,100	172,000	2,800	.644	.74
September	2,280	1,730	2,030	121,000	-13,400	108,000	1,810	.416	.46
The year	21,400	1,300	8,030	5,840,000	+8,200	5,850,000	8,060	1.85	25.19

*Partly estimated.

Monthly discharge of Spokane River at Spokane--Continued

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	
1896-97									
October..	1,860	1,500	1,600	98,400	0	98,400	1,600	0.368	0.42
November..	13,400	1,780	6,630	395,000	+127,000	522,000	8,780	2.02	2.25
December..	17,000	8,330	12,800	787,000	+19,300	806,000	13,100	3.01	3.47
January..	10,700	6,400	7,870	484,000	-57,500	426,000	6,940	1.60	1.81
February..	6,860	5,070	6,000	333,000	-29,800	303,000	5,460	1.26	1.31
March....	8,330	4,240	5,180	319,000	+51,600	371,000	6,030	1.39	1.60
April.....	33,900	8,850	20,100	1,200,000	+414,000	1,610,000	27,100	6.23	6.95
May.....	30,900	21,100	27,400	1,680,000	-172,000	1,510,000	24,500	5.63	6.49
June.....	20,400	9,630	12,500	744,000	-223,000	521,000	8,760	2.01	2.24
July.....	9,370	5,070	7,790	479,000	-70,800	408,000	6,640	1.53	1.76
August....	5,070	2,580	3,580	220,000	-43,100	177,000	2,880	.662	.76
September	2,750	2,250	2,450	146,000	-5,400	141,000	2,360	.543	.61
The year	33,900	1,500	9,510	6,890,000	+10,300	6,890,000	9,520	2.19	29.70
1897-98									
October..	2,250	1,860	1,970	121,000	-8,000	113,000	1,840	.423	.49
November..	11,300	1,860	5,480	326,000	+127,000	453,000	7,620	1.75	1.95
December..	12,200	8,080	10,000	615,000	+10,900	626,000	10,200	2.34	2.70
January..	11,300	4,650	7,900	486,000	-87,100	399,000	6,490	1.49	1.72
February..	19,000	4,440	11,100	616,000	+158,000	774,000	13,900	3.20	3.35
March....	14,200	7,830	12,000	738,000	-106,000	632,000	10,300	2.37	2.73
April.....	26,800	7,340	14,500	863,000	+354,000	1,220,000	20,500	4.71	5.26
May.....	27,200	22,500	24,800	1,520,000	-37,800	1,480,000	24,100	5.54	6.39
June.....	25,200	12,200	19,100	1,140,000	-252,000	888,000	14,900	3.43	3.83
July.....	11,600	4,650	7,320	450,000	-116,000	334,000	5,430	1.25	1.44
August....	4,650	2,750	3,470	213,000	-35,000	178,000	2,890	.664	.77
September	2,750	2,410	2,460	146,000	-5,400	141,000	2,360	.543	.61
The year	27,200	1,860	9,990	7,230,000	+2,600	7,240,000	10,000	2.30	31.22
1898-99									
October..	2,750	2,410	2,490	153,000	+5,400	158,000	2,580	.593	.68
November..	3,100	2,750	3,040	181,000	+5,400	186,000	3,130	.720	.80
December..	3,460	2,580	2,800	172,000	+8,000	180,000	2,930	.674	.78
January..	11,000	3,460	5,840	359,000	+120,000	479,000	7,790	1.79	2.06
February..	10,700	6,400	7,610	423,000	-71,300	352,000	6,330	1.46	1.52
March....	6,400	5,950	6,170	379,000	-5,400	374,000	6,080	1.40	1.61
April.....	20,700	5,950	14,000	833,000	+267,000	1,100,000	18,500	4.25	4.74
May.....	28,900	17,300	23,500	1,440,000	+144,000	1,580,000	25,800	5.93	6.84
June.....	28,400	19,700	24,800	1,480,000	-165,000	1,320,000	22,100	5.08	5.67
July.....	19,300	6,400	11,900	732,000	-240,000	492,000	7,990	1.84	2.12
August....	6,400	3,460	4,740	291,000	-46,600	242,000	3,940	.906	1.04
September	3,460	2,750	3,230	192,000	-13,400	179,000	3,000	.690	.77
The year	28,900	2,410	9,170	6,640,000	+6,100	6,640,000	9,170	2.11	28.63
1899-1900									
October..	3,460	2,580	2,870	176,000	+13,400	189,000	3,080	.708	.82
November..	5,730	3,280	3,800	226,000	+37,800	264,000	4,430	1.02	1.14
December..	10,400	6,400	8,460	520,000	+46,300	566,000	9,210	2.12	2.44
January..	15,800	8,330	11,900	732,000	+35,800	768,000	12,500	2.87	3.31
February..	10,700	5,950	7,450	414,000	-65,800	348,000	6,270	1.44	1.55
March....	16,400	6,630	12,700	781,000	+154,000	935,000	15,200	3.49	4.02
April.....	17,000	13,400	15,700	934,000	-52,800	881,000	14,800	3.40	3.79
May.....	13,600	10,400	12,900	793,000	-46,400	747,000	12,100	2.78	3.20
June.....	10,400	5,510	7,360	438,000	-73,600	364,000	6,120	1.41	1.57
July.....	5,510	2,750	3,950	243,000	-48,500	194,000	3,160	.726	.84
August....	2,750	2,090	2,390	147,000	-8,100	139,000	2,260	.520	.60
September	2,410	2,010	2,150	128,000	+2,700	131,000	2,200	.506	.56
The year	17,000	2,010	7,640	5,530,000	-5,200	5,530,000	7,610	1.75	23.84
1900-1901									
October..	4,040	2,250	2,760	170,000	+29,600	200,000	3,250	.747	.86
November..	5,730	4,040	5,330	317,000	+24,300	341,000	5,740	1.32	1.47
December..	14,200	5,950	10,300	633,000	+103,000	736,000	9,830	.880	1.01
January..	11,600	7,580	9,690	596,000	-64,500	532,000	8,640	1.99	2.29
February..	9,630	5,070	7,150	397,000	+24,600	422,000	7,590	1.74	1.81
March....	19,000	10,400	14,500	892,000	+24,900	917,000	14,900	3.43	3.95
April.....	12,800	9,370	10,900	649,000	+25,100	674,000	11,300	2.60	2.90
May.....	22,200	13,000	19,400	1,190,000	+157,000	1,350,000	21,900	5.03	5.80
June.....	19,700	9,370	13,200	786,000	-210,000	576,000	9,680	2.23	2.49
July.....	9,110	4,240	6,320	389,000	-81,500	308,000	5,000	1.15	1.33
August....	4,040	2,750	3,150	194,000	-26,900	167,000	2,720	.625	.70
September	2,580	2,410	2,440	145,000	-5,400	140,000	2,350	.540	.62
The year	22,200	2,250	8,780	6,360,000	+200	6,360,000	8,790	2.02	25.23

Monthly discharge of Spokane River at Spokane--Continued

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	
1901-2									
October..	2,410	2,090	2,330	143,000	-2,700	140,000	2,280	0.524	0.60
November.	4,040	2,250	2,680	159,000	+32,300	191,000	3,210	.738	.82
December.	5,290	3,840	4,490	276,000	+16,200	292,000	4,750	1.09	1.26
January..	8,590	5,070	6,620	407,000	0	407,000	6,620	1.52	1.75
February.	8,330	4,240	5,550	297,000	+51,600	349,000	6,280	1.44	1.51
March....	8,850	6,400	8,060	496,000	-30,000	466,000	7,580	1.74	2.01
April.....	12,400	6,170	9,420	561,000	+89,100	650,000	10,900	2.51	2.80
May.....	24,800	12,200	18,100	1,110,000	+246,000	1,360,000	22,100	5.08	5.86
June.....	24,000	8,330	14,800	881,000	-306,000	575,000	9,670	2.22	2.48
July.....	15,400	6,860	11,000	676,000	-21,800	654,000	10,600	2.44	2.81
August....	6,400	3,100	4,370	269,000	-64,800	204,000	3,320	.763	.88
September	3,100	2,410	2,570	153,000	-10,800	142,000	2,390	.549	.61
The year	24,800	2,090	7,500	5,430,000	-900	5,430,000	7,500	1.72	23.38
1902-3									
October..	2,410	1,930	2,200	135,000	-5,300	130,000	2,110	.485	.56
November.	5,290	2,250	3,910	233,000	+45,700	279,000	4,680	1.08	1.20
December.	5,950	4,650	4,990	307,000	+5,400	312,000	5,080	1.17	1.35
January..	13,000	5,070	10,000	615,000	+92,900	708,000	11,500	2.64	3.04
February.	10,700	4,650	6,880	382,000	-98,300	284,000	5,110	1.17	1.22
March....	11,000	4,240	5,140	316,000	+98,300	414,000	6,740	1.55	1.79
April.....	19,300	11,000	13,400	797,000	+138,000	935,000	15,700	3.61	4.03
May.....	22,400	18,300	19,900	1,220,000	-10,200	1,210,000	19,600	4.51	5.20
June.....	23,900	12,100	19,500	1,150,000	-122,000	1,030,000	17,300	3.98	4.44
July.....	11,500	4,550	7,530	451,000	-109,000	342,000	5,560	1.28	1.48
August....	4,550	2,260	3,150	194,000	-40,300	154,000	2,500	.575	.66
September	2,260	2,100	2,250	134,000	-2,700	131,000	2,210	.508	.57
The year	23,900	1,930	8,200	5,930,000	-7,500	5,930,000	8,190	1.88	25.54
1903-4									
October..	3,080	2,100	2,460	151,000	+16,100	167,000	2,720	.625	.72
November.	5,160	2,910	4,000	238,000	+32,300	270,000	4,540	1.04	1.16
December.	7,870	5,160	6,710	413,000	+10,800	424,000	6,890	1.58	1.82
January..	5,590	4,550	5,010	308,000	-10,800	297,000	4,830	1.11	1.28
February.	4,750	3,780	4,100	236,000	+2,700	239,000	4,150	.954	1.03
March....	11,500	4,750	8,880	546,000	+65,300	611,000	9,940	2.29	2.64
April.....	27,900	8,450	18,800	1,120,000	+338,000	1,460,000	24,500	5.63	6.28
May.....	27,600	18,500	22,100	1,360,000	-164,000	1,200,000	19,400	4.46	5.14
June.....	18,200	8,660	13,500	804,000	-179,000	625,000	10,500	2.41	2.69
July.....	8,450	3,660	5,710	351,000	-84,100	267,000	4,340	.998	1.15
August....	3,500	1,970	2,600	160,000	-32,200	128,000	2,080	.478	.55
September	1,970	1,420	1,620	96,200	-8,000	88,200	1,480	.340	.38
The year	27,900	1,420	7,970	5,780,000	-12,900	5,780,000	7,960	1.83	24.84
1904-5									
October..	1,420	1,300	1,370	84,200	+2,700	86,900	1,410	.324	.37
November.	1,620	1,300	1,380	82,400	+8,000	90,400	1,520	.349	.39
December.	1,900	1,620	1,770	109,000	+5,400	114,000	1,860	.428	.49
January..	2,370	1,890	2,090	128,000	+8,000	136,000	2,210	.508	.59
February.	2,360	1,860	2,050	114,000	+6,750	121,000	2,170	.499	.52
March....	7,510	2,560	5,220	321,000	+79,800	401,000	6,520	1.50	1.73
April.....	9,040	6,720	7,580	439,000	+23,200	462,000	7,770	1.79	2.00
May.....	9,160	7,650	8,710	535,000	-1,350	534,000	8,680	2.00	2.31
June.....	9,510	5,840	7,970	474,000	-53,200	421,000	7,070	1.63	1.82
July.....	5,650	2,550	3,860	238,000	-56,600	181,000	2,950	.678	.78
August....	2,520	1,340	1,790	110,000	-20,000	90,000	1,460	.336	.39
September	1,800	1,240	1,560	92,500	+1,350	93,800	1,580	.363	.40
The year	9,510	1,240	3,770	2,730,000	+4,050	2,730,000	3,770	.867	11.79
1905-6									
October..	2,840	1,390	2,470	152,000	+25,400	177,000	2,890	.664	.77
November.	2,880	2,070	2,410	144,000	-2,700	141,000	2,370	.545	.61
December.	2,660	2,240	2,450	151,000	-5,400	146,000	2,370	.545	.63
January..	3,390	2,190	2,600	160,000	+26,900	187,000	3,040	.699	.81
February.	8,230	3,470	5,320	295,000	+81,500	376,000	6,780	1.56	1.62
March....	8,250	5,860	7,050	433,000	0	433,000	7,040	1.62	1.87
April.....	18,400	8,720	14,200	845,000	+123,000	968,000	16,300	3.75	4.18
May.....	17,100	9,580	12,800	787,000	-107,000	680,000	11,100	2.55	2.94
June.....	10,400	6,000	8,440	502,000	-61,400	441,000	7,410	1.70	1.90
July.....	5,820	2,460	3,790	233,000	-55,200	178,000	2,890	.664	.77
August....	2,420	1,590	1,920	118,000	-22,800	95,200	1,550	.356	.41
September	1,970	1,410	1,610	95,800	-6,700	89,100	1,500	.345	.38
The year	18,400	1,390	5,410	3,920,000	-4,400	3,910,000	5,400	1.24	16.89

Monthly discharge of Spokane River at Spokane--Continued

Month	Observed				Gain or loss in storage in Ooeur 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	
1906-7									
October..	1,910	1,360	1,620	99,600	-2,700	96,900	1,580	0.363	0.42
November.	6,640	1,560	3,600	214,000	+138,000	352,000	5,910	1.36	1.52
December.	8,870	4,000	5,210	320,000	+30,600	351,000	5,700	1.31	1.51
January..	9,730	3,900	6,820	419,000	-104,000	315,000	5,120	1.18	1.36
February.	13,500	3,940	7,540	419,000	+139,000	558,000	10,100	2.32	2.42
March....	14,700	9,750	12,400	762,000	-26,200	736,000	12,000	2.76	3.18
April....	22,300	12,300	17,400	1,040,000	+95,600	1,140,000	19,100	4.39	4.90
May.....	25,800	16,900	21,400	1,320,000	+40,700	1,360,000	22,100	5.08	5.86
June.....	21,000	7,470	14,100	839,000	-159,000	680,000	11,400	2.62	2.92
July.....	7,430	2,540	4,610	283,000	-34,200	249,000	4,050	.931	1.07
August....	2,660	2,120	2,380	146,000	-20,400	126,000	2,040	.469	.54
September	2,820	2,250	2,460	146,000	-19,000	127,000	2,130	.490	.55
The year	25,800	1,360	8,300	6,010,000	+78,400	6,090,000	8,410	1.93	26.25
1907-8									
October..	2,600	2,290	2,460	151,000	-35,100	116,000	1,880	.432	.50
November.	2,480	2,000	2,250	134,000	-20,200	114,000	1,910	.439	.49
December.	2,350	2,000	2,130	131,000	+18,800	150,000	2,440	.561	.65
January..	2,350	2,020	2,150	132,000	+10,800	143,000	2,320	.553	.61
February.	2,880	1,920	2,240	129,000	+13,500	142,000	2,480	.570	.61
March....	16,100	3,250	8,900	547,000	+101,000	648,000	10,500	2.41	2.78
April....	26,300	8,310	15,200	904,000	+193,000	1,100,000	18,400	4.23	4.72
May.....	23,700	15,000	19,200	1,180,000	-150,000	1,030,000	16,800	3.86	4.45
June.....	14,900	4,580	12,200	726,000	-63,600	662,000	11,100	2.55	2.84
July.....	3,480	2,190	2,720	167,000	+11,200	178,000	2,900	.667	.77
August....	2,410	1,920	2,140	132,000	-27,600	104,000	1,700	.391	.45
September	2,040	1,680	1,850	110,000	-24,600	85,400	1,440	.331	.37
The year	26,300	1,680	6,120	4,440,000	+27,200	4,470,000	6,160	1.42	19.24
1908-9									
October..	2,240	1,740	1,930	119,000	-8,200	111,000	1,800	.414	.48
November.	2,440	2,030	2,320	138,000	-12,200	126,000	2,110	.485	.54
December.	2,540	2,220	2,390	147,000	-32,400	115,000	1,860	.428	.49
January..	10,300	1,680	4,380	269,000	+76,100	345,000	5,610	1.29	1.49
February.	8,180	2,970	5,030	279,000	-28,700	250,000	4,510	1.04	1.08
March....	7,800	4,580	5,910	363,000	+9,500	372,000	6,060	1.39	1.60
April....	11,100	8,100	9,100	541,000	+52,300	593,000	9,970	2.29	2.56
May.....	17,300	11,100	13,400	824,000	+97,500	922,000	15,000	3.45	3.98
June.....	19,400	8,440	13,900	827,000	-57,500	770,000	12,900	2.97	3.31
July.....	8,000	2,530	4,040	248,000	-23,400	225,000	3,650	.839	.97
August....	2,640	2,440	2,540	156,000	-44,300	112,000	1,820	.418	.48
September	2,580	1,840	2,210	132,000	-28,200	93,800	1,580	.363	.40
The year	19,400	1,680	5,580	4,040,000	-9,500	4,030,000	5,570	1.28	17.38
1909-10									
October..	2,280	1,800	2,030	125,000	-25,800	99,200	1,610	3.70	.43
November.	17,100	1,940	5,640	336,000	+207,000	543,000	9,120	2.10	2.34
December.	14,600	5,210	10,600	652,000	-192,000	460,000	7,480	1.72	1.98
January..	4,800	3,050	3,620	223,000	+13,600	237,000	3,850	.885	1.02
February.	5,410	3,250	4,590	255,000	-32,500	222,000	4,010	.922	.96
March....	28,100	3,120	17,700	1,090,000	+352,000	1,440,000	23,400	5.38	6.20
April....	26,000	20,200	23,300	1,390,000	+67,500	1,460,000	24,500	5.63	6.28
May.....	25,400	13,100	18,800	1,160,000	-271,000	889,000	14,500	3.33	3.64
June.....	12,700	3,320	5,950	354,000	-48,200	306,000	5,140	1.18	1.32
July.....	3,460	2,920	3,180	196,000	-56,600	139,000	2,270	.522	.60
August....	3,120	1,860	2,220	136,000	-48,800	87,200	1,420	.326	.38
September	2,490	1,810	2,000	119,000	-25,600	93,400	1,570	.361	.40
The year	28,100	1,800	8,340	6,040,000	-60,400	5,980,000	8,250	1.90	25.75
1910-11									
October..	2,370	1,810	2,170	133,000	+2,650	136,000	2,210	.508	.59
November.	7,540	2,070	3,770	224,000	-109,000	115,000	1,940	.446	.50
December.	6,860	3,820	5,480	337,000	-69,500	268,000	4,350	1.00	1.15
January..	3,750	2,670	3,310	204,000	-27,000	177,000	2,880	.662	.76
February.	3,460	1,960	2,940	163,000	-18,800	144,000	2,600	.598	.62
March....	10,800	2,310	5,460	336,000	+141,000	477,000	7,760	1.78	2.05
April....	15,300	9,590	11,700	696,000	+82,200	778,000	13,100	3.01	3.36
May.....	17,200	14,200	15,900	978,000	-31,200	947,000	15,400	3.54	4.08
June.....	13,700	4,950	9,260	551,000	-46,400	505,000	8,480	1.95	2.18
July.....	5,250	2,190	3,760	231,000	-42,700	188,000	3,060	.703	.81
August....	2,920	1,650	2,220	136,000	-26,000	110,000	1,790	.411	.47
September	2,670	1,750	2,260	134,000	-39,400	94,600	1,590	.366	.41
The year	17,200	1,650	5,690	4,120,000	-184,000	3,940,000	5,440	1.25	16.98

Monthly discharge of Spokane River at Spokane--Continued

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	
1911-12									
October..	2,070	1,750	1,950	120,000	-27,800	92,200	1,500	0.345	0.40
November..	3,880	1,850	2,550	152,000	+35,100	187,000	3,140	.722	.81
December..	3,730	2,190	2,650	163,000	-26,200	137,000	2,220	.510	.59
January..	5,600	2,070	2,590	159,000	+62,400	221,000	3,690	.828	.95
February..	9,880	5,120	7,030	404,000	+2,700	407,000	7,070	1.63	1.76
March....	6,450	3,750	4,730	291,000	-6,310	285,000	4,630	1.06	1.22
April.....	16,900	6,810	14,000	833,000	+148,000	981,000	16,500	3.79	4.23
May.....	21,200	15,800	19,000	1,170,000	+111,000	1,280,000	20,800	4.78	5.51
June.....	20,600	5,120	13,100	780,000	-211,000	569,000	9,570	2.20	2.46
July.....	5,440	1,750	3,140	193,000	+2,800	196,000	3,180	.731	.84
August....	3,050	1,650	1,890	116,000	-15,400	101,000	1,640	.377	.43
September	4,800	2,430	3,300	196,000	-70,000	126,000	2,120	.487	.54
The year	21,200	1,650	6,300	4,580,000	+5,290	4,580,000	6,310	1.45	19.74
1912-13									
October..	3,050	1,960	2,520	155,000	-34,600	120,000	1,960	.451	.52
November..	6,100	2,550	4,510	263,000	+52,200	320,000	5,360	1.24	1.38
December..	4,960	3,050	3,820	235,000	-46,000	189,000	3,070	.706	.81
January..	5,120	3,050	4,290	264,000	+23,000	287,000	4,670	1.07	1.23
February..	5,280	3,310	4,140	230,000	+16,200	246,000	4,430	1.02	1.06
March....	7,560	4,800	5,990	362,000	+47,800	410,000	6,560	1.53	1.76
April.....	29,600	8,360	19,500	1,160,000	+331,000	1,490,000	28,100	5.77	6.44
May.....	32,800	20,800	26,600	1,640,000	+114,000	1,750,000	28,500	6.55	7.55
June.....	33,200	11,300	21,600	1,290,000	-380,000	910,000	15,300	3.52	3.93
July.....	11,300	2,250	5,190	319,000	-21,200	298,000	4,840	1.11	1.28
August....	2,140	1,810	1,960	121,000	-5,580	115,000	1,880	.432	.50
September	2,140	1,700	1,870	111,000	-23,400	87,600	1,470	.338	.38
The year	33,200	1,700	8,490	6,160,000	+73,400	6,220,000	8,590	1.97	26.84
1913-14									
October..	4,370	1,700	2,470	152,000	-37,200	115,000	1,870	.430	.50
November..	4,860	2,360	3,650	218,000	-28,300	190,000	3,190	.733	.82
December..	4,210	2,140	2,730	168,000	-23,800	144,000	2,550	.540	.62
January..	7,070	2,140	3,000	184,000	+102,000	286,000	4,650	1.07	1.23
February..	6,490	3,920	5,350	297,000	-23,800	273,000	4,920	1.13	1.18
March....	13,000	6,680	9,910	609,000	+35,600	645,000	10,500	2.41	2.78
April.....	19,600	3,360	15,800	940,000	+127,000	1,070,000	17,900	4.11	4.59
May.....	17,200	9,180	15,000	922,000	-112,000	810,000	13,200	3.03	3.49
June.....	8,090	2,140	4,990	297,000	-13,800	283,000	4,760	1.09	1.22
July.....	2,470	1,810	2,060	127,000	-7,220	120,000	1,950	.448	.52
August....	2,590	1,600	1,860	114,000	-36,600	77,400	1,260	.290	.33
September	2,250	1,500	1,670	99,400	-12,600	86,800	1,460	.336	.37
The year	19,600	1,500	5,700	4,130,000	-30,700	4,100,000	5,660	1.30	17.65
1914-15									
October..	1,810	1,400	1,580	97,200	+7,660	105,000	1,710	.393	.45
November..	4,860	1,500	3,900	232,000	+21,300	253,000	4,260	.979	1.09
December..	4,370	2,140	3,350	206,000	-59,800	146,000	2,380	.547	.63
January..	2,960	2,140	2,430	149,000	-35,900	113,000	1,840	.423	.49
February..	2,360	1,700	1,980	110,000	+36,200	146,000	2,630	.605	.63
March....	9,180	1,700	5,160	317,000	+63,400	380,000	6,190	1.42	1.64
April.....	11,000	8,300	10,200	607,000	-6,640	600,000	10,100	2.32	2.59
May.....	11,500	2,470	6,820	419,000	+34,600	454,000	7,380	1.70	1.96
June.....	9,460	2,220	4,630	276,000	-1,880	274,000	4,610	1.06	1.13
July.....	2,810	1,780	2,360	145,000	-25,000	120,000	1,950	.448	.52
August....	2,220	1,890	1,950	120,000	-38,300	81,700	1,330	.306	.35
September	2,000	1,840	1,910	114,000	-37,000	77,000	1,290	.297	.33
The year	11,500	1,400	3,860	2,790,000	-41,400	2,750,000	3,800	.874	11.86
1915-16									
October..	2,060	1,840	1,910	117,000	-30,800	86,200	1,400	.322	.37
November..	2,450	1,890	2,000	119,000	+540	120,000	2,010	.462	.52
December..	2,630	2,390	2,470	152,000	+55,200	207,000	3,370	.775	.89
January..	4,180	2,450	2,750	169,000	-26,600	142,000	2,320	.533	.61
February..	6,810	3,060	4,740	273,000	+38,600	312,000	5,420	1.25	1.35
March....	25,100	5,700	13,700	842,000	+502,000	1,140,000	18,600	4.28	4.93
April.....	23,400	19,600	21,500	1,280,000	-3,180	1,280,000	21,500	4.94	5.51
May.....	28,200	18,400	22,700	1,400,000	-104,000	1,300,000	21,100	4.85	5.59
June.....	19,900	17,000	18,300	1,090,000	-22,400	1,070,000	17,900	4.11	4.59
July.....	17,000	3,330	11,000	676,000	-149,000	527,000	8,580	1.97	2.27
August....	3,190	2,160	2,380	146,000	+11,500	158,000	2,560	.589	.68
September	2,220	2,110	2,130	127,000	-8,740	118,000	1,990	.457	.51
The year	28,200	1,840	8,800	6,390,000	+63,100	6,460,000	8,900	2.05	27.82

Monthly discharge of Spokane River at Spokane--Continued

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	
1916-17									
October..	2,120	2,000	2,070	127,000	-21,400	106,000	1,720	0.395	0.46
November..	2,610	2,060	2,300	137,000	0	137,000	2,300	.529	.59
December..	2,420	2,180	2,330	143,000	-20,700	122,000	1,990	.457	.53
January..	2,420	2,180	2,330	143,000	-10,400	133,000	2,160	.497	.57
February..	3,140	2,240	2,780	154,000	-9,720	144,000	2,600	.598	.62
March....	3,350	2,540	2,890	178,000	-25,400	153,000	2,480	.570	.66
April.....	26,500	3,350	14,200	845,000	+380,000	1,220,000	20,900	4.74	5.29
May.....	41,500	24,500	32,900	2,020,000	+195,000	2,220,000	36,000	8.28	9.55
June.....	37,700	16,000	25,800	1,540,000	-352,000	1,190,000	20,000	4.60	5.13
July.....	15,500	3,000	6,470	398,000	-107,000	291,000	4,730	1.09	1.26
August....	3,000	2,480	2,730	168,000	-17,900	150,000	2,440	.561	.65
September	2,600	2,360	2,430	145,000	-65,600	79,400	1,330	.306	.34
The year	41,500	2,000	8,290	6,000,000	-55,100	5,950,000	8,210	1.89	25.65
1917-18									
October..	2,360	2,120	2,280	140,000	-45,900	94,100	1,530	.352	.41
November..	2,300	1,620	1,980	118,000	-24,600	93,400	1,570	.361	.40
December..	27,300	1,570	6,500	400,000	+495,000	895,000	14,600	3.36	3.87
January..	39,600	10,900	24,400	1,500,000	-340,000	1,160,000	18,900	4.34	5.00
February..	10,800	6,700	9,210	512,000	-56,500	456,000	8,200	1.89	1.97
March....	14,400	5,410	7,730	475,000	+148,000	623,000	10,100	2.32	2.68
April.....	13,800	14,400	16,300	970,000	+40,500	1,010,000	17,000	3.91	4.36
May.....	18,200	10,900	15,100	928,000	-120,000	808,000	13,100	3.01	3.47
June.....	10,700	3,050	7,550	449,000	-10,400	439,000	7,370	1.69	1.89
July.....	2,980	1,830	2,200	155,000	-7,920	127,000	2,070	.476	.55
August....	1,830	1,620	1,790	110,000	-19,500	90,500	1,470	.338	.39
September	1,830	1,720	1,750	104,000	-31,700	72,300	1,220	.280	.31
The year	39,600	1,570	8,070	5,840,000	+27,000	5,870,000	8,110	1.86	25.30
1918-19									
October..	1,880	1,720	1,760	108,000	-9,780	98,200	1,600	.368	.42
November..	2,410	1,940	2,180	130,000	-7,660	122,000	2,060	.474	.53
December..	6,420	2,290	3,890	239,000	-15,200	224,000	3,640	.837	.96
January..	13,400	2,410	5,380	331,000	+110,000	441,000	7,180	1.65	1.90
February..	11,100	3,210	6,390	355,000	-53,200	302,000	5,430	1.25	1.30
March....	13,200	5,590	8,210	505,000	+77,900	583,000	9,480	2.18	2.51
April.....	23,900	13,700	19,100	1,140,000	+210,000	1,350,000	22,700	5.22	5.82
May.....	24,600	15,500	18,400	1,130,000	-143,000	987,000	16,000	3.68	4.24
June.....	15,500	2,980	7,750	461,000	-130,000	331,000	5,560	1.28	1.43
July.....	2,920	2,000	2,250	138,000	-21,300	117,000	1,900	.437	.50
August....	2,050	1,670	1,780	109,000	-30,900	78,400	1,270	.292	.34
September	1,780	1,620	1,770	101,000	-27,600	73,400	1,230	.283	.32
The year	24,600	1,620	6,550	4,750,000	-40,400	4,710,000	6,500	1.49	20.27
1919-20									
October..	1,830	1,620	1,700	105,000	-26,500	78,500	1,280	.294	.34
November..	1,780	1,620	1,680	100,000	-2,700	97,300	1,540	.377	.42
December..	1,780	1,670	1,700	105,000	-2,700	102,000	1,750	.402	.46
January..	1,790	1,680	1,720	106,000	+70,000	176,000	2,860	.657	.76
February..	2,950	1,680	2,280	351,000	+21,300	352,000	2,650	.609	.66
March....	10,500	1,630	5,770	355,000	+560	356,000	5,780	1.33	1.53
April.....	12,600	6,190	9,340	586,000	+56,000	642,000	10,800	2.38	2.77
May.....	18,200	12,100	15,300	941,000	+20,000	961,000	15,600	3.59	4.14
June.....	13,000	3,780	8,340	496,000	-36,800	457,000	7,680	1.77	1.98
July.....	4,690	1,490	2,370	146,000	+620	147,000	2,580	.547	.63
August....	1,960	1,640	1,810	111,000	-27,000	84,000	1,370	.315	.36
September	1,860	1,560	1,710	102,000	+6,720	109,000	1,330	.291	.34
The year	18,200	1,490	4,520	3,280,000	+82,900	3,370,000	4,640	1.07	14.52
1920-21									
October..	4,180	1,550	2,840	175,000	-7,840	167,000	2,720	.625	.72
November..	8,220	1,880	4,160	248,000	-16,000	232,000	3,900	.897	1.00
December..	7,460	2,320	4,450	274,000	+10,900	285,000	4,630	1.06	1.22
January..	13,200	6,640	9,830	604,000	-33,600	570,000	9,280	2.13	2.46
February..	13,500	4,990	9,190	510,000	+53,300	563,000	10,100	2.32	2.42
March....	19,300	10,200	14,500	892,000	+122,000	1,010,000	16,500	3.79	4.37
April.....	21,200	14,300	17,800	1,020,000	+43,200	1,060,000	17,900	4.11	4.59
May.....	26,200	18,500	22,500	1,390,000	+31,300	1,420,000	23,100	5.31	6.12
June.....	20,600	3,080	11,300	672,000	-180,000	492,000	8,270	1.90	2.12
July.....	4,790	1,470	2,330	143,000	-3,100	140,000	2,280	.524	.60
August....	1,960	1,640	1,780	109,000	-25,800	83,200	1,350	.310	.36
September	1,850	1,480	1,640	97,600	-20,500	77,100	1,300	.299	.33
The year	26,200	1,470	8,480	6,130,000	-26,100	6,100,000	8,420	1.94	26.31

Monthly discharge of Spokane River at Spokane--Continued

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	
1921-22									
October..	1,930	1,670	1,810	111,000	-15,000	96,000	1,560	0.359	0.41
November..	3,460	1,640	2,080	124,000	-12,300	112,000	1,880	.432	.48
December..	8,920	4,330	6,590	405,000	-13,600	391,000	6,370	1.46	1.68
January..	5,020	1,900	2,930	180,000	-37,300	143,000	2,320	.533	.66
February..	2,080	1,670	1,840	102,000	-3,780	98,200	1,770	.407	.42
March....	4,360	1,800	2,620	161,000	+31,900	193,000	3,140	.722	.83
April.....	14,700	4,580	10,500	625,000	+167,000	792,000	13,300	3.06	3.41
May.....	25,700	14,700	20,500	1,260,000	+109,000	1,370,000	22,300	5.13	5.91
June.....	20,500	3,220	13,300	791,000	-180,000	611,000	10,300	2.37	2.64
July.....	3,700	1,600	2,150	132,000	-6,060	126,000	2,050	.471	.54
August....	1,700	1,470	1,560	95,900	-18,900	77,000	1,250	.287	.33
September	1,650	1,440	1,540	91,600	-23,000	68,600	1,150	.264	.29
The year	25,700	1,440	5,640	4,080,000	-2,040	4,080,000	5,630	1.29	17.55
1922-23									
October..	1,750	1,450	1,560	95,900	-15,600	80,300	1,300	.299	.34
November..	1,990	1,680	1,820	108,000	-24,500	83,500	1,400	.322	.36
December..	2,870	1,580	2,050	126,000	+6,580	133,000	2,160	.497	.57
January..	-	3,680	7,310	449,000	-1,920	447,000	7,270	1.67	1.92
February..	5,060	1,980	3,200	178,000	-32,200	146,000	2,630	.605	.63
March....	7,080	2,560	3,660	225,000	+74,500	300,000	4,870	1.12	1.29
April.....	20,500	8,720	16,100	958,000	+207,000	1,160,000	19,600	4.51	5.03
May.....	21,500	16,700	19,500	1,200,000	-59,800	1,140,000	18,600	4.28	4.93
June.....	17,700	4,890	14,200	845,000	-102,000	743,000	12,500	2.87	3.20
July.....	6,820	1,690	3,210	197,000	-630	196,000	3,190	.733	.85
August....	2,180	1,580	1,730	106,000	-10,000	96,000	1,560	.359	.41
September	2,080	1,600	1,910	114,000	-37,200	76,800	1,290	.297	.33
The year	21,500	1,450	6,360	4,600,000	+4,230	4,600,000	6,360	1.46	19.86
1923-24									
October..	1,960	1,480	1,710	105,000	-14,000	91,000	1,480	.340	.39
November..	2,110	1,620	1,870	111,000	-4,370	107,000	1,790	.411	.46
December..	5,120	1,750	2,710	167,000	-11,700	155,000	2,530	.582	.67
January..	2,910	1,980	2,220	136,000	-17,900	118,000	1,920	.441	.51
February..	12,600	3,970	10,000	575,000	+73,900	649,000	11,300	2.60	2.80
March....	9,870	2,710	7,150	440,000	-68,200	372,000	6,050	1.39	1.60
April.....	12,200	2,660	8,220	489,000	+112,000	601,000	10,100	2.32	2.59
May.....	17,800	5,820	15,000	922,000	-24,100	898,000	14,600	3.36	3.87
June.....	5,320	1,560	3,200	190,000	+2,170	192,000	3,230	.743	.83
July.....	1,850	1,470	1,650	101,000	-21,200	79,800	1,500	.299	.34
August....	1,830	1,400	1,620	99,300	-37,700	61,600	1,010	.232	.27
September	1,560	1,250	1,400	83,300	-19,400	63,900	1,070	.246	.27
The year	17,800	1,250	4,720	3,420,000	-30,500	3,390,000	4,670	1.07	14.60
1924-25									
October..	1,560	1,360	1,440	88,500	-9,500	79,000	1,280	.294	.34
November..	6,560	1,360	2,300	137,000	+32,800	170,000	2,850	.655	.73
December..	9,130	1,910	5,100	314,000	-7,930	306,000	4,980	1.14	1.31
January..	6,480	2,000	4,000	246,000	+2,160	248,000	4,040	.929	1.07
February..	22,500	8,060	14,800	822,000	+64,300	886,000	16,000	3.68	3.83
March....	13,300	8,310	10,500	646,000	+26,300	672,000	10,900	2.51	2.89
April.....	31,100	13,600	23,800	1,420,000	+141,000	1,560,000	26,200	6.02	6.72
May.....	21,000	17,400	19,800	1,220,000	-41,100	1,180,000	19,200	4.41	5.08
June.....	16,500	3,690	9,360	557,000	-132,000	425,000	7,150	1.64	1.83
July.....	3,480	1,600	2,180	134,000	-4,030	130,000	2,110	.485	.56
August....	2,200	1,910	2,060	127,000	-42,200	84,800	1,580	.317	.37
September	2,040	1,720	1,910	114,000	-34,700	79,300	1,330	.306	.34
The year	31,100	1,360	8,030	5,830,000	-4,900	5,820,000	8,040	1.85	25.07
1925-26									
October..	2,090	1,520	1,820	112,000	-24,400	87,600	1,420	.326	.38
November..	2,170	1,630	1,760	105,000	-11,300	93,700	1,570	.361	.40
December..	2,840	1,560	1,870	115,000	+52,100	167,000	2,720	.625	.72
January..	3,640	1,850	2,470	152,000	-18,800	133,000	2,170	.499	.58
February..	7,610	3,330	6,060	337,000	+21,800	359,000	6,460	1.49	1.55
March....	8,850	6,060	7,280	448,000	+33,800	482,000	7,840	1.80	2.08
April.....	14,700	6,770	10,300	613,000	+87,100	700,000	11,800	2.71	3.02
May.....	13,600	2,340	7,370	453,000	-34,500	418,000	6,810	1.57	1.81
June.....	2,730	1,860	2,140	127,000	-760	126,000	2,120	.487	.54
July.....	2,290	1,620	1,960	121,000	-55,600	65,400	1,060	.244	.28
August....	1,970	1,160	1,530	94,100	-24,800	69,300	1,130	.260	.30
September	1,990	1,140	1,510	89,800	+1,960	91,800	1,540	.354	.40
The year	14,700	1,140	3,820	2,770,000	+26,600	2,790,000	3,860	.887	12.06

Monthly discharge of Spokane River at Spokane--Continued

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	
1926-27									
October..	4,080	1,580	2,160	133,000	+30,400	163,000	2,660	0.611	0.70
November.	9,960	2,940	4,750	283,000	+23,100	306,000	5,140	1.18	1.32
December.	15,800	5,220	10,500	646,000	-78,300	568,000	9,230	2.12	2.44
January..	6,970	3,090	5,330	322,000	-5,140	323,000	5,250	1.21	1.40
February.	11,000	3,530	7,140	397,000	+76,800	474,000	8,530	1.96	2.02
March....	10,300	7,880	9,050	556,000	-17,800	538,000	8,750	2.01	2.30
April....	24,500	9,400	12,400	738,000	+280,000	1,020,000	17,100	3.93	4.38
May.....	28,200	21,000	24,700	1,520,000	-76,500	1,440,000	23,500	5.40	6.23
June.....	22,000	-	18,600	1,110,000	-166,000	944,000	15,900	3.66	4.08
July.....	-	1,870	3,530	217,000	-12,800	204,000	3,320	.763	.88
August....	2,330	1,920	2,180	134,000	-39,900	94,100	1,530	.352	.41
September	2,240	1,820	2,040	121,000	+21,200	142,000	2,390	.549	.61
The year	28,200	1,580	8,540	6,180,000	+35,100	6,220,000	8,590	1.97	26.81
1927-28									
October..	9,900	2,180	5,640	347,000	-25,800	321,000	5,220	1.20	1.38
November.	23,000	4,650	13,100	780,000	+253,000	1,030,000	17,400	4.00	4.46
December.	24,500	7,440	15,900	978,000	-264,000	714,000	11,600	2.67	3.08
January..	13,200	6,410	9,300	572,000	+14,200	586,000	9,530	2.19	2.52
February.	8,010	4,540	6,840	393,000	-42,300	351,000	6,100	1.40	1.51
March....	17,400	2,900	11,100	682,000	+195,000	877,000	14,300	3.29	3.79
April....	20,100	12,800	15,600	928,000	-3,060	925,000	15,500	3.56	3.97
May.....	26,000	17,700	23,000	1,410,000	+65,500	1,480,000	24,000	5.52	6.36
June.....	19,900	3,320	8,960	533,000	-173,000	360,000	6,050	1.39	1.55
July.....	3,950	1,880	2,480	152,000	-9,060	143,000	2,320	.533	.61
August....	1,900	1,600	1,770	109,000	-31,500	77,500	1,260	.290	.33
September	1,770	1,500	1,600	95,200	-22,900	72,300	1,210	.278	.31
The year	26,000	1,500	9,620	6,980,000	-43,900	6,940,000	9,550	2.20	29.87
1928-29									
October..	1,910	1,500	1,690	104,000	-13,900	90,100	1,460	.336	.39
November.	1,970	1,550	1,760	105,000	-4,860	100,000	1,680	.386	.43
December.	2,130	1,330	1,750	108,000	-18,200	89,800	1,460	.336	.39
January..	1,850	1,290	1,560	95,900	-20,800	75,100	1,220	.280	.32
February.	1,550	1,420	1,490	82,800	-14,600	68,200	1,230	.283	.29
March....	8,120	1,480	2,050	123,000	+107,000	233,000	3,790	.871	1.00
April....	12,600	3,630	7,160	426,000	+69,300	495,000	8,320	1.91	2.13
May.....	14,300	11,900	13,500	830,000	-26,800	803,000	13,100	3.01	3.47
June.....	11,500	2,400	5,730	341,000	-10,900	330,000	5,550	1.28	1.43
July.....	3,030	1,370	1,870	115,000	-7,440	108,000	1,750	.402	.46
August....	1,980	1,300	1,540	94,700	-40,200	54,500	886	.204	.24
September	1,940	1,550	1,720	102,000	-41,500	60,500	1,020	.234	.26
The year	14,300	1,290	3,490	2,530,000	-22,900	2,510,000	3,460	.795	10.81
1929-30									
October..	1,660	1,310	1,480	91,000	-16,200	74,800	1,220	.280	.32
November.	1,710	1,340	1,460	86,900	-23,000	63,900	1,070	.246	.27
December.	1,520	1,310	1,360	83,600	+34,300	118,000	1,920	.441	.51
January..	1,840	1,240	1,590	97,800	-32,700	65,100	1,060	.244	.28
February.	6,320	1,340	2,660	147,000	+81,000	228,000	4,100	.943	.98
March....	10,100	2,480	4,030	248,000	+32,700	281,000	4,570	1.05	1.21
April....	12,300	9,760	11,300	672,000	+25,400	697,000	11,700	2.69	3.00
May.....	11,800	5,000	7,510	462,000	+2,880	465,000	7,560	1.74	2.01
June.....	7,700	1,860	4,400	262,000	-350	262,000	4,400	1.01	1.13
July.....	2,280	1,160	1,520	93,500	-10,400	83,100	1,350	.310	.36
August....	1,570	1,310	1,440	88,500	-42,400	46,100	751	.173	.20
September	1,520	1,340	1,420	84,500	-30,300	54,200	911	.209	.23
The year	12,300	1,160	3,340	2,420,000	+20,900	2,440,000	3,370	.775	10.50
1930-31									
October..	1,480	1,250	1,390	85,500	-13,300	72,200	1,170	.269	.31
November.	1,460	1,240	1,350	80,300	+5,410	85,700	1,440	.331	.37
December.	1,510	1,260	1,340	82,400	-14,100	68,300	1,110	.255	.29
January..	1,500	1,260	1,340	82,400	+22,900	105,000	1,710	.393	.45
February.	3,920	1,260	2,060	114,000	+21,800	136,000	2,450	.563	.59
March....	12,000	2,110	6,610	406,000	+42,000	448,000	7,290	1.68	1.94
April....	15,800	10,400	13,900	827,000	+30,900	858,000	14,400	3.31	3.69
May.....	15,200	4,070	11,500	707,000	-17,100	690,000	11,200	2.57	2.96
June.....	4,250	1,510	2,620	156,000	+4,160	160,000	2,690	.618	.69
July.....	1,570	1,190	1,360	83,600	-25,800	59,800	972	.223	.26
August....	1,670	1,130	1,370	84,200	-45,800	38,400	625	.144	.17
September	1,620	1,150	1,390	82,700	-24,500	58,200	978	.225	.25
The year	15,800	1,130	3,860	2,790,000	-11,400	2,780,000	3,840	.883	11.97

Monthly discharge of Spokane River at Spokane--Continued

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	
1931-32									
October..	1,610	1,120	1,370	84,200	-18,700	65,500	1,060	0.244	0.28
November.	1,350	1,140	1,230	73,200	+9,720	82,900	1,390	.320	.36
December.	1,320	1,170	1,230	75,600	+18,600	94,200	1,530	.352	.41
January..	4,120	1,390	2,660	164,000	-22,900	141,000	2,300	.529	.61
February.	7,850	-	2,500	144,000	+72,600	217,000	3,770	.867	.94
March....	16,100	7,940	11,600	713,000	+120,000	833,000	13,600	3.13	3.61
April....	29,800	16,600	23,800	1,420,000	+178,000	1,600,000	26,900	6.18	6.90
May.....	32,900	24,200	29,800	1,830,000	-44,600	1,790,000	29,000	6.67	7.69
June.....	23,200	4,040	14,100	839,000	-232,000	607,000	10,200	2.34	2.61
July.....	4,260	1,700	2,600	160,000	-310	160,000	2,600	.598	.69
August....	1,720	1,380	1,510	92,800	-20,300	72,500	1,180	.271	.31
September	1,550	1,360	1,440	85,700	-22,000	63,700	1,070	.246	.27
The year	32,900	1,120	7,820	5,680,000	+38,100	5,730,000	7,890	1.81	24.68
1932-33									
October..	1,730	1,580	1,560	95,900	-7,930	88,000	1,430	.329	.38
November.	-	-	*5,690	339,000	-270	339,000	*5,700	1.31	1.46
December.	8,960	2,090	5,220	321,000	-12,900	308,000	5,010	1.15	1.33
January..	7,720	2,400	5,040	310,000	-11,500	298,000	4,860	1.12	1.29
February.	3,750	2,180	3,020	168,000	-29,000	139,000	2,500	.575	.60
March....	9,290	2,650	5,670	349,000	+86,300	435,000	7,070	1.63	1.88
April....	25,600	9,630	14,100	839,000	+319,000	1,160,000	19,500	4.48	5.00
May.....	28,000	20,400	22,900	1,410,000	-107,000	1,300,000	21,100	4.85	5.59
June.....	26,100	14,100	21,800	1,500,000	-158,000	1,140,000	19,200	4.41	4.92
July.....	13,400	1,780	4,440	273,000	-37,600	235,000	3,820	.878	1.01
August....	1,840	1,350	1,600	98,400	-5,420	90,000	1,460	.336	.39
September	1,780	1,370	1,530	91,000	-6,280	84,700	1,420	.326	.36
The year	28,000	1,350	7,720	5,590,000	+26,400	5,620,000	7,760	1.78	24.21
1933-34									
October..	8,640	1,450	3,037	186,700	-2,800	183,900	2,991	.688	.79
November.	12,300	2,990	7,195	428,100	-26,150	402,000	6,756	1.55	1.73
December.	47,100	2,740	22,910	1,409,000	+468,800	1,878,000	30,540	7.02	8.09
January..	34,300	18,400	25,430	1,564,000	-255,000	1,309,000	21,290	4.89	5.64
February.	20,100	9,990	14,310	794,700	-192,400	602,300	10,840	2.49	2.59
March....	19,200	9,690	12,960	796,700	+195,000	991,700	16,130	3.71	4.28
April....	25,700	17,200	20,930	1,245,000	-48,690	1,196,000	20,100	4.62	5.16
May.....	17,200	4,450	9,957	612,300	-123,100	489,200	7,956	1.83	2.11
June.....	5,710	1,660	3,073	182,900	-1,240	181,700	3,054	.702	.78
July.....	2,010	1,460	1,666	102,500	-19,430	83,070	1,351	.311	.36
August....	1,610	1,260	1,480	91,020	-33,190	57,830	941	.216	.25
September	1,660	1,290	1,433	85,270	-17,480	67,790	1,139	.262	.29
The year	47,100	1,260	10,360	7,498,000	-55,680	7,442,000	10,280	2.36	32.07
1934-35									
October..	1,660	1,260	1,414	86,960	+33,880	120,800	1,965	.452	.52
November.	6,110	1,580	4,271	254,100	-9,590	244,500	4,109	.945	1.05
December.	7,780	1,740	4,675	287,400	-7,080	280,300	4,559	1.05	1.21
January..	7,530	4,340	5,690	349,900	+11,440	361,300	5,876	1.35	1.56
February.	7,560	5,500	6,609	367,100	-24,330	342,800	6,172	1.42	1.48
March....	10,900	4,870	8,084	497,000	+32,530	529,500	8,611	1.98	2.28
April....	22,800	7,970	14,070	837,200	+261,300	1,098,000	18,450	4.24	4.73
May.....	24,900	20,700	23,000	1,414,000	-55,070	1,359,000	22,100	5.08	5.86
June.....	20,300	3,570	11,200	666,600	-169,600	497,000	8,352	1.92	2.14
July.....	4,020	1,610	2,412	148,300	-2,480	145,800	2,371	.545	.63
August....	2,090	1,500	1,745	107,300	-29,860	77,440	1,259	.289	.33
September	2,130	1,740	1,958	116,500	-42,790	73,710	1,239	.285	.32
The year	24,900	1,260	7,090	5,132,000	-1,650	5,130,000	7,086	1.63	22.11

*Partly estimated.

Yearly discharge of Spokane River at Spokane

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1892.....	6,130	1.41	19.18	4,450,000	5,930	1.36	18.55	4,310,000
1893.....	6,820	1.57	21.27	4,940,000	7,770	1.79	24.27	5,630,000
1894.....	10,000	2.30	31.41	7,270,000	9,570	2.20	29.91	6,930,000
1895.....	5,600	1.29	17.47	4,060,000	5,050	1.16	15.74	3,650,000
1896.....	8,060	1.85	25.19	5,850,000	9,600	2.21	29.99	6,970,000
1897.....	9,520	2.19	29.70	6,890,000	9,200	2.11	28.70	6,660,000
1898.....	10,000	2.30	31.22	7,240,000	9,080	2.09	28.34	6,570,000
1899.....	9,170	2.11	28.63	6,640,000	9,860	2.27	30.77	7,140,000
1900.....	7,610	1.75	23.84	5,530,000	7,970	1.83	22.78	5,780,000
1901.....	8,790	2.02	25.23	6,360,000	7,890	1.81	24.57	5,710,000
1902.....	7,500	1.72	23.38	5,430,000	7,640	1.76	23.81	5,530,000
1903.....	8,190	1.88	25.54	5,930,000	8,380	1.93	26.13	6,070,000
1904.....	7,960	1.83	24.84	5,780,000	7,170	1.65	22.39	5,210,000
1905.....	3,770	.867	11.79	2,730,000	4,010	.922	12.55	2,900,000
1906.....	5,400	1.24	16.89	3,910,000	5,870	1.35	18.33	4,250,000
1907.....	8,410	1.93	26.25	6,090,000	7,830	1.80	24.44	5,670,000
1908.....	6,160	1.42	19.24	4,470,000	6,120	1.41	19.11	4,440,000
1909.....	5,570	1.28	17.38	4,030,000	6,610	1.52	20.62	4,780,000
1910.....	8,260	1.90	25.75	5,980,000	7,450	1.71	23.24	5,390,000
1911.....	5,440	1.25	16.98	3,940,000	5,300	1.22	16.54	3,840,000
1912.....	6,310	1.45	19.74	4,580,000	6,610	1.52	20.65	4,800,000
1913.....	8,590	1.97	26.84	6,220,000	8,350	1.92	26.07	6,040,000
1914.....	5,660	1.30	17.65	4,100,000	5,740	1.32	17.88	4,160,000
1915.....	3,800	.874	11.86	2,750,000	3,670	.844	11.47	2,660,000
1916.....	8,900	2.05	27.82	6,460,000	8,830	2.50	27.62	6,410,000
1917.....	8,210	1.89	25.65	5,950,000	9,200	2.11	28.75	6,660,000
1918.....	8,110	1.86	25.30	5,870,000	7,220	1.66	22.53	5,230,000
1919.....	6,500	1.49	20.27	4,710,000	6,280	1.44	19.58	4,550,000
1920.....	4,640	1.07	14.52	3,370,000	5,190	1.19	16.24	3,770,000
1921.....	8,420	1.94	26.31	6,100,000	8,310	1.91	25.94	6,010,000
1922.....	5,650	1.29	17.55	4,080,000	5,220	1.20	16.25	3,780,000
1923.....	6,360	1.46	19.86	4,600,000	6,430	1.48	20.11	4,660,000
1924.....	4,670	1.07	14.60	3,390,000	4,950	1.14	15.46	3,580,000
1925.....	8,040	1.85	25.07	5,820,000	7,750	1.78	24.19	5,610,000
1926.....	3,860	.887	12.06	2,790,000	4,810	1.11	15.02	3,480,000
1927.....	8,590	1.97	26.81	6,220,000	10,000	2.30	31.27	7,240,000
1928.....	9,550	2.20	29.87	6,940,000	7,100	1.63	22.16	5,150,000
1929.....	3,460	.795	10.81	2,510,000	3,430	.789	10.70	2,480,000
1930.....	3,370	.775	10.50	2,440,000	3,330	.766	10.37	2,410,000
1931.....	3,840	.883	11.97	2,780,000	3,860	.887	12.05	2,800,000
1932.....	7,890	1.81	24.68	5,730,000	8,570	1.97	26.80	6,220,000
1933.....	7,760	1.78	24.21	5,620,000	10,100	2.32	31.65	7,350,000
1934.....	10,280	2.36	32.07	7,442,000	7,769	1.79	24.24	5,624,000
1935.....	7,086	1.63	22.11	5,130,000	-	-	-	-
Highest.....	10,280	2.36	32.07	7,442,000	10,100	2.32	31.65	7,350,000
Average.....	7,000	1.61	21.80	5,070,000	7,000	1.61	21.81	5,070,000
Lowest.....	3,370	.775	10.50	2,440,000	3,330	.766	10.37	2,410,000

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.

Drainage area.- 6,380 square miles.

Records available.- October 1912 to September 1935.

Extremes.- Maximum discharge recorded, 48,000 second-feet at 10 a.m. Dec. 26, 1933;

minimum observed, 169 second-feet Sept. 30, 1931 (result of discharge measurement).

Remarks.- Diversions for irrigation above station. Flow affected considerably by power regulation and by storage in Coeur d'Alene Lake.

The following table contains all the records for this station adjusted for storage in Coeur d'Alene and Long Lakes.

Monthly discharge of Spokane River below Little Falls, near Long Lake

Month	Observed				Gain or loss in storage (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	
1912-13									
October..	-	-	†3,400	209,000	-34,600	174,000	†2,830	0.444	0.51
November..	7,150	-	5,540	330,000	+52,200	382,000	6,420	1.01	1.13
December..	6,610	3,820	4,740	291,000	-46,000	245,000	3,980	.624	.72
January..	6,250	4,080	5,280	325,000	+23,000	348,000	5,660	.887	1.02
February..	6,430	4,350	†5,220	290,000	+16,200	306,000	†5,510	.864	.90
March....	13,500	5,910	8,980	552,000	+47,800	600,000	9,760	1.53	1.76
April.....	30,000	14,000	22,600	1,340,000	+331,000	1,670,000	23,100	4.40	4.91
May.....	31,700	22,600	27,300	1,680,000	+114,000	1,790,000	23,100	4.56	5.26
June.....	31,700	13,500	22,800	1,360,000	-380,000	980,000	16,500	2.59	2.89
July.....	13,200	3,460	6,720	413,000	-21,200	392,000	6,380	1.00	1.15
August....	3,240	2,560	2,920	180,000	-5,580	174,000	2,830	.444	.51
September	3,040	2,420	2,700	161,000	-23,400	138,000	2,320	.364	.41
The year	31,700	2,420	9,850	7,130,000	+73,400	7,200,000	9,940	1.56	21.17
1913-14									
October..	5,080	2,470	3,260	200,000	-37,200	163,000	2,650	.415	.48
November..	5,740	3,140	4,380	261,000	-27,800	233,000	3,920	.614	.68
December..	5,080	2,470	3,510	216,000	-23,600	192,000	3,120	.489	.56
January..	7,750	2,840	4,390	270,000	+104,000	374,000	6,080	.953	1.10
February..	12,000	4,930	7,210	400,000	-16,100	384,000	6,910	1.08	1.12
March....	15,600	9,870	12,400	762,000	+38,000	800,000	13,000	2.04	2.35
April.....	21,300	5,570	17,800	1,060,000	+133,000	1,190,000	20,000	3.13	3.49
May.....	19,700	11,700	17,000	1,050,000	-118,000	932,000	18,200	2.38	2.74
June.....	10,100	3,040	6,430	383,000	-18,900	364,000	6,120	.959	1.07
July.....	3,240	2,470	2,880	177,000	-5,380	172,000	2,800	.439	.51
August....	2,840	1,930	2,560	157,000	-33,300	124,000	2,020	.317	.37
September	2,660	1,910	†2,300	137,000	-5,600	131,000	†2,200	.345	.38
The year	21,300	1,910	7,000	5,070,000	-10,900	5,060,000	6,990	1.10	14.85
1914-15									
October..	2,650	2,030	2,370	146,000	+12,600	159,000	2,590	.406	.47
November..	4,910	2,230	3,680	219,000	+64,900	284,000	4,770	.748	.85
December..	4,660	2,310	2,860	176,000	-2,450	174,000	2,830	.444	.51
January..	2,880	2,000	2,580	159,000	-12,300	147,000	2,590	.375	.45
February..	3,600	2,550	2,940	163,000	+36,100	199,000	3,580	.561	.58
March....	10,700	2,720	6,250	384,000	+72,700	457,000	7,430	1.16	1.34
April.....	12,700	10,100	11,700	696,000	-7,020	689,000	11,600	1.82	2.03
May.....	14,800	3,380	8,350	513,000	+41,000	554,000	9,010	1.41	1.63
June.....	11,700	2,930	5,810	346,000	-9,080	337,000	5,660	.887	.99
July.....	5,040	2,580	3,100	191,000	-31,400	160,000	2,600	.408	.47
August....	3,320	2,400	2,660	164,000	-40,900	123,000	2,000	.313	.36
September	2,710	2,270	2,520	150,000	-36,400	114,000	1,920	.301	.34
The year	14,800	2,000	4,540	3,310,000	+87,800	3,400,000	4,690	.735	9.98
1915-16									
October..	3,480	2,180	2,650	163,000	-35,600	127,000	2,070	.324	.37
November..	-	1,820	2,690	160,000	+5,040	165,000	2,770	.454	.48
December..	3,920	2,660	3,280	202,000	+55,000	257,000	4,180	.655	.76
January..	4,930	3,040	3,460	213,000	-25,400	188,000	3,060	.480	.55
February..	9,430	3,820	6,740	368,000	+39,900	428,000	7,440	1.17	1.26
March....	29,400	7,150	17,000	1,050,000	+308,000	1,360,000	22,100	3.46	3.99
April.....	27,000	21,800	23,900	1,420,000	+17,400	1,440,000	24,200	3.79	4.23
May.....	27,800	20,200	24,000	1,480,000	-107,000	1,370,000	22,500	3.50	4.04
June.....	-	18,900	19,700	1,170,000	+27,700	1,140,000	19,200	3.01	3.36
July.....	18,700	13,200	13,200	812,000	-150,000	662,000	10,800	1.69	1.95
August....	4,490	2,940	3,330	205,000	-5,790	199,000	3,240	.508	.59
September	2,940	2,740	2,830	168,000	-11,500	157,000	2,640	.414	.46
The year	29,400	1,820	10,200	7,430,000	+62,600	7,490,000	10,300	1.61	22.04
1916-17									
October..	2,920	2,610	2,810	173,000	-21,800	151,000	2,460	.386	.44
November..	4,080	2,080	2,970	177,000	+1,010	178,000	2,990	.469	.52
December..	3,200	2,800	3,040	187,000	-20,400	167,000	2,720	.426	.49
January..	3,100	2,790	2,960	182,000	-10,600	171,000	2,780	.436	.50
February..	4,080	2,780	3,580	199,000	-9,660	189,000	3,400	.533	.56
March....	7,820	3,410	4,230	260,000	-24,800	235,000	3,820	.599	.69
April.....	26,800	6,100	16,700	994,000	+384,000	1,380,000	23,200	3.64	4.06
May.....	40,900	26,500	34,500	2,120,000	+219,000	2,340,000	36,100	5.97	6.88
June.....	40,100	19,100	29,200	1,740,000	-342,000	1,400,000	23,500	3.68	4.11
July.....	18,200	3,950	8,190	504,000	-127,000	377,000	6,130	.961	1.11
August....	3,930	3,120	3,550	218,000	-30,900	187,000	3,040	.476	.55
September	4,080	2,290	3,110	185,000	-66,700	118,000	1,980	.310	.35
The year	40,900	2,080	9,580	6,940,000	-49,800	6,890,000	9,520	1.49	20.26

*Adjusted for gain or loss in storage in Coeur d'Alene and Long Lakes.

†Partly estimated.

Monthly discharge of Spokane River below Little Falls, near Long Lake--Continued

Month	Observed				Gain or loss in storage (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	
1917-18									
October..	3,140	2,650	2,920	180,000	-46,700	133,000	2,160	0.339	0.39
November..	3,100	2,340	2,760	164,000	-24,600	139,000	2,340	.367	.41
December..	23,500	2,260	6,280	386,000	+493,000	879,000	14,300	2.24	2.58
January..	38,700	12,200	25,700	1,580,000	-304,000	1,280,000	20,800	3.26	3.76
February..	12,400	7,650	10,700	594,000	-78,800	515,000	9,270	1.45	1.51
March....	15,400	6,560	8,910	548,000	+142,000	690,000	11,200	1.76	2.03
April.....	20,300	15,600	18,000	1,070,000	+51,800	1,120,000	18,800	2.95	3.29
May.....	20,500	12,400	17,100	1,050,000	-116,000	934,000	15,200	2.38	2.74
June.....	12,300	3,650	8,880	528,000	-18,800	509,000	8,550	1.34	1.50
July.....	4,300	2,320	2,870	176,000	-26,500	150,000	2,440	.382	.44
August....	2,450	1,920	2,290	141,000	-19,000	122,000	1,980	.310	.36
September	2,330	1,720	2,120	126,000	-33,800	92,200	1,550	.243	.27
The year	38,700	1,720	9,050	6,540,000	+18,600	6,560,000	9,070	1.42	19.28
1918-19									
October..	2,420	1,880	2,200	136,000	-6,180	130,000	2,110	.331	.38
November..	2,950	2,110	2,550	152,000	-6,410	146,000	2,450	.384	.45
December..	6,420	2,600	4,320	266,000	-12,100	254,000	4,130	.647	.75
January..	14,400	2,830	6,000	369,000	+110,000	479,000	7,790	1.22	1.41
February..	12,800	-	7,800	433,000	-37,400	396,000	7,130	1.12	1.17
March.....	16,600	4,690	10,400	640,000	+62,500	702,000	11,400	1.79	2.06
April.....	26,500	17,700	22,400	1,330,000	+233,000	1,560,000	26,200	4.11	4.59
May.....	27,600	16,800	21,000	1,290,000	-141,000	1,150,000	18,700	2.93	3.38
June.....	18,500	3,730	9,160	545,000	-112,000	433,000	7,280	1.14	1.27
July.....	3,990	2,550	3,060	188,000	-14,700	173,000	2,810	.440	.51
August....	3,230	2,100	2,650	163,000	-30,500	132,000	2,150	.337	.39
September	3,350	2,220	2,570	153,000	-29,000	124,000	2,080	.326	.36
The year	27,600	1,880	7,830	5,660,000	+16,200	5,680,000	7,840	1.23	16.70
1919-20									
October..	4,660	2,000	2,500	154,000	-25,800	128,000	2,080	.326	.38
November..	2,960	1,860	2,620	156,000	-1,000	155,000	2,600	.408	.46
December..	5,640	2,080	2,700	166,000	+2,550	169,000	2,750	.431	.50
January..	3,680	2,160	2,680	165,000	+67,000	232,000	3,770	.591	.68
February..	3,800	2,240	3,110	196,000	+23,300	219,000	3,810	.597	.64
March.....	15,900	2,210	6,630	408,000	-10,400	398,000	6,470	1.01	1.16
April.....	14,700	5,760	11,000	655,000	+62,500	718,000	12,100	1.90	2.12
May.....	20,000	12,800	16,600	1,020,000	+24,800	1,040,000	16,900	2.65	3.06
June.....	14,800	3,810	9,120	543,000	-42,000	501,000	8,420	1.32	1.47
July.....	5,630	2,300	3,000	184,000	+6,770	191,000	3,110	.487	.56
August....	2,570	2,020	2,310	142,000	-26,100	116,000	1,890	.296	.34
September	2,490	1,910	2,240	133,000	+10,400	143,000	2,400	.376	.42
The year	20,000	1,860	5,400	3,920,000	+92,000	4,010,000	5,520	.865	11.79
1920-21									
October..	4,850	2,050	3,340	205,000	-8,090	197,000	3,200	.502	.58
November..	8,910	2,380	4,720	281,000	-16,000	265,000	4,450	.697	.78
December..	13,100	2,830	5,430	334,000	+9,300	343,000	5,580	.875	1.01
January..	15,800	7,920	11,100	682,000	-49,800	632,000	10,300	1.61	1.86
February..	16,800	5,690	12,000	666,000	+56,100	722,000	13,000	2.04	2.12
March....	23,200	11,700	17,600	1,080,000	+118,000	1,200,000	19,500	3.06	3.53
April.....	24,500	16,800	19,800	1,180,000	+42,700	1,220,000	20,500	3.21	3.58
May.....	28,200	20,600	24,800	1,520,000	+30,900	1,550,000	25,200	3.95	4.55
June.....	22,500	2,450	11,900	708,000	-180,000	528,000	8,870	1.39	1.55
July.....	5,210	2,100	2,900	178,000	+26,600	205,000	3,330	.522	.60
August....	2,630	1,870	2,240	150,000	-23,900	126,000	2,050	.321	.37
September	2,530	2,000	2,220	138,000	-22,000	116,000	1,950	.306	.34
The year	28,200	1,870	9,840	7,120,000	-16,200	7,100,000	9,810	1.54	20.87
1921-22									
October..	2,650	1,940	2,430	149,000	-15,200	134,000	2,180	.342	.39
November..	4,170	2,020	2,690	160,000	-10,800	149,000	2,500	.392	.44
December..	11,200	4,460	7,200	443,000	-15,600	427,000	6,940	1.09	1.26
January..	6,690	2,170	3,450	212,000	-39,400	173,000	2,810	.440	.51
February..	2,830	1,980	2,420	134,000	+120	134,000	2,410	.378	.39
March....	9,380	2,270	4,240	261,000	+30,100	291,000	4,730	.741	.85
April.....	17,600	8,350	13,800	821,000	+162,000	983,000	16,500	2.59	2.89
May.....	27,900	17,100	22,500	1,380,000	+103,000	1,480,000	24,100	3.78	4.36
June.....	21,600	1,890	14,100	839,000	-185,000	654,000	11,000	1.72	1.92
July.....	4,950	2,090	2,770	170,000	+12,500	182,000	2,960	.464	.53
August....	2,630	1,900	2,260	139,000	-18,500	120,000	1,950	.306	.35
September	2,720	1,860	2,200	131,000	-25,100	106,000	1,780	.279	.31
The year	27,900	1,860	6,690	4,840,000	-1,880	4,830,000	6,680	1.05	14.20

*Adjusted for gain or loss in storage in Coeur d'Alene and Long Lakes.

†Partly estimated.

Monthly discharge of Spokane River below Little Falls, near Long Lake--Continued

Month	Observed				Gain or loss in storage (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	
1922-23									
October..	2,560	1,770	2,220	136,000	-13,800	122,000	1,980	0.310	0.36
November..	2,760	1,600	2,270	135,000	-26,500	108,000	1,820	.285	.32
December..	4,040	1,920	2,700	166,000	+7,580	174,000	2,830	.444	.51
January..	13,200	3,900	8,630	531,000	-1,170	530,000	8,620	1.35	1.51
February..	5,090	2,370	3,840	213,000	-40,600	172,000	3,100	.486	.55
March....	9,570	3,690	5,230	322,000	+81,800	404,000	6,570	1.03	1.19
April....	22,900	12,000	18,500	1,100,000	+206,000	1,310,000	22,000	3.45	3.85
May.....	23,800	18,800	21,200	1,300,000	-67,800	1,230,000	20,000	3.13	3.61
June.....	24,200	5,500	16,200	964,000	-106,000	858,000	14,400	2.26	2.52
July.....	8,540	1,960	3,940	236,000	+12,600	249,000	4,050	.635	.73
August....	2,500	1,860	2,300	141,000	-10,600	130,000	2,110	.331	.38
September..	2,780	1,940	2,480	148,000	-35,700	112,000	1,880	.295	.33
The year	24,200	1,600	7,450	5,390,000	+5,810	5,400,000	7,460	1.17	15.87
1923-24									
October..	2,700	1,940	2,410	148,000	-13,100	135,000	2,200	.345	.40
November..	2,970	1,820	2,540	151,000	-6,000	145,000	2,440	.382	.43
December..	6,170	2,180	3,310	204,000	-10,700	193,000	3,140	.492	.57
January..	11,300	1,950	3,270	201,000	-17,900	183,000	2,980	.467	.54
February..	14,900	8,780	11,900	684,000	+70,500	754,000	13,100	2.05	2.21
March....	11,500	5,040	7,920	487,000	-76,400	411,000	6,680	1.05	1.21
April....	12,600	3,170	8,950	533,000	+119,000	652,000	11,000	1.72	1.92
May.....	19,100	6,580	15,900	978,000	-26,800	951,000	15,500	2.43	2.80
June.....	6,480	2,070	3,890	231,000	+2,670	234,000	3,930	.616	.69
July.....	3,160	1,750	2,420	149,000	-15,200	134,000	2,180	.342	.39
August....	2,670	1,990	2,410	148,000	-36,900	111,000	1,810	.284	.33
September..	2,760	1,760	2,260	134,000	-19,400	115,000	1,930	.303	.34
The year	19,100	1,750	5,580	4,050,000	-30,200	4,020,000	5,530	.867	11.83
1924-25									
October..	2,480	1,790	2,220	136,000	-8,350	128,000	2,080	.326	.38
November..	3,060	1,880	3,040	181,000	+30,800	212,000	3,560	.558	.62
December..	9,870	2,390	5,900	363,000	-7,930	355,000	5,770	.904	1.04
January..	19,700	2,330	5,730	352,000	+1,210	353,000	5,740	.900	1.04
February..	28,200	12,400	18,500	1,030,000	+60,900	1,090,000	19,600	3.07	3.20
March....	14,800	9,260	12,400	762,000	+21,200	783,000	12,700	1.99	2.29
April....	34,300	14,800	25,400	1,510,000	+143,000	1,650,000	27,700	4.34	4.84
May.....	22,900	18,800	21,600	1,330,000	-43,900	1,290,000	21,000	3.29	3.79
June.....	19,100	4,470	10,200	607,000	-132,000	475,000	7,980	1.25	1.40
July.....	4,350	2,110	2,940	181,000	+6,870	188,000	3,060	.480	.55
August....	3,090	2,290	2,710	167,000	-43,600	123,000	2,000	.313	.36
September..	3,100	2,290	2,620	156,000	-33,200	123,000	2,070	.324	.36
The year	34,300	1,790	9,360	6,780,000	-5,000	6,770,000	9,350	1.47	19.87
1925-26									
October..	2,940	1,870	2,500	154,000	-25,400	129,000	2,100	.329	.38
November..	2,830	1,820	2,420	144,000	-12,600	131,000	2,200	.345	.38
December..	3,660	1,830	2,630	162,000	+53,800	216,000	3,510	.550	.63
January..	5,080	2,430	3,220	198,000	-18,500	180,000	2,930	.459	.53
February..	10,600	4,080	8,130	452,000	+18,600	471,000	8,480	1.33	1.38
March....	11,200	7,200	8,640	531,000	+33,600	565,000	9,190	1.44	1.66
April....	17,500	7,360	11,400	678,000	+84,300	762,000	12,800	2.01	2.24
May.....	15,000	2,930	8,980	504,000	-39,000	465,000	7,560	1.18	1.36
June.....	3,520	2,170	2,780	165,000	+8,130	173,000	2,910	.456	.51
July.....	2,920	2,000	2,600	160,000	-54,200	106,000	1,720	.270	.31
August....	2,730	1,670	2,200	135,000	-26,100	109,000	1,770	.274	.32
September..	2,650	1,480	2,210	132,000	+2,460	134,000	2,250	.353	.39
The year	17,500	1,480	4,720	3,420,000	+25,200	3,440,000	4,750	.745	10.09
1926-27									
October..	5,430	1,910	2,880	177,000	+30,900	208,000	3,380	.530	.61
November..	11,500	3,130	5,330	317,000	+23,400	340,000	5,710	.895	1.00
December..	17,400	5,910	11,700	719,000	-83,400	636,000	10,300	1.61	1.86
January..	10,300	3,690	6,750	415,000	-5,140	410,000	6,670	1.05	1.21
February..	19,700	5,330	10,400	578,000	+79,400	657,000	11,800	1.85	1.93
March....	14,300	9,980	11,600	713,000	-24,300	689,000	11,200	1.76	2.03
April....	27,200	10,100	14,300	851,000	+279,000	1,130,000	19,000	2.98	3.32
May.....	31,500	22,500	26,600	1,640,000	-80,700	1,560,000	25,400	3.98	4.59
June.....	24,500	12,700	20,000	1,190,000	-167,000	1,020,000	17,100	2.68	2.99
July.....	12,500	2,450	4,510	277,000	-1,900	275,000	4,470	.701	.81
August....	3,180	2,260	2,950	181,000	-35,500	146,000	2,370	.371	.43
September..	4,170	2,360	3,000	179,000	+21,000	200,000	3,360	.527	.59
The year	31,500	1,910	10,000	7,240,000	+35,800	7,270,000	10,000	1.57	21.37

*Adjusted for gain or loss in storage in Coeur d'Alene and Long Lakes.

Monthly discharge of Spokane River below Little Falls, near Long Lake--Continued

Month	Observed				Gain or loss in storage (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	
1927-28									
October..	16,500	2,590	6,720	413,000	-26,100	387,000	6,290	0.986	1.14
November..	28,000	5,530	15,700	934,000	+251,000	1,180,000	19,800	3.10	3.44
December..	28,700	9,190	18,300	1,130,000	-271,000	859,000	14,000	2.19	2.52
January...	16,300	7,460	11,600	713,000	+15,600	729,000	11,900	1.87	2.16
February...	11,100	6,000	9,040	520,000	-41,800	478,000	8,310	1.30	1.40
March....	22,500	4,510	14,700	904,000	+198,000	1,100,000	17,900	2.81	3.24
April.....	24,500	14,100	18,000	1,070,000	-8,910	1,060,000	17,800	2.79	3.11
May.....	28,800	19,400	25,100	1,540,000	+67,200	1,610,000	26,200	4.11	4.74
June.....	22,000	3,720	10,100	601,000	-178,000	423,000	7,110	1.11	1.24
July.....	4,940	2,370	3,400	209,000	+4,440	213,000	3,460	.542	.62
August....	2,890	2,040	2,600	160,000	-31,700	128,000	2,080	.326	.38
September	2,910	1,970	2,410	143,000	-23,700	119,000	2,000	.313	.35
The year	28,800	1,970	11,500	8,340,000	-45,000	8,290,000	11,400	1.79	24.36
1928-29									
October..	2,760	1,980	2,480	152,000	-13,900	138,000	2,240	.351	.40
November..	3,100	1,790	2,500	149,000	-7,010	142,000	2,390	.375	.42
December..	3,430	1,810	2,620	161,000	-15,300	146,000	2,370	.371	.43
January...	2,890	1,690	2,440	150,000	-21,300	129,000	2,100	.329	.38
February...	3,480	1,640	2,640	147,000	-18,500	128,000	2,300	.361	.38
March....	9,000	1,320	3,520	216,000	+90,400	306,000	4,980	.781	.90
April.....	13,600	4,730	8,300	494,000	+79,200	573,000	9,630	1.51	1.68
May.....	15,800	12,200	14,400	885,000	-27,800	857,000	13,900	2.18	2.51
June.....	11,200	3,130	6,510	387,000	-10,200	377,000	6,340	.994	1.11
July.....	3,760	1,820	2,550	157,000	+3,460	160,000	2,600	.408	.47
August....	2,840	1,270	2,270	140,000	-40,200	99,800	1,620	.254	.29
September	2,800	1,680	2,410	143,000	-42,500	100,000	1,680	.263	.29
The year	15,800	1,270	4,400	3,180,000	-23,600	3,160,000	4,360	.683	9.26
1929-30									
October..	2,800	1,110	2,260	139,000	-14,700	124,000	2,020	.317	.37
November..	3,140	745	2,390	142,000	-27,800	114,000	1,920	.301	.34
December..	3,100	530	1,900	117,000	+23,500	140,000	2,280	.357	.41
January...	3,290	1,400	2,280	140,000	-22,100	118,000	1,920	.301	.35
February...	7,870	2,190	3,980	221,000	+74,900	296,000	5,330	.835	.87
March.....	21,300	2,600	5,720	352,000	+27,400	379,000	6,160	.966	1.11
April.....	14,400	6,860	12,000	714,000	-27,400	687,000	11,500	1.80	2.01
May.....	12,800	3,060	7,760	477,000	+22,800	500,000	8,130	1.27	1.46
June.....	8,810	2,610	4,870	290,000	+36,000	326,000	5,480	.859	.96
July.....	3,160	1,760	2,250	138,000	+930	139,000	2,260	.354	.41
August....	2,430	1,770	2,150	132,000	-43,200	88,800	1,440	.226	.26
September	2,560	1,580	2,180	130,000	-28,100	102,000	1,710	.268	.30
The year	21,300	530	4,140	2,990,000	+22,200	3,010,000	4,160	.652	8.85
1930-31									
October..	2,360	1,120	2,040	125,000	-13,800	111,000	1,810	.284	.33
November..	2,480	1,300	2,040	121,000	+5,660	127,000	2,130	.334	.37
December..	2,750	1,400	2,080	128,000	-13,900	114,000	1,850	.290	.33
January...	2,370	1,240	2,030	125,000	+18,800	144,000	2,340	.367	.42
February...	6,070	1,830	2,940	163,000	+25,700	189,000	3,400	.533	.56
March.....	13,200	2,610	7,070	496,000	+40,800	537,000	7,730	1.37	1.58
April.....	17,900	12,200	15,600	928,000	+27,100	955,000	16,000	2.51	2.80
May.....	17,500	2,820	12,400	762,000	-18,200	744,000	12,100	1.90	2.19
June.....	5,300	2,120	3,440	205,000	+8,210	213,000	3,580	.561	.63
July.....	2,270	1,290	1,850	114,000	-25,500	88,500	1,440	.226	.26
August....	2,640	1,380	1,970	121,000	-41,700	79,300	1,290	.202	.23
September	2,660	1,070	2,060	123,000	-25,500	97,500	1,640	.257	.29
The year	17,900	1,070	4,710	3,410,000	-12,300	3,400,000	4,700	.737	9.99

*Adjusted for gain or loss in storage in Coeur d'Alene and Long Lakes.

†Partly estimated.

Monthly discharge of Spokane River below Little Falls, near Long Lake--Continued

Month	Observed				Gain or loss in storage (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	
1931-32									
October..	2,570	942	1,930	119,000	-21,400	97,600	1,590	.249	.29
November.	2,510	1,290	1,840	109,000	+11,700	121,000	2,030	.318	.35
December.	3,010	1,060	2,020	124,000	+18,600	143,000	2,330	.365	.42
January..	7,990	1,750	3,850	237,000	-24,300	213,000	3,460	.542	.62
February.	20,600	1,850	4,980	286,000	+69,100	355,000	6,170	.967	1.04
March....	20,800	9,830	15,700	965,000	+93,600	1,060,000	17,200	2.70	3.11
April.....	31,800	20,700	26,500	1,580,000	+181,000	1,760,000	29,600	4.64	5.18
May.....	33,400	26,000	30,800	1,890,000	-50,500	1,840,000	29,900	4.69	5.41
June.....	25,100	4,630	15,200	904,000	-227,000	677,000	11,400	1.79	2.00
July.....	6,070	2,120	3,420	210,000	+14,600	225,000	3,600	.574	.66
August....	2,880	1,510	2,250	138,000	-20,300	118,000	1,920	.301	.35
September	2,630	1,600	2,150	128,000	-24,600	103,000	1,730	.271	.30
The year	33,400	942	9,220	6,690,000	+20,500	6,710,000	9,250	1.45	19.73
1932-33									
October..	3,060	1,200	2,160	133,000	-8,430	125,000	2,030	0.318	0.37
November.	10,700	1,660	6,140	365,000	+2,630	368,000	6,180	.969	1.08
December.	10,500	3,230	6,350	390,000	-16,500	374,000	6,080	.953	1.10
January..	15,000	3,690	6,710	413,000	-10,200	403,000	6,550	1.03	1.19
February.	6,640	2,260	3,860	214,000	-51,000	183,000	3,300	.517	.54
March....	13,000	4,580	9,210	566,000	+86,800	653,000	10,600	1.66	1.91
April.....	28,200	13,200	16,500	982,000	+315,000	1,300,000	21,800	3.42	3.82
May.....	32,800	21,600	24,600	1,510,000	-106,000	1,400,000	22,800	3.57	4.12
June.....	27,200	14,600	22,600	1,340,000	-165,000	1,180,000	19,800	3.10	3.46
July.....	14,400	2,320	5,250	323,000	-29,600	293,000	4,770	.748	.86
August....	2,880	1,710	2,240	138,000	-3,220	135,000	2,200	.345	.40
September	2,660	1,560	2,250	134,000	-5,530	128,000	2,150	.337	.38
The year	32,800	1,200	9,000	6,510,000	+29,000	6,540,000	9,040	1.42	19.23
1933-34									
October..	11,100	1,600	3,724	229,000	-11,550	217,400	3,536	.554	.64
November.	12,900	2,950	7,814	465,000	-21,650	443,400	7,452	1.17	1.30
December.	47,200	3,720	25,580	1,573,000	+461,300	2,034,000	33,080	5.18	5.97
January..	36,100	21,800	28,270	1,739,000	-255,200	1,484,000	24,130	3.78	4.36
February.	23,600	10,900	16,420	912,000	-182,400	729,600	13,140	2.06	2.14
March....	20,800	11,000	14,970	920,500	+189,800	1,110,000	18,050	2.83	3.26
April.....	28,000	19,400	22,910	1,363,000	-46,790	1,316,000	22,120	3.47	3.87
May.....	18,600	5,500	11,360	698,700	-116,400	582,300	9,470	1.48	1.71
June.....	7,360	2,090	3,917	233,100	-1,740	231,400	3,889	.610	.68
July.....	2,850	1,600	2,357	145,000	-20,680	124,300	2,022	.317	.37
August....	2,770	1,310	2,254	138,600	-37,190	101,400	1,649	.258	.30
September	2,550	1,100	1,994	118,600	-13,480	105,100	1,766	.277	.31
The year	47,200	1,100	11,790	8,536,000	-55,980	8,479,000	11,710	1.84	24.91
1934-35									
October..	2,830	1,380	2,193	134,800	+33,880	168,700	2,744	.430	.50
November.	8,310	1,990	5,165	307,400	-12,640	294,800	4,954	.776	.87
December.	9,910	2,650	5,853	359,900	-9,230	350,700	5,704	.894	1.03
January..	13,500	4,910	7,901	485,800	+4,190	490,000	7,969	1.25	1.44
February.	10,200	6,060	8,467	470,200	-19,180	451,000	8,121	1.27	1.32
March....	14,200	5,060	10,320	634,600	+34,380	669,000	10,880	1.71	1.97
April.....	25,200	9,610	16,420	977,200	+259,200	1,236,000	20,770	3.26	3.64
May.....	26,500	21,700	24,230	1,490,000	-53,020	1,437,000	23,370	3.66	4.22
June.....	21,200	4,000	12,240	728,200	-164,400	563,800	9,475	1.49	1.66
July.....	4,740	1,910	3,205	197,100	-1,780	195,300	3,176	.498	.57
August....	3,200	1,580	2,509	154,300	-34,560	119,700	1,947	.305	.35
September	3,070	1,200	2,473	147,100	-39,240	107,900	1,813	.284	.32
The year	26,500	1,200	8,407	6,087,000	-2,400	6,084,000	8,404	1.32	17.89

*Adjusted for gain or loss in storage in Coeur d'Alene and Long Lakes.

Yearly discharge of Spokane River below Little Falls, near Long Lake

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1913.....	9,940	1.56	21.17	7,200,000	9,650	1.51	20.53	6,990,000
1914.....	6,990	1.10	14.85	5,060,000	7,030	1.10	14.94	5,090,000
1915.....	4,690	.735	9.98	3,400,000	4,600	.721	9.78	3,330,000
1916.....	10,300	1.61	22.04	7,490,000	10,200	1.60	21.88	7,440,000
1917.....	9,520	1.49	20.26	6,890,000	10,400	1.63	22.19	7,550,000
1918.....	9,070	1.42	19.28	6,560,000	8,210	1.29	17.46	5,940,000
1919.....	7,840	1.23	16.70	5,680,000	7,740	1.21	16.48	5,600,000
1920.....	5,520	.865	11.79	4,010,000	6,010	.942	12.82	4,360,000
1921.....	9,810	1.54	20.87	7,100,000	9,680	1.52	20.59	7,010,000
1922.....	6,680	1.05	14.20	4,830,000	6,250	.980	13.30	4,530,000
1923.....	7,460	1.17	15.87	5,400,000	7,550	1.18	16.08	5,470,000
1924.....	5,530	.867	11.83	4,020,000	5,840	.915	12.47	4,240,000
1925.....	9,350	1.47	19.87	6,770,000	9,050	1.42	19.22	6,550,000
1926.....	4,750	.745	10.09	3,440,000	5,730	.898	12.17	4,150,000
1927.....	10,000	1.57	21.37	7,270,000	11,800	1.85	25.02	8,510,000
1928.....	11,400	1.79	24.36	8,290,000	8,660	1.36	18.49	6,290,000
1929.....	4,360	.683	9.26	3,160,000	4,290	.672	9.13	3,110,000
1930.....	4,160	.652	8.85	3,010,000	4,130	.647	8.76	2,990,000
1931.....	4,700	.737	9.99	3,400,000	4,710	.738	10.02	3,410,000
1932.....	9,250	1.45	19.73	6,710,000	9,940	1.56	21.22	7,220,000
1933.....	9,040	1.42	19.23	6,540,000	11,600	1.82	24.59	8,560,000
1934.....	11,710	1.84	24.91	8,479,000	9,114	1.43	19.40	6,598,000
1935.....	8,404	1.32	17.89	6,084,000	-	-	-	-
Highest.....	11,710	1.84	24.91	8,479,000	11,800	1.85	25.02	8,510,000
Average.....	7,850	1.23	16.71	5,690,000	7,830	1.23	16.66	5,670,000
Lowest.....	4,160	.652	8.85	3,010,000	4,130	.647	8.76	2,990,000

Little Spokane River at Dartford, Wash.

Location.- Staff gage, lat. 47°47'00", long. 117°25'00", in sec. 6, T. 26 N., R. 43 E., at Dartford, 50 feet below highway bridge and 6 miles above mouth.

Drainage area.- 600 square miles.

Records available.- April 1929 to September 1932.

Extremes.- Maximum discharge observed, 1,670 second-feet Feb. 27, 1932; minimum observed, 65 second-feet July 24, 1930.

Remarks.- No diversion of any consequence above station.

Monthly discharge of Little Spokane River at Dartford

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
April 22-30, 1929.....	439	373	399	0.665	0.22	7,120
May.....	350	132	203	.338	.39	12,500
June.....	184	127	146	.243	.27	8,690
July.....	164	105	124	.207	.24	7,620
August.....	117	88	106	.177	.20	6,520
September.....	114	87	102	.170	.19	6,070
The period.....	-	-	-	-	-	48,500
October 1929.....	119	96	110	.183	.21	6,760
November.....	149	101	113	.188	.21	6,780
December.....	244	130	159	.265	.31	9,780
January 1930.....	146	-	99.6	.166	.19	6,120
February.....	910	110	279	.465	.48	15,500
March.....	227	146	167	.278	.32	10,300
April.....	192	146	170	.283	.32	10,100
May.....	164	110	132	.220	.25	8,120
June.....	152	85	105	.175	.20	6,250
July.....	130	65	80.5	.154	.15	4,950
August.....	88	69	78.5	.131	.15	4,830
September.....	103	83	89.1	.143	.17	5,300
Water year 1929-30.....	910	65	131	.218	.296	94,700

Monthly discharge of Little Spokane River at Dartford--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1930.....	119	92	106	.177	.20	6,520
November.....	135	112	121	.202	.23	7,800
December.....	130	117	122	.203	.23	7,500
Calendar year 1930.....	910	63	128	.213	2.89	92,700
January 1931.....	185	119	136	.227	.26	8,360
February.....	238	123	160	.267	.28	8,890
March.....	260	183	221	.368	.42	13,600
April.....	260	172	210	.350	.39	12,500
May.....	172	101	133	.222	.26	6,150
June.....	118	90	98.2	.164	.18	5,840
July.....	96	71	80.3	.134	.15	4,940
August.....	72	65	67.9	.113	.13	4,170
September.....	92	68	80.3	.134	.15	4,780
Water year 1930-31.....	260	65	128	.213	2.88	92,500
October 1931.....	97	80	87.9	.146	.17	5,400
November.....	142	94	117	.195	.22	6,960
December.....	245	96	149	.248	.29	9,160
Calendar year 1931.....	260	65	128	.213	2.90	92,800
January 1932.....	595	140	206	.343	.40	12,700
February.....	1,670	-	347	.578	.62	20,000
March.....	1,530	358	903	1.50	1.73	55,500
April.....	1,390	950	1,130	1.88	2.10	67,200
May.....	895	425	589	.982	1.13	36,200
June.....	402	146	258	.430	.48	15,400
July.....	146	108	124	.207	.24	7,620
August.....	124	104	111	.185	.21	6,920
September.....	117	104	108	.180	.20	6,430
Water year 1931-32.....	1,670	80	343	.572	7.79	249,000

SANPOIL RIVER BASIN

Lost Creek near Aeneas, Wash.

Location.-- Staff gage, lat. 48°29', long. 119°01', in sec. 36, T. 35 N., R. 30 E., a quarter of a mile below Sheep Creek and 5 miles south of Aeneas post office.

Records available.-- October 1920 to September 1921.

Extremes.-- Maximum discharge observed, 290 second-feet May 16, 1921; minimum observed, 2.3 second-feet Aug. 30 to Sept. 1, 1921.

Remarks.-- No diversion or regulation.

Monthly discharge of Lost Creek near Aeneas

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1920-21				
October.....	11	2.5	4.89	301
November.....	47	-	13.7	815
December.....	30	-	10.3	633
January.....	9.0	-	7.18	441
February.....	94	5.4	14.5	805
March.....	190	11	37.8	2,320
April.....	140	36	89.5	5,330
May.....	290	94	186	11,400
June.....	89	16	45.7	2,720
July.....	16	3.4	7.32	450
August.....	3.7	2.3	2.79	172
September.....	-	2.3	3.06	182
The year.....	290	2.3	34.9	25,600

NESPELEM RIVER BASIN

Nespelem River at Nespelem, Wash.

Location.- Staff gage, lat. 48°11', long. 118°59', in SE $\frac{1}{4}$ sec. 24, T. 31 N., R. 30 E., half a mile above Nespelem and 6 miles above mouth.

Drainage area.- 122 square miles.

Records available.- May 1911 to September 1929.

Extremes.- Maximum discharge observed, 483 second-feet Apr. 5, 1919; minimum observed, 2.7 second-feet July 26 to Aug. 1, 1926.

Remarks.- Nespelem canal has diverted water above station for irrigation since April 1921.

Monthly discharge of Nespelem River and Nespelem canal at Nespelem

Month	Discharge in second-feet					Run-off in acre-feet (combined)
	Maximum (combined)	Minimum (combined)	Mean			
			River	Canal	Combined	
1919-20						
October.....	11.2	10.1	10.3	0	10.3	633
November.....	12.7	10.6	11.5	0	11.5	684
December.....	21	8.5	10.7	0	10.7	658
January.....	10.6	9.0	9.70	0	9.70	596
February.....	10.6	9.6	10.2	0	10.2	587
March.....	12.7	10.6	11.5	0	11.5	707
April.....	18.8	11.7	15.3	0	15.3	910
May.....	31	17.4	21.2	0	21.2	1,300
June.....	22	11.7	15.7	0	15.7	934
July.....	11.2	7.8	9.00	0	9.00	553
August.....	8.5	6.7	7.24	0	7.24	445
September.....	9.0	7.1	7.71	0	7.71	459
The year.....	31	6.7	11.7	0	11.7	8,470
1920-21						
October.....	9.6	7.1	8.57	0	8.57	527
November.....	43	9.6	22.0	0	22.0	1,310
December.....	32	25	28.6	0	28.6	1,760
January.....	30	22	27.2	0	27.2	1,670
February.....	46	27	32.4	0	32.4	1,800
March.....	243	56	146	0	146	8,980
April.....	304	213	283	5.66	289	17,200
May.....	263	136	215	7.16	222	13,600
June.....	126	33	63.5	7.66	71.2	4,240
July.....	35	14.4	12.9	8.07	21.0	1,290
August.....	14.4	11.4	6.78	5.81	12.6	775
September.....	12.1	11.0	6.19	5.40	11.6	690
The year.....	394	7.1	71.1	3.33	74.4	53,800
1921-22						
October.....	12	9.6	10.1	0	10.1	621
November.....	12	10	11.1	0	11.1	660
December.....	15	11	11.8	0	11.8	726
January.....	11	9.6	10.4	0	10.4	640
February.....	10	9.0	9.8	0	9.8	544
March.....	26	9.6	14.3	0	14.3	879
April.....	163	31	80.6	1.86	82.5	4,910
May.....	196	104	149	6.72	156	9,590
June.....	97	27	49.7	9.23	58.9	3,500
July.....	26	11	11.6	5.59	17.2	1,060
August.....	11	9.1	5.70	4.57	10.3	633
September.....	10	7.8	4.59	4.10	8.69	517
The year.....	196	7.8	30.8	2.68	33.5	24,300
1922-23						
April.....	104	43	77.7	.88	78.6	4,680
May.....	89.3	47.6	55.7	6.64	62.3	3,830
June.....	78.1	45.6	54.5	8.39	62.9	3,740
July.....	48.6	15.8	20.7	9.01	29.7	1,830
August.....	15.8	11.8	7.67	5.93	13.6	836
September.....	11.4	9.0	4.90	4.71	9.61	572
The period...	-	-	-	-	-	15,500
1923-24						
April.....	68.7	48.0	54.4	2.83	57.2	3,400
May.....	56.7	27.7	32.6	9.69	42.3	2,600
June.....	25.7	12.9	8.51	9.90	18.4	1,090
July.....	10.3	7.3	3.58	5.09	8.67	533
August.....	8.3	7.1	3.39	4.13	7.52	462
September.....	10.5	7.7	4.28	4.16	8.44	502
The period...	-	-	-	-	-	8,590

Monthly discharge of Nespalem River and Nespalem canal at Nespalem--Continued

Month	Discharge in second-feet					Run-off in acre-feet (combined)
	Maximum (combined)	Minimum (combined)	Mean			
			River	Canal	Combined	
1924-25						
April.....	339	141	243	2.27	245	14,600
May.....	156	67	108	5.13	113	6,950
June.....	65	23	34.9	10.5	45.4	2,700
July.....	21	11	6.73	7.37	14.1	867
August.....	11	8.8	5.09	4.94	10.0	615
September.....	11	8.7	5.51	4.47	9.98	594
The period....	-	-	-	-	-	26,300
1925-26						
October.....	11.1	9.8	5.42	4.82	10.2	627
November.....	9.8	9.3	4.92	4.61	9.53	567
December.....	9.6	9.3	4.80	4.60	9.40	578
January.....	8.4	7.7	7.86	0	7.86	483
February.....	15.4	7.7	12.5	0	12.5	694
March.....	23	12.3	13.3	2.08	15.4	947
April.....	40	23	29.9	3.08	33.0	1,960
May.....	34	18.5	16.2	8.62	24.8	1,520
June.....	18.4	7.7	5.79	5.71	11.5	684
July.....	7.7	5.9	2.79	3.57	6.36	391
August.....	7.2	5.7	3.37	2.55	5.92	364
September.....	8.6	7.0	3.99	3.56	7.55	449
The year.....	40	5.7	9.19	3.62	12.8	9,260
1926-27						
October.....	7.9	7.2	4.11	3.67	7.78	478
November.....	9.7	6.6	5.98	1.31	7.29	434
December 1-18..	10.6	9.0	8.18	1.41	9.59	342
April.....	322	130	183	2.14	185	11,000
May.....	299	120	185	5.11	190	11,700
June.....	110	55	78.8	8.36	87.2	5,190
July.....	55	12.0	17.0	8.97	26.0	1,600
August.....	13.5	10.0	6.70	4.56	11.3	695
September.....	13.8	10.3	7.35	5.08	12.4	738
1927-28						
October.....	15.9	13.2	9.00	5.27	14.3	879
November.....	19.3	13.7	10.9	6.33	17.2	1,020
December.....	17.9	12	11.7	1.99	13.7	842
January.....	15	12	13.2	0	13.2	812
February.....	18	15	15.9	0	15.9	915
March.....	63	15	35.8	0	35.8	2,200
April.....	108	64	75.2	.67	75.9	4,520
May.....	109	49	71.5	6.74	78.2	4,810
June.....	46	16.5	17.6	10.2	27.8	1,650
July.....	29	9.3	6.98	8.47	15.4	947
August.....	10.4	8.7	4.94	4.41	9.35	575
September.....	9.2	8.2	3.91	4.78	8.69	517
The year.....	109	8.2	23.0	-	27.1	19,700
1928-29						
October.....	9.9	9.4	4.28	5.37	9.65	593
November.....	11	8.7	4.46	4.89	9.35	556
December.....	9.4	7.7	8.03	.15	8.18	503
January.....	8.2	7.2	7.70	0	7.70	473
February.....	7.2	5.3	5.98	0	5.98	332
March.....	40	6.3	11.2	0	11.2	689
April.....	38	10	18.1	.94	19.0	1,130
May.....	40	27	25.1	8.11	33.2	2,040
June.....	32	16	13.1	11.7	24.8	1,480
July.....	16	7.6	5.44	4.58	10.0	615
August.....	7.7	6.9	4.16	3.12	7.28	448
September.....	7.9	6.8	4.21	3.07	7.28	433
The year.....	40	5.3	9.34	3.50	12.8	9,290

Yearly discharge of Nespelem River and Nespelem canal at Nespelem

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1912.....	31.4	22,800	33.6	24,400
1913.....	39.6	28,600	37.4	27,100
1914.....	66.1	47,800	66.8	48,400
1915.....	49.4	35,700	49.3	35,700
1916.....	72.1	52,400	72.0	52,300
1917.....	48.7	35,200	47.8	34,600
1918.....	15.8	11,400	15.8	11,400
1919.....	61.9	44,900	62.2	45,100
1920.....	11.7	8,470	13.9	10,100
1921.....	74.4	53,800	72.2	52,300
1922.....	33.5	24,300	-	-
1926.....	12.8	9,260	-	-
1928.....	27.1	19,700	25.6	18,600
1929.....	12.8	9,290	-	-
Highest.....	74.4	53,800	72.2	52,300
Average.....	39.8	28,800	45.1	32,700
Lowest.....	11.7	8,470	13.9	10,100

OKANOGAN RIVER BASIN

Okanogan River at Okanogan Falls, British Columbia

(International gaging station)

Location.- Staff gage, lat. 49°21', long. 119°35', below falls at village of Okanogan Falls. Prior to Oct. 2, 1935, staff gage above falls.

Drainage area.- 2,550 square miles.

Records available.- October 1930 to September 1935. March 1915 to September 1930 in reports of Department of Mines and Resources, Canada.

Extremes.- Maximum discharge observed, 2,680 second-feet June 10, 1928; minimum observed, 4.6 second-feet Mar. 14, 1931.

Remarks.- Some diversions above station for irrigation. Flow regulated by control dam at outlet of Okanogan Lake. This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Monthly discharge of Okanogan River at Okanogan Falls, British Columbia

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1930-31				
October.....	167	7.7	57.0	3,500
November.....	136	11.5	48.0	2,860
December.....	14.0	6.0	9.6	590
January.....	7.7	5.6	6.7	412
February.....	7.7	5.1	6.2	344
March.....	93	4.6	27.1	1,670
April.....	77	36.0	49.6	2,950
May.....	146	39.0	86.0	5,290
June.....	97	42.5	66.0	3,930
July.....	116	62	93.0	5,720
August.....	110	73	88.0	5,410
September.....	82	42.5	61.0	3,630
The year.....	167	4.6	50.0	36,300
1931-32				
October.....	94	12.9	47.7	2,930
November.....	116	9.9	68.0	4,050
December.....	11.5	8.2	9.8	603
January.....	201	7.7	38.4	2,360
February.....	610	129	357	20,500
March.....	686	596	639	39,300
April.....	845	567	677	40,300
May.....	970	828	883	54,300
June.....	940	793	846	50,300
July.....	793	432	624	38,400
August.....	503	444	479	29,500
September.....	494	429	458	27,300
The year.....	970	7.7	427	310,000

Monthly discharge of Okanogan River at Okanogan Falls, British Columbia--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1932-33				
October.....	472	299	410	25,200
November.....	520	307	376	22,400
December.....	744	504	640	39,400
January.....	701	362	625	38,400
February.....	622	118	267	14,800
March.....	726	152	386	23,700
April.....	934	701	751	44,700
May.....	1,300	948	1,080	66,400
June.....	1,280	1,060	1,180	70,200
July.....	1,070	815	954	58,700
August.....	828	646	747	45,900
September.....	652	498	560	33,300
The year.....	1,300	118	668	483,000
1933-34				
October.....	633	454	562	34,600
November.....	721	594	661	39,300
December.....	770	613	706	43,400
January.....	756	693	719	44,200
February.....	770	707	744	41,300
March.....	777	686	724	44,500
April.....	1,160	777	946	56,300
May.....	978	852	933	57,400
June.....	954	742	818	48,700
July.....	785	574	725	44,600
August.....	544	371	421	25,900
September.....	421	208	343	20,400
The year.....	1,160	208	691	501,000
1934-35				
October.....	463	396	434	26,700
November.....	542	463	504	30,000
December.....	523	429	481	29,600
January.....	634	457	568	34,900
February.....	655	594	619	34,400
March.....	720	607	660	40,600
April.....	742	613	656	39,000
May.....	1,110	727	937	57,600
June.....	1,080	871	956	56,900
July.....	1,030	669	866	53,300
August.....	840	757	808	49,700
September.....	825	772	798	47,500
The year.....	1,110	396	691	500,000

Yearly discharge of Okanogan River at Okanogan Falls, British Columbia

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1931.....	50.0	36,300	51.0	36,900
1932.....	427	310,000	536	389,000
1933.....	668	483,000	709	513,000
1934.....	691	501,000	649	470,000
1935.....	691	500,000	-	-

Okanogan River near Tonasket, Wash.

(International gaging station)

(Formerly called Okanogan River at Okanogan)

Location.— Water-stage recorder, lat. 48°38'00", long. 119°27'50", in lot 3, sec. 8, T. 35 N., R. 27 E., 1,000 feet above Chewilken Creek and 5½ miles south of Tonasket.

Prior to Oct. 1, 1925, chain gage a quarter of a mile above Salmon Creek at Okanogan.

Drainage area.— 7,250 square miles; 7,740 square miles at former site.

Records available.— April 1929 to September 1935. May 1911 to September 1925, equivalent records at site a quarter of a mile above Salmon Creek at Okanogan (published as Okanogan River at Okanogan).

Extremes.— Maximum discharge, 25,400 second-feet Apr. 27, 1934; minimum, 126 second-feet Sept. 5, 1931.

Remarks.— Several diversions above station for irrigation. Flow subject to natural regulation in several lakes, and, in the interest of navigation, to artificial regulation in Okanogan Lake. Pondage in connection with operation of power plant on Similkameen River affects low flow slightly. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Monthly discharge of Okanogan River near Tonasket

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	891	826	853	52,400
November.....	2,500	745	1,160	69,000
December.....	1,290	615	903	55,500
January.....	1,180	700	868	53,400
February.....	1,290	868	1,100	63,300
March.....	840	745	788	48,500
April.....	1,850	745	844	50,200
May.....	7,950	1,650	4,740	291,000
June.....	10,800	4,050	8,290	493,000
July.....	9,990	2,920	5,750	354,000
August.....	2,780	1,010	1,680	103,000
September.....	1,160	765	946	56,300
The year.....	10,800	615	2,330	1,690,000
1920-21				
October.....	3,040	1,160	1,970	115,000
November.....	1,560	1,010	1,180	70,200
December.....	1,010	765	897	55,200
January.....	1,010	570	818	50,300
February.....	1,250	715	919	51,000
March.....	1,250	1,080	1,170	71,900
April.....	2,470	1,080	1,760	105,000
May.....	20,100	2,530	9,830	604,000
June.....	20,800	8,990	14,600	869,000
July.....	8,990	2,880	5,110	314,000
August.....	2,740	870	1,600	98,400
September.....	2,120	570	823	49,000
The year.....	20,800	570	3,380	2,450,000
1921-22				
October.....	3,460	780	1,230	75,600
November.....	2,880	720	1,640	97,600
December.....	4,750	1,140	1,990	122,000
January.....	1,800	1,450	1,610	99,000
February.....	1,650	1,140	1,290	71,600
March.....	2,000	1,140	1,380	84,800
April.....	2,180	1,530	1,550	92,200
May.....	15,900	2,240	7,000	430,000
June.....	20,400	5,600	11,900	708,000
July.....	5,430	1,530	2,610	160,000
August.....	1,230	840	981	60,300
September.....	900	720	816	48,600
The year.....	20,400	720	2,830	2,050,000
1922-23				
October.....	1,230	840	987	60,700
November.....	1,230	970	1,110	66,000
December.....	1,510	-	979	60,200
January.....	1,710	720	1,280	78,700
February.....	1,230	385	986	54,800
March.....	1,140	780	1,030	63,300
April.....	5,640	780	2,340	139,000
May.....	11,700	4,320	9,050	556,000
June.....	16,200	8,130	11,700	696,000
July.....	9,100	2,490	5,240	322,000
August.....	2,370	1,610	1,870	115,000
September.....	1,610	1,050	1,220	72,600
The year.....	16,200	385	3,160	2,280,000

Monthly discharge of Okanogan River near Tonasket--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1923-24				
October.....	1,320	1,100	1,180	72,600
November.....	1,230	1,140	1,160	69,000
December.....	1,140	765	1,040	64,000
January.....	1,320	-	858	52,800
February.....	2,370	1,320	1,660	95,500
March.....	1,510	1,140	1,330	81,900
April.....	2,030	1,050	1,440	85,700
May.....	17,800	2,740	10,200	627,000
June.....	8,130	2,870	5,340	318,000
July.....	2,740	900	1,600	98,400
August.....	865	465	629	38,700
September.....	705	412	452	26,900
The year.....	17,800	412	2,240	1,630,000
1924-25				
October.....	-	530	755	46,400
November.....	1,050	615	806	48,000
December.....	5,470	530	1,230	75,600
January.....	-	-	1,290	79,300
February.....	4,480	798	1,470	81,600
March.....	1,320	705	800	49,200
April.....	5,640	1,320	3,600	214,000
May.....	19,200	4,160	11,400	701,000
June.....	9,430	4,750	6,930	412,000
July.....	4,380	1,060	2,170	133,000
August.....	1,020	528	743	45,700
September.....	558	450	476	28,300
The year.....	19,200	450	2,640	1,910,000
1929				
April 17-30.....	1,150	330	506	14,000
May.....	8,120	1,040	3,890	239,000
June.....	8,310	2,730	5,530	329,000
July.....	2,550	577	1,330	81,800
August.....	583	288	406	25,000
September.....	288	253	270	16,100
The period.....	-	-	-	705,000
1929-30				
October.....	505	262	416	25,600
November.....	521	330	413	24,600
December.....	537	316	399	24,500
January.....	583	292	360	22,100
February.....	1,190	325	581	32,300
March.....	1,000	410	529	32,500
April.....	6,280	1,110	3,240	193,000
May.....	7,740	3,770	5,090	313,000
June.....	7,930	3,620	5,660	337,000
July.....	3,340	818	1,840	113,000
August.....	783	335	515	31,700
September.....	516	288	365	21,700
The year.....	7,930	262	1,620	1,170,000
1930-31				
October.....	714	306	442	27,200
November.....	714	447	588	35,000
December.....	516	341	443	27,200
January.....	776	335	439	27,000
February.....	860	462	600	33,300
March.....	648	447	525	32,500
April.....	2,560	518	770	45,800
May.....	8,290	3,820	5,630	346,000
June.....	4,890	1,670	2,730	162,000
July.....	1,760	370	908	55,800
August.....	337	152	231	14,200
September.....	518	132	335	19,900
The year.....	8,290	132	1,140	826,000

Monthly discharge of Okanogan River near Tonasket--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1931-32				
October.....	468	359	403	24,800
November.....	916	463	663	39,500
December.....	582	348	491	30,200
January.....	480	-	398	24,500
February.....	6,820	-	883	50,800
March.....	4,620	1,720	2,060	127,000
April.....	5,430	1,720	2,920	174,000
May.....	10,800	5,940	8,620	530,000
June.....	9,170	4,150	6,840	407,000
July.....	3,910	1,310	2,270	140,000
August.....	1,270	755	915	56,300
September.....	769	636	696	41,400
The year.....	10,600	-	2,260	1,650,000
1932-33				
October.....	1,620	660	887	54,500
November.....	3,680	1,040	1,870	111,000
December.....	2,230	-	1,850	114,000
January.....	1,360	-	1,500	92,200
February.....	1,280	-	1,040	87,800
March.....	1,080	840	916	56,300
April.....	6,790	1,000	1,980	118,000
May.....	12,500	5,110	7,200	443,000
June.....	19,900	10,000	13,300	791,000
July.....	9,610	2,780	5,940	365,000
August.....	2,640	1,120	1,810	111,000
September.....	1,500	1,000	1,090	64,900
The year.....	19,900	660	3,280	2,380,000
1933-34				
October.....	5,600	1,200	2,113	129,900
November.....	4,150	2,710	3,233	192,400
December.....	3,240	1,960	2,437	149,900
January.....	2,400	1,800	2,011	123,600
February.....	2,120	1,460	1,861	103,300
March.....	6,090	1,840	2,855	175,600
April.....	25,400	6,090	13,220	786,800
May.....	19,600	9,190	12,270	754,400
June.....	11,100	3,330	6,214	369,800
July.....	3,090	1,440	2,114	130,000
August.....	1,440	640	1,055	64,880
September.....	748	514	626	37,260
The year.....	25,400	514	4,168	3,018,000
1934-35				
October.....	1,190	748	950	58,430
November.....	2,910	1,230	2,203	131,100
December.....	2,140	1,300	1,755	107,900
January.....	3,200	430	1,388	85,370
February.....	4,470	2,130	2,889	160,500
March.....	2,180	1,660	1,896	116,600
April.....	3,740	1,480	2,011	119,600
May.....	14,300	4,320	9,283	570,800
June.....	14,700	6,270	10,710	637,000
July.....	7,160	2,710	4,727	290,700
August.....	2,600	1,380	1,881	115,700
September.....	1,450	1,100	1,251	74,460
The year.....	14,700	430	3,409	2,468,000

Yearly discharge of Okanogan River near Tonasket

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1912.....	2,600	1,890,000	2,650	1,920,000
1913.....	3,060	2,210,000	3,130	2,270,000
1914.....	3,070	2,230,000	3,020	2,180,000
1915.....	2,170	1,570,000	2,150	1,550,000
1916.....	4,070	2,960,000	4,020	2,920,000
1917.....	2,860	2,070,000	2,870	2,080,000
1918.....	3,080	2,230,000	3,070	2,220,000
1919.....	3,180	2,300,000	3,170	2,300,000
1920.....	2,330	1,590,000	2,410	1,750,000
1921.....	3,380	2,450,000	3,460	2,510,000
1922.....	2,830	2,050,000	2,680	1,940,000
1923.....	3,160	2,280,000	3,180	2,300,000
1924.....	2,240	1,630,000	2,200	1,590,000
1925.....	2,640	1,910,000	-	-
1930.....	1,620	1,170,000	1,640	1,190,000
1931.....	1,140	826,000	1,150	831,000
1932.....	2,260	1,650,000	2,520	1,830,000
1933.....	3,280	2,380,000	3,550	2,570,000
1934.....	4,168	3,018,000	3,927	2,845,000
1935.....	3,409	2,468,000	-	-
Highest.....	4,168	3,018,000	4,020	2,920,000
Average.....	2,830	2,050,000	2,820	2,040,000
Lowest.....	1,140	826,000	1,150	831,000

Similkameen River near Nighthawk, Wash.

(International gaging station)

(Formerly called Similkameen River near Oroville)

Location.- Water-stage recorder, lat. 48°59'10", long. 119°37'00", in NW¼ sec. 7, T. 40 N., R. 26 E., about 1½ miles below Nighthawk. Prior to Oct. 1, 1928, staff-gage at Okanogan Valley Power Co.'s plant, 4 miles above Oroville and about 8 miles below Nighthawk.

Drainage area.- 3,420 square miles; 3,450 square miles at former site.

Records available.- September 1928 to September 1935. May 1911 to September 1928 at site 4 miles above Oroville (published as Similkameen River near Oroville); records equivalent if flow of Oroville-Tonasket Irrigation District canal is included.

Extremes.- Maximum discharge recorded, 27,200 second-feet at 4:30 a.m. Apr. 26, 1934; no flow Dec. 5, 1920, when pond behind dam was being filled.

Remarks.- Oroville-Tonasket Irrigation District canal diverts water at a point three-quarters of a mile below gage near Nighthawk and about 6 miles above former gage near Oroville. Some regulation at high stage caused by natural diversion into Palmer Lake. This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Monthly discharge of Similkameen River and Oroville-Tonasket Irrigation District canal near Oroville

Month	Discharge in second-feet					Run-off (combined)		
	River			Canal (mean)	Combined			
	Maximum	Minimum	Mean		Mean	Per square mile	Inches	Acre-feet
1915-16								
October.....	1,630	437	632	0	632	0.183	0.21	38,900
November.....	1,270	564	825	0	825	.239	.27	49,100
December.....	-	-	461	0	461	.134	.15	28,300
January.....	-	-	404	0	404	.117	.13	24,800
February.....	960	-	629	0	629	.182	.20	36,200
March.....	1,690	642	1,110	0	1,110	.322	.37	68,200
April.....	4,750	820	2,140	*20	2,160	.626	.70	129,000
May.....	12,800	4,950	8,740	*60	8,800	2.55	2.94	541,000
June.....	20,400	9,720	13,600	*70	13,700	3.97	4.43	815,000
July.....	11,600	2,990	6,800	*75	6,880	1.99	2.29	423,000
August.....	2,830	970	1,710	*75	1,780	.516	.59	109,000
September....	1,260	617	829	*55	884	.256	.29	52,600
The year...	20,400	-	3,160	*30	3,190	.925	12.57	2,320,000

*Estimated.

Monthly discharge of Similkameen River and Oroville-Tonasket Irrigation District canal near Oroville--Continued

Month	Discharge in second-feet						Run-off (combined)	
	River			Canal (mean)	Combined			
	Maximum	Minimum	Mean		Mean	Per square mile	Inches	Acres-foot
1916-17								
October.....	662	531	592	0	592	0.172	0.20	36,400
November.....	862	-	583	0	583	.169	.19	34,700
December.....	-	-	475	0	475	.138	.16	29,200
January.....	-	-	429	0	429	.124	.14	26,400
February.....	-	-	395	0	395	.114	.12	21,900
March.....	-	-	430	0	430	.125	.14	26,400
April.....	758	435	519	*20	539	.156	.17	32,100
May.....	15,900	758	5,830	*65	5,900	1.71	1.97	363,000
June.....	15,000	8,260	11,400	*80	11,500	3.33	3.72	684,000
July.....	8,520	1,640	4,380	*85	4,460	1.29	1.49	274,000
August.....	1,580	531	927	*85	1,010	.293	.34	62,100
September....	531	382	449	*60	509	.148	.17	30,300
The year...	15,900	-	2,200	*33	2,230	.646	8.81	1,620,000
1917-18								
October.....	531	382	441	0	441	.128	.15	27,100
November.....	1,380	453	690	0	690	.200	.22	41,100
December.....	4,340	-	799	0	799	.232	.27	49,100
January.....	5,050	-	1,790	0	1,790	.519	.60	110,000
February.....	-	-	746	0	746	.216	.22	41,400
March.....	709	617	661	0	661	.192	.22	40,600
April.....	6,040	809	2,240	*25	2,260	.655	.73	134,000
May.....	13,200	5,380	8,840	*75	8,920	2.69	2.99	548,000
June.....	16,700	4,740	10,000	*85	10,100	2.93	3.27	601,000
July.....	4,540	1,380	2,540	*95	2,640	.765	.88	162,000
August.....	1,320	709	986	*90	1,080	.513	.56	66,400
September....	662	348	446	*65	511	.148	.17	30,400
The year...	16,700	348	2,540	*36	2,580	.748	10.08	1,850,000
1918-19								
October.....	1,140	380	636	0	636	.184	.21	39,100
November.....	901	361	658	0	658	.191	.21	39,200
December.....	845	-	563	0	563	.163	.19	34,600
January.....	736	-	500	0	500	.145	.17	30,700
February.....	510	-	444	0	444	.129	.13	24,700
March.....	534	-	444	0	444	.129	.15	27,500
April.....	6,980	558	2,080	*25	2,100	.609	.68	125,000
May.....	19,100	5,600	9,820	*80	9,900	2.87	3.31	609,000
June.....	12,200	7,610	9,780	*95	9,880	2.86	3.19	588,000
July.....	6,980	1,520	3,980	*105	4,080	1.18	1.36	261,000
August.....	1,710	610	973	*100	1,070	.510	.56	65,800
September....	901	400	514	*70	584	.169	.19	34,800
The year...	19,100	-	2,540	*40	2,580	.748	10.15	1,870,000
1919-20								
October.....	558	400	453	0	453	.131	.15	27,900
November.....	2,130	343	817	0	817	.237	.26	48,600
December.....	-	-	649	0	649	.188	.22	39,900
January.....	1,140	-	602	0	602	.174	.20	37,000
February.....	1,200	583	838	0	838	.243	.26	48,200
March.....	658	534	578	0	578	.168	.19	35,500
April.....	1,670	433	589	*30	619	.179	.20	36,800
May.....	7,620	1,370	4,360	*90	4,450	1.29	1.49	274,000
June.....	9,700	3,600	7,540	*105	7,640	2.21	2.47	455,000
July.....	9,000	1,760	4,480	*115	4,600	1.33	1.53	283,000
August.....	1,550	490	839	*110	949	.275	.32	58,400
September....	970	378	608	*80	608	.199	.22	40,900
The year...	9,700	-	1,860	*44	1,900	.551	7.51	1,390,000
1920-21								
October.....	2,880	910	1,610	0	1,610	.467	.54	99,000
November.....	1,150	710	902	0	902	.261	.29	53,700
December.....	760	432	595	0	595	.172	.20	36,600
January.....	710	279	537	0	537	.156	.18	33,000
February.....	1,150	530	796	0	796	.231	.24	44,200
March.....	1,150	770	907	0	907	.263	.30	55,800
April.....	1,950	770	1,360	*30	1,390	.403	.45	82,700
May.....	20,800	1,680	9,110	*100	9,210	2.67	3.08	566,000
June.....	20,000	5,820	11,800	*115	11,900	3.45	3.85	708,000
July.....	5,580	1,290	2,700	*125	2,820	.817	.94	173,000
August.....	1,220	445	703	*120	823	.239	.28	50,600
September....	1,770	405	558	*85	643	.186	.21	38,500
The year...	20,800	279	2,630	*48	2,680	.777	10.56	1,940,000

*Estimated.

Monthly discharge of Similkameen River and Oroville-Tonascket Irrigation District canal near Oroville--Continued

Month	Discharge in second-feet						Run-off (combined)	
	River (mean)	Canal (mean)	Combined			Inches		
			Maximum	Minimum	Mean		Per square mile	
1921-22								
October.....	911	0	3,240	575	911	0.264	0.30	56,000
November.....	1,230	0	1,950	670	1,230	.357	.40	73,200
December.....	1,160	0	4,140	575	1,160	.336	.39	71,300
January.....	752	0	940	575	752	.218	.25	46,200
February.....	663	0	770	575	663	.192	.20	36,800
March.....	520	0	575	485	520	.151	.17	32,000
April.....	732	5	1,320	530	737	.214	.24	45,900
May.....	6,180	94	14,100	1,560	6,270	1.82	2.10	386,000
June.....	10,700	143	21,500	4,010	10,800	3.13	3.49	643,000
July.....	1,670	162	3,810	930	1,830	.530	.61	113,000
August.....	589	137	956	601	726	.210	.24	44,600
September....	500	40	705	405	540	.157	.18	32,100
The year....	2,130	49	21,500	405	2,180	.632	8.57	1,580,000
1922-23								
October.....	644	0	940	508	644	.187	.22	39,600
November.....	596	0	720	508	596	.173	.19	35,500
December.....	418	0	620	330	418	.121	.14	25,700
January.....	515	0	620	260	515	.149	.17	31,700
February.....	412	0	465	278	412	.119	.12	22,900
March.....	416	0	445	385	416	.121	.14	25,600
April.....	2,030	1	5,320	508	2,030	.588	.66	121,000
May.....	8,470	95	11,700	3,520	8,560	2.48	2.86	526,000
June.....	10,600	100	16,100	7,380	10,700	3.10	3.46	637,000
July.....	3,800	129	7,240	1,430	3,930	1.14	1.31	242,000
August.....	892	148	1,360	774	1,040	.301	.35	64,000
September....	479	116	774	427	595	.172	.19	35,400
The year....	2,450	49	16,100	260	2,500	.725	9.81	1,810,000
1923-24								
October.....	521	0	575	427	521	.151	.17	32,000
November.....	462	0	525	427	462	.134	.15	27,500
December.....	430	0	525	132	430	.125	.14	26,400
January.....	369	0	-	123	369	.107	.12	22,700
February.....	871	0	1,680	-	871	.252	.27	50,100
March.....	678	0	905	551	678	.197	.23	41,700
April.....	1,060	51.4	2,480	551	1,110	.322	.36	66,000
May.....	9,940	141	18,300	3,200	10,100	2.93	3.38	621,000
June.....	4,540	164	7,380	2,730	4,700	1.36	1.52	280,000
July.....	1,280	141	2,640	783	1,420	.412	.48	87,300
August.....	400	147	731	415	547	.159	.18	33,600
September....	279	133	724	349	412	.119	.13	24,500
The year....	1,740	-	18,300	123	1,810	.525	7.13	1,310,000
1924-25								
October.....	567	0	1,170	334	567	.164	.19	34,900
November.....	613	0	775	369	613	.178	.20	36,500
December.....	1,090	0	5,080	351	1,090	.316	.36	67,000
January.....	768	0	1,040	551	768	.223	.26	47,200
February.....	760	0	905	628	760	.220	.23	42,200
March.....	730	0	905	528	730	.212	.24	44,900
April.....	3,130	51.5	5,240	689	3,180	.922	1.03	189,000
May.....	11,100	137	18,200	4,360	11,200	3.25	3.75	689,000
June.....	6,280	142	7,980	3,740	6,420	1.86	2.08	382,000
July.....	1,630	164	3,540	827	1,790	.519	.60	110,000
August.....	452	147	827	472	599	.174	.20	36,800
September....	264	143	472	346	407	.118	.13	24,200
The year....	2,290	65.7	18,200	334	2,350	.681	9.27	1,700,000
1925-26								
October.....	348	0	406	282	348	.101	.12	21,400
November.....	382	0	444	282	382	.111	.12	22,700
December.....	526	0	713	351	526	.152	.18	32,500
January.....	402	0	463	369	402	.117	.13	24,700
February.....	369	0	444	316	369	.107	.11	20,500
March.....	518	0	840	334	518	.150	.17	31,900
April.....	2,810	60.2	5,700	-	2,870	.832	.93	171,000
May.....	3,030	127	5,560	1,990	3,160	.916	1.06	194,000
June.....	1,290	137	1,910	892	1,430	.414	.46	86,100
July.....	395	160	929	334	555	.161	.19	34,100
August.....	127	149	373	224	276	.080	.09	17,000
September....	155	96.7	286	227	252	.073	.08	15,000
The year....	864	61.2	5,700	224	925	.268	3.64	670,000

Monthly discharge of Similkameen River and Oroville-Tonasket Irrigation District canal near Oroville--Continued

Month	Discharge in second-feet						Run-off (combined)	
	River (mean)	Canal (mean)	Combined					
			Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926-27								
October.....	509	0	1,540	250	509	0.148	0.17	31,300
November.....	471	0	551	387	471	.137	.15	28,000
December.....	368	0	655	220	368	.107	.12	22,600
January.....	318	0	505	100	318	.092	.11	19,600
February.....	349	0	444	250	349	.101	.11	19,400
March.....	371	2.26	-	-	373	.108	.12	22,900
April.....	677	38.0	2,640	248	715	.207	.23	42,500
May.....	4,490	110	7,980	1,800	4,600	1.33	1.53	283,000
June.....	9,500	128	17,200	4,070	9,630	2.79	3.11	573,000
July.....	2,170	159	3,850	1,010	2,330	.675	.78	143,000
August.....	624	165	1,010	662	789	.229	.26	48,500
September....	1,410	72.6	2,100	927	1,480	.429	.48	88,100
The year...	1,770	56.7	17,200	100	1,830	.630	7.17	1,320,000
1927-28								
October.....	2,210	0	3,180	1,380	2,210	.641	.74	136,000
November.....	1,690	0	2,040	1,380	1,690	.490	.55	101,000
December.....	1,440	0	2,910	655	1,440	.417	.48	88,500
January.....	1,440	0	2,460	551	1,440	.417	.48	88,500
February.....	1,110	0	1,540	713	1,110	.322	.35	63,900
March.....	1,050	0	1,620	744	1,050	.304	.35	64,600
April.....	2,080	52.5	5,770	-	2,130	.617	.69	127,000
May.....	12,100	128	20,600	4,090	12,200	3.54	4.08	750,000
June.....	5,050	145	8,520	3,560	5,200	1.51	1.68	309,000
July.....	2,090	136	3,550	973	2,230	.646	.75	137,000
August.....	503	142	913	358	645	.187	.22	39,700
September....	256	132	488	343	388	.112	.12	23,100
The year...	2,600	61.4	20,600	343	2,660	.771	10.49	1,930,000

Monthly discharge of Similkameen River near Nighthawk

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	1,190	346	656	0.192	0.22	40,300
November.....	612	430	517	.151	.17	30,800
December.....	509	279	371	.108	.12	22,800
January.....	358	-	247	.072	.08	15,200
February.....	-	-	217	.064	.07	12,100
March.....	378	-	345	.101	.12	21,200
April.....	1,250	297	427	.125	.14	25,400
May.....	8,100	1,090	3,960	1.16	1.34	243,000
June.....	7,900	2,460	5,220	1.53	1.71	311,000
July.....	2,340	552	1,190	.348	.40	73,200
August.....	534	291	376	.110	.13	23,100
September.....	297	252	269	.079	.09	16,000
The year.....	8,100	-	1,150	.336	4.59	834,000
1929-30						
October.....	422	263	330	.096	.11	20,300
November.....	329	231	306	.089	.10	18,200
December.....	343	194	285	.083	.10	17,500
January.....	329	-	215	.063	.07	13,200
February.....	1,130	-	442	.129	.13	24,500
March.....	1,090	358	466	.136	.16	28,700
April.....	6,550	1,130	3,470	1.01	1.13	206,000
May.....	7,900	3,780	5,230	1.53	1.76	322,000
June.....	8,300	3,400	5,620	1.64	1.83	334,000
July.....	3,180	821	1,740	.509	.59	107,000
August.....	779	375	533	.156	.18	32,800
September.....	570	334	391	.114	.13	23,300
The year.....	8,300	-	1,590	.465	6.29	1,150,000

Monthly discharge of Similkameen River near Nighthawk--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	668	-	416	0.122	0.14	25,600
November.....	622	331	484	.142	.16	28,800
December.....	421	238	353	.103	.12	21,700
January.....	737	252	352	.103	.12	21,600
February.....	702	404	473	.138	.14	26,300
March.....	628	396	496	.145	.17	30,500
April.....	3,770	478	911	.266	.30	54,200
May.....	8,960	4,220	6,060	1.77	2.04	373,000
June.....	5,190	1,660	2,760	.807	.90	164,000
July.....	1,760	448	945	.276	.32	58,100
August.....	430	260	328	.096	.11	20,200
September.....	548	257	411	.120	.13	24,500
The year.....	8,960	238	1,170	.342	4.65	848,000
1931-32						
October.....	456	359	395	.115	.13	24,300
November.....	788	348	532	.156	.17	31,700
December.....	-	-	*387	.113	.13	23,800
January.....	389	-	344	.101	.12	21,200
February.....	7,790	-	774	.226	.24	44,500
March.....	3,390	973	1,370	.401	.46	84,200
April.....	5,150	996	2,290	.670	.75	136,000
May.....	10,200	5,690	7,960	2.33	2.69	489,000
June.....	8,790	3,280	6,090	1.78	1.99	362,000
July.....	2,990	875	1,650	.482	.56	101,000
August.....	834	442	568	.166	.19	34,900
September.....	456	328	374	.109	.12	22,300
The year.....	10,200	-	1,900	.556	7.55	1,370,000
1932-33						
October.....	1,310	318	523	.153	.18	32,200
November.....	3,470	586	1,470	.430	.48	87,600
December.....	1,820	-	1,070	.313	.36	65,800
January.....	884	450	702	.205	.24	43,200
February.....	604	-	496	.145	.15	27,600
March.....	586	498	531	.155	.18	32,600
April.....	6,020	503	1,480	.433	.48	88,100
May.....	12,000	3,990	6,270	1.83	2.11	386,000
June.....	20,500	9,070	12,200	3.67	3.98	726,000
July.....	8,410	2,120	5,030	1.47	1.70	309,000
August.....	1,970	687	1,260	.368	.42	77,600
September.....	720	586	631	.185	.21	37,600
The year.....	20,500	318	2,640	.772	10.49	1,910,000
1933-34						
October.....	5,260	713	1,595	.466	.54	98,080
November.....	3,400	2,070	2,599	.760	.85	154,700
December.....	2,460	1,100	1,661	.486	.56	102,100
January.....	1,670	1,100	1,302	.381	.44	80,050
February.....	1,220	1,040	1,141	.334	.35	63,350
March.....	5,260	1,140	2,206	.645	.74	135,600
April.....	26,400	5,080	13,510	3.95	4.41	804,200
May.....	15,800	8,200	11,070	3.24	3.74	680,700
June.....	9,070	2,580	5,377	1.57	1.75	319,900
July.....	2,460	935	1,516	.443	.51	93,240
August.....	958	426	645	.189	.22	39,650
September.....	508	388	441	.129	.14	26,210
The year.....	26,400	388	3,588	1.05	14.25	2,598,000
1934-35						
October.....	629	412	489	.143	.16	30,060
November.....	2,350	635	1,287	.376	.42	76,600
December.....	1,180	420	838	.245	.28	51,660
January.....	2,500	280	779	.228	.26	47,930
February.....	3,540	1,360	2,235	.654	.68	124,100
March.....	1,400	898	1,103	.323	.37	67,850
April.....	3,140	814	1,315	.385	.43	78,260
May.....	14,300	3,400	8,704	2.55	2.94	535,200
June.....	14,600	5,080	9,598	2.81	3.14	571,100
July.....	6,400	1,870	3,675	1.07	1.23	225,900
August.....	1,970	752	1,243	.363	.42	76,420
September.....	849	518	617	.180	.20	36,710
The year.....	14,600	280	2,654	.776	10.53	1,922,000

*Estimated.

Yearly discharge of Similkameen River near Nighthawk

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-foot		Run-off		Discharge in second-foot		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1912.....	1,820	0.528	7.19	1,320,000	1,820	0.528	7.19	1,320,000
1913.....	2,190	.635	8.62	1,590,000	2,240	.649	8.81	1,620,000
1914.....	2,140	.620	8.42	1,550,000	2,120	.614	8.33	1,530,000
1915.....	1,320	.383	5.20	952,000	1,310	.380	5.16	946,000
1916.....	3,190	.925	12.57	2,320,000	3,170	.919	12.49	2,300,000
1917.....	2,230	.646	8.81	1,620,000	2,260	.655	8.90	1,640,000
1918.....	2,580	.748	10.08	1,850,000	2,550	.739	10.05	1,850,000
1919.....	2,580	.748	10.15	1,870,000	2,590	.751	10.17	1,870,000
1920.....	1,900	.551	7.51	1,390,000	2,010	.583	7.91	1,460,000
1921.....	2,680	.777	10.56	1,940,000	2,700	.783	10.62	1,950,000
1922.....	2,180	.632	8.57	1,580,000	2,040	.591	8.03	1,480,000
1923.....	2,500	.725	9.81	1,810,000	2,470	.716	9.72	1,790,000
1924.....	1,810	.525	7.13	1,310,000	1,890	.545	7.42	1,370,000
1925.....	2,350	.681	9.27	1,700,000	2,270	.658	8.94	1,640,000
1926.....	925	.268	3.64	670,000	933	.270	3.66	675,000
1927.....	1,830	.530	7.17	1,320,000	2,160	.626	8.50	1,570,000
1928.....	2,660	.771	10.49	1,930,000	2,340	.680	9.23	1,700,000
1929.....	1,150	.336	4.59	834,000	1,100	.322	4.39	796,000
1930.....	1,590	.465	6.29	1,150,000	1,610	.471	6.40	1,170,000
1931.....	1,170	.342	4.65	848,000	1,190	.345	4.66	852,000
1932.....	1,900	.556	7.55	1,370,000	2,040	.596	8.14	1,480,000
1933.....	2,640	.772	10.49	1,910,000	2,880	.842	11.42	2,080,000
1934.....	3,588	1.05	14.25	2,598,000	3,317	.970	13.16	2,401,000
1935.....	2,654	.776	10.53	1,922,000	-	-	-	-
Highest.....	3,588	1.05	14.25	2,598,000	3,317	.970	13.16	2,401,000
Average.....	2,150	.625	8.48	1,560,000	2,130	.619	8.40	1,540,000
Lowest.....	925	.268	3.64	670,000	933	.270	3.66	675,000

Sinlahekin Creek above Blue Lake, near Loomis, Wash.

Location.-- Water-stage recorder, lat. 48°41'30", long. 119°43'00", in NE¼ sec. 20, T. 37 N., R. 25 E., 1,800 feet above Blue Lake diversion dam and 9½ miles southwest of Loomis.

Drainage area.-- 41.7 square miles.

Records available.-- April 1924 to September 1930.

Extremes.-- Maximum discharge, 284 second-feet at 12 p.m. June 7, 1927; minimum, 0.4 second-foot Sept. 20, 1930.

Remarks.-- No diversion or regulation.

Monthly discharge of Sinlahekin Creek above Blue Lake, near Loomis

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1924				
April 17-30.....	16	5.5	8.00	222
May.....	28	9.5	18.0	1,110
June.....	12	3.5	7.10	422
July.....	3.6	2.0	2.65	163
August.....	-	-	2.57	158
September.....	-	-	2.43	145
The period.....	-	-	-	2,220
1925				
April.....	69	3.7	29.0	1,730
May.....	74	36	49.7	3,060
June.....	40	13	26.0	1,550
July.....	12	3.2	6.22	382
August.....	3.3	2.4	2.79	172
September.....	-	2.4	2.70	161
The period.....	-	-	-	7,060
1925-26				
October.....	3.2	2.6	2.73	168
March 20-31.....	6.7	3.2	3.92	93.3
April.....	17	3.5	9.59	571
May.....	-	5.2	8.11	499
June.....	7.3	2.9	4.37	260
July.....	3.3	.9	1.74	107
August 1-10.....	1.0	.8	.89	17.7
September 10-27.....	3.3	1.1	2.01	71.8

Monthly discharge of Sinlahekin Creek above Blue Lake, near Loomis--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1927				
April 5-30.....	36	2.5	9.98	515
May.....	134	21	56.2	3,460
June.....	200	23	61.6	3,670
July.....	30	8.7	15.6	959
August.....	11	6.2	7.83	481
September.....	15	6.7	8.88	528
The period.....	-	-	-	9,610
1927-28				
October.....	13	8.1	10.1	621
November 1-10.....	10	5.2	8.92	177
March 28-31.....	5.5	5.2	5.42	43.0
April.....	68	4.5	15.2	904
May.....	96	28	59.7	3,670
June.....	48	20	25.7	1,530
July.....	57	12	29.3	1,800
August.....	13	4.8	7.93	488
September.....	4.8	3.6	3.97	236
1928-29				
October.....	5.1	3.2	4.13	254
November.....	4.3	1.8	3.50	196
December 1-3.....	3.3	3.1	3.17	18.9
April 16-30.....	9.2	2.3	4.94	147
May.....	18	6.6	11.9	732
June.....	28	10	18.0	1,070
July.....	9.6	2.7	5.66	348
August.....	2.7	1.2	1.81	111
September.....	2.1	1.3	1.64	97.6
1929-30				
October.....	2.9	1.3	1.85	114
April 13-30.....	11	5.5	8.17	292
May.....	8.4	4.1	5.84	359
June.....	21	5.2	10.2	607
July.....	9.6	2.3	5.28	325
August.....	2.3	1.0	1.45	89.2
September.....	5.0	.5	1.11	66.0

Sinlahekin Creek at Blue Lake, near Loomis, Wash.

Location.-- Staff gage, lat. 48°41'40", long. 119°42'20", in NE $\frac{1}{4}$ sec. 21, T. 37 N., R. 25 E., three-quarters of a mile northwest of Blue Lake and $\frac{9}{16}$ miles southwest of Loomis.

Drainage area.-- 42.9 square miles.

Records available.-- June to October 1920.

Remarks.-- No diversion or regulation.

Monthly discharge of Sinlahekin Creek at Blue Lake, near Loomis

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1920				
June.....	-	-	8.17	486
July.....	6.5	2.0	4.07	250
August.....	4.3	.7	1.36	83.6
September.....	3.7	1.1	2.12	126
October.....	6.5	3.2	3.90	240
The period.....	-	-	-	1,190

Sinlahekin Creek at Twin Bridges, near Loomis, Wash.

Location.- Staff gage, lat. 48°44'10", long. 119°40'30", in NE¼ sec. 3, T. 37 N., R. 25 E., 100 feet above lower bridge, half a mile below Sarsapkin Creek, and 6 miles south-west of Loomis.

Drainage area.- 75.5 square miles.

Records available.- May 1921 to September 1923.

Extremes.- Maximum discharge observed, 363 second-feet May 18, 1922; minimum observed, 1.6 second-feet Aug. 7, 8, 1922.

Remarks.- Diversions above gage for irrigation.

Monthly discharge of Sinlahekin Creek at Twin Bridges, near Loomis

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1921				
May.....	339	-	151	9,280
June.....	142	27	75.9	4,520
July.....	27	3.7	10.4	640
August.....	3.3	2.4	2.99	184
September.....	4.1	2.8	3.58	213
The period.....	-	-	-	14,800
1921-22				
October.....	7.5	3.3	4.58	282
November 1-22.....	4.7	2.4	3.66	160
March 8-31.....	20	4.7	10.3	490
April.....	31	5.5	12.1	720
May.....	363	34	129	7,930
June.....	273	20	90.6	5,390
July.....	16	2.4	7.27	447
August.....	11	1.6	4.76	293
September.....	11	1.8	5.03	299
1923				
May 12-31.....	36	23	30.5	1,210
June.....	69	25	47.7	2,840
July.....	51	3.4	17.7	1,090
August.....	7.9	1.9	4.12	253
September.....	14	1.9	3.85	229
The period.....	-	-	-	5,620

Toats Coulee Creek near Loomis, Wash.

Location.- Water-stage recorder, lat. 48°49'50", long. 119°41'30", in SE¼ sec. 33, T. 39 N., R. 25 E., just below Deer Creek, 1,200 feet above intake of Whitestone Irrigation District flume, and 3 miles northwest of Loomis.

Drainage area.- 132 square miles.

Records available.- May 1920 to September 1926.

Extremes.- Maximum discharge, 925 second-feet at 8 p.m. June 3, 1922; minimum, 1.6 second-feet Sept. 13, 14, 1926 (may have been less sometime between Aug. 1 and Sept. 9, 1926, when recorder was not operating satisfactorily).

Remarks.- No diversion or regulation.

Monthly discharge of Toats Coulee Creek near Loomis

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1920				
May.....	134	-	73.8	4,540
June.....	173	44	83.6	4,970
July.....	64	11.6	34.6	2,130
August.....	12.2	4.0	6.77	416
September.....	-	5.2	8.84	526
The period	-	-	-	12,600
1920-21				
October.....	35	11.6	21.9	1,350
November.....	19.7	8.4	12.1	720
December.....	11.6	-	8.92	548
January.....	-	-	*7.13	438
February.....	7.6	6.2	7.08	393
March.....	-	-	*8.31	511
April.....	17.9	8.6	13.4	797
May.....	544	15.2	264	16,200
June.....	481	106	258	15,400
July.....	99	17	46.9	2,880
August.....	18	6.0	8.75	538
September.....	9.4	6.0	7.41	441
The year.....	544	-	55.5	40,200

*Estimated.

Monthly discharge of Toats Coulee Creek near Loomis--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1921-22				
October.....	18	4.8	8.7	535
November 1-19.....	16	3.4	10.2	384
March 27-31.....	7.8	6.1	6.6	65
April.....	28	7.0	13.3	791
May.....	522	28	199	12,200
June.....	595	57	229	13,600
July.....	51	11	23.7	1,460
August.....	20	5.1	10.9	670
September.....	22	4.2	8.47	504
1922-23				
October.....	24	10	13.3	818
November 1-12.....	11	6	8.7	207
May 13-31.....	235	112	154	5,800
June.....	326	156	246	14,600
July.....	207	26	90.3	5,550
August.....	59	13	24.1	1,480
September.....	14	8	10.4	619
1923-24				
October.....	27	7	13.2	812
November.....	11	7	9.4	559
December 1-8.....	9	6	7.8	124
April 13-30.....	50	12	18.6	664
May.....	221	41	109	6,700
June.....	87	19	44.2	2,630
July.....	18	6	10.3	633
August.....	13	4	6.4	394
September.....	6	3	4.1	244
1924-25				
October 1-16.....	7.6	5.2	6.16	195
April.....	53	5.7	25.7	1,530
May.....	284	49	147	9,040
June.....	134	33	78.0	4,640
July.....	30	6.3	13.8	848
August.....	6.4	3.7	5.37	330
September.....	5.4	2.5	3.88	231
1925-26				
March 19-31.....	13	6.5	7.98	206
April.....	71	6.8	31.7	1,890
May.....	60	25	39.0	2,400
June.....	24	8.8	16.7	994
July.....	34	2.5	8.98	552
September 10-30.....	7.4	1.8	4.97	207

Bonaparte Creek near Anglin, Wash.

Location.- Staff gage, lat. 48°39'40", long. 119°15'40", in sec. 35, T. 37 N., R. 28 E., 4 miles below mouth of South Fork a quarter of a mile below headgate of Anglin ditch, and 1½ miles northeast of Anglin post office.

Drainage area.- 110 square miles.

Records available.- October 1920 to April 1921.

Remarks.- Several small ditches divert water above gage for irrigation. Figures of monthly discharge adjusted for diversion by Anglin ditch, a quarter of a mile above gage, maximum discharge, about 4 second-feet.

Monthly discharge of Bonaparte Creek and Anglin ditch, near Anglin

Month	Discharge in second-feet					Run-off in acre-feet (combined)
	Maximum (creek)	Minimum (creek)	Mean (creek)	Mean (ditch)	Mean (com- bined)	
1920-21						
October...	0.1	0	0.09	*1.04	1.13	69.5
November...	4.8	.1	2.00	*.55	2.53	151
December...	6.0	2.5	3.95	*.19	4.14	255
January...	4.8	1.9	3.40	*.95	4.35	267
February...	94	2.8	11.7	(†)	11.7	650
March...	25	5.7	14.3	(†)	14.3	879
April...	31	12	17.1	(†)	17.1	1,020
The period	-	-	-	-	-	3,290

*Computed on basis of three discharge measurements and fragmentary gage-height record.

†Probably no flow.

Salmon Creek near Conconully, Wash.

(Formerly called Salmon Creek near Malott, and near Okanogan)

Location.-- Staff gage, lat. 48°31'30", long. 119°44'30", in sec. 18, T. 35 N., R. 25 E., half a mile below Conconully Reservoir, 2 miles south of Conconully, and about 14 miles above Okanogan. Apr. 12, 1903 to Mar. 31, 1912, staff gage about 3 miles above Okanogan.

Drainage areas.-- 121 square miles; 164 square miles at former site.

Records available.-- April 1903 to March 1912 (near Malott and near Okanogan), July 1910 to September 1922.

Extremes.-- Maximum discharge observed, 577 second-feet Apr. 29, 1904; no flow Oct. 3-11, 1910, Nov. 20-21, 1919, when water was being stored in Salmon Lake and Conconully Reservoirs.

Remarks.-- Flow regulated by storage in Salmon Lake and Conconully Reservoirs, data insufficient for adjusting records for 1919-1922.

Monthly discharge of Salmon Creek near Conconully

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	1.9	0.8	0.84	51.6
November.....	.8	0	.75	44.6
December.....	1.3	.8	.82	50.4
January.....	1.0	.8	.83	51.0
February.....	1.0	.8	.82	47.2
March.....	3.8	.8	1.18	72.6
April.....	4.3	.8	1.32	78.6
May.....	48	1.3	13.0	799
June.....	52	5.1	29.4	1,750
July.....	63	2.1	34.2	2,100
August.....	68	4.7	28.2	1,730
September.....	17.7	6.8	13.2	786
The year.....	68	0	10.4	7,560
1920-21				
October.....	20	.8	7.66	471
November.....	1.3	.8	.91	54.1
December.....	1.3	.8	.94	57.8
January.....	1.3	1.0	1.18	72.6
February.....	1.5	1.3	1.38	76.6
March.....	1.5	1.3	1.39	85.5
April.....	2.1	1.5	1.70	101
May.....	84	2.1	46.4	2,850
June.....	93	67	83.5	4,970
July.....	104	74	87.7	5,390
August.....	97	63	85.9	5,280
September.....	89	1.3	43.8	2,610
The year.....	104	.8	30.4	22,000
1921-22				
October.....	10	1.5	2.76	170
November.....	8.5	1.2	1.84	109
December.....	1.7	1.2	1.47	90.4
January.....	1.5	1.5	1.50	92.2
February.....	1.5	1.5	1.50	83.3
March.....	1.9	1.5	1.65	101
April.....	15.2	1.9	6.97	415
May.....	100	1.9	50.3	3,090
June.....	94	34	74.0	4,400
July.....	88	66	78.4	4,820
August.....	82	34	68.2	4,190
September.....	64	1.7	22.0	1,310
The year.....	100	1.2	26.1	18,900

Yearly discharge of Salmon Creek near Conconully

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1904.....	78.9	57,300	78.0	56,600
1905.....	58.6	42,400	57.6	41,700
1906.....	40.5	29,300	40.2	29,100
1907.....	47.9	34,700	47.4	34,300
1908.....	34.4	25,000	34.0	24,700
1909.....	33.3	24,100	33.9	24,600
1910.....	29.4	21,300	26.6	19,200
1911.....	20.6	15,000	22.4	16,200
1912.....	27.1	19,700	27.4	19,900
1913.....	29.3	21,200	28.8	20,900
1914.....	44.6	32,300	46.6	33,700
1915.....	44.9	32,500	43.5	31,500
1916.....	69.4	50,400	70.0	50,800
1917.....	35.2	25,500	34.8	25,200
1918.....	12.2	8,860	10.7	7,720
1919.....	21.6	15,600	20.8	15,000
1920.....	10.4	7,560	11.0	8,000
1921.....	30.4	22,000	30.1	21,800
1922.....	26.1	18,900	-	-
Highest.....	78.9	57,300	78.0	56,600
Average.....	36.6	26,500	36.9	26,700
Lowest.....	10.4	7,560	10.7	7,720

METHOW RIVER BASIN

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., below highway bridge at Twisp, a quarter of a mile below Twisp River.

Prior to Dec. 19, 1933, chain or staff gage on highway bridge.

Drainage area.- 1,330 square miles (revised).

Records available.- June 1919 to September 1929, October 1933 to September 1935.

Extremes.- Maximum discharge recorded, 15,200 second-feet 9 a.m. to 4 p.m. Apr. 24 and 8 a.m. to 12 m. Apr. 25, 1934; minimum recorded, 134 second-feet Sept. 4, 5, 1926, Sept. 9, 10, 1929.

Remarks.- Water diverted above station for irrigation by two Methow Valley Irrigation District canals, Risley ditch, and some smaller ditches.

Monthly discharge of Methow River at Twisp

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	343	267	287	17,600
November.....	363	-	304	18,100
December.....	323	-	222	13,600
January.....	285	165	227	14,000
February.....	249	177	209	12,000
March.....	267	203	240	14,800
April.....	449	217	246	14,600
May.....	2,620	472	1,550	95,300
June.....	4,320	1,260	2,990	178,000
July.....	4,000	619	1,750	108,000
August.....	593	285	392	24,100
September.....	449	267	351	20,900
The year.....	4,320	-	731	531,000
1920-21				
October.....	1,450	495	886	54,500
November.....	729	449	569	33,900
December.....	449	304	375	23,100
January.....	384	249	325	20,000
February.....	363	233	319	17,700
March.....	729	363	490	30,100
April.....	1,650	819	1,280	76,200
May.....	11,600	1,260	6,120	376,000
June.....	12,700	4,480	7,410	441,000
July.....	4,320	1,140	2,150	132,000
August.....	1,060	344	617	37,900
September.....	365	304	323	19,200
The year.....	12,700	233	1,740	1,260,000

Monthly discharge of Methow River at Twisp--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1921-22				
October.....	850	324	436	26,800
November.....	815	453	596	35,500
December.....	1,900	408	643	39,500
January.....	500	285	406	25,000
February.....	430	249	305	16,900
March.....	304	249	259	15,900
April.....	1,400	304	727	43,300
May.....	9,470	1,310	3,760	231,000
June.....	12,300	3,050	6,000	357,000
July.....	2,620	549	1,210	74,400
August.....	574	408	469	28,800
September.....	453	267	341	20,300
The year.....	12,300	249	1,260	914,000
1922-23				
October.....	386	324	357	22,000
November.....	344	267	316	18,800
December.....	344	203	281	17,300
January.....	304	203	250	15,400
February.....	324	203	239	13,300
March.....	408	217	245	15,100
April.....	3,050	453	1,590	94,600
May.....	7,210	2,120	4,480	275,000
June.....	8,420	3,840	5,320	317,000
July.....	4,650	815	2,280	140,000
August.....	780	453	563	34,600
September.....	430	285	311	18,500
The year.....	8,420	203	1,360	982,000
1923-24				
October.....	356	275	320	19,700
November.....	335	275	307	18,300
December.....	294	204	264	16,200
January.....	275	-	227	14,000
February.....	266	191	238	13,700
March.....	356	266	312	19,200
April.....	1,500	335	737	43,900
May.....	10,800	1,800	4,950	304,000
June.....	3,840	1,220	2,180	130,000
July.....	1,500	356	723	44,500
August.....	335	204	267	16,400
September.....	204	178	192	11,400
The year.....	10,800	-	897	651,000
1924-25				
October.....	314	238	262	16,100
November.....	335	238	291	17,300
December.....	1,140	204	371	22,800
January.....	-	-	309	19,000
February.....	314	266	286	15,900
March.....	550	275	384	23,600
April.....	3,840	525	1,900	113,000
May.....	11,400	2,120	5,910	363,000
June.....	5,330	2,620	3,700	220,000
July.....	2,240	550	1,110	68,200
August.....	500	238	321	19,700
September.....	221	204	210	12,500
The year.....	11,400	204	1,260	911,000
1925-26				
October.....	294	204	242	14,900
November.....	275	221	247	14,700
December.....	238	204	222	13,600
January.....	204	178	190	11,700
February.....	204	178	193	10,700
March.....	356	191	238	14,600
April.....	3,050	378	1,230	73,200
May.....	2,760	990	1,580	97,200
June.....	1,800	475	846	50,300
July.....	500	178	289	17,800
August.....	204	144	162	9,960
September.....	221	134	168	10,000
The year.....	3,050	134	467	339,000

Monthly discharge of Methow River at Twisp--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1926-27				
October.....	525	228	345	21,200
November.....	411	306	342	20,400
December.....	347	265	303	18,600
January.....	306	195	257	15,800
February.....	245	210	229	12,700
March.....	265	210	222	13,600
April.....	1,770	285	571	34,000
May.....	5,190	1,200	2,520	155,000
June.....	12,400	2,610	5,480	326,000
July.....	2,230	550	1,310	80,600
August.....	635	347	469	28,800
September.....	920	578	692	41,200
The year.....	12,400	195	1,060	768,000
1927-28				
October.....	1,200	605	909	55,900
November.....	840	605	710	42,200
December.....	1,280	500	693	42,600
January.....	800	455	537	33,000
February.....	478	306	395	22,700
March.....	1,000	368	570	35,000
April.....	2,750	635	1,030	61,300
May.....	10,200	1,770	6,110	376,000
June.....	3,500	2,350	2,810	167,000
July.....	2,350	500	1,270	78,100
August.....	500	228	316	19,400
September.....	265	195	214	12,700
The year.....	10,200	195	1,300	946,000
1928-29				
October.....	326	195	268	16,500
November.....	326	245	274	16,300
December.....	285	228	253	15,600
January.....	-	-	199	12,200
February.....	-	-	183	10,200
March.....	228	180	205	12,600
April.....	245	144	180	10,700
May.....	5,010	245	2,020	124,000
June.....	4,830	1,280	2,790	166,000
July.....	1,200	245	588	36,200
August.....	228	155	185	11,400
September.....	210	134	148	8,810
The year.....	5,010	134	609	441,000
1933-34				
October.....	-	-	*1,300	79,930
November.....	1,460	974	1,183	70,420
December.....	1,150	645	876	53,860
January.....	658	493	552	33,930
February.....	723	543	611	33,940
March.....	3,980	710	1,773	109,000
April.....	14,900	3,260	7,692	457,700
May.....	8,600	4,340	5,974	367,300
June.....	5,860	1,560	3,544	210,900
July.....	1,560	578	968	59,490
August.....	543	212	323	19,880
September.....	248	171	212	12,640
The year.....	-	-	2,084	1,509,000
1934-35				
October.....	370	204	258	15,860
November.....	1,000	390	708	42,120
December.....	745	496	613	37,680
January.....	1,430	250	578	35,550
February.....	1,090	759	958	53,230
March.....	794	634	730	44,880
April.....	2,540	703	1,278	76,050
May.....	9,580	2,540	5,312	326,600
June.....	9,840	3,620	6,257	372,300
July.....	3,260	1,090	2,188	134,500
August.....	1,090	313	561	34,490
September.....	549	252	302	17,980
The year.....	9,840	204	1,645	1,191,000

*Estimated.

Yearly discharge of Methow River at Twisp

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1920.....	731	531,000	817	593,000
1921.....	1,740	1,260,000	1,730	1,250,000
1922.....	1,260	914,000	1,200	871,000
1923.....	1,360	982,000	1,350	978,000
1924.....	897	651,000	900	653,000
1925.....	1,260	911,000	1,240	898,000
1926.....	467	339,000	491	356,000
1927.....	1,060	768,000	1,170	848,000
1928.....	1,300	946,000	1,180	854,000
1929.....	609	441,000	-	-
1934.....	2,084	1,509,000	1,934	1,400,000
1935.....	1,645	1,191,000	-	-
Highest.....	2,084	1,509,000	1,934	1,400,000
Average.....	1,200	870,000	1,200	870,000
Lowest.....	467	339,000	491	356,000

Methow River at Pateros, Wash.

Location.- Staff gage, lat. 48°02'50", long. 119°54'40", in sec. 2, T. 29 N., R. 23 E., at Pateros, three-quarters of a mile above highway bridge, and 1 mile above mouth.

Drainage area.- 1,810 square miles (revised).

Records available.- June 1903 to September 1920.

Extremes.- Maximum discharge observed, 14,900 second-feet May 11, 1910; minimum, 204 second-feet (estimated) Jan. 5, 6, 1919, when stage-discharge relation was affected by ice.

Remarks.- A considerable amount of water is diverted above the station for irrigation.

Monthly discharge of Methow River at Pateros

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	449	386	414	25,500
November.....	495	366	443	26,400
December.....	520	-	336	20,700
January.....	-	-	370	22,800
February.....	506	329	366	21,100
March.....	406	312	361	22,200
April.....	495	295	348	20,700
May.....	2,930	406	1,740	107,000
June.....	4,550	1,420	3,140	187,000
July.....	4,550	713	2,070	127,000
August.....	845	301	471	29,000
September.....	568	320	404	24,000
The year.....	4,550	-	873	633,000

Yearly discharge of Methow River at Pateros

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1904.....	2,270	1,650,000	2,180	1,570,000
1905.....	1,880	1,360,000	1,910	1,380,000
1906.....	1,510	1,100,000	1,510	1,090,000
1907.....	1,900	1,380,000	1,880	1,360,000
1908.....	1,670	1,210,000	1,660	1,200,000
1909.....	1,530	1,110,000	1,550	1,120,000
1910.....	2,370	1,720,000	2,420	1,750,000
1911.....	1,620	1,170,000	1,550	1,120,000
1912.....	1,300	946,000	1,310	948,000
1913.....	1,560	1,130,000	1,560	1,130,000
1914.....	1,680	1,220,000	1,750	1,270,000
1915.....	1,200	870,000	1,140	828,000
1916.....	2,380	1,730,000	2,400	1,740,000
1917.....	1,460	1,050,000	1,440	1,040,000
1918.....	1,360	987,000	1,360	986,000
1919.....	1,580	1,140,000	1,580	1,140,000
1920.....	873	633,000	-	-
Highest.....	2,380	1,730,000	2,420	1,750,000
Average.....	1,660	1,200,000	1,700	1,230,000
Lowest.....	873	633,000	1,140	828,000

Chewack Creek below Boulder Creek, near Winthrop, Wash.

Location.- Staff gage, lat. 48°35', long. 120°10', in sec. 35, T. 36 N., R. 21 E., at sawmill of Chewack Lumber Co., 400 feet below Boulder Creek, and 7½ miles north of Winthrop.

Drainage area.- 475 square miles.

Records available.- April 1920 to September 1921.

Extremes.- Maximum discharge observed, 4,700 second-feet June 5, 1921; minimum, 29 second-feet (estimated) Jan. 11, 1921, when stage-discharge relation was affected by ice.

Remarks.- Jones ditch diverts a small amount from Boulder Creek above station.

Monthly discharge of Chewack Creek below Boulder Creek, near Winthrop

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1920						
April.....	-	-	*52.0	0.109	0.12	3,090
May.....	-	-	*520	.674	.78	19,700
June.....	1,160	-	615	1.29	1.44	36,600
July.....	650	128	309	.651	.75	19,000
August.....	120	58	81.0	.171	.20	4,980
September.....	112	56	79.9	.168	.19	4,750
The period.....	-	-	-	-	-	88,100
1920-21						
October.....	404	128	240	.505	.58	14,800
November.....	198	112	152	.320	.36	9,040
December.....	120	64	98.3	.207	.24	6,040
January.....	104	-	61.5	.129	.15	3,780
February.....	-	-	52.8	.111	.12	2,930
March.....	120	48	84.5	.178	.21	5,200
April.....	-	120	210	.442	.49	12,500
May.....	4,560	250	1,990	4.19	4.83	122,000
June.....	4,700	1,020	2,380	5.01	5.59	142,000
July.....	970	228	443	.953	1.08	27,200
August.....	218	-	*136	.286	.35	8,360
September.....	-	-	*70	.147	.16	4,170
The year.....	4,700	-	495	1.04	14.14	358,000

*Estimated.

CHELAN RIVER BASIN

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. Prior to Aug. 19, 1911, staff gage at Stehekin; Aug. 19, 1911 to Oct. 31, 1915, staff gage a quarter of a mile below Boulder Creek. Discharge measurements made below Boulder Creek.

Drainage area.- 372 square miles (revised) at measuring section.

Records available.- October 1910 to October 1915, January 1927 to September 1935.

Extremes.- Maximum discharge recorded, 12,100 second-feet at 12:30 a.m. June 15, 1933; minimum, 56 second-feet Jan. 12, 1930.

Remarks.- Flow of Boulder Creek included in records of discharge. At very high stages small part of flow is diverted past gage by natural sloughs; amount diverted included in records of discharge.

Monthly discharge of Stehekin River at Stehekin

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927						
January 4-31.....	412	225	315	0.847	0.88	17,500
February.....	274	215	233	.626	.65	12,900
March.....	421	221	269	.723	.83	16,500
April.....	3,200	436	1,030	2.77	3.09	61,300
May.....	5,700	1,390	2,800	7.53	8.68	172,000
June.....	9,760	3,120	5,230	14.1	15.73	311,000
July.....	3,200	1,820	2,430	6.67	7.69	152,000
August.....	1,720	673	1,200	3.23	3.72	73,800
September.....	1,930	630	927	2.49	2.75	55,200
The period.....	-	-	-	-	-	872,000

Monthly discharge of Stehekin River at Stehekin--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927-28						
October.....	2,880	584	1,280	3.44	3.97	78,700
November.....	1,450	728	965	2.59	2.89	57,400
December.....	3,000	340	1,030	2.77	3.19	63,300
January.....	2,290	350	843	2.27	2.62	51,800
February.....	560	378	448	1.20	1.29	25,800
March.....	1,310	373	688	1.85	2.13	42,300
April.....	2,630	652	1,110	2.98	3.32	66,000
May.....	9,830	1,550	5,040	13.5	15.56	310,000
June.....	5,090	2,190	3,430	9.22	10.29	204,000
July.....	3,200	1,450	2,330	6.26	7.22	143,000
August.....	1,560	714	1,010	2.72	3.14	62,100
September.....	1,160	392	585	1.57	1.75	34,800
The year.....	9,830	340	1,570	4.22	57.37	1,140,000
1928-29						
October.....	4,020	375	775	2.08	2.40	47,700
November.....	379	276	325	.874	.98	19,300
December.....	286	186	224	.602	.69	13,800
January.....	192	125	157	.422	.49	9,650
February.....	142	118	128	.344	.36	7,110
March.....	501	130	271	.728	.84	16,700
April.....	1,750	303	625	1.68	1.87	37,200
May.....	5,660	1,550	2,820	7.58	8.74	173,000
June.....	5,280	2,020	3,220	8.66	9.66	192,000
July.....	2,370	1,030	1,650	4.44	5.12	101,000
August.....	1,310	622	937	2.52	2.90	57,600
September.....	717	218	457	1.23	1.37	27,200
The year.....	5,660	118	970	2.61	35.42	702,000
1929-30						
October.....	590	120	253	.690	.78	15,600
November.....	190	110	148	.398	.44	8,810
December.....	166	82	125	.336	.39	7,590
January.....	140	58	86.0	.231	.27	5,290
February.....	540	90	260	.699	.73	14,400
March.....	1,930	207	538	1.45	1.67	33,100
April.....	3,440	1,350	2,130	5.73	6.39	127,000
May.....	4,440	1,450	2,190	5.89	6.79	135,000
June.....	3,920	1,820	2,650	7.12	7.94	158,000
July.....	3,290	1,110	2,110	5.67	6.54	130,000
August.....	1,350	540	957	2.57	2.96	58,800
September.....	993	304	583	1.57	1.75	34,700
The year.....	4,440	58	1,000	2.69	36.65	728,000
1930-31						
October.....	1,060	254	416	1.12	1.29	25,600
November.....	479	260	324	.871	.97	19,300
December.....	257	127	191	.513	.59	11,700
January.....	490	125	182	.489	.56	11,200
February.....	376	234	275	.739	.77	15,300
March.....	752	244	427	1.15	1.33	26,500
April.....	5,480	580	1,200	3.23	3.60	71,400
May.....	7,250	2,080	4,120	11.1	12.80	253,000
June.....	5,230	1,590	3,220	8.66	9.66	192,000
July.....	2,400	1,000	1,590	4.27	4.92	97,800
August.....	1,200	595	742	1.99	2.29	45,600
September.....	1,720	340	627	1.69	1.89	37,300
The year.....	7,250	125	1,110	2.98	40.67	806,000
1931-32						
October.....	510	255	327	.879	1.01	20,100
November.....	860	305	479	1.29	1.44	28,500
December.....	309	205	253	.680	.78	15,600
January.....	476	184	278	.747	.86	17,100
February.....	9,120	178	973	2.62	2.83	56,000
March.....	2,910	679	1,080	2.90	3.34	66,400
April.....	3,350	1,030	1,810	4.87	5.43	108,000
May.....	4,800	2,070	3,590	9.65	11.12	221,000
June.....	7,170	2,700	4,380	11.8	13.17	261,000
July.....	3,670	1,290	2,190	5.89	6.79	135,000
August.....	1,530	605	1,030	2.77	3.19	63,300
September.....	715	334	486	1.31	1.46	28,900
The year.....	9,120	178	1,410	3.79	51.42	1,020,000

Monthly discharge of Stehekin River at Stehekin--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	1,020	280	492	1.32	1.52	30,300
November.....	4,440	384	1,410	3.79	4.23	83,900
December.....	2,520	438	916	2.46	2.84	56,300
January.....	760	379	517	1.39	1.60	31,800
February.....	370	264	297	.798	.83	16,500
March.....	353	236	277	.745	.86	17,000
April.....	3,870	357	1,190	3.20	3.57	70,800
May.....	4,510	1,470	2,420	6.51	7.50	149,000
June.....	10,300	2,660	4,900	13.2	14.73	292,000
July.....	5,950	2,270	4,160	11.2	12.91	256,000
August.....	3,000	962	1,930	5.19	5.98	119,000
September.....	1,660	545	807	2.17	2.42	48,000
The year.....	10,300	236	1,620	4.35	58.99	1,170,000
1933-34						
October.....	4,190	568	1,581	4.25	4.90	97,220
November.....	3,350	916	1,754	4.66	5.20	103,200
December.....	2,340	918	1,266	3.40	3.92	77,850
January.....	1,100	542	784	2.11	2.43	48,210
February.....	764	592	659	1.77	1.84	36,590
March.....	4,020	537	1,546	4.16	4.80	95,080
April.....	9,590	2,160	4,644	12.5	13.95	276,500
May.....	7,410	2,660	4,289	11.5	13.26	263,700
June.....	5,370	2,090	3,506	9.42	10.51	208,600
July.....	3,160	1,300	2,153	5.79	6.68	132,400
August.....	1,500	1,060	1,212	3.26	3.76	74,520
September.....	1,100	320	664	1.78	1.99	39,500
The year.....	9,590	320	2,007	5.40	73.24	1,453,000
1934-35						
October.....	660	256	406	1.09	1.26	24,930
November.....	2,210	754	1,188	3.19	3.56	70,720
December.....	845	532	658	1.72	1.98	39,230
January.....	5,950	-	1,057	2.84	3.27	65,010
February.....	1,850	652	1,115	3.00	3.12	61,950
March.....	1,000	494	662	1.83	2.11	41,940
April.....	2,000	477	1,040	2.80	3.12	61,940
May.....	6,150	1,940	3,556	9.51	10.96	217,400
June.....	6,780	2,860	4,428	11.9	13.28	263,500
July.....	4,840	1,790	2,865	7.76	8.95	177,400
August.....	1,700	948	1,271	3.42	3.94	78,120
September.....	1,500	458	901	2.42	2.70	55,600
The year.....	6,780	-	1,596	4.29	58.25	1,156,000

Yearly discharge of Stehekin River at Stehekin

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	1,830	4.92	66.78	1,330,000	1,600	4.30	58.37	1,160,000
1912.....	1,220	3.28	44.65	886,000	1,210	3.25	44.24	882,000
1913.....	1,420	3.82	51.85	1,030,000	1,460	3.92	53.21	1,060,000
1914.....	1,340	3.60	48.87	973,000	1,400	3.76	51.04	1,010,000
1915.....	971	2.61	35.43	702,000	-	-	-	-
1928.....	1,570	4.22	57.37	1,140,000	1,410	3.79	51.39	1,020,000
1929.....	970	2.61	35.42	702,000	903	2.43	32.96	654,000
1930.....	1,000	2.69	36.65	728,000	1,040	2.80	37.89	753,000
1931.....	1,110	2.98	40.67	806,000	1,120	3.01	41.05	814,000
1932.....	1,410	3.79	51.42	1,020,000	1,550	4.17	56.78	1,130,000
1933.....	1,620	4.35	58.99	1,170,000	1,770	4.76	64.42	1,280,000
1934.....	2,007	5.40	73.24	1,453,000	1,809	4.86	66.02	1,310,000
1935.....	1,596	4.29	58.25	1,156,000	-	-	-	-
Highest....	2,007	5.40	73.24	1,453,000	1,809	4.86	66.02	1,310,000
Average....	1,390	3.74	50.74	1,010,000	1,590	3.73	50.67	1,010,000
Lowest.....	970	2.61	35.42	702,000	903	2.43	32.96	654,000

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. Prior to Nov. 11, 1928, staff gage 800 feet below Chelan Electric Co.'s diversion and control dam at Chelan. Discharge measurements made within a mile of lake outlet.

Drainage area.- 950 square miles.

Records available.- October 1903 to September 1935.

Extremes.- Maximum daily discharge, 12,300 second-feet Apr. 27, 1934; 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.- Unmeasured diversion for irrigation above station is small proportion of run-off. Figures of daily discharge include water diverted at Chelan for power and irrigation by Chelan Electric Co. Flow regulated by operation of power plant.

Monthly discharge of Chelan River at Chelan

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	
1919-20									
October..	730	427	578	35,500	-11,300	24,200	394	0.415	0.48
November.	586	381	460	27,400	+22,100	49,500	832	.876	.98
December.	586	547	568	34,900	-300	34,600	563	.593	.68
January..	730	512	595	36,600	+6,000	42,600	693	.729	.84
February.	3,040	630	839	48,300	-13,500	34,800	605	.637	.69
March....	2,760	211	1,050	64,600	-6,500	58,100	945	.995	1.15
April.....	1,970	379	1,020	60,700	-10,000	50,700	852	.897	1.00
May.....	3,340	2,050	2,880	177,000	+4,350	181,000	2,940	3.09	3.56
June.....	4,610	1,660	2,930	174,000	+83,200	257,000	4,320	4.55	5.08
July.....	5,580	2,900	4,790	295,000	-24,500	270,000	4,390	4.62	5.33
August....	2,900	845	2,170	133,000	-29,800	103,000	1,680	1.77	2.04
September	1,240	980	1,130	67,200	+6,500	73,700	1,240	1.31	1.46
The year	5,580	211	1,590	1,150,000	+26,200	1,180,000	1,620	1.71	23.29
1920-21									
October..	2,010	1,240	1,720	106,000	+3,250	109,000	1,770	1.86	2.14
November.	1,440	910	1,090	64,900	-9,750	55,200	928	.977	1.09
December.	980	678	822	50,500	-10,800	39,700	646	.680	.78
January..	980	730	850	52,300	+2,400	54,700	890	.937	1.08
February.	1,150	730	938	52,100	+10,700	62,800	1,130	1.19	1.24
March....	1,660	980	1,350	83,000	-8,000	75,000	1,220	1.28	1.48
April.....	3,340	1,340	1,980	118,000	-8,100	110,000	1,850	1.95	2.18
May.....	9,140	2,370	5,170	318,000	+105,000	423,000	6,880	7.24	8.35
June.....	11,600	7,700	9,230	549,000	-12,500	536,000	9,010	9.48	10.58
July.....	7,880	4,450	5,790	356,000	-63,900	292,000	4,750	5.00	5.76
August....	4,450	845	2,580	159,000	-29,800	129,000	2,100	2.21	2.55
September	785	586	641	38,100	+7,200	45,300	761	.801	.89
The year	11,600	586	2,690	1,950,000	-14,300	1,930,000	2,670	2.81	38.12
1921-22									
October..	1,770	630	829	51,000	+31,300	82,300	1,340	1.41	1.63
November.	2,010	1,150	1,570	93,400	-14,100	79,300	1,330	1.40	1.56
December.	2,760	1,150	1,870	115,000	+1,200	116,000	1,890	1.99	2.29
January..	1,660	845	1,110	68,200	-33,900	34,300	558	.597	.68
February.	785	630	720	40,000	-19,400	20,600	371	.391	.41
March....	630	512	558	34,300	-5,100	29,200	475	.500	.58
April.....	2,130	512	1,010	60,100	+13,000	73,100	1,230	1.29	1.44
May.....	4,930	2,010	3,340	205,000	+80,800	286,000	4,650	4.89	5.64
June.....	8,420	5,580	7,080	421,000	-2,100	419,000	7,040	7.41	8.27
July.....	5,920	1,550	3,800	234,000	-55,400	179,000	2,910	3.06	3.53
August....	1,660	1,440	1,540	94,700	+2,100	96,800	1,570	1.65	1.90
September	1,550	730	1,250	74,400	-23,000	51,400	864	.909	1.01
The year	8,420	512	2,060	1,490,000	-24,600	1,470,000	2,030	2.14	28.94
1922-23									
October..	845	586	717	44,100	-11,000	33,100	538	.566	.65
November.	678	381	496	29,500	-12,500	17,000	286	.301	.34
December.	403	360	376	23,100	+4,650	27,800	452	.476	.55
January..	427	340	369	22,700	+20,400	43,100	701	.738	.85
February.	360	340	344	19,100	-2,550	16,600	299	.315	.33
March....	1,770	289	581	35,700	-6,350	29,400	478	.503	.58
April.....	3,040	1,890	2,290	136,000	+22,900	159,000	2,670	2.81	3.14
May.....	6,260	3,040	4,850	298,000	+54,000	352,000	5,720	6.02	6.94
June.....	7,520	5,090	6,310	375,000	+17,600	393,000	6,600	6.95	7.75
July.....	6,980	2,130	5,080	312,000	-40,300	272,000	4,420	4.65	5.36
August....	1,890	1,560	1,740	107,000	-6,650	100,000	1,630	1.72	1.98
September	1,670	800	1,130	67,200	-22,600	44,600	750	.789	.88
The year	7,520	289	2,030	1,470,000	+17,600	1,490,000	2,050	2.16	29.35

Monthly discharge of Chelan River at Chelan--Continued

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	
1923-24									
October..	810	528	638	39,200	-3,600	35,600	579	0.609	0.70
November..	528	355	433	25,800	-10,400	15,400	259	.273	.30
December..	402	330	352	21,600	+8,900	30,500	496	.522	.60
January..	355	320	330	20,300	+300	20,600	335	.353	.44
February..	865	330	578	33,200	+22,700	55,900	972	1.02	1.10
March....	3,380	810	1,920	112,000	-59,000	53,000	862	.907	1.05
April.....	1,730	1,200	1,490	88,700	+5,300	94,000	1,580	1.66	1.85
May.....	7,950	1,850	5,220	321,000	+101,000	422,000	6,860	7.22	8.32
June.....	6,230	1,850	4,240	252,000	-19,700	232,000	3,900	4.11	4.59
July.....	4,080	1,610	2,690	165,000	-13,100	152,000	2,470	2.60	3.00
August....	1,350	1,200	1,470	90,400	-19,000	71,400	1,160	1.22	1.41
September	1,200	865	1,060	63,100	-23,000	40,100	674	.709	.79
The year	7,950	320	1,700	1,230,000	-9,600	1,220,000	1,680	1.77	24.12
1924-25									
October..	865	700	766	47,100	-5,100	42,000	683	.719	.83
November..	700	575	634	37,700	-2,400	35,300	593	.624	.70
December..	1,120	528	818	50,300	+47,400	97,700	1,590	1.67	1.92
January..	1,120	810	934	57,400	-9,500	48,100	782	.823	.95
February..	925	810	864	48,000	+1,100	49,100	884	.931	.97
March....	2,680	810	1,500	92,200	-36,500	55,700	906	.954	1.10
April.....	3,520	1,850	2,770	165,000	+19,700	185,000	3,110	3.27	3.65
May.....	8,670	2,820	5,840	359,000	+89,500	448,000	7,290	7.67	8.84
June.....	6,910	4,970	5,880	350,000	-12,600	337,000	5,660	5.96	6.65
July.....	6,230	1,730	4,330	266,000	-63,200	203,000	3,300	3.47	4.00
August....	2,120	1,200	1,640	101,000	-19,400	81,600	1,330	1.40	1.61
September	1,120	925	1,030	61,300	-28,600	32,700	550	.579	.65
The year	8,670	528	2,260	1,640,000	-19,400	1,620,000	2,230	2.35	31.87
1925-26									
October..	865	482	651	40,000	-22,100	17,900	291	.306	.35
November..	471	330	384	22,800	-8,500	14,500	244	.257	.29
December..	330	310	320	19,700	+12,200	31,900	519	.546	.63
January..	320	290	305	18,800	+5,400	24,200	394	.415	.48
February..	460	275	321	17,803	+9,800	27,600	497	.523	.54
March....	1,500	440	702	43,200	+13,200	61,400	999	1.05	1.21
April.....	3,520	1,610	2,190	130,000	+54,000	184,000	3,090	3.25	3.63
May.....	3,800	2,320	3,330	205,000	-15,600	189,000	3,070	3.23	3.72
June.....	2,960	1,730	2,200	131,000	+23,600	155,000	2,600	2.74	3.06
July.....	2,680	1,200	2,030	125,000	-28,600	96,400	1,570	1.65	1.90
August....	1,200	925	1,030	63,300	-12,500	50,800	826	.869	1.00
September	925	755	842	50,100	-23,600	26,500	445	.468	.52
The year	3,800	275	1,200	867,000	+12,500	879,000	1,210	1.27	17.33
1926-27									
October..	760	660	700	43,000	+36,400	79,400	1,290	1.36	1.57
November..	760	710	730	43,400	-2,450	41,000	689	.725	.81
December..	760	612	664	40,800	+5,900	46,700	760	.800	.92
January..	820	612	716	44,000	-21,700	22,300	363	.382	.44
February..	660	547	589	32,700	-3,600	29,100	524	.552	.57
March....	1,460	612	1,110	68,200	-50,200	18,000	293	.308	.36
April.....	1,860	820	1,010	60,100	+34,700	94,800	1,590	1.67	1.86
May.....	4,080	1,970	3,050	188,000	+47,400	235,000	3,320	4.02	4.64
June.....	7,730	3,700	6,480	386,000	+57,500	443,000	7,440	7.83	8.74
July.....	6,480	880	3,350	206,000	-24,500	182,000	2,960	3.12	3.60
August....	820	75	429	26,400	+61,400	87,800	1,430	1.51	1.74
September	5,560	-	972	57,800	+6,650	64,400	1,080	1.14	1.27
The year	7,730	-	1,650	1,200,000	+147,000	1,340,000	1,860	1.96	26.52
1927-28									
October..	5,300	602	2,100	129,000	-37,400	91,600	1,490	1.57	1.81
November..	913	181	657	39,100	+40,600	79,700	1,340	1.41	1.67
December..	851	211	597	36,700	+46,100	82,800	1,350	1.42	1.64
January..	772	406	671	41,300	+37,100	78,400	1,280	1.35	1.56
February..	751	578	677	38,900	+960	39,900	694	.731	.79
March....	756	0	539	33,100	+34,900	68,000	1,110	1.17	1.35
April.....	709	399	657	39,100	+59,100	98,200	1,650	1.74	1.94
May.....	9,700	571	3,550	218,000	+235,000	453,000	7,370	7.76	8.95
June.....	8,770	401	2,860	170,000	+98,900	269,000	4,520	4.76	5.31
July.....	4,660	1,120	2,850	175,000	-2,820	178,000	2,890	3.04	3.50
August....	2,140	742	1,420	87,300	-19,700	67,600	1,100	1.16	1.34
September	1,920	1,090	1,680	100,000	-62,900	37,100	623	.666	.73
The year	9,700	0	1,560	1,110,000	+435,000	1,540,000	2,120	2.23	30.49

Monthly discharge of Chelan River at Chelan--Continued

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	
1928-29									
October..	2,260	804	1,250	76,900	-20,200	56,700	922	0.971	1.12
November.	1,910	1,020	1,520	90,400	-66,200	24,200	407	.428	.48
December.	2,390	999	1,790	110,000	-83,200	26,800	436	.459	.53
January..	2,390	2,100	2,340	144,000	-121,000	23,000	374	.394	.45
February.	2,400	2,180	2,310	128,000	-109,000	19,000	342	.360	.37
March....	2,510	261	654	40,200	-16,500	23,700	385	.405	.47
April.....	472	131	356	21,200	+22,300	43,500	731	.769	.86
May.....	231	147	168	10,300	+215,000	225,000	3,660	3.85	4.44
June.....	368	147	235	14,000	+249,000	263,000	4,420	4.65	5.19
July.....	3,790	273	1,600	98,400	+20,300	119,000	1,940	2.04	2.35
August....	2,590	1,490	2,090	129,000	-58,700	70,300	1,140	1.20	1.38
September	2,500	2,280	2,410	143,000	-104,000	39,000	655	.689	.77
The year	3,790	131	1,390	1,010,000	-72,200	933,000	1,290	1.36	18.41
1929-30									
October..	2,510	2,160	2,370	146,000	-117,000	29,000	472	.497	.57
November.	2,400	2,010	2,310	137,000	-120,000	17,000	286	.301	.34
December.	2,530	754	1,840	113,000	-90,400	22,600	368	.387	.45
January..	1,860	778	1,430	87,900	-79,300	8,600	140	.147	.17
February.	1,040	28	138	7,660	+20,600	28,300	510	.537	.56
March....	116	28	42.6	2,620	+46,000	48,600	790	.832	.96
April.....	436	35	71.6	4,260	+165,000	169,000	2,840	2.99	3.34
May.....	212	48	154	9,470	+177,000	186,000	3,020	3.18	3.67
June.....	3,410	156	890	53,000	+158,000	211,000	3,550	3.74	4.17
July.....	5,650	941	2,210	136,000	+7,870	144,000	2,340	2.46	2.84
August....	2,400	1,620	2,200	135,000	-60,400	74,600	1,210	1.27	1.46
September	2,000	1,430	1,760	105,000	-63,700	41,300	694	.731	.82
The year	5,650	28	1,300	937,000	+43,700	980,000	1,350	1.42	19.35
1930-31									
October..	1,890	1,020	1,550	95,300	-67,500	27,800	452	.476	.55
November.	2,120	872	1,650	98,200	-72,700	25,500	429	.452	.50
December.	2,420	1,420	2,040	125,000	-102,000	23,000	374	.394	.45
January..	2,370	554	1,400	86,100	-57,000	29,100	473	.498	.57
February.	637	252	427	23,700	-640	23,100	416	.438	.46
March....	284	160	209	12,900	+25,600	38,500	626	.659	.76
April.....	270	156	171	10,200	+69,800	80,000	1,340	1.41	1.57
May.....	1,490	176	770	47,300	+276,000	323,000	5,250	5.53	6.38
June.....	7,880	857	3,280	195,000	+46,600	242,000	4,070	4.28	4.78
July.....	2,930	1,170	2,020	124,000	-3,280	121,000	1,970	2.07	2.39
August....	2,520	1,640	2,270	140,000	-79,700	60,300	981	1.03	1.19
September	2,550	1,250	2,280	136,000	-84,800	51,200	860	.905	1.01
The year	7,880	156	1,510	1,090,000	-49,600	1,040,000	1,440	1.52	20.61
1931-32									
October..	2,530	1,080	2,150	132,000	-103,000	29,000	472	.497	.57
November.	1,720	683	1,360	80,900	-47,200	33,700	566	.596	.66
December.	1,810	707	1,200	73,800	-47,600	26,200	426	.448	.52
January..	960	249	336	20,700	+7,400	28,100	457	.481	.55
February.	714	395	473	27,200	+47,300	74,500	1,300	1.37	1.48
March....	1,010	42	665	40,900	+65,100	106,000	1,720	1.81	2.09
April.....	1,000	505	880	52,400	+96,900	149,000	2,500	2.63	2.93
May.....	6,950	720	3,970	244,000	+67,500	312,000	5,070	5.34	6.16
June.....	10,200	1,600	4,950	295,000	+68,500	364,000	6,120	6.44	7.18
July.....	4,250	1,430	2,570	158,000	+17,400	175,000	2,850	3.00	3.46
August....	2,290	1,050	1,500	92,200	-7,550	84,600	1,380	1.45	1.67
September	1,760	943	1,390	82,700	-51,200	31,500	529	.557	.62
The year	10,200	42	1,790	1,300,000	+114,000	1,410,000	1,950	2.05	27.89
1932-33									
October..	2,240	1,260	1,790	110,000	-72,800	37,200	605	.637	.73
November.	1,230	254	764	45,500	+74,500	120,000	2,020	2.13	2.38
December.	2,580	1,700	2,270	140,000	-67,300	72,700	1,180	1.24	1.43
January..	2,100	703	1,160	71,300	-20,500	50,800	826	.869	1.00
February.	2,480	702	1,820	101,000	-81,400	19,600	353	.372	.39
March....	2,410	152	1,850	114,000	-82,000	32,000	520	.547	.63
April.....	894	292	588	35,000	+75,500	110,000	1,850	1.95	2.18
May.....	4,790	46	1,240	76,200	+139,000	215,000	3,500	3.68	4.24
June.....	8,710	3,550	6,520	388,000	+57,000	445,000	7,480	7.87	8.78
July.....	7,210	2,490	5,290	325,000	+25,300	350,000	5,690	5.99	6.91
August....	4,570	1,090	2,300	141,000	+7,210	148,000	2,410	2.54	2.93
September	1,490	1,120	1,350	80,300	-17,000	63,300	1,060	1.12	1.25
The year	8,710	46	2,250	1,630,000	+37,500	1,660,000	2,290	2.41	32.85

Monthly discharge of Chelan River at Chelan--Continued

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	
1933-34									
October..	6,730	946	2,457	151,100	-26,570	124,500	2,025	2.13	2.46
November..	4,080	2,180	3,287	195,600	-59,210	136,400	2,292	2.41	2.69
December..	5,440	1,340	2,804	172,400	-18,580	153,900	2,501	2.63	3.03
January..	4,390	1,660	2,577	158,400	-78,550	79,840	1,298	1.37	1.58
February..	3,770	1,730	2,958	164,300	-96,630	67,670	1,218	1.28	1.33
March....	3,190	6.0	1,048	64,430	+89,780	154,200	2,508	2.64	3.04
April....	12,300	6.8	4,416	262,700	+179,900	442,600	7,438	7.83	8.74
May.....	11,100	4,440	6,731	413,900	-4,590	409,300	6,657	7.01	8.08
June.....	9,080	1,920	4,462	265,500	+33,780	299,300	5,030	5.29	5.90
July.....	4,570	2,000	2,765	170,000	+1,640	171,600	2,791	2.94	3.39
August....	2,350	1,440	2,196	135,000	-41,330	93,670	1,523	1.60	1.84
September	2,310	910	2,005	119,300	-75,870	43,430	730	.768	.86
The year	12,300	6.0	3,139	2,273,000	-96,240	2,176,000	3,006	3.16	42.94
1934-35									
October..	2,280	1,370	2,007	123,400	-79,540	43,860	713	.751	.87
November..	1,220	555	787	46,820	+60,310	107,100	1,800	1.89	2.11
December..	1,160	680	844	51,920	+10,450	62,350	1,014	1.07	1.23
January..	4,090	916	1,516	93,200	-330	92,870	1,510	1.59	1.83
February..	5,400	3,210	3,949	219,300	-137,300	82,000	1,476	1.55	1.61
March....	3,830	944	2,047	125,800	-58,910	66,890	1,088	1.15	1.33
April....	943	816	872	51,920	+43,030	94,950	1,596	1.68	1.87
May.....	7,910	867	2,490	153,100	+190,600	343,700	5,590	5.88	6.78
June.....	7,920	2,780	5,796	344,900	+65,220	410,100	6,892	7.25	8.09
July.....	7,890	1,400	3,593	220,900	+21,000	241,900	3,934	4.14	4.77
August....	2,270	1,730	2,155	132,500	-38,380	94,120	1,531	1.61	1.86
September	2,260	2,090	2,237	133,100	-70,330	62,770	1,055	1.11	1.24
The year	7,920	555	2,344	1,697,000	+5,800	1,703,000	2,352	2.48	33.59

Yearly discharge of Chelan River at Chelan

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1904.....	2,840	2.99	40.74	2,060,000	2,700	2.84	38.62	1,960,000
1905.....	2,330	2.45	33.24	1,680,000	2,400	2.53	34.31	1,740,000
1906.....	2,050	2.16	29.24	1,480,000	2,140	2.25	30.58	1,550,000
1907.....	2,480	2.61	35.38	1,790,000	2,310	2.43	32.93	1,670,000
1908.....	2,250	2.37	32.24	1,630,000	2,230	2.35	31.93	1,620,000
1909.....	1,920	2.02	27.48	1,390,000	2,070	2.18	29.57	1,500,000
1910.....	2,680	2.82	38.22	1,940,000	2,810	2.96	40.16	2,040,000
1911.....	2,190	2.31	31.29	1,580,000	1,890	1.99	27.04	1,370,000
1912.....	1,840	1.94	26.41	1,340,000	1,840	1.94	26.40	1,340,000
1913.....	2,120	2.23	30.27	1,530,000	2,150	2.26	30.77	1,560,000
1914.....	2,050	2.16	29.32	1,490,000	2,160	2.27	30.79	1,560,000
1915.....	1,470	1.55	20.96	1,060,000	1,370	1.44	19.50	988,000
1916.....	2,680	2.82	38.47	1,950,000	2,630	2.77	37.75	1,910,000
1917.....	1,950	2.05	27.91	1,410,000	2,080	2.19	29.77	1,510,000
1918.....	2,300	2.42	32.93	1,670,000	2,300	2.42	32.92	1,670,000
1919.....	2,320	2.44	33.08	1,680,000	2,240	2.36	32.04	1,620,000
1920.....	1,620	1.71	23.29	1,180,000	1,760	1.85	25.16	1,270,000
1921.....	2,670	2.81	38.12	1,930,000	2,770	2.92	39.59	2,010,000
1922.....	2,030	2.14	28.94	1,470,000	1,750	1.84	25.00	1,270,000
1923.....	2,050	2.16	29.35	1,490,000	2,060	2.17	29.41	1,490,000
1924.....	1,680	1.77	24.12	1,220,000	1,810	1.91	25.97	1,320,000
1925.....	2,230	2.35	31.87	1,620,000	2,080	2.19	29.69	1,500,000
1926.....	1,210	1.27	17.33	879,000	1,360	1.43	19.36	982,000
1927.....	1,860	1.96	26.52	1,340,000	1,980	2.08	28.24	1,430,000
1928.....	2,120	2.23	30.49	1,540,000	1,920	2.02	27.60	1,400,000
1929.....	1,290	1.36	18.41	933,000	1,240	1.31	17.64	894,000
1930.....	1,350	1.42	19.35	980,000	1,360	1.43	18.49	988,000
1931.....	1,440	1.52	20.61	1,040,000	1,460	1.54	20.66	1,060,000
1932.....	1,850	2.05	27.89	1,410,000	2,140	2.25	30.68	1,550,000
1933.....	2,290	2.41	32.86	1,660,000	2,550	2.68	36.49	1,850,000
1934.....	3,006	3.16	42.94	2,176,000	2,728	2.87	38.97	1,975,000
1935.....	2,352	2.48	33.59	1,703,000	-	-	-	-
Highest....	3,006	3.16	42.94	2,176,000	2,810	2.96	40.16	2,040,000
Average....	2,080	2.19	29.78	1,510,000	2,070	2.18	29.65	1,500,000
Lowest.....	1,210	1.27	17.33	879,000	1,240	1.31	17.64	894,000

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 southwest of Lucerne. Prior to July 1, 1913, staff gage just above mouth.

Drainage area.- 64 square miles.

Records available.- December 1910 to June 1913, January 1927 to September 1935.

Extremes.- Maximum discharge recorded, 1,910 second-feet at 12:45 a.m. June 8, 1927; minimum, not determined, occurred during period Jan. 15-25, 1930, when stage-discharge relation was affected by ice.

Remarks.- No diversion or regulation.

Monthly discharge of Railroad Creek at Lucerne

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927						
January 26-31.....	37	24	28.5	0.445	0.10	339
February.....	25	18	22.2	.347	.36	1,230
March.....	24	14	17.6	.275	.32	1,080
April.....	366	27	96.2	1.50	1.67	5,720
May.....	772	196	373	5.83	6.72	22,900
June.....	1,550	462	868	13.6	15.17	51,600
July.....	555	305	415	6.48	7.47	25,500
August.....	364	127	253	3.64	4.20	14,500
September.....	276	96	151	2.36	2.63	8,980
1927-28						
October.....	394	94	175	2.73	3.15	10,800
November.....	203	98	126	1.97	2.20	7,600
December.....	460	-	146	2.28	2.63	8,980
January.....	262	-	118	1.84	2.12	7,280
February.....	94	61	76.7	1.20	1.29	4,410
March.....	167	57	97.5	1.52	1.75	6,000
April.....	340	106	158	2.47	2.76	9,400
May.....	1,680	215	741	11.6	13.37	45,600
June.....	789	341	515	8.05	8.98	30,600
July.....	515	266	383	5.98	6.89	23,600
August.....	250	87	157	2.45	2.82	9,650
September.....	193	70	114	1.78	1.99	6,780
The year.....	1,680	-	235	3.67	49.95	171,000
1928-29						
October.....	290	49	86.3	1.35	1.56	5,310
November.....	48	37	42.9	.670	.75	2,650
December.....	-	-	34.1	.533	.61	2,100
January.....	-	-	27.6	.451	.50	1,700
February.....	29	14	21.0	.328	.34	1,170
March.....	45	18	29.4	.459	.53	1,810
April.....	138	33	53.5	.836	.93	3,180
May.....	933	122	382	5.97	6.88	23,600
June.....	795	295	500	7.81	8.71	29,800
July.....	363	158	247	3.86	4.45	15,200
August.....	194	129	166	2.59	2.99	10,200
September.....	140	28	86.4	1.35	1.51	5,140
The year.....	933	14	140	2.19	29.76	102,000
1929-30						
October.....	54	28	38.9	.608	.70	2,390
November.....	59	11	21.2	.331	.37	1,260
December.....	98	10	24.5	.383	.44	1,510
January.....	-	-	14.2	.222	.26	873
February.....	-	-	26.4	.412	.43	1,470
March.....	182	28	59.6	.931	1.07	3,660
April.....	380	140	234	3.66	4.08	13,900
May.....	604	209	317	4.95	5.71	19,500
June.....	595	258	387	6.05	6.75	23,000
July.....	456	170	296	4.82	5.33	18,200
August.....	209	114	162	2.53	2.92	9,960
September.....	152	58	105	1.64	1.83	6,250
The year.....	604	-	141	2.20	29.89	102,000
1930-31						
October.....	114	40	56.6	0.884	1.02	3,480
November.....	49	32	39.8	.622	.69	2,370
December.....	33	-	27.3	.427	.49	1,680
January.....	73	-	28.5	.445	.51	1,750
February.....	49	-	34.8	.544	.57	1,930
March.....	55	28	41.0	.641	.74	2,520
April.....	418	53	101	1.58	1.76	6,010
May.....	792	275	485	7.58	8.74	29,800
June.....	706	239	485	7.58	8.46	28,900
July.....	361	159	238	3.72	4.29	14,500
August.....	188	103	130	2.03	2.34	7,990
September.....	192	53	95.6	1.49	1.66	5,690
The year.....	792	-	147	2.30	31.27	107,000

Monthly discharge of Railroad Creek at Lucerne--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	52	36	42.6	.666	.77	2,620
November.....	91	-	50.5	.789	.88	3,000
December.....	44	-	33.2	.519	.60	2,040
January.....	70	-	35.3	.552	.64	2,170
February.....	784	-	96.9	1.51	1.63	5,570
March.....	336	91	132	2.06	2.38	8,120
April.....	434	128	214	3.34	3.73	12,700
May.....	628	314	506	7.91	9.12	31,100
June.....	911	422	635	9.92	11.07	37,800
July.....	606	214	352	5.50	6.34	21,600
August.....	241	101	178	2.78	3.20	10,900
September.....	125	54	80.4	1.26	1.41	4,780
The year.....	911	-	196	3.06	41.77	142,000
1932-33						
October.....	137	46	72.0	1.12	1.29	4,430
November.....	815	54	188	2.94	3.28	11,200
December.....	202	67	101	1.58	1.82	6,210
January.....	91	50	*64.7	1.01	1.16	3,980
February.....	52	-	40.5	.633	.66	2,250
March.....	49	33	38.1	.595	.69	2,340
April.....	545	39	158	2.47	2.76	9,400
May.....	680	220	334	5.22	6.02	20,500
June.....	1,310	418	737	11.5	12.83	43,900
July.....	912	365	656	10.2	11.76	40,300
August.....	439	177	304	4.75	5.48	18,700
September.....	167	55	104	1.62	1.81	6,190
The year.....	1,310	-	234	3.66	49.56	169,000
1933-34						
October.....	264	60	110	1.72	1.98	6,780
November.....	255	115	193	3.02	3.37	11,460
December.....	326	53	163	2.55	2.94	10,020
January.....	147	77	104	1.62	1.87	6,370
February.....	119	87	97.0	1.52	1.58	5,390
March.....	380	99	198	3.09	3.56	12,200
April.....	1,530	296	717	11.2	12.50	42,660
May.....	1,280	395	657	10.3	11.87	40,410
June.....	907	286	520	8.12	9.06	30,940
July.....	440	190	316	4.94	5.70	19,410
August.....	256	112	180	2.81	3.24	11,090
September.....	129	47	90.9	1.42	1.58	5,410
The year.....	1,530	47	279	4.36	59.25	202,100
1934-35						
October.....	121	43	69.9	1.09	1.26	4,300
November.....	345	105	176	2.75	3.07	10,480
December.....	138	91	114	1.78	2.05	7,020
January.....	893	35	161	2.52	2.90	9,900
February.....	228	107	155	2.42	2.52	8,630
March.....	141	88	105	1.64	1.89	6,450
April.....	242	79	136	2.12	2.36	8,100
May.....	896	238	484	7.56	8.72	29,740
June.....	1,120	450	701	11.0	12.27	41,720
July.....	715	258	435	6.80	7.84	26,760
August.....	252	138	181	2.83	3.26	11,130
September.....	200	85	136	2.12	2.36	8,100
The year.....	1,120	35	238	3.72	50.50	172,300

*Partly estimated.

Yearly discharge of Railroad Creek at Lucerne

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	-	-	-	-	191	2.98	40.44	138,000
1912.....	174	2.72	36.98	126,000	170	2.66	36.10	123,000
1913.....	235	3.67	49.95	171,000	211	3.30	44.89	153,000
1914.....	140	2.19	29.76	102,000	134	2.09	28.35	96,900
1915.....	141	2.20	29.89	102,000	144	2.25	30.58	104,000
1916.....	147	2.30	31.27	107,000	148	2.31	31.32	107,000
1917.....	196	3.06	41.77	142,000	216	3.38	45.91	157,000
1918.....	234	3.66	49.56	169,000	243	3.80	51.46	176,000
1919.....	279	4.36	59.25	202,100	270	4.22	57.34	195,700
1920.....	238	3.72	50.50	172,300	-	-	-	-

ENTIAT RIVER BASIN

Entiat River at Entiat, Wash.

Location.- Staff gage, lat. 47°39'40", long. 120°14'20", in sec. 18, T. 25 N., R. 21 E., an eighth of a mile below power plant of Wenatchee Valley Gas & Electric Co., three-quarters of a mile west of Entiat, and 1 mile above mouth.

Drainage area.- 419 square miles.

Records available.- October 1910 to September 1925.

Extremes.- Maximum discharge observed, 5,150 second-feet June 17, 1916; minimum observed, 32 second-feet Jan. 30, 1923.

Remarks.- Several diversions above station for irrigation. The Entiat Irrigation Co.'s high-line canal carries water past the station. Figures of monthly discharge adjusted for water diverted around station by Entiat Irrigation Co.'s high-line canal and for depletion owing to irrigation above station. Flow slightly regulated by operation at power plant.

Monthly discharge of Entiat River at Entiat

Month	Observed			Estimated diversion and depletion (sec.-ft.)	Adjusted for diversion and depletion			
	Discharge in second-feet				Discharge in second-feet		Run-off	
	Maximum	Minimum	Mean		Mean	Per square mile	Inches	Acre-feet
1919-20								
October.....	138	97	110	6	116	0.277	0.32	7,130
November.....	229	85	131	0	131	.313	.35	7,800
December.....	-	-	114	0	114	.272	.31	7,010
January.....	200	-	127	0	127	.303	.35	7,810
February.....	180	79	124	0	124	.296	.32	7,130
March.....	135	106	121	0	121	.289	.33	7,440
April.....	355	111	158	4	162	.387	.43	9,640
May.....	938	310	639	11	650	1.55	1.79	40,000
June.....	1,030	488	829	14	843	2.01	2.24	50,200
July.....	984	268	590	15	605	1.44	1.66	37,200
August.....	268	122	177	15	192	.458	.53	11,900
September...	260	101	171	12	183	.437	.49	10,800
The year..	1,030	-	275	-	281	.671	9.12	204,000
1920-21								
October.....	550	177	309	6	315	.752	.87	19,400
November.....	248	167	198	0	198	.475	.53	11,800
December.....	180	116	148	0	148	.353	.41	9,100
January.....	167	-	128	0	128	.305	.35	7,870
February.....	310	-	195	0	195	.465	.48	10,800
March.....	310	252	276	0	276	.659	.76	17,000
April.....	583	332	500	4	504	1.20	1.34	30,000
May.....	3,460	518	1,990	11	2,000	4.77	5.50	123,000
June.....	4,360	1,630	2,800	14	2,810	6.71	7.49	167,000
July.....	1,900	583	1,050	15	1,060	2.53	2.92	65,200
August.....	583	167	320	15	335	.800	.92	20,600
September...	248	124	161	12	173	.413	.46	10,300
The year..	4,360	-	675	-	680	1.62	22.03	492,000
1921-22								
October.....	355	132	183	6	189	0.451	0.52	11,600
November.....	310	158	210	0	210	.501	.56	12,500
December.....	1,540	149	417	0	417	.995	1.15	25,600
January.....	-	-	183	0	183	.437	.50	11,300
February.....	-	-	100	0	100	.239	.25	5,550
March.....	127	-	113	0	113	.270	.31	6,950
April.....	458	132	250	4	254	.606	.68	15,100
May.....	2,780	458	1,100	11	1,110	2.65	3.06	68,200
June.....	3,640	984	1,870	14	1,880	4.49	5.01	112,000
July.....	983	229	457	15	472	1.13	1.30	29,000
August.....	237	149	179	15	194	.463	.53	11,900
September...	161	83	114	12	126	.301	.34	7,500
The year...	3,640	-	432	-	438	1.05	14.21	317,000
1922-23								
October.....	129	83	109	6	115	.274	.32	7,070
November.....	127	81	97.8	0	97.8	.233	.26	5,820
December.....	-	-	79.8	0	79.8	.190	.22	4,910
January.....	229	-	124	0	124	.296	.34	7,620
February.....	-	-	60.4	0	60.4	.144	.15	3,350
March.....	310	83	123	0	123	.294	.34	7,560
April.....	768	355	492	4	496	1.18	1.32	29,500
May.....	2,130	653	1,460	11	1,470	3.51	4.05	90,400
June.....	3,120	1,290	1,890	14	1,900	4.53	5.05	113,000
July.....	1,980	332	898	15	913	2.18	2.51	56,100
August.....	310	177	235	15	250	.597	.69	15,400
September...	174	101	123	12	135	.322	.36	8,030
The year...	3,120	-	476	-	482	1.15	15.61	349,000

Monthly discharge of Entiat River at Entiat--Continued

Month	Observed			Estimated diversion and depletion (sec.-ft.)	Adjusted for diversion and depletion			
	Discharge in second-feet				Discharge in second-feet		Run-off	
	Maximum	Minimum	Mean		Mean	Per square mile	Inches	Acre-feet
1923-24								
October.....	155	108	125	6	131	.313	.36	8,060
November.....	133	99	110	0	110	.263	.29	6,550
December.....	133	-	103	0	103	.246	.28	6,330
January.....	-	-	104	0	104	.248	.29	6,400
February.....	431	113	195	0	195	.465	.50	11,200
March.....	197	187	190	0	190	.453	.52	11,700
April.....	380	161	271	4	275	.656	.73	16,400
May.....	3,460	458	1,860	11	1,870	4.46	5.14	115,000
June.....	1,420	404	756	14	770	1.84	2.05	45,800
July.....	579	155	277	15	292	.697	.80	18,000
August.....	211	88	135	15	150	.358	.41	9,220
September....	104	78	87.4	12	99.4	.237	.26	5,910
The year...	3,460	-	352	-	359	.857	11.63	261,000
1924-25								
October.....	161	86	109	6	115	.274	.32	7,070
November.....	161	67	126	0	126	.301	.34	7,500
December.....	548	59	155	0	155	.370	.43	9,530
January.....	-	-	147	0	147	.351	.40	9,040
February.....	175	127	143	0	143	.341	.36	7,940
March.....	219	156	178	0	178	.425	.49	10,900
April.....	1,070	219	656	4	660	1.58	1.76	39,300
May.....	3,670	745	2,150	11	2,160	5.16	5.95	133,000
June.....	1,920	1,070	1,440	14	1,450	3.46	3.86	86,300
July.....	1,020	311	543	15	558	1.33	1.53	34,300
August.....	301	111	181	15	196	.468	.54	12,100
September....	132	91	101	12	113	.270	.30	6,720
The year...	3,670	-	496	-	502	1.20	16.28	364,000

Yearly discharge of Entiat River at Entiat

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	478	1.14	15.47	345,000	446	1.06	14.46	323,000
1912.....	463	1.11	15.07	336,000	463	1.11	15.04	336,000
1913.....	576	1.37	18.66	417,000	583	1.39	18.90	422,000
1914.....	520	1.24	16.84	376,000	529	1.26	17.14	383,000
1915.....	344	.821	11.15	249,000	323	.771	10.45	234,000
1916.....	811	1.94	26.35	589,000	818	1.95	26.56	594,000
1917.....	511	1.22	16.56	371,000	519	1.24	16.81	376,000
1918.....	494	1.18	16.02	358,000	492	1.17	15.91	356,000
1919.....	524	1.25	16.93	379,000	516	1.23	16.70	374,000
1920.....	281	.671	9.12	204,000	306	.730	9.95	222,000
1921.....	680	1.62	22.03	492,000	693	1.65	22.45	501,000
1922.....	458	1.05	14.21	317,000	394	.940	12.78	285,000
1923.....	452	1.15	15.61	349,000	486	1.16	15.74	352,000
1924.....	359	.857	11.63	261,000	363	.866	11.79	264,000
1925.....	502	1.20	16.28	364,000	-	-	-	-
Highest.....	811	1.94	26.35	589,000	818	1.95	26.56	594,000
Average.....	498	1.19	16.13	360,000	495	1.18	16.05	359,000
Lowest.....	281	.671	9.12	204,000	306	.730	9.95	222,000

WENATCHEE RIVER BASIN

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, 2½ miles above mouth of Wenatchee Lake, 7½ miles northwest of Plain. Prior to Jan. 4, 1935, staff gage at same site and datum. Discharge measurements made at highway bridge half a mile below lake outlet.

Drainage area.- 277 square miles.

Records available.- January 1932 to September 1935.

Extremes.- Maximum discharge recorded, 8,310 second-feet June 16, 1933; minimum, 165 second-feet Oct. 6, 1934.

Remarks.- No diversions above station. Flow subject to natural regulation in Wenatchee Lake.

Monthly discharge, of Wenatchee River below Wenatchee Lake

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
January 1932	-	-	*415	1.50	1.73	25,540
February.....	7,550	238	906	3.27	3.53	52,140
March.....	3,990	577	1,161	4.19	4.83	71,370
April.....	2,660	1,090	1,647	5.95	6.64	98,020
May.....	3,990	2,070	3,080	11.1	12.80	189,400
June.....	5,900	2,440	3,382	12.2	13.61	201,200
July.....	2,900	1,020	1,653	5.97	6.88	101,600
August.....	874	460	609	2.20	2.54	37,440
September.....	443	250	290	1.05	1.17	17,230
The period.....	-	-	-	-	-	793,900
October 1932.....	682	190	402	1.45	1.67	24,690
November.....	6,050	532	2,128	7.68	8.57	126,600
December.....	3,730	558	1,149	4.15	4.78	70,680
Calendar year 1932.....	7,550	190	1,403	5.06	68.75	1,016,000
January 1933.....	954	471	620	2.24	2.68	38,100
February.....	471	448	461	1.66	1.73	25,620
March.....	639	471	529	1.91	2.20	32,520
April.....	3,080	639	1,054	3.81	4.25	62,730
May.....	2,960	1,260	1,873	6.76	7.79	115,100
June.....	8,000	2,070	4,508	16.3	18.19	268,300
July.....	5,060	1,970	3,659	13.2	15.22	225,000
August.....	1,970	577	1,255	4.53	5.22	77,160
September.....	1,490	394	572	2.06	2.30	34,030
Water year 1932-33.....	8,000	190	1,520	5.49	74.50	1,101,000
October 1933.....	3,990	538	1,565	5.65	6.51	96,220
November.....	6,950	858	1,821	6.57	7.33	108,400
December.....	6,800	810	2,237	8.08	9.32	137,600
Calendar year 1933.....	8,000	394	1,686	6.09	82.64	1,221,000
January 1934.....	2,170	1,130	1,549	5.59	6.44	95,250
February.....	1,580	962	1,185	4.28	4.46	65,790
March.....	5,060	1,130	2,113	7.63	8.80	129,900
April.....	7,550	2,660	4,715	17.0	18.97	280,500
May.....	4,780	2,320	3,312	12.0	13.83	203,600
June.....	3,860	1,400	2,444	8.82	9.84	145,400
July.....	1,580	728	1,117	4.03	4.65	68,690
August.....	742	416	506	1.83	2.11	31,080
September.....	388	187	287	1.04	1.16	17,070
Water year 1933-34.....	7,550	187	1,906	6.88	93.42	1,380,000
October 1934.....	1,540	165	475	1.71	1.97	29,190
November.....	3,470	954	1,657	5.98	6.67	98,610
December.....	922	577	717	2.59	2.99	44,090
Calendar year 1934.....	7,550	165	1,670	6.03	81.89	1,209,000
January 1935.....	7,550	426	1,528	5.52	6.36	93,940
February.....	2,320	660	1,209	4.36	4.54	67,140
March.....	1,090	532	741	2.68	3.09	46,530
April.....	1,720	519	925	3.34	3.73	56,020
May.....	4,640	1,770	3,061	11.1	12.80	188,200
June.....	6,200	2,600	3,983	14.4	16.07	237,000
July.....	3,400	1,090	2,181	7.87	9.07	134,100
August.....	1,020	471	655	2.36	2.72	40,280
September.....	639	270	428	1.55	1.73	25,440
Water year 1934-35.....	7,550	165	1,462	5.28	71.74	1,059,000

*Estimated.

Wenatchee River at Plain, Wash.

(Formerly called Wenatchee River near Leavenworth)

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. Prior to Jan. 8, 1932, staff gage half a mile below Beaver Creek.

Drainage area.- 591 square miles.

Records available.- October 1910 to September 1935.

Extremes.- Maximum discharge observed, 20,800 second-feet Dec. 13, 1921; minimum, 250 second-feet Oct. 18, 19, 1925.

Remarks.- Wenatchee Park Land & Irrigation Co. has diverted a maximum of about 12 second-feet from Chiwawa River during irrigation seasons. Natural regulation in Wenatchee Lake.

Monthly discharge of Wenatchee River at Plain

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	580	405	456	0.772	0.89	28,000
November.....	3,740	424	1,400	2.37	2.64	83,300
December.....	1,660	-	1,060	1.79	2.06	65,200
January.....	3,390	790	1,500	2.54	2.93	92,200
February.....	2,180	880	1,200	2.03	2.19	69,000
March.....	1,480	790	1,020	1.73	1.99	62,700
April.....	2,610	930	1,260	2.13	2.38	75,000
May.....	5,110	2,320	3,480	5.89	6.79	214,000
June.....	5,770	2,320	4,180	7.07	7.89	249,000
July.....	6,470	1,360	3,280	5.55	6.40	202,000
August.....	1,420	660	1,010	1.71	1.97	62,100
September.....	2,760	580	1,540	2.61	2.91	91,600
The year.....	6,470	405	1,780	3.01	41.04	1,290,000
1920-21						
October.....	5,550	1,480	2,470	4.18	4.82	152,000
November.....	1,790	835	1,250	2.12	2.36	74,400
December.....	2,050	660	932	1.58	1.82	57,300
January.....	2,760	880	1,390	2.35	2.71	85,500
February.....	5,770	790	2,180	3.69	3.84	121,000
March.....	2,610	1,790	2,100	3.55	4.09	129,000
April.....	3,740	2,050	2,840	4.81	5.37	169,000
May.....	11,800	2,610	7,230	12.2	14.07	445,000
June.....	13,800	6,230	9,150	15.5	17.29	544,000
July.....	7,200	2,760	4,330	7.33	8.45	266,000
August.....	2,760	790	1,570	2.66	3.07	96,500
September.....	2,180	505	917	1.55	1.73	54,600
The year.....	13,800	505	3,030	5.13	69.62	2,190,000
1921-22						
October.....	4,490	620	1,330	2.25	2.59	81,800
November.....	4,490	880	1,590	2.69	3.00	94,600
December.....	20,800	1,190	3,770	6.38	7.36	232,000
January.....	1,240	-	915	1.55	1.79	56,300
February.....	-	620	723	1.22	1.27	40,200
March.....	700	620	643	1.09	1.26	39,500
April.....	2,760	745	1,670	2.83	3.16	99,400
May.....	13,200	2,760	5,140	8.70	10.03	316,000
June.....	12,100	4,300	6,900	11.7	13.05	411,000
July.....	4,110	1,030	2,010	3.40	3.92	124,000
August.....	1,140	745	850	1.44	1.66	52,300
September.....	790	505	621	1.05	1.17	37,000
The year.....	20,800	505	2,190	3.71	50.26	1,580,000
1922-23						
October.....	745	438	533	.902	1.04	32,800
November.....	745	470	579	.960	1.09	34,500
December.....	1,920	-	651	1.10	1.27	40,000
January.....	2,760	620	1,260	2.13	2.46	77,500
February.....	660	-	592	1.00	1.04	32,900
March.....	1,790	540	689	1.18	1.36	43,000
April.....	-	2,050	4,080	6.90	7.70	243,000
May.....	-	-	6,380	10.8	12.45	392,000
June.....	10,100	4,110	6,050	10.2	11.38	360,000
July.....	7,970	-	3,720	6.29	7.25	229,000
August.....	-	-	1,600	2.71	3.12	98,400
September.....	-	-	625	1.06	1.18	37,200
The year.....	10,100	-	2,240	3.79	51.34	1,620,000

Monthly discharge of Wenatchee River at Plain--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acres-feet
1923-24						
October.....	-	-	477	0.807	0.93	29,300
November.....	-	-	647	1.09	1.22	38,500
December.....	-	-	907	1.53	1.76	55,800
January.....	-	-	689	1.17	1.35	42,400
February.....	10,500	-	3,010	5.09	5.49	173,000
March.....	2,230	1,580	1,930	3.27	3.77	119,000
April.....	2,810	1,400	1,930	3.27	3.65	115,000
May.....	13,000	3,120	7,130	12.1	13.95	438,000
June.....	6,780	2,510	3,950	6.68	7.45	235,000
July.....	3,800	1,010	1,930	3.27	3.77	119,000
August.....	-	-	756	1.28	1.48	46,500
September.....	-	-	507	.858	.96	30,200
The year.....	13,000	-	1,990	3.37	45.78	1,440,000
1924-25						
October.....	-	-	677	1.15	1.33	41,600
November.....	-	-	880	1.49	1.66	52,400
December.....	7,710	-	2,060	3.49	4.02	127,000
January.....	1,660	1,140	1,280	2.17	2.50	78,700
February.....	2,050	930	1,290	2.18	2.27	71,600
March.....	1,790	1,030	1,300	2.20	2.54	79,900
April.....	7,710	1,240	3,810	6.45	7.20	227,000
May.....	12,600	3,390	7,820	13.2	15.22	481,000
June.....	7,970	3,560	5,600	9.48	10.58	333,000
July.....	4,490	1,660	2,770	4.69	5.41	170,000
August.....	-	-	930	1.57	1.81	57,200
September.....	-	-	523	.855	.99	31,100
The year.....	12,600	-	2,420	4.09	55.53	1,750,000
1925-26						
October.....	1,220	250	420	.711	.82	25,800
November.....	870	403	549	.929	1.04	32,700
December.....	-	-	1,310	2.22	2.56	80,600
January.....	-	-	748	1.27	1.46	46,000
February.....	-	-	925	1.57	1.64	51,400
March.....	-	-	1,990	3.37	3.88	122,000
April.....	6,200	-	3,800	6.43	7.17	226,000
May.....	5,520	2,200	3,500	5.92	6.82	215,000
June.....	3,590	1,600	2,220	3.76	4.20	132,000
July.....	1,600	550	976	1.65	1.90	60,000
August.....	630	480	530	.897	1.03	32,600
September.....	515	344	408	.690	.77	24,300
The year.....	6,200	250	1,450	2.45	33.29	1,050,000
1926-27						
October.....	4,990	451	1,360	2.30	2.65	83,600
November.....	1,190	715	864	1.46	1.63	51,400
December.....	1,920	800	1,170	1.98	2.28	71,900
January.....	845	425	601	1.02	1.18	37,000
February.....	560	425	492	.832	.87	27,300
March.....	715	458	523	.855	1.02	32,200
April.....	5,390	715	1,770	2.99	3.34	105,000
May.....	8,980	2,990	4,920	8.32	9.59	303,000
June.....	14,300	5,380	8,770	14.8	16.51	522,000
July.....	5,180	1,920	3,560	6.01	6.93	218,000
August.....	1,920	675	1,130	1.91	2.20	69,500
September.....	1,560	675	986	1.67	1.86	58,700
The year.....	14,300	425	2,180	3.69	50.06	1,580,000
1927-28						
October.....	2,940	950	1,740	2.94	3.39	107,000
November.....	4,040	1,150	2,590	4.04	4.51	142,000
December.....	5,590	770	2,100	3.55	4.09	129,000
January.....	6,020	860	2,800	3.72	4.29	135,000
February.....	1,200	815	956	1.62	1.75	55,000
March.....	2,940	770	1,560	2.64	3.04	95,900
April.....	4,800	1,510	2,530	3.94	4.40	139,000
May.....	14,000	3,300	8,350	14.1	16.26	513,000
June.....	6,240	3,850	5,120	8.66	9.66	305,000
July.....	3,660	1,260	2,470	4.18	4.82	152,000
August.....	1,140	560	758	1.28	1.48	46,600
September.....	560	398	467	.790	.88	27,800
The year.....	14,000	398	2,550	4.31	58.57	1,850,000

Monthly discharge of Wenatchee River at Plain--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	2,940	391	915	1.55	1.79	56,300
November.....	560	450	509	.861	.96	30,300
December.....	496	-	410	.694	.80	25,200
January.....	377	-	335	.567	.65	20,600
February.....	-	-	306	.518	.54	17,000
March.....	1,040	328	561	.949	1.09	34,500
April.....	2,590	560	1,010	1.71	1.91	60,100
May.....	8,460	2,420	4,550	7.70	8.88	280,000
June.....	6,470	3,480	4,680	7.92	8.84	278,000
July.....	3,480	982	1,920	3.25	3.75	118,000
August.....	982	480	683	1.16	1.34	42,000
September.....	504	335	406	.687	.77	24,200
The year.....	8,460	-	1,360	2.30	31.32	986,000
1929-30						
October.....	-	-	*290	.491	.57	17,800
November.....	-	-	*240	.406	.45	14,300
December.....	-	-	*340	.575	.66	20,900
January.....	-	-	*310	.525	.61	19,100
February.....	-	-	*650	1.10	1.14	36,100
March.....	-	-	*1,180	2.00	2.31	72,600
April.....	-	-	*3,500	5.92	6.60	208,000
May.....	-	-	*3,670	6.21	7.16	226,000
June.....	-	-	*3,160	5.35	5.97	188,000
July.....	-	-	*1,770	2.99	3.45	109,000
August.....	-	-	*670	1.13	1.30	41,200
September.....	-	-	*400	.677	.76	23,800
The year.....	-	-	*1,350	2.28	30.98	977,000
1930-31						
October.....	-	-	*450	.761	.88	27,700
November.....	-	-	*500	.846	.94	29,800
December.....	-	-	*350	.592	.68	21,500
January.....	-	-	*520	.880	1.01	32,000
February.....	-	-	*830	1.40	1.46	46,100
March.....	-	-	*1,080	1.83	2.11	66,400
April.....	-	-	*1,960	3.32	3.70	117,000
May.....	-	-	*6,000	10.2	11.76	369,000
June.....	-	-	*3,900	6.60	7.36	232,000
July.....	-	-	*1,280	2.13	2.46	77,500
August.....	-	475	559	.946	1.09	34,400
September.....	718	408	490	.829	.92	29,200
The year.....	-	-	*1,490	2.52	34.37	1,080,000
1931-32						
October.....	658	387	446	.755	.87	27,400
November.....	1,900	504	958	1.62	1.81	57,000
December.....	536	-	483	.817	.94	29,700
January.....	-	442	707	1.20	1.38	43,500
February.....	10,600	435	1,500	2.54	2.74	86,300
March.....	6,640	1,400	2,470	4.18	4.82	152,000
April.....	5,240	2,170	3,230	5.47	6.10	192,000
May.....	7,570	3,840	5,960	10.1	11.64	366,000
June.....	9,780	4,730	6,460	10.9	12.16	384,000
July.....	5,240	1,680	3,020	5.11	5.89	186,000
August.....	1,680	626	1,200	2.03	2.34	73,800
September.....	606	431	504	.853	.95	30,000
The year.....	10,600	-	2,240	3.79	51.64	1,630,000
1932-33						
October.....	1,200	373	651	1.10	1.27	40,000
November.....	8,330	796	3,160	5.35	5.97	188,000
December.....	5,660	934	1,960	3.32	3.83	121,000
January.....	2,060	868	1,230	2.08	2.40	75,600
February.....	860	594	680	1.15	1.20	37,800
March.....	772	600	656	1.11	1.28	40,300
April.....	5,840	780	2,040	3.45	3.85	121,000
May.....	7,120	2,750	4,320	7.31	8.43	266,000
June.....	13,800	5,480	8,040	13.6	15.17	478,000
July.....	8,120	3,260	6,090	10.3	11.87	374,000
August.....	3,410	1,040	2,120	3.59	4.14	130,000
September.....	2,560	695	988	1.67	1.86	58,800
The year.....	13,800	373	2,670	4.52	61.27	1,930,000

*Computed on basis of records for Wenatchee River at Peshastin.

Monthly discharge of Wenatchee River at Plain--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	5,840	828	2,527	4.28	4.93	155,400
November.....	9,190	1,630	3,066	5.19	5.79	182,400
December.....	9,880	1,480	3,720	6.29	7.25	228,700
January.....	3,730	1,780	2,537	4.29	4.95	156,000
February.....	2,680	1,580	1,994	3.37	3.51	110,700
March.....	7,710	1,900	3,719	6.29	7.25	228,700
April.....	13,200	4,790	8,162	13.8	15.40	485,700
May.....	9,190	4,740	6,516	11.0	12.68	400,600
June.....	6,530	2,550	4,434	7.50	8.37	263,800
July.....	2,800	1,300	1,953	3.30	3.80	120,100
August.....	1,300	707	918	1.55	1.79	56,450
September.....	662	399	538	.910	1.02	32,010
The year.....	13,200	399	3,344	5.66	76.74	2,421,000
1934-35						
October.....	2,670	370	785	1.33	1.53	48,270
November.....	5,250	1,670	2,716	4.60	5.13	161,600
December.....	1,670	1,070	1,269	2.15	2.48	78,050
January.....	10,100	660	2,399	4.06	4.68	147,500
February.....	3,920	1,300	2,162	3.66	3.81	120,100
March.....	2,080	1,050	1,433	2.42	2.79	88,110
April.....	3,400	1,080	1,920	3.25	3.63	114,200
May.....	8,540	3,400	5,941	10.1	11.64	365,300
June.....	10,100	4,910	7,007	11.9	13.28	416,900
July.....	5,610	1,920	3,749	6.34	7.31	230,500
August.....	1,820	825	1,168	1.98	2.28	71,800
September.....	1,050	490	716	1.21	1.35	42,600
The year.....	10,100	370	2,604	4.41	59.91	1,885,000

Yearly discharge of Wenatchee River at Plain

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	2,170	3.67	49.91	1,570,000	1,870	3.16	42.92	1,350,000
1912.....	2,070	3.50	47.60	1,500,000	2,010	3.40	46.28	1,460,000
1913.....	2,500	4.23	57.37	1,810,000	2,620	4.43	60.15	1,900,000
1914.....	2,090	3.54	48.05	1,520,000	2,150	3.64	49.40	1,560,000
1915.....	1,360	2.30	31.31	987,000	1,200	2.03	27.63	871,000
1916.....	2,810	4.75	64.83	2,040,000	2,760	4.67	63.50	2,000,000
1917.....	2,160	3.65	49.52	1,560,000	2,440	4.13	56.10	1,770,000
1918.....	2,500	4.23	57.43	1,810,000	2,420	4.09	56.61	1,750,000
1919.....	2,480	4.20	56.92	1,800,000	2,400	4.06	54.95	1,730,000
1920.....	1,780	3.01	41.04	1,290,000	1,930	3.27	44.45	1,400,000
1921.....	3,030	5.13	69.62	2,190,000	3,200	5.41	73.57	2,320,000
1922.....	2,190	3.71	50.26	1,580,000	1,770	2.99	40.71	1,280,000
1923.....	2,240	3.79	51.34	1,620,000	2,260	3.82	51.85	1,640,000
1924.....	1,990	3.37	45.78	1,440,000	2,120	3.59	48.88	1,540,000
1925.....	2,420	4.09	55.53	1,750,000	2,300	3.89	52.94	1,670,000
1926.....	1,450	2.45	33.29	1,050,000	1,540	2.61	35.43	1,120,000
1927.....	2,180	3.69	50.06	1,580,000	2,420	4.09	55.49	1,750,000
1928.....	2,550	4.31	58.57	1,850,000	2,180	3.69	50.13	1,580,000
1929.....	1,360	2.30	31.32	986,000	1,280	2.17	29.45	927,000
1930.....	1,350	2.28	30.98	977,000	1,590	2.35	31.80	1,000,000
1931.....	1,490	2.52	34.37	1,080,000	1,540	2.61	35.49	1,120,000
1932.....	2,240	3.79	51.64	1,630,000	2,570	4.35	59.09	1,860,000
1933.....	2,670	4.52	61.27	1,930,000	2,970	5.03	68.17	2,150,000
1934.....	3,344	5.66	76.74	2,421,000	2,959	5.01	67.91	2,142,000
1935.....	2,604	4.41	59.91	1,885,000	-	-	-	-
Highest.....	3,344	5.66	76.74	2,421,000	3,200	5.41	73.57	2,320,000
Average.....	2,200	3.72	50.59	1,590,000	2,180	3.69	50.08	1,580,000
Lowest.....	1,350	2.28	30.98	977,000	1,200	2.03	27.63	871,000

Wenatchee River at Peshastin, Wash.

Location.- Water-stage recorder, lat. 47°34'50", long. 120°37'00", in SE¼ sec. 8, T. 24 N., R. 18 E., 1 mile northwest of Peshastin. Prior to Apr. 22, 1932, staff gage 1½ miles above Peshastin Creek.

Drainage area.- 1,000 square miles.

Records available.- October 1928 to September 1935 estimated by comparison with Wenatchee River at Plain.

Extremes.- Maximum discharge recorded, 20,400 second-feet 3 to 4 a.m. June 16, 1933; minimum, 270 second-feet Oct. 2, 1929.

Remarks.- Several diversions for irrigation above station. Slight regulation at mill pond at Leavenworth, and natural regulation in Wenatchee Lake.

Monthly discharge of Wenatchee River at Peshastin

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1928-29				
October.....	-	-	*1,170	71,900
November.....	-	-	*710	42,200
December.....	-	-	*570	35,000
January.....	-	-	*450	27,700
February.....	-	-	*450	25,000
March.....	1,530	-	806	49,600
April.....	3,800	810	1,480	88,100
May.....	11,600	3,310	6,360	391,000
June.....	9,290	4,870	6,680	397,000
July.....	4,680	1,310	2,670	164,000
August.....	1,360	535	862	53,000
September.....	645	310	442	26,300
The year.....	-	-	1,890	1,370,000
1929-30				
October.....	435	270	376	23,100
November.....	435	290	329	19,600
December.....	685	300	474	29,100
January.....	-	-	421	25,900
February.....	-	-	953	52,900
March.....	4,500	900	1,680	103,000
April.....	7,830	2,250	4,930	293,000
May.....	8,070	3,730	5,030	309,000
June.....	6,700	3,560	4,510	268,000
July.....	3,730	1,210	2,420	149,000
August.....	1,210	492	783	48,100
September.....	555	349	458	27,300
The year.....	8,070	270	1,860	1,350,000
1930-31				
October.....	1,380	385	577	35,500
November.....	980	555	697	41,500
December.....	590	-	462	29,600
January.....	3,080	-	700	43,000
February.....	2,080	850	1,220	67,800
March.....	2,770	980	1,540	94,700
April.....	9,040	1,840	2,760	164,000
May.....	12,000	4,630	8,230	506,000
June.....	9,290	3,080	5,590	333,000
July.....	2,770	862	1,730	106,000
August.....	862	470	572	35,200
September.....	730	430	506	30,100
The year.....	12,000	-	2,050	1,490,000
1931-32				
October.....	815	390	509	31,300
November.....	2,480	595	1,220	72,600
December.....	692	-	627	38,600
January.....	2,340	540	895	55,000
February.....	14,800	470	2,160	124,000
March.....	8,790	1,950	3,550	217,000
April.....	6,900	3,000	4,410	262,000
May.....	10,500	5,200	8,130	500,000
June.....	13,800	6,300	8,980	534,000
July.....	7,300	2,110	4,050	249,000
August.....	1,930	785	1,300	79,900
September.....	714	534	602	35,800
The year.....	14,800	390	3,030	2,200,000

*Computed on basis of records for Wenatchee River near Plain.

Monthly discharge of Wenatchee River at Peshastin--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1932-33				
October.....	1,720	479	867	53,500
November.....	12,100	1,120	4,460	265,000
December.....	7,670	1,310	2,710	167,000
January.....	2,860	1,150	1,680	103,000
February.....	1,180	-	961	53,400
March.....	1,180	840	971	59,700
April.....	8,110	1,190	2,900	173,000
May.....	10,400	3,780	5,920	364,000
June.....	20,000	7,670	11,700	696,000
July.....	11,400	4,380	8,580	528,000
August.....	4,530	1,290	2,820	173,000
September.....	3,350	885	1,250	74,400
The year.....	20,000	479	3,740	2,710,000
1933-34				
October.....	-	1,170	3,640	223,800
November.....	-	-	*4,546	270,500
December.....	15,700	-	5,648	347,300
January.....	5,040	2,600	3,697	227,300
February.....	4,230	2,400	3,042	169,000
March.....	10,200	2,720	5,172	318,000
April.....	18,400	-	11,250	669,400
May.....	12,900	6,430	8,911	547,900
June.....	9,010	3,560	6,079	361,700
July.....	3,780	1,670	2,644	162,600
August.....	1,670	862	1,119	68,800
September.....	870	531	683	40,650
The year.....	18,400	531	*4,706	3,407,000
1934-35				
October.....	4,080	479	1,086	66,770
November.....	7,240	2,340	3,897	231,900
December.....	2,790	1,500	1,888	116,100
January.....	14,200	850	3,505	215,500
February.....	5,430	1,900	3,131	173,900
March.....	3,070	1,500	2,095	128,800
April.....	4,860	1,620	2,780	165,400
May.....	12,200	4,690	8,208	504,700
June.....	15,100	6,660	9,941	591,600
July.....	7,320	2,530	4,945	304,000
August.....	2,400	968	1,447	88,970
September.....	1,270	628	854	50,800
The year.....	15,100	479	3,644	2,638,000

*Computed on basis of records for Wenatchee River at Plain.

Yearly discharge of Wenatchee River at Peshastin

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1929.....	1,890	1,370,000	1,790	1,290,000
1930.....	1,860	1,350,000	1,910	1,380,000
1931.....	2,050	1,490,000	2,100	1,520,000
1932.....	3,030	2,200,000	3,500	2,540,000
1933.....	3,740	2,710,000	4,230	3,070,000
1934.....	4,706	3,407,000	4,116	2,980,000
1935.....	3,644	2,638,000	-	-

Phelps Creek near Plain, Wash.

Location.- Staff gage, lat. 48°04'30", long. 120°50'40", a quarter of a mile above mouth and 25 miles northeast of Plain.

Drainage area.- 16.8 square miles.

Records available.- November 1926 to March 1931.

Extremes.- Maximum discharge observed, 1,080 second-feet at 3 p.m. June 7, 1927; no flow Feb. 20-23, Mar. 1-12, 1927, because of snow slides into gorge above station.

Remarks.- A few second-feet diverted past gage for operation of mine power plant.

Monthly discharge of Phelps Creek near Plain

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
November 5-30, 1926.....	-	17	19.2	990
December.....	19	16	17.2	1,060
January 1927.....	19	-	12.7	781
February.....	11	0	7.70	428
March.....	9.4	0	5.40	332
April.....	122	9.4	28.8	1,710
May.....	347	46	161	9,900
June.....	790	200	368	21,900
July.....	213	100	161	9,900
August.....	104	28	50.2	3,090
September.....	60	14	25.6	1,520
The period.....	-	-	-	51,600
October 1927.....	122	20	58.6	3,600
November.....	72	26	41.1	2,450
December.....	121	-	37.7	2,320
Calendar year 1927.....	790	0	80.0	57,900
January 1928.....	31	-	22.6	1,390
February.....	21	15	16.8	966
March.....	58	14	24.3	1,490
April.....	140	23	45.1	2,680
May.....	618	80	345	21,200
June.....	316	134	188	11,200
July.....	140	49	99.1	6,090
August.....	48	17	25.2	1,550
September.....	17	9.1	12.3	732
Water year 1927-28.....	618	9.1	76.7	55,700
October 1928.....	63	9.7	17.9	1,100
November.....	14	6.7	10.3	613
December.....	8.5	5.1	6.28	386
Calendar year 1928.....	618	5.1	68.0	49,400
January 1929.....	6.2	4.8	5.26	323
February.....	-	-	3.81	212
March.....	8.8	4.3	6.10	375
April.....	51	4.4	13.2	786
May.....	256	47	125	7,690
June.....	241	115	161	9,580
July.....	140	26	68.5	4,210
August.....	26	7.2	13.9	855
September.....	7.2	4.0	5.01	298
Water year 1928-29.....	256	-	36.5	26,400
October 1929.....	8.0	2.5	3.64	224
November.....	3.7	1.5	2.26	134
December.....	2.4	1.2	1.83	113
Calendar year 1929.....	256	1.2	34.3	24,800
January 1930.....	2.2	1.8	1.92	118
February.....	8.4	2.0	4.08	227
March.....	40	2.0	8.01	493
April.....	157	29	79.5	4,730
May.....	190	56	112	6,890
June.....	195	72	113	6,720
July.....	100	23	58.0	3,570
August.....	23	4.1	11.5	707
September.....	13	2.8	5.49	327
Water year 1929-30.....	195	1.2	33.5	24,300
October 1930.....	14	1.8	6.50	400
November.....	7.1	1.4	3.85	229
December.....	4.1	1.1	2.39	147
Calendar year 1930.....	195	1.1	33.9	24,600
January 1931.....	9.4	1.1	3.01	185
February.....	7.7	2.3	4.22	234
March.....	15	2.8	5.35	329

YAKIMA RIVER BASIN

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 1935 (only fragmentary gage heights, October 1903 to January 1904).

Extremes.-- Maximum discharge recorded, 7,370 second-feet at 10:45 a.m. Mar. 26*, 1915, when temporary crib dam was washed out; practically no flow when gates in Keechelus Lake Reservoir Dam are closed.

Remarks.-- Records include water diverted over reservoir spillway. Flow partly controlled by storage in Keechelus Lake Reservoir.

Monthly discharge of Yakima River near Martin

Month	Observed				Gain or loss in storage in Keechelus 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	
1919-20									
October..	904	118	530	32,600	-25,200	7,400	120	2.18	2.51
November..	271	5	142	8,440	+19,700	28,100	472	8.58	9.57
December..	4	4	4	246	+17,900	18,100	294	5.35	6.17
January..	18	4	7.97	490	+29,900	30,400	494	8.98	10.35
February..	21	18	20.4	1,170	+9,730	10,900	190	3.45	3.72
March....	24	21	22.3	1,370	+12,300	13,700	223	4.05	4.67
April.....	32	24	25	1,490	+12,400	13,900	234	4.25	4.74
May.....	35	24	29.4	1,800	+28,600	30,400	494	8.98	10.35
June.....	905	24	273	16,300	+8,850	25,200	424	7.71	8.60
July.....	2,340	30	1,480	90,900	-75,000	15,900	259	4.71	5.43
August....	1,960	206	1,040	63,900	-49,300	14,600	237	4.31	4.97
September	1,870	0	822	48,900	-10,800	38,100	640	11.6	12.94
The year	2,340	0	369	268,000	-20,900	247,000	340	6.18	84.02
1920-21									
October..	716	0	240	14,800	+9,510	24,300	395	7.18	8.28
November..	2	2	2.00	119	+15,300	15,400	259	4.71	5.26
December..	2	2	2.00	123	+16,700	16,800	273	4.96	5.72
January..	28	2	3.97	244	+24,900	25,100	408	7.42	8.55
February..	3	2	2.29	127	+25,100	25,200	454	8.25	8.59
March....	1,020	10	483	29,700	-9,160	20,500	333	6.05	6.98
April.....	860	10	109	6,490	+17,200	23,700	398	7.24	8.08
May.....	1,020	8	379	23,300	+23,500	46,800	761	13.8	15.91
June.....	1,470	107	617	36,700	+14,400	51,100	859	15.6	17.40
July.....	1,750	24	777	47,800	-29,400	18,400	299	5.44	6.27
August....	1,790	860	1,220	75,000	-70,000	5,000	81	1.47	1.70
September	700	462	496	28,900	-20,600	8,300	139	2.53	2.82
The year	1,790	0	364	263,000	+17,400	281,000	388	7.05	95.56
1921-22									
October..	1,020	3	213	13,100	+1,980	15,100	246	4.47	5.15
November..	3	3	3.00	179	+14,900	15,100	254	4.62	5.16
December..	5	3	3.13	192	+52,900	53,100	864	15.7	18.10
January..	3	3	3.00	184	+6,870	7,050	115	2.09	2.41
February..	3	3	3.00	167	+4,540	4,710	84.8	1.54	1.60
March....	3	3	3.00	184	+4,840	5,020	81.6	1.48	1.71
April.....	1,430	3	154	9,160	+3,280	12,400	208	3.78	4.22
May.....	893	12	308	18,900	+27,300	46,200	751	13.7	15.79
June.....	1,740	41	639	38,000	+7,390	45,400	763	13.9	15.51
July.....	1,260	550	926	56,900	-49,900	7,000	114	2.07	2.39
August....	1,840	828	1,480	91,000	-85,800	5,200	84.6	1.54	1.78
September	716	114	271	16,100	-12,400	3,700	62.2	1.13	1.26
The year	1,840	3	337	244,000	-24,100	220,000	304	5.53	75.08
1922-23									
October..	130	0	20.1	1,240	+4,520	5,760	93.7	1.70	1.96
November..	0	0	0	0	+10,100	10,100	170	3.09	3.45
December..	0	0	0	0	+18,100	18,100	294	5.35	6.17
January..	17	0	5.97	367	+33,900	34,300	558	10.1	11.64
February..	19	17	18.4	1,020	+4,390	5,410	97.4	1.77	1.84
March....	24	19	20.7	1,270	+6,810	8,080	131	2.38	2.74
April.....	36	24	30.1	1,790	+28,200	30,000	504	9.16	10.22
May.....	779	40	113	6,960	+40,700	47,700	776	14.1	16.26
June.....	2,260	95	666	39,600	+3,800	43,400	729	13.3	14.84
July.....	1,160	95	446	27,400	-10,500	16,900	275	5.00	3.76
August....	2,030	1,160	1,630	100,000	-91,800	8,200	133	2.42	2.79
September	1,670	77	876	52,100	-44,700	7,400	124	2.25	2.51
The year	2,260	0	321	232,000	+3,520	235,000	325	5.91	80.18

*Erroneously published in some Water-Supply Papers.

Monthly discharge of Yakima River near Martin--Continued

Month	Observed				Gain or loss in storage in Keechelus 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	
1923-24									
October..	77	12	29.9	1,840	+6,500	8,340	136	2.47	2.85
November..	19	12	15.8	938	+14,200	15,100	254	4.62	5.16
December..	23	20	22.5	1,380	+19,100	20,500	333	6.05	6.98
January..	27	24	25.4	1,560	+14,500	16,100	262	4.76	5.49
February..	53	31	34.8	2,070	+33,200	35,300	614	11.2	12.08
March....	34	32	32.7	2,010	+9,290	11,300	184	3.35	3.86
April.....	166	10	38.6	2,300	+16,200	18,500	311	5.65	6.30
May.....	781	10	193	11,800	+37,000	48,800	794	14.4	16.60
June.....	623	287	380	22,600	-5,610	19,000	319	5.80	6.47
July.....	961	255	733	45,000	-40,500	4,500	73.2	1.33	1.53
August....	1,720	927	1,380	84,700	-78,800	5,900	96.0	1.75	2.02
September	1,610	109	583	34,700	-30,500	4,200	70.6	1.28	1.45
The year	1,720	10	290	211,000	-3,420	208,000	286	5.20	70.77
1924-25									
October..	141	12	68.7	4,220	+8,770	13,000	211	3.84	4.43
November..	16	12	13.9	827	+15,200	16,000	269	4.89	5.46
December..	24	16	20.2	1,240	+33,000	34,200	556	10.1	11.64
January..	26	24	24.7	1,520	+15,200	16,700	272	4.95	5.71
February..	30	26	29.1	1,610	+19,800	21,400	385	7.00	7.29
March....	33	30	31.8	1,960	+11,000	13,000	211	3.84	4.43
April.....	36	33	35.0	2,080	+30,100	32,200	541	9.84	10.98
May.....	1,630	35	551	33,900	+20,600	54,500	886	16.1	18.56
June.....	571	285	440	26,200	-540	25,700	432	7.85	8.76
July.....	1,120	485	900	55,400	-48,800	6,600	107	1.95	2.25
August....	1,160	692	1,070	65,700	-63,000	2,700	43.9	.798	.92
September	810	416	529	31,500	-25,300	6,200	104	1.89	2.11
The year	1,630	12	312	226,000	+16,000	242,000	335	6.09	82.54
1925-26									
October..	449	1	90.6	5,570	+230	5,800	94.3	1.71	1.97
November..	22	1	17.0	1,010	+9,210	10,200	171	3.11	3.47
December..	42	22	32.8	2,010	+35,000	36,000	569	10.3	11.87
January..	43	2	22.3	1,370	+13,500	14,900	242	4.40	5.07
February..	2	2	2.0	111	+12,400	12,500	225	4.09	4.26
March....	3	2	2.3	139	+24,600	24,700	402	7.31	8.43
April.....	3	3	3.0	178	+30,100	30,300	509	9.25	10.32
May.....	880	3	342	21,000	-1,860	19,100	311	5.65	6.51
June.....	947	620	883	52,500	-48,300	4,200	70.6	1.28	1.43
July.....	1,130	756	957	58,800	-55,600	3,200	52.0	.945	1.09
August....	1,210	103	584	35,900	-33,000	2,900	47.2	.858	.99
September	1,140	68	101	6,990	-690	6,300	89.1	1.62	1.81
The year	1,210	1	255	185,000	-16,400	168,000	232	4.22	57.22
1926-27									
October..	119	25	45.8	2,810	+18,100	20,900	340	6.18	7.12
November..	33	25	27.1	1,610	+13,200	14,800	249	4.53	5.05
December..	35	27	31.7	1,950	+17,300	19,200	312	5.67	6.54
January..	38	34	35.9	2,210	+6,740	8,950	146	2.65	3.06
February..	38	38	38.0	2,110	+4,720	6,830	123	2.24	2.33
March....	46	38	42.7	2,630	+5,250	7,880	128	2.33	2.69
April.....	63	46	52.0	3,090	+16,000	19,100	321	5.84	6.52
May.....	82	64	73.5	4,520	+40,000	44,500	724	13.2	15.22
June.....	1,020	17	620	36,900	+20,800	57,700	970	17.6	19.64
July.....	817	15	570	35,000	18,900	16,100	262	4.76	5.49
August....	1,090	817	826	50,800	-46,000	4,800	78.1	1.42	1.64
September	1,380	100	795	47,300	-35,800	11,500	193	3.51	3.92
The year	1,380	15	264	191,000	+41,400	232,000	321	5.84	79.22
1927-28									
October..	817	87	363	22,300	+682	23,000	374	6.80	7.84
November..	96	2	23.4	1,390	+47,200	48,600	817	14.9	16.62
December..	1,090	3	640	39,400	-20,400	19,000	309	5.62	6.48
January..	437	174	288	17,700	+11,300	29,000	472	8.58	9.89
February..	309	45	210	12,100	-5,940	6,160	107	1.95	2.10
March....	51	45	47.6	2,930	+18,700	21,600	351	6.38	7.36
April.....	55	51	52.9	3,150	+17,800	21,000	353	6.42	7.16
May.....	1,110	55	231	14,200	+41,500	55,700	906	16.5	19.02
June.....	532	274	343	20,400	+51	20,500	345	6.27	7.00
July.....	1,400	274	906	55,700	-49,700	6,000	97.6	1.77	2.04
August....	1,880	471	1,470	90,100	-85,700	4,400	71.6	1.30	1.50
September	471	43	249	14,800	-12,800	2,000	33.6	.611	.68
The year	1,880	2	405	294,000	-37,300	257,000	354	6.44	87.69

Monthly discharge of Yakima River near Martin--Continued

Month	Observed				Gain or loss in storage in Keechelus 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	
1928-29									
October..	47	14	21.6	1,330	+16,100	17,400	283	5.15	5.94
November..	15	14	14.0	835	+7,710	8,540	144	2.62	2.92
December..	16	15	16.0	982	+5,420	6,400	104	1.89	2.18
January..	24	16	21.8	1,340	+2,910	4,250	69.1	1.26	1.45
February..	31	24	28.4	1,580	+1,610	3,190	57.4	1.04	1.08
March....	117	3	14.9	918	+10,400	11,300	184	3.35	3.86
April.....	3	3	3.00	179	+15,200	15,400	259	4.71	5.26
May.....	4	3	3.77	232	+49,900	50,100	815	14.8	17.06
June.....	534	4	49.9	2,970	+35,400	38,400	645	11.7	13.05
July.....	1,720	244	1,040	64,200	-52,600	11,600	189	3.44	3.97
August....	1,970	14	907	55,800	-55,800	2,000	32.5	.591	.68
September	1,040	381	668	39,800	-37,400	2,400	40.3	.733	.82
The year	1,970	3	235	170,000	+850	171,000	236	4.29	58.27
1929-30									
October..	322	61	124	7,630	-4,880	2,750	44.7	.813	.94
November..	91	1	13.0	772	+2,020	2,790	46.9	.853	.95
December..	5	5	5.00	307	+6,990	7,300	119	2.16	2.49
January..	6	5	5.84	359	+6,650	7,010	114	2.07	2.39
February..	10	6	7.29	405	+23,500	23,900	430	7.82	8.14
March....	14	10	11.1	680	+17,400	18,100	294	5.35	6.17
April.....	14	12	13.4	799	+36,100	36,900	620	11.3	12.61
May.....	18	14	15.5	956	+25,900	26,900	437	7.95	9.16
June.....	191	18	55.9	3,330	+13,700	17,000	286	5.20	5.80
July.....	1,590	191	933	57,400	-51,600	5,800	94.3	1.71	1.97
August....	1,450	643	860	52,900	-49,700	3,200	52.0	.945	1.09
September	643	164	536	31,900	-29,100	2,800	47.1	.856	.96
The year	1,590	1	217	157,000	-3,020	154,000	213	3.87	52.67
1930-31									
October..	145	3	57.8	3,550	+4,900	8,450	137	2.49	2.87
November..	1	1	1.00	59.5	+10,100	10,200	171	3.11	3.47
December..	1	1	1.00	61.5	+5,820	5,880	95.6	1.74	2.01
January..	1	1	1.00	61.5	+12,800	12,900	210	3.82	4.40
February..	1	1	1.00	55.5	+13,900	14,000	252	4.58	4.77
March....	1	1	1.00	61.5	+21,700	21,800	355	6.45	7.44
April.....	126	1	25.8	1,540	+24,600	26,100	439	7.98	8.90
May.....	614	2	80.4	4,940	+39,000	43,900	714	13.0	14.99
June.....	736	4	473.00	28,100	-7,920	20,200	339	6.16	6.87
July.....	1,150	580	1,000	61,600	-55,000	6,600	107	1.95	2.25
August....	1,070	878	1,000	61,600	-58,700	2,900	47.2	.858	.99
September	808	85	266	15,800	-13,200	2,600	43.7	.795	.89
The year	1,150	1	245	178,000	-2,000	176,000	242	4.40	59.85
1931-32									
October..	109	1	36.6	2,250	+7,290	9,540	155	2.82	3.25
November..	1	1	1.00	59.5	+19,500	19,600	329	5.98	6.67
December..	1	1	1.00	61.5	+7,460	7,520	122	2.22	2.56
January..	1	1	1.00	61.5	+18,000	18,100	294	5.35	6.17
February..	2	1	1.07	61.5	+22,100	22,200	386	7.02	7.57
March....	2	1	1.16	71.4	+32,100	32,200	624	9.53	10.99
April.....	3	2	2.17	129	+32,300	32,400	544	9.89	11.03
May.....	1,000	2	561	34,500	+16,300	50,800	826	15.0	17.29
June.....	1,490	647	898	55,500	-540	55,000	691	16.2	18.07
July.....	1,610	387	646	39,700	-21,000	18,700	304	5.53	6.38
August....	1,610	1,570	1,590	39,700	-69,800	7,900	128	2.33	2.69
September	1,570	131	787	46,800	-42,500	4,300	72.3	1.31	1.46
The year	1,610	1	379	275,000	+1,210	276,000	381	6.93	94.13
1932-33									
October..	126	1	37.1	2,280	+9,460	11,700	190	3.45	3.98
November..	2	1	1.10	55.5	+61,300	61,400	1,030	18.7	20.86
December..	1	1	1.00	61.5	+27,800	27,900	454	8.25	9.51
January..	3	1	2.19	136	+25,600	25,700	418	7.60	8.76
February..	142	3	55.9	3,100	+4,690	7,790	140	2.55	2.66
March....	142	142	142	8,730	+308	8,420	137	2.49	2.87
April.....	486	142	183	10,900	+7,290	18,200	306	5.56	6.20
May.....	486	486	486	29,900	+7,400	37,300	607	11.0	12.68
June.....	1,890	486	1,020	60,500	+4,480	65,000	1,090	19.8	22.09
July.....	857	512	671	41,200	-4,240	37,000	602	10.9	12.57
August....	1,220	512	986	60,600	-51,700	8,900	145	2.64	3.04
September	721	484	683	40,700	-29,400	11,300	190	3.45	3.85
The year	1,890	1	357	258,000	+62,400	321,000	443	8.05	109.07

Monthly discharge of Yakima River near Martin--Continued

Month	Observed				Gain or loss in storage in Keechelus 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	
1933-34									
October..	349	1	98.7	6,070	+30,710	36,780	598	10.9	12.57
November..	596	1	410	24,400	+7,500	31,900	536	9.75	10.88
December..	1,500	596	1,110	68,200	+11,860	80,060	1,302	23.7	27.32
January...	1,500	258	823	50,600	-13,620	36,980	601	10.9	12.57
February..	925	4	581	32,300	-14,490	17,810	321	5.84	6.08
March....	4	4	4.00	246	+47,440	47,690	776	14.1	16.26
April.....	1,040	4	534	31,800	+16,440	48,240	811	14.7	16.40
May.....	927	299	467	28,700	-6,340	22,360	364	6.62	7.63
June.....	474	449	454	27,000	-19,840	7,160	120	2.18	2.43
July.....	449	449	449	27,600	-24,920	2,680	43.6	.793	.91
August....	1,380	449	1,090	67,100	-65,830	1,270	20.7	.376	.43
September	466	1	127	7,540	-4,720	2,820	47.4	.862	.96
The year	1,500	1	513	371,600	-35,810	335,800	464	8.44	114.44
1934-35									
October..	2	1	1.3	81	+22,620	22,700	369	6.71	7.74
November..	2	2	2.0	119	+32,300	32,420	545	9.91	11.06
December..	479	2	188	11,530	+8,700	20,230	329	5.98	6.89
January...	1,230	269	481	29,580	+9,800	39,380	640	11.6	13.37
February..	1,230	199	522	29,000	-14,480	14,520	261	4.75	4.95
March....	199	4	51.0	3,140	+11,360	14,500	236	4.29	4.95
April.....	515	4	211	12,540	+2,500	15,040	253	4.60	5.13
May.....	241	233	240	14,750	+29,260	44,010	716	13.0	14.99
June.....	653	219	384	22,880	+18,720	41,600	699	12.7	14.17
July.....	830	460	649	39,900	-25,960	13,940	227	4.13	4.76
August....	853	718	780	47,940	-43,540	4,400	71.6	1.30	1.50
September	868	453	661	39,310	-35,180	4,130	69.4	1.26	1.41
The year	1,230	1	346	250,800	+16,100	266,900	369	6.71	90.92

Yearly discharge of Yakima River near Martin

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1905.....	277	5.04	68.34	200,000	289	5.25	71.63	209,000
1906.....	290	5.28	71.72	210,000	361	6.56	89.25	262,000
1907.....	410	7.46	101.06	296,000	327	5.95	80.73	237,000
1908.....	351	6.38	86.76	255,000	337	6.13	83.40	245,000
1909.....	287	5.22	70.72	208,000	391	7.11	96.47	283,000
1910.....	400	7.27	98.83	290,000	366	6.65	90.97	265,000
1911.....	307	5.58	75.70	222,000	280	5.09	69.12	203,000
1912.....	324	5.89	80.10	235,000	290	5.27	71.57	210,000
1913.....	335	6.09	82.55	242,000	343	6.24	84.52	248,000
1914.....	318	5.78	78.28	230,000	330	6.00	81.41	239,000
1915.....	214	3.89	52.89	155,000	217	3.95	53.65	157,000
1916.....	467	8.49	115.72	339,000	425	7.73	105.26	309,000
1917.....	349	6.35	86.18	253,000	463	8.42	114.14	335,000
1918.....	411	7.47	101.62	298,000	375	6.82	92.50	271,000
1919.....	360	6.55	88.94	261,000	326	5.93	80.43	236,000
1920.....	340	6.18	84.02	247,000	344	6.25	85.03	250,000
1921.....	388	7.05	95.56	281,000	425	7.73	104.71	307,000
1922.....	304	5.53	75.08	220,000	236	4.29	58.25	171,000
1923.....	325	5.91	80.18	235,000	339	6.16	83.59	245,000
1924.....	286	5.20	70.77	208,000	312	5.67	77.31	227,000
1925.....	335	6.09	82.54	242,000	318	5.78	78.32	230,000
1926.....	232	4.22	57.22	168,000	238	4.33	58.62	172,000
1927.....	321	5.84	79.22	232,000	370	6.73	91.45	268,000
1928.....	354	6.44	87.69	257,000	274	4.98	67.79	199,000
1929.....	236	4.29	58.27	171,000	209	3.80	51.61	151,000
1930.....	213	3.87	52.67	154,000	229	4.16	56.64	166,000
1931.....	242	4.40	59.85	176,000	259	4.71	63.98	188,000
1932.....	381	6.93	94.13	276,000	469	8.53	116.00	341,000
1933.....	443	8.05	109.07	321,000	509	9.25	125.49	368,000
1934.....	464	8.44	114.44	335,800	362	6.58	89.36	262,400
1935.....	369	6.71	90.92	266,900	-	-	-	-
Highest.....	467	8.49	115.72	339,000	509	9.25	125.49	368,000
Average.....	333	6.06	82.29	241,000	334	6.07	82.42	242,000
Lowest.....	213	3.87	52.67	154,000	209	3.80	51.61	151,000

Yakima River at Cle Elum, Wash.

Location.— Staff and chain gages, and 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 1935.

Extremes.— Maximum discharge recorded, about 25,600 second-feet Nov. 14, 1906 (stage determined from floodmarks); minimum, 64 second-feet Nov. 16, 17, 1929.

Remarks.— Kittitas canal diverts water above gage for irrigation; diversion began in May, 1930. Adjustment made for diversion and for regulation by storage in Keechelus Lake, Kachess Lake, and Cle Elum Lake Reservoirs.

Monthly discharge of Yakima River at Cle Elum

Month	Observed			Gain or loss in storage in Keechelus, Kachess, and Cle Elum Lakes (acre-feet)	Diverted by Kittitas canal (acre-feet)	Adjusted for storage and diversions				
	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
1919-20										
October..	1,020	511	768	47,200	-23,500	-	23,700	385	0.770	0.89
November.	2,260	659	1,270	75,400	+44,900	-	120,000	2,020	4.04	4.51
December.	1,880	723	1,080	66,600	+22,800	-	89,400	1,450	2.90	3.34
January..	4,580	582	1,530	94,400	+54,100	-	148,000	2,410	4.82	5.56
February.	1,820	588	945	54,400	+18,200	-	72,600	1,260	2.52	2.72
March....	1,440	532	854	52,500	+25,900	-	78,400	1,280	2.56	2.95
April.....	1,880	813	1,220	72,800	+25,200	-	98,000	1,650	3.30	3.68
May.....	3,510	1,390	2,220	136,000	+55,600	-	192,000	3,120	6.24	7.19
June.....	3,060	1,340	1,990	118,000	+32,700	-	151,000	2,540	5.08	5.67
July.....	2,990	1,660	2,600	160,000	-88,400	-	71,600	1,160	2.32	2.68
August....	3,200	2,450	2,810	173,000	-138,000	-	35,000	569	1.14	1.31
September	2,710	1,140	2,010	120,000	-51,700	-	68,300	1,150	2.30	2.57
The year	4,580	511	1,610	1,170,000	-22,200	-	1,150,000	1,580	3.16	43.07
1920-21										
October..	3,490	757	1,720	106,000	+23,900	-	130,000	2,110	4.22	4.86
November.	1,240	320	758	45,100	+32,900	-	78,000	1,310	2.62	2.92
December.	3,200	416	776	47,700	+34,900	-	82,600	1,340	2.68	3.09
January..	4,480	717	1,570	96,500	+46,900	-	143,000	2,330	4.66	5.37
February.	3,930	605	1,680	93,300	+46,500	-	140,000	2,520	5.04	5.25
March....	3,840	1,600	3,000	184,000	-29,200	-	155,000	2,520	5.04	5.81
April.....	4,380	1,440	2,220	132,000	+43,400	-	175,000	2,940	5.88	6.56
May.....	8,690	1,880	4,940	304,000	+46,100	-	350,000	5,690	11.4	13.14
June.....	8,430	2,710	5,290	315,000	+22,400	-	337,000	5,660	11.3	12.61
July.....	2,920	1,820	2,250	138,000	-17,000	-	121,000	1,970	3.94	4.54
August....	3,280	2,710	3,020	186,000	-150,000	-	36,000	585	1.17	1.35
September	2,990	1,200	1,910	114,000	-68,500	-	45,500	765	1.53	1.71
The year	8,690	320	2,430	1,760,000	+32,300	-	1,790,000	2,480	4.96	67.21
1921-22										
October..	2,190	445	957	58,800	+8,440	-	67,200	1,090	2.18	2.51
November.	1,710	554	807	48,000	+24,800	-	72,800	1,220	2.44	2.72
December.	17,100	803	3,080	189,000	+101,000	-	290,000	4,720	9.44	10.88
January..	825	197	612	37,600	+3,400	-	41,000	667	1.33	1.53
February.	220	183	195	10,800	+14,900	-	25,700	463	.926	.96
March....	460	178	240	14,800	+13,000	-	27,800	452	.904	1.04
April.....	2,670	580	1,260	75,000	+18,400	-	93,400	1,570	3.14	3.50
May.....	8,550	1,910	3,970	244,000	+48,600	-	293,000	4,770	9.54	11.00
June.....	9,050	2,090	4,120	245,000	+20,800	-	266,000	4,470	8.94	9.97
July.....	3,560	2,400	3,170	195,000	-142,000	-	53,000	862	1.72	1.98
August....	3,100	2,470	2,780	171,000	-144,000	-	27,000	439	.878	1.01
September	2,600	1,070	1,690	101,000	-76,200	-	24,800	417	.834	.93
The year	17,100	178	1,920	1,390,000	-109,000	-	1,280,000	1,770	3.54	48.03
1922-23										
October..	1,050	200	466	28,700	-3,600	-	25,100	408	.816	.94
November.	425	265	318	18,900	+20,200	-	39,100	657	1.31	1.46
December.	1,210	262	437	26,800	+44,100	-	70,900	1,150	2.30	2.65
January..	6,620	592	1,830	112,000	+63,900	-	176,000	2,860	5.72	6.60
February.	611	406	520	28,900	+11,600	-	40,500	729	1.46	1.52
March....	2,210	406	753	46,300	+19,400	-	65,700	1,070	2.14	2.47
April.....	4,180	2,210	2,890	172,000	+63,400	-	235,000	3,950	7.90	8.81
May.....	6,850	2,150	3,920	241,000	+88,100	-	329,000	5,350	10.7	12.34
June.....	5,970	2,280	3,540	199,000	+40,400	-	239,000	4,020	8.04	8.97
July.....	3,480	1,740	2,500	154,000	-44,600	-	109,000	1,770	3.54	4.08
August....	3,480	2,340	2,850	175,000	-167,000	-	8,000	130	.260	.30
September	2,470	534	1,930	115,000	-103,000	-	12,000	202	.404	.45
The year	6,850	200	1,820	1,320,000	+32,900	-	1,350,000	1,860	3.72	50.59

Monthly discharge of Yakima River at Cle Elum--Continued

Month	Observed			Gain or loss in storage in Keechelus, Kachess, and Cle Elum Lakes (acre-feet)	Diverted by Kittitas canal (acre-feet)	Adjusted for storage and diversions				
	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
1923-24										
October..	610	235	374	23,000	+12,400	-	35,400	576	1.15	1.33
November..	652	144	341	20,300	+36,000	-	56,000	946	1.89	2.11
December..	1,600	449	840	51,700	+42,400	-	94,100	1,530	3.06	3.53
January..	1,650	574	839	51,600	+28,600	-	80,200	1,300	2.60	3.00
February..	8,350	895	2,210	127,000	+65,600	-	193,000	3,360	6.72	7.25
March....	1,410	786	1,050	64,900	+21,000	-	85,900	1,400	2.80	3.23
April.....	2,440	752	1,650	97,900	+37,100	-	135,000	2,270	4.54	5.06
May.....	7,630	2,440	4,390	270,000	+84,800	-	355,000	5,770	11.5	13.26
June.....	3,450	2,080	2,660	158,000	-25,200	-	133,000	2,240	4.48	5.00
July.....	3,370	2,910	3,110	191,000	-136,000	-	55,000	894	1.79	2.06
August....	3,130	2,380	2,790	171,000	-144,000	-	27,000	439	.878	1.01
September	2,560	739	1,460	86,900	-66,800	-	20,100	338	.676	.75
The year	8,350	144	1,810	1,310,000	-44,100	-	1,270,000	1,750	3.50	47.59
1924-25										
October..	752	298	443	27,300	+22,800	-	50,100	815	1.63	1.88
November..	758	310	450	26,700	+35,200	-	61,900	1,040	2.08	2.32
December..	6,690	400	1,780	109,000	+61,800	-	171,000	2,780	5.56	6.41
January..	1,110	562	759	46,600	+29,600	-	76,200	1,240	2.48	2.86
February..	2,630	835	1,330	73,600	+38,800	-	112,000	2,020	4.04	4.21
March....	1,650	902	1,200	73,700	+24,600	-	98,300	1,600	3.20	3.69
April.....	6,030	1,240	2,920	174,000	+65,100	-	239,000	4,020	8.04	8.97
May.....	8,350	2,630	4,790	294,000	+73,600	-	368,000	5,980	12.0	13.83
June.....	3,450	2,140	2,650	158,000	+23,700	-	182,000	3,060	6.12	6.83
July.....	2,440	1,920	2,200	135,000	-64,100	-	70,900	1,150	2.30	2.65
August....	3,060	2,500	2,770	170,000	-144,000	-	26,000	423	.846	.98
September	2,560	786	1,820	108,000	-88,600	-	19,400	326	.652	.73
The year	8,350	298	1,930	1,400,000	+78,500	-	1,470,000	2,040	4.08	55.36
1925-26										
October..	700	186	349	21,500	+4,070	-	25,600	416	.832	.96
November..	454	282	354	21,100	+14,900	-	36,000	605	1.21	1.35
December..	2,770	270	1,210	74,600	+77,600	-	152,000	2,470	4.94	5.70
January..	1,650	550	920	56,500	+25,800	-	82,300	1,340	2.68	3.09
February..	1,280	508	825	45,800	+24,600	-	70,400	1,270	2.54	2.64
March....	2,700	934	1,680	103,000	+49,500	-	152,000	2,470	4.94	5.70
April.....	3,700	1,320	2,330	139,000	+60,500	-	200,000	3,360	6.72	7.50
May.....	2,770	1,800	1,890	116,000	+12,800	-	129,000	2,100	4.20	4.84
June.....	3,060	1,920	2,670	159,000	-102,000	-	57,000	958	1.92	2.14
July.....	3,060	2,700	2,940	181,000	-154,000	-	27,000	439	.878	1.01
August....	2,700	918	1,750	107,000	-88,800	-	18,200	296	.592	.68
September	910	274	541	32,200	-7,640	-	24,600	413	.826	.92
The year	3,700	186	1,460	1,060,000	-82,700	-	974,000	1,350	2.70	36.53
1926-27										
October..	1,320	278	710	43,600	+46,200	-	89,800	1,460	2.92	3.37
November..	1,700	466	841	50,000	+26,800	-	76,800	1,290	2.58	2.88
December..	2,630	713	1,300	79,900	+35,000	-	115,000	1,870	3.74	4.31
January..	990	405	660	40,500	+14,700	-	55,200	898	1.80	2.08
February..	670	360	498	27,600	+12,500	-	40,100	722	1.44	1.50
March....	1,030	520	685	42,100	+12,800	-	54,900	893	1.79	2.06
April.....	5,610	942	1,890	113,000	+41,500	-	154,000	2,590	5.18	5.78
May.....	6,690	2,880	3,600	222,000	+85,000	-	307,000	4,990	9.98	11.51
June.....	7,150	2,770	4,790	285,000	+72,500	-	358,000	6,020	12.0	13.39
July.....	2,500	1,600	2,180	134,000	-28,900	-	105,000	1,710	3.42	3.94
August....	2,500	2,030	2,310	142,000	-109,000	-	33,000	537	1.07	1.23
September	2,260	574	1,950	116,000	-70,500	-	45,500	765	1.53	1.71
The year	7,150	278	1,790	1,290,000	+139,000	-	1,430,000	1,980	3.96	53.76
1927-28										
October..	2,500	958	1,680	103,000	+17,500	-	120,000	1,950	3.90	4.50
November..	5,200	918	2,370	141,000	+88,200	-	229,000	3,850	7.70	8.59
December..	7,150	1,070	3,090	190,000	-30,800	-	159,000	2,590	5.18	5.97
January..	10,000	835	2,640	162,000	+10,200	-	172,000	2,900	5.60	6.46
February..	1,340	705	998	57,400	-12,500	-	44,900	781	1.56	1.68
March....	3,380	671	1,660	102,000	+32,800	-	135,000	2,200	4.40	5.07
April.....	3,810	1,200	1,940	115,000	+35,200	-	150,000	2,520	5.04	5.62
May.....	7,310	2,090	4,910	302,000	+89,400	-	391,000	6,360	12.7	14.64
June.....	3,220	1,970	2,630	157,000	+9,870	-	167,000	2,810	5.62	6.27
July.....	2,850	2,030	2,550	157,000	-94,400	-	62,600	1,020	2.04	2.35
August....	3,140	1,480	2,670	164,000	-142,000	-	22,000	358	.716	.83
September	1,430	506	983	58,500	-44,300	-	14,200	239	.478	.53
The year	10,000	506	2,350	1,710,000	-40,800	-	1,670,000	2,300	4.60	62.51

Monthly discharge of Yakima River at Cle Elum--Continued

Month	Observed			Run-off in acre-feet	Gain or loss in storage in Keechelus, Kachess, and Cle Elum Lakes (acre-feet)	Divert- ed by Kittitas canal (acre- feet)	Adjusted for storage and diversions			
	Discharge in second-feet		Run-off in acre-feet				Run-off in acre-feet	Discharge in second-feet		Run- off in inches
	Maxi- mum	Mini- mum						Mean	Mean	
1928-29										
October..	800	452	616	37,900	+27,100	-	65,000	1,060	2.12	2.44
November..	448	261	341	20,300	+18,500	-	38,800	652	1.30	1.45
December..	303	151	230	14,200	+18,400	-	32,600	530	1.06	1.22
January..	422	151	281	17,300	+5,380	-	22,700	369	.738	.85
February..	237	164	204	11,300	+9,550	-	20,800	375	.750	.78
March....	1,360	265	779	47,900	+24,200	-	72,100	1,170	2.34	2.70
April....	3,120	801	1,300	77,600	+27,900	-	106,000	1,780	3.56	3.97
May.....	5,330	2,410	3,620	222,000	+94,000	-	316,000	5,140	10.3	11.87
June.....	4,050	1,760	2,790	166,000	+52,300	-	218,000	3,660	7.32	8.17
July.....	3,650	2,480	2,880	177,000	-101,000	-	76,000	1,240	2.48	2.86
August....	3,270	841	2,050	126,000	-96,000	-	30,000	488	.976	1.13
September	1,270	601	972	57,800	-43,600	-	14,200	239	.478	.53
The year	5,330	151	1,350	976,000	+36,700	-	1,010,000	1,400	2.80	37.97
1929-30										
October..	762	70	422	25,900	-16,100	-	9,800	159	.318	.37
November..	177	66	94.2	5,610	+7,620	-	13,200	222	.444	.50
December..	253	76	157	9,670	+22,000	-	31,700	516	1.03	1.19
January..	448	230	323	19,900	+10,200	-	30,100	490	.980	1.13
February..	2,560	443	1,060	59,000	+44,400	-	103,000	1,850	3.70	3.85
March....	4,220	534	1,380	85,000	+39,200	-	124,000	2,020	4.04	4.66
April....	4,490	2,370	3,130	186,000	+69,600	-	256,000	4,300	8.60	9.60
May.....	3,140	1,630	2,220	136,000	+32,900	5,820	175,000	2,850	5.70	6.57
June.....	2,840	1,300	1,780	106,000	-9,770	9,180	105,000	1,760	3.52	3.93
July.....	3,210	2,630	2,920	180,000	-146,000	13,300	47,300	769	1.54	1.78
August....	2,980	482	1,910	117,000	-110,000	17,700	24,700	402	.804	.93
September	1,050	174	690	41,100	-59,200	31,800	13,700	230	.460	.51
The year	4,490	66	1,340	972,000	-115,000	77,800	934,000	1,290	2.58	35.02
1930-31										
October..	558	138	338	20,800	+9,310	3,310	33,400	543	1.09	1.26
November..	360	142	233	13,800	+29,200	-	43,000	723	1.45	1.62
December..	300	162	239	14,700	+10,000	-	24,700	402	.804	.93
January..	2,160	166	404	24,800	+24,400	-	49,200	800	1.60	1.84
February..	1,520	548	840	46,700	+24,400	-	71,100	1,280	2.56	2.67
March....	2,530	575	1,140	69,900	+44,100	-	114,000	1,850	3.70	4.27
April....	5,580	1,260	1,900	113,000	+53,400	168	167,000	2,810	5.62	6.27
May.....	6,820	1,880	3,500	215,000	+77,200	3,970	296,000	4,810	9.62	11.09
June.....	2,530	1,060	1,860	111,000	-10,200	23,300	124,000	2,080	4.16	4.64
July.....	2,660	1,670	2,250	138,000	-139,000	34,500	33,500	545	1.09	1.26
August....	1,930	1,300	1,560	95,800	-111,000	21,200	6,000	97.6	.195	.22
September	1,300	406	706	42,000	-37,900	5,650	9,750	164	.328	.37
The year	6,820	138	1,250	905,000	-26,100	92,100	972,000	1,340	2.68	36.44
1931-32										
October..	915	193	453	27,900	+31,900	-	59,800	973	1.95	2.25
November..	1,060	470	811	48,200	+30,000	-	78,200	1,300	2.62	2.92
December..	455	330	380	33,400	+14,500	-	47,900	779	1.56	1.80
January..	2,130	322	848	52,100	+30,800	-	82,900	1,350	2.70	3.11
February..	8,730	303	1,200	68,900	+62,600	-	132,000	2,290	4.58	4.94
March....	5,880	1,260	2,670	164,000	+54,300	-	218,000	3,550	7.10	8.19
April....	3,880	1,850	2,720	162,000	+70,600	-	233,000	3,920	7.84	8.75
May.....	5,480	2,590	4,330	266,000	+62,700	7,390	336,000	5,460	10.9	12.57
June.....	5,880	2,260	3,780	225,000	+33,200	24,800	283,000	4,760	9.52	10.62
July.....	2,660	2,020	2,250	138,000	-65,100	36,800	110,000	1,790	3.58	4.13
August....	2,730	1,960	2,500	154,000	-140,000	27,300	41,300	672	1.34	1.54
September	2,070	1,170	1,480	88,000	-86,700	22,300	23,600	397	.794	.89
The year	8,730	193	1,950	1,420,000	+98,800	119,000	1,650,000	2,270	4.54	61.71
1932-33										
October..	1,050	266	605	37,200	+440	9,960	47,600	774	1.55	1.79
November..	4,060	539	1,170	69,400	+213,000	-	282,000	4,740	9.48	10.58
December..	3,720	539	2,180	134,000	+19,900	-	154,000	2,500	5.00	5.76
January..	5,680	1,400	2,940	181,000	-40,800	-	140,000	2,280	4.56	5.26
February..	1,350	716	1,000	55,600	-10,700	-	44,900	808	1.62	1.69
March....	1,440	551	1,040	63,900	-9,860	-	54,000	878	1.76	2.03
April....	4,500	932	1,970	117,000	+37,600	-	155,000	2,600	5.20	5.80
May.....	4,780	3,470	3,900	240,000	+40,100	5,830	286,000	4,650	9.30	10.72
June.....	5,680	3,800	4,500	268,000	+112,000	22,300	402,000	6,760	13.5	15.06
July.....	4,230	1,990	3,460	213,000	-38,400	41,700	216,000	3,510	7.02	8.09
August....	2,800	1,740	2,270	139,000	-105,000	33,300	67,300	1,090	2.18	2.51
September	2,450	1,640	1,900	113,000	-77,100	19,100	55,000	924	1.85	2.06
The year	5,680	266	2,250	1,630,000	+141,000	132,000	1,900,000	2,620	5.24	71.53

Monthly discharge of Yakima River at Cle Elum--Continued

Month	Observed				Gain or loss in storage in Keechelus, Kachess, and Cle Elum Lakes - (acre-feet)	Diverted by Kitchikan canal (acre-feet)	Adjusted for storage and diversions			
	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	
1933-34										
October..	2,130	432	1,280	78,900	+99,540	10,310	188,800	3,071	6.14	7.08
November..	2,730	568	1,340	79,400	+100,500	-	179,900	3,023	6.05	6.75
December..	12,300	2,130	5,930	365,000	+83,410	-	448,400	7,293	14.6	16.83
January..	7,410	2,620	4,800	295,000	-61,920	-	233,100	3,791	7.58	8.74
February..	4,890	644	3,130	174,000	-35,990	-	138,000	2,485	4.97	5.18
March....	5,630	735	1,620	99,500	+182,500	-	282,000	4,586	9.17	10.57
April.....	6,200	858	4,910	292,000	+33,930	6,390	332,300	5,584	11.2	12.50
May.....	4,530	858	3,110	191,000	-19,260	28,100	199,800	3,249	6.50	7.49
June.....	2,210	1,300	1,790	107,000	-62,500	48,070	92,570	1,556	3.11	3.47
July.....	2,210	2,020	2,100	129,000	-141,000	50,790	38,790	631	1.26	1.45
August....	2,210	2,080	2,130	131,000	-146,600	38,050	22,450	365	.730	.84
September	2,210	756	1,420	84,500	-91,410	30,290	23,380	393	.786	.88
The year	12,300	432	2,800	2,026,000	-58,800	212,000	2,179,000	3,010	6.02	81.78
1934-35										
October..	1,960	136	582	35,780	+47,860	10,360	94,000	1,529	3.06	3.53
November..	1,500	410	648	38,570	+145,000	-	183,600	3,086	6.17	6.88
December..	1,610	328	772	47,450	+65,840	-	113,300	1,843	3.69	4.25
January..	7,000	594	2,179	134,000	+96,600	-	230,600	3,750	7.50	8.65
February..	5,440	1,300	2,797	155,300	-39,990	-	115,300	2,076	4.15	4.32
March....	1,300	782	981	60,290	+39,490	-	99,780	1,623	3.25	3.75
April.....	2,660	803	1,553	92,400	+27,900	597	120,900	2,032	4.06	4.53
May.....	5,490	1,170	3,165	194,600	+90,550	24,470	309,600	5,035	10.1	11.64
June.....	4,830	2,270	3,483	207,200	+10,980	34,930	253,100	4,253	8.51	9.50
July.....	2,510	1,610	2,030	124,800	-77,770	53,800	100,800	1,639	3.28	3.78
August....	2,480	2,020	2,277	140,000	-138,600	38,680	40,080	652	1.30	1.50
September	2,550	1,200	2,052	122,100	-127,300	34,270	29,070	489	.978	1.09
The year	7,000	136	1,868	1,352,000	+140,600	197,100	1,690,000	2,335	4.67	63.42

Yearly discharge of Yakima River at Cle Elum (adjusted for storage and diversion)

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1907.....	2,310	4.62	62.60	1,670,000	1,780	3.56	48.20	1,290,000
1908.....	2,020	4.04	54.84	1,460,000	2,020	4.04	54.95	1,470,000
1909.....	1,550	3.10	42.01	1,120,000	2,090	4.18	56.67	1,510,000
1910.....	2,510	5.02	68.25	1,820,000	2,320	4.64	63.12	1,680,000
1911.....	1,810	3.62	49.17	1,310,000	1,670	3.34	45.42	1,210,000
1912.....	1,940	3.88	52.68	1,410,000	1,760	3.52	47.81	1,280,000
1913.....	2,210	4.42	59.95	1,600,000	2,260	4.52	61.46	1,640,000
1914.....	1,310	3.62	49.30	1,310,000	1,870	3.74	50.68	1,350,000
1915.....	1,140	2.28	30.94	825,000	1,070	2.14	29.16	778,000
1916.....	2,690	5.38	73.00	1,950,000	2,560	5.12	69.59	1,860,000
1917.....	2,060	4.12	55.35	1,490,000	2,610	5.22	70.71	1,890,000
1918.....	2,400	4.80	65.14	1,740,000	2,170	4.34	58.85	1,570,000
1919.....	2,120	4.24	57.50	1,550,000	1,990	3.98	53.85	1,440,000
1920.....	1,580	3.16	43.07	1,150,000	1,660	3.32	45.20	1,210,000
1921.....	2,430	4.96	67.21	1,790,000	2,670	5.34	72.45	1,930,000
1922.....	1,770	3.54	48.03	1,280,000	1,360	2.72	36.97	987,000
1923.....	1,860	3.72	50.59	1,350,000	1,930	3.86	52.51	1,400,000
1924.....	1,750	3.50	47.59	1,270,000	1,880	3.76	51.23	1,370,000
1925.....	2,040	4.08	55.36	1,470,000	1,940	3.88	52.08	1,410,000
1926.....	1,350	2.70	36.53	974,000	1,440	2.88	39.08	1,040,000
1927.....	1,980	3.96	53.76	1,430,000	2,290	4.58	62.26	1,660,000
1928.....	2,300	4.60	62.51	1,670,000	1,780	3.56	48.56	1,300,000
1929.....	1,400	2.80	37.97	1,010,000	1,290	2.58	34.92	930,000
1930.....	1,290	2.58	35.02	934,000	1,350	2.70	36.77	980,000
1931.....	1,340	2.68	36.44	972,000	1,460	2.92	39.60	1,060,000
1932.....	2,270	4.54	61.71	1,650,000	2,680	5.36	72.87	1,940,000
1933.....	2,620	5.24	71.35	1,900,000	3,090	6.18	83.88	2,240,000
1934.....	3,010	6.02	81.78	2,179,000	2,422	4.84	65.78	1,755,000
1935.....	2,335	4.67	63.42	1,690,000	-	-	-	-
Highest.....	3,010	6.02	81.78	2,179,000	3,090	6.18	83.88	2,240,000
Average.....	2,000	4.00	54.26	1,450,000	1,980	3.96	53.76	1,430,000
Lowest.....	1,140	2.28	30.94	825,000	1,070	2.14	29.16	778,000

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. Prior to Sept. 28, 1911, staff and chain gages were used.

Drainage area.- 1,620 square miles.

Records available.- August 1906 to September 1935 (records 1916-31 for irrigation seasons only). Records 1922-35, not previously published, furnished by Bureau of Reclamation.

Extremes.- Maximum discharge, about 41,000 second-feet Nov. 15 or 16, 1906 (stage determined from floodmarks); minimum, 138 second-feet Oct. 3, 1915.

Remarks.- Water diverted above gage for irrigation. Flow partly regulated by storage in Keechelus Lake, Kachess Lake, and Cle Elum Lake Reservoirs.

Monthly discharge of Yakima River at Umtanum

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1920				
March.....	2,160	820	1,240	76,200
April.....	2,420	1,030	1,540	91,600
May.....	4,380	1,560	2,580	159,000
June.....	3,000	1,440	1,930	115,000
July.....	2,800	1,350	2,340	144,000
August.....	3,100	2,110	2,510	154,000
September.....	2,800	1,340	2,060	123,000
The period.....	-	-	-	863,000
1920-21				
October.....	3,880	1,440	2,090	129,000
April.....	6,540	2,790	3,970	256,000
May.....	11,700	2,790	6,940	427,000
June.....	9,700	3,200	6,340	377,000
July.....	3,420	1,610	2,280	140,000
August.....	3,510	2,430	2,940	181,000
September.....	3,100	1,100	1,890	112,000
1921-22				
October.....	2,430	636	1,070	65,800
April.....	4,490	1,330	2,500	149,000
May.....	10,500	3,080	5,290	325,000
June.....	9,930	1,860	4,500	268,000
July.....	3,500	1,760	2,890	178,000
August.....	2,870	2,220	2,550	157,000
September.....	2,590	986	1,570	93,400
1922-23				
October.....	955	405	601	37,000
April.....	7,580	3,880	5,370	320,000
May.....	9,330	2,870	5,370	330,000
June.....	6,850	2,130	3,790	226,000
July.....	2,980	1,580	2,300	142,000
August.....	3,530	2,300	2,920	179,000
September.....	2,480	1,070	1,940	116,000
1923-24				
October.....	770	465	574	35,300
April.....	3,760	1,260	2,400	143,000
May.....	9,630	2,670	5,420	333,000
June.....	3,500	2,000	2,480	147,000
July.....	2,870	2,480	2,640	162,000
August.....	2,770	1,970	2,400	147,000
September.....	2,130	752	1,320	78,500
1924-25				
October.....	752	394	510	31,400
April.....	9,030	2,220	4,710	280,000
May.....	9,630	3,300	6,170	379,000
June.....	3,530	2,090	2,770	165,000
July.....	2,090	1,600	1,830	112,000
August.....	2,920	2,230	2,540	156,000
September.....	2,710	895	1,830	109,000
1925-26				
October.....	853	226	434	26,700
March 30-31.....	-	-	2,820	11,200
April.....	4,960	1,760	2,950	175,000
May.....	3,130	1,180	1,930	118,000
June.....	2,710	1,760	2,400	143,000
July.....	2,920	2,420	2,600	160,000
August.....	2,420	714	1,560	95,600
September.....	714	226	440	26,100

*Erroneously published as sec. 30 in Water-Supply Papers 442, 462, 482, 512, and 532.

Monthly discharge of Yakima River at Umtanum--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1926-27				
October.....	1,470	233	780	48,000
March 28-31.....	-	-	2,260	17,900
April.....	8,640	1,800	3,480	207,000
May.....	8,640	3,360	4,880	300,000
June.....	8,370	3,060	5,390	320,000
July.....	2,670	1,590	2,040	125,000
August.....	2,230	1,960	2,120	130,000
September.....	2,320	704	1,950	116,000
1927-28				
October.....	2,770	1,190	1,990	122,000
November 1-6.....	3,160	1,150	1,660	19,800
April.....	5,200	2,150	3,060	182,000
May.....	7,830	2,770	5,770	355,000
June.....	3,570	1,920	2,670	159,000
July.....	2,580	1,920	2,310	142,000
August.....	2,770	1,430	2,430	150,000
September.....	1,530	507	983	58,500
1928-29				
October.....	991	418	724	44,500
April.....	3,420	1,120	1,680	99,700
May.....	6,120	2,740	4,060	250,000
June.....	4,300	1,960	2,900	172,000
July.....	3,020	2,200	2,470	152,000
August.....	2,920	696	1,800	111,000
September.....	1,150	643	789	47,000
1929-30				
October.....	705	201	502	30,900
April.....	4,960	2,960	3,880	231,000
May.....	2,960	1,800	2,360	145,000
June.....	2,670	1,010	1,740	104,000
July.....	3,060	2,490	2,690	166,000
August.....	2,670	743	1,830	112,000
September.....	1,220	743	1,010	60,300
1930-31				
October.....	772	314	531	32,600
March 4-31.....	3,160	948	1,600	88,600
April.....	5,710	1,640	2,360	140,000
May.....	6,760	1,890	3,560	219,000
June.....	2,960	1,320	1,930	115,000
July.....	2,400	1,690	2,040	126,000
August.....	1,890	1,390	1,560	96,000
September.....	1,370	485	839	49,900
1931-32				
October.....	980	406	583	35,900
November.....	1,310	782	1,040	62,100
December.....	668	508	563	34,600
January.....	3,570	478	1,270	77,900
February.....	12,000	581	1,870	108,000
March.....	8,960	2,230	4,680	288,000
April.....	6,340	3,270	4,530	270,000
May.....	7,140	3,270	5,510	339,000
June.....	6,470	2,410	4,260	254,000
July.....	2,680	1,940	2,170	133,000
August.....	2,780	1,950	2,400	147,000
September.....	2,020	1,230	1,480	88,300
The year.....	12,000	406	2,530	1,840,000
1932-33				
October.....	1,260	548	847	52,100
November.....	5,820	849	1,890	113,000
December.....	3,800	1,170	2,730	168,000
January.....	6,610	1,820	3,450	212,000
February.....	1,740	1,050	1,310	72,900
March.....	2,230	1,060	1,690	104,000
April.....	8,120	2,120	3,880	231,000
May.....	6,610	4,130	5,240	322,000
June.....	7,490	4,470	5,720	340,000
July.....	5,060	1,980	3,830	236,000
August.....	3,070	2,000	2,330	143,000
September.....	2,500	1,690	2,030	121,000
The year.....	8,120	548	2,920	2,120,000

Monthly discharge of Yakima River at Umanum--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1933-34				
October.....	2,970	898	1,650	101,000
November.....	5,190	1,290	2,020	120,000
December.....	29,600	2,410	9,210	567,000
January.....	11,000	3,800	7,170	441,000
February.....	7,490	1,920	4,720	262,000
March.....	8,120	1,890	3,930	242,000
April.....	8,790	3,370	6,940	413,000
May.....	5,950	1,500	3,760	231,000
June.....	3,070	1,630	1,920	114,000
July.....	2,230	2,080	2,120	130,000
August.....	2,410	2,000	2,160	133,000
September.....	2,230	968	1,590	94,400
The year.....	29,600	898	3,930	2,850,000
1934-35				
October.....	3,270	342	979	60,200
November.....	2,870	1,020	1,450	86,300
December.....	2,970	782	1,370	83,900
January.....	13,400	811	3,590	221,000
February.....	7,490	2,080	4,040	224,000
March.....	2,970	1,350	1,870	115,000
April.....	4,820	1,540	3,030	180,000
May.....	7,190	2,500	4,810	296,000
June.....	6,480	2,590	4,360	259,000
July.....	2,970	1,740	2,090	129,000
August.....	2,500	2,080	2,300	141,000
September.....	2,590	1,440	2,150	128,000
The year.....	13,400	342	2,660	1,920,000

Yearly discharge of Yakima River at Umanum

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1907.....	3,280	-	-	2,380,000	2,450	-	-	1,770,000
1908.....	2,410	-	-	1,750,000	2,360	-	-	1,720,000
1909.....	1,920	-	-	1,310,000	2,570	-	-	1,860,000
1910.....	3,450	-	-	2,490,000	3,080	-	-	2,230,000
1911.....	2,000	-	-	1,450,000	1,860	-	-	1,350,000
1912.....	2,440	-	-	1,770,000	2,280	-	-	1,660,000
1913.....	2,660	-	-	1,930,000	2,750	-	-	1,990,000
1914.....	2,250	-	-	1,630,000	2,300	-	-	1,670,000
1915.....	1,460	-	-	1,060,000	-	-	-	-
1932.....	2,530	-	-	1,940,000	2,810	-	-	2,040,000
1933.....	2,920	-	-	2,120,000	3,550	-	-	2,570,000
1934.....	3,930	-	-	2,850,000	3,160	-	-	2,290,000
1935.....	2,660	-	-	1,920,000	-	-	-	-
Highest.....	3,930	-	-	2,850,000	3,550	-	-	2,570,000
Average.....	2,600	-	-	1,880,000	2,650	-	-	1,920,000
Lowest.....	1,460	-	-	1,060,000	1,860	-	-	1,350,000

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. Prior to Aug. 17, 1915, hook, staff, and chain gages were used.

Drainage area.- 5,560 square miles.

Records available.- April 1908 to September 1921, October 1931 to September 1935. Records October 1921 to September 1931 not previously published, furnished by Bureau of Reclamation.

Extremes.- Maximum discharge, 54,300 second-feet 6-7 a.m. Dec. 23, 1933 (stage determined from floodmarks); practically no flow on several days during latter part of irrigation seasons as result of diversions.

Remarks.- Water diverted above gage for irrigation of a large acreage. Flow partly regulated by diversions and by storage in Keechelus Lake, Kachess Lake, Cle Elum Lake, Bumping Lake, and Tieton Reservoirs. October 1919 to September 1935, totals are comparable with monthly results previously determined for Yakima River at Union Gap, near Yakima.

Monthly discharge of Yakima River near Parker

Month	Mean discharge in second-feet						Gain or loss by storage upstream (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
1919-20									
October..	524	10	220	18	543	1,320	-432	888	54,600
November..	1,900	-	-	-	50	1,930	+909	2,840	169,000
December..	2,150	-	-	-	-	2,150	+492	2,620	161,000
January..	5,040	-	-	-	-	5,040	+1,010	4,050	249,000
February..	2,490	-	-	-	-	2,490	+308	2,800	161,000
March....	2,100	-	-	-	4	2,100	+566	2,470	152,000
April.....	1,120	31	264	154	787	2,360	+475	2,840	169,000
May.....	1,450	46	1,120	252	1,180	4,050	+983	5,030	309,000
June.....	964	46	1,000	219	1,140	3,370	+678	4,050	241,000
July.....	482	43	1,070	166	1,140	2,900	-1,530	1,370	84,200
August....	374	44	968	143	1,230	2,760	-2,530	230	14,100
September	905	34	658	100	909	2,610	-976	1,630	97,000
The year	1,450	-	-	-	-	2,590	-25	2,560	1,860,000
1920-21									
October..	2,540	16	92	28	496	3,170	+547	3,720	229,000
November..	2,400	-	-	-	-	2,400	+547	2,950	176,000
December..	2,250	-	-	-	-	2,250	+457	2,710	167,000
January..	4,540	-	-	-	-	4,540	+734	5,270	324,000
February..	5,400	-	-	-	-	5,400	+835	6,240	347,000
March....	8,050	-	-	-	99	8,150	-583	7,570	465,000
April.....	5,500	28	477	184	938	7,130	+754	7,980	469,000
May.....	9,340	44	1,180	224	1,210	12,000	+1,160	13,200	812,000
June.....	9,340	43	1,170	262	1,200	12,500	+510	13,000	774,000
July.....	1,650	44	1,170	194	1,240	4,300	-265	4,040	248,000
August....	710	46	1,170	152	1,240	3,320	-2,640	680	41,800
September	670	32	687	92	936	2,420	-1,410	1,010	60,100
The year	4,400	-	-	-	-	5,630	+47	5,680	4,110,000
1921-22									
October..	961	14	177	-	495	1,650	+88	1,740	107,000
November..	1,950	-	-	-	-	1,950	+419	2,370	141,000
December..	7,070	-	-	-	-	7,070	+1,910	8,980	552,000
January..	2,070	-	-	-	-	2,070	-205	1,860	114,000
February..	1,260	-	-	-	-	1,260	+154	1,410	78,300
March....	1,380	-	-	-	22	1,400	+199	1,600	98,400
April.....	3,280	11	195	90	621	4,200	+327	4,530	270,000
May.....	5,940	43	1,240	286	1,220	8,730	+1,100	9,830	604,000
June.....	5,770	47	1,330	272	1,250	8,670	+608	9,280	552,000
July.....	650	46	1,300	234	1,300	3,530	-2,360	1,170	71,900
August....	323	44	1,130	190	1,260	2,950	-2,650	300	18,400
September	123	34	691	132	975	1,960	-1,500	460	27,400
The year	2,570	-	-	-	-	3,800	-163	3,640	2,630,000
1922-23									
October..	397	10	104	-	495	1,010	-49	961	59,100
November..	877	-	-	-	-	877	+354	1,230	73,200
December..	1,330	-	-	-	-	1,330	+844	2,170	133,000
January..	4,350	-	-	-	-	4,350	+1,170	5,520	339,000
February..	2,010	-	-	-	-	2,010	-16	1,990	111,000
March....	2,670	-	-	-	137	2,310	+242	3,050	188,000
April.....	6,990	36	568	143	934	8,670	+1,310	9,980	594,000
May.....	6,500	47	1,520	252	1,200	9,520	+1,760	11,300	695,000
June.....	4,560	43	1,340	134	1,200	7,280	+688	7,970	474,000
July.....	1,530	48	1,220	162	1,250	4,210	-718	3,490	215,000
August....	767	47	1,200	152	1,240	3,410	-2,950	460	28,300
September	367	36	929	117	996	2,440	-2,000	440	26,200
The year	2,700	-	-	-	-	4,000	+54	4,050	2,940,000

Monthly discharge of Yakima River near Parker--Continued

Month	Mean discharge in second-feet					Combined flow, Yakima River and canals	Gain or loss by storage upstream (second-feet)	Combined flow of Yakima River and canals adjusted for upstream storage	
	Yakima River near Parker	Union Gap canal (estimated)	New Reservoir canal	Old Reservoir canal	Sunny-side canal			Second-feet	Run-off in acre-feet
1923-24									
October..	824	11	-	2	330	1,170	+196	1,370	84,200
November.	1,120	-	-	-	-	1,120	+695	1,320	108,000
December.	2,190	-	-	-	-	2,190	+702	2,890	178,000
January..	2,300	-	-	-	-	2,300	+426	2,730	168,000
February.	7,030	-	-	-	-	7,030	+1,340	8,370	481,000
March....	3,100	-	266	-	278	3,650	+185	3,840	236,000
April....	1,350	42	1,300	89	1,060	3,840	+633	4,470	266,000
May.....	5,980	48	1,450	153	1,240	8,870	+1,760	10,600	652,000
June.....	800	48	1,390	77	1,280	3,600	-414	3,190	190,000
July.....	211	50	1,330	40	1,300	2,930	-2,430	500	30,700
August....	169	42	1,210	38	1,240	2,700	-2,620	80	4,920
September	50	24	740	23	789	1,630	-1,210	420	25,000
The year	2,080	0	-	-	-	3,410	-69	3,340	2,420,000
1924-25									
October..	320	9	380	3	281	993	+576	1,570	96,500
November.	1,290	-	-	-	-	1,290	+937	2,230	133,000
December.	3,360	-	-	-	-	3,360	+1,290	5,150	317,000
January..	2,060	-	-	-	-	2,060	+681	2,740	166,000
February.	3,590	-	-	-	-	3,590	+1,080	4,670	259,000
March....	2,800	1	357	30	314	3,500	+594	4,090	251,000
April....	5,530	33	957	112	1,030	7,660	+1,450	9,110	542,000
May.....	7,940	50	1,620	161	1,220	10,100	+1,460	11,600	713,000
June.....	2,340	51	1,450	134	1,250	5,220	+465	5,680	338,000
July.....	322	49	1,500	68	1,310	3,250	-1,840	1,410	86,700
August....	367	46	1,360	27	1,280	3,080	-3,040	40	2,460
September	599	31	795	21	954	2,400	-1,870	550	31,500
The year	2,580	-	-	-	-	3,920	+139	4,060	2,940,000
1925-26									
October..	398	9	239	5	316	967	+128	1,100	67,600
November.	909	-	22	-	-	931	+159	1,090	64,900
December.	2,150	-	-	-	-	2,150	+1,740	3,890	239,000
January..	1,880	-	-	-	-	1,880	+671	2,550	157,000
February.	2,080	-	-	-	-	2,080	+732	2,810	156,000
March....	3,040	-	198	23	522	3,780	+1,340	5,120	315,000
April....	1,910	40	1,250	106	1,120	4,430	+1,580	6,010	358,000
May.....	436	47	1,590	112	1,190	3,380	-49	3,330	205,000
June.....	174	44	1,400	59	1,240	2,920	-2,030	890	53,000
July.....	87	43	1,480	6	1,240	2,860	-3,070	-210	-12,900
August....	20	34	1,120	-	1,080	2,250	-2,280	-50	-1,840
September	23	11	465	-	558	1,060	-592	468	27,800
The year	1,090	-	-	-	-	2,390	-145	2,250	1,630,000
1926-27									
October..	831	4	-	-	239	1,070	+1,020	2,090	129,000
November.	1,600	-	-	-	-	1,600	+755	2,360	140,000
December.	2,970	-	-	-	-	2,970	+1,160	4,130	254,000
January..	1,800	-	-	-	-	1,800	+371	2,170	133,000
February.	1,870	-	-	-	-	1,870	+490	2,360	131,000
March....	2,680	-	62	-	176	2,920	+457	3,380	208,000
April....	3,900	24	666	93	904	5,590	+1,230	6,820	406,000
May.....	5,030	46	1,690	150	1,240	8,160	+2,220	10,400	640,000
June.....	8,050	47	1,410	116	1,240	10,900	+1,750	12,600	750,000
July.....	497	48	1,580	88	1,290	3,500	-607	2,890	178,000
August....	356	46	1,440	-	1,290	3,130	-2,670	460	28,500
September	1,010	30	836	-	893	2,770	-1,580	1,190	70,800
The year	2,540	-	-	-	-	3,860	+379	4,240	3,070,000
1927-28									
October..	2,620	14	148	-	313	3,100	+591	3,690	227,000
November.	4,470	-	-	-	-	4,470	+2,110	6,580	392,000
December.	6,740	-	-	-	-	6,740	-1,010	5,730	352,000
January..	5,990	-	-	-	-	5,990	+333	6,320	389,000
February.	3,020	-	-	-	-	3,020	-436	2,580	148,000
March....	4,370	1	25	-	234	4,630	+794	5,420	333,000
April....	3,650	26	427	135	810	4,950	+889	5,840	348,000
May.....	7,600	50	1,660	200	1,270	10,700	+2,130	12,800	787,000
June.....	1,670	49	1,720	121	1,280	4,840	+119	4,960	295,000
July.....	324	49	1,480	21	1,290	3,160	-1,870	1,290	79,300
August....	280	46	1,460	-	1,260	3,050	-3,020	50	1,840
September	449	31	766	-	958	2,200	-1,860	340	20,200
The year	3,430	-	-	-	-	4,750	-105	4,650	3,370,000

Monthly discharge of Yakima River near Parker--Continued

Month	Mean discharge in second-feet						Gain or loss by storage upstream (second-feet)	Combined flow of Yakima River and canals adjusted for upstream storage	
	Yakima River near Parker	Union Gap canal (estimated)	New Reser- vation canal	Old Reser- vation canal	Sunny- side canal	Combined flow, Yakima River and canals		Second- feet	Run-off in acre-feet
1928-29									
October..	801	11	443	-	358	1,610	+318	1,930	119,000
November.	1,040	-	-	-	-	1,040	+257	1,300	77,400
December.	903	-	-	-	-	903	+302	1,200	73,800
January..	859	-	-	-	-	859	+90	949	58,400
February.	900	-	-	-	-	900	+168	1,070	59,400
March....	1,470	-	-	-	211	1,680	+565	2,240	138,000
April.....	589	26	898	78	912	2,490	+364	2,850	170,000
May.....	2,510	47	1,870	147	1,270	5,840	+2,630	8,470	521,000
June.....	1,660	46	1,600	70	1,260	4,640	+1,690	6,330	377,000
July.....	198	46	1,590	71	1,290	3,200	-1,900	1,300	79,900
August....	111	44	1,530	-	1,270	2,960	-2,890	70	4,500
September	46	32	1,020	-	1,110	2,210	-2,180	30	1,790
The year	925	-	-	-	-	2,370	-51	2,320	1,680,000
1929-30									
October..	170	11	396	2	431	1,010	-345	665	40,900
November.	462	-	-	-	-	658	+36	694	41,300
December.	701	-	-	-	-	701	+472	1,170	71,900
January..	700	-	-	-	-	700	+176	876	53,900
February.	2,140	-	-	-	-	2,140	+1,360	3,500	194,000
March....	2,020	6	98	16	368	2,510	+1,110	3,620	223,000
April....	3,100	35	1,400	143	1,100	5,780	+2,080	7,860	468,000
May.....	611	45	1,850	42	1,290	3,820	+950	4,770	293,000
June.....	170	46	1,610	-	1,270	3,100	-173	2,930	174,000
July.....	147	46	1,600	-	1,290	3,080	-2,680	400	24,600
August....	111	44	1,400	-	1,240	2,800	-2,960	-160	-9,840
September	96	30	790	-	959	1,880	-1,950	-70	-4,170
The year	857	-	-	-	-	2,340	-175	2,170	1,570,000
1930-31									
October..	268	14	309	-	419	1,010	+106	1,120	68,900
November.	765	-	-	-	-	765	+434	1,250	74,400
December.	813	-	-	-	-	813	+136	949	58,400
January..	947	-	-	-	-	947	+618	1,560	96,900
February.	1,580	-	29	13	74	1,700	+759	2,460	137,000
March....	692	10	576	64	664	2,010	+1,070	3,080	189,000
April.....	709	34	1,440	111	1,080	3,770	+1,630	5,000	298,000
May.....	2,750	46	1,880	143	1,300	6,120	+2,210	8,330	512,000
June.....	222	42	1,430	69	1,150	2,910	-25	2,880	171,000
July.....	56	42	1,660	55	1,090	2,900	-3,230	-330	-20,300
August....	23	41	1,450	-	999	2,510	-2,950	-440	-27,100
September	23	28	775	-	758	1,580	-1,350	230	13,700
The year	734	-	-	-	-	2,220	-56	2,170	1,570,000
1931-32									
October..	315	14	446	-	242	1,020	+555	1,580	97,200
November.	1,620	-	123	-	-	1,740	+645	2,380	142,000
December.	1,070	-	-	-	-	1,070	+412	1,480	91,000
January..	1,940	-	-	-	-	1,940	+737	2,680	165,000
February.	2,900	-	-	-	-	2,900	+1,480	4,380	252,000
March....	6,220	-	116	31.0	210	6,580	+1,790	8,370	515,000
April.....	4,510	27	1,060	91.6	909	6,600	+1,790	8,390	499,000
May.....	5,520	46	1,920	146	1,290	8,920	+1,890	10,800	664,000
June.....	4,290	46	1,630	126	1,270	7,360	+1,040	8,400	500,000
July.....	378	45	1,680	127	1,300	3,530	-1,400	2,130	131,000
August....	144	43	1,520	78.1	1,260	3,050	-2,920	130	7,990
September	144	30	910	-	1,060	2,140	-2,140	0	0
The year	2,420	-	-	-	-	3,900	+317	4,220	3,060,000
1932-33									
October..	511	19	504	-	477	1,510	-110	1,400	86,100
November.	3,860	-	-	-	-	3,860	+4,220	8,080	481,000
December.	4,300	-	-	-	-	4,300	+351	4,650	286,000
January..	4,880	-	-	-	-	4,880	-742	4,140	255,000
February.	2,550	-	-	-	-	2,550	-517	2,030	113,000
March....	2,440	-	71.5	6.74	207	2,730	-270	2,460	151,000
April.....	3,650	26	1,010	111	906	5,700	+1,210	6,910	411,000
May.....	4,450	43	1,980	136	1,260	7,870	+1,680	9,550	587,000
June.....	8,770	45	1,780	48.2	1,290	11,900	+1,850	13,800	821,000
July.....	3,610	46	1,770	53.3	1,310	6,790	-634	6,160	379,000
August....	382	47	1,700	66.1	1,300	3,500	-2,410	1,090	67,000
September	1,250	27	1,120	17.6	1,010	3,420	-2,300	1,120	66,600
The year	3,380	-	-	-	-	4,920	+188	5,110	3,700,000

Monthly discharge of Yakima River near Parker--Continued

Month	Mean discharge in second-feet					Gain or loss by storage upstream (second-feet)	Combined flow of Yakima River and canals adjusted for upstream storage	
	Yakima River near Parker	Union Gap canal (estimated)	New Reservoir canal	Old Reservoir canal	Sunny-side canal	Combined flow, Yakima River and canals	Second-feet	Run-off in acre-feet
1933-34								
October..	1,990	20	405	3.0	449	2,867	+1,900	293,100
November.	3,500	-	-	1.5	-	3,502	+2,015	328,300
December.	14,800	-	-	-	-	14,800	+2,022	1,034,000
January..	12,300	-	-	-	-	12,300	-1,421	669,000
February.	8,190	-	-	1.3	-	8,191	-1,207	387,900
March....	5,760	15	278	24.2	374	6,451	+4,035	645,000
April....	8,390	35	1,420	178	1,200	11,220	+872	12,090
May.....	3,190	40	1,570	194	1,300	6,294	-292	369,000
June.....	276	40	1,630	78.4	1,270	3,294	-1,398	112,800
July.....	121	40	1,650	70.3	1,280	3,161	-3,124	2,280
August...	155	35	1,510	53.8	1,230	2,984	-3,313	-20,230
September	146	25	1,070	25.2	1,080	2,346	-2,124	13,210
The year	4,890	-	-	-	-	6,451	-161	4,554,000
1934-35								
October..	1,078	5	270	3.3	463	1,839	+1,032	176,500
November.	3,524	-	-	-	-	3,524	+3,412	412,700
December.	2,932	-	-	-	-	2,932	+1,150	251,000
January..	5,913	-	-	-	-	5,913	+1,660	465,600
February.	6,611	-	-	-	-	6,611	-756	325,200
March....	2,642	-	174	52.2	325	3,193	+662	237,000
April....	1,641	35	1,596	159	1,094	4,525	+618	306,000
May.....	4,599	45	2,020	94.5	1,309	8,068	+2,298	637,600
June.....	4,865	45	1,725	49.3	1,267	7,951	+548	505,700
July.....	377	45	1,811	60.6	1,287	3,581	-1,724	114,200
August...	196	45	1,680	68.7	1,266	3,256	-3,196	3,690
September	242	40	1,364	53.2	1,132	2,831	-2,798	1,960
The year	,858	-	-	-	-	4,499	+248	3,437,000

Yearly discharge of Yakima River near Parker

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1920.....	2,560	-	-	1,860,000	2,820	-	-	2,050,000
1921.....	5,680	-	-	4,110,000	6,000	-	-	4,340,000
1922.....	3,640	-	-	2,630,000	2,900	-	-	2,100,000
1923.....	4,050	-	-	2,940,000	4,200	-	-	3,040,000
1924.....	3,340	-	-	2,420,000	3,580	-	-	2,600,000
1925.....	4,060	-	-	2,940,000	3,820	-	-	2,760,000
1926.....	2,250	-	-	1,630,000	2,460	-	-	1,780,000
1927.....	4,240	-	-	3,070,000	4,860	-	-	3,520,000
1928.....	4,650	-	-	3,370,000	3,680	-	-	2,670,000
1929.....	2,320	-	-	1,680,000	2,160	-	-	1,560,000
1930.....	2,170	-	-	1,570,000	2,240	-	-	1,620,000
1931.....	2,170	-	-	1,570,000	2,350	-	-	1,700,000
1932.....	4,220	-	-	3,060,000	4,940	-	-	3,590,000
1933.....	5,110	-	-	3,700,000	6,220	-	-	4,500,000
1934.....	6,290	-	-	4,554,000	5,164	-	-	3,739,000
1935.....	4,748	-	-	3,437,000	-	-	-	-
Highest.....	6,290	-	-	4,554,000	6,220	-	-	4,500,000
Average.....	3,840	-	-	2,780,000	3,830	-	-	2,770,000
Lowest.....	2,170	-	-	1,570,000	2,160	-	-	1,560,000

Yakima River near Prosser, Wash.

Location.- Water-stage recorder, lat. 46°13'00", long. 119°45'00", in SE $\frac{1}{4}$ sec. 36, T. 9 N., R. 24 E., 1 $\frac{1}{4}$ miles northeast of Prosser. Prior to Oct. 13, 1906, chain and staff gages were used.

Drainage area.- 5,340 square miles.

Records available.- June 1904 to October 1906, August 1913 to October 1918, April 1919 to September 1922, October 1926 to February 1933. October 1922 to September 1926, not previously published, furnished by Bureau of Reclamation.

Extremes.- Maximum discharge recorded, about 62,800 second-feet at 3 p.m. Nov. 17, 1906; maximum discharge observed, about 40 second-feet Aug. 19, 26, 30, 31, Sept. 30, 1906.

Remarks.- Flow partly regulated by diversions and by storage in Keechelus Lake, Kachess Lake, Cle Elum Lake, Bumping Lake, and Tieton Reservoirs.

Monthly discharge of Yakima River near Prosser

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	1,550	920	1,170	71,900
November.....	3,420	1,520	2,330	139,000
December.....	4,790	1,570	2,580	158,000
January.....	6,140	2,090	3,400	209,000
February.....	4,790	2,260	3,040	175,000
March.....	3,720	1,980	2,540	156,000
April.....	2,590	955	1,670	99,300
May.....	3,800	760	1,850	114,000
June.....	3,220	730	1,600	95,000
July.....	2,140	701	1,150	70,400
August.....	1,620	760	972	59,800
September.....	2,460	920	1,690	100,000
The year.....	6,140	701	2,000	1,450,000
1920-21				
October.....	4,790	1,760	3,060	188,000
November.....	4,280	1,760	2,760	164,000
December.....	5,540	1,920	2,530	156,000
January.....	10,500	2,860	5,190	319,000
February.....	12,600	2,520	6,100	339,000
March.....	11,100	6,760	8,980	552,000
April.....	7,890	4,440	6,260	372,000
May.....	18,000	3,080	10,000	615,000
June.....	15,200	5,740	10,100	601,000
July.....	5,540	1,520	2,650	163,000
August.....	1,760	1,390	1,580	97,200
September.....	1,980	1,180	1,670	99,400
The year.....	18,000	1,180	5,070	3,670,000
1921-22				
October.....	2,720	1,220	1,630	100,000
November.....	3,420	1,520	2,170	129,000
December.....	30,400	3,120	7,390	454,000
January.....	3,200	2,050	2,500	154,000
February.....	1,870	1,380	1,540	85,500
March.....	2,170	1,240	1,670	103,000
April.....	6,760	2,520	4,180	249,000
May.....	15,500	3,220	6,570	404,000
June.....	13,800	2,200	6,870	409,000
July.....	1,870	1,390	1,500	92,200
August.....	1,670	1,030	1,340	82,400
September.....	1,350	920	1,100	65,500
The year.....	30,400	920	3,210	2,330,000
1922-23				
October.....	1,350	992	1,170	72,000
November.....	1,720	1,260	1,430	85,200
December.....	4,040	1,310	1,900	117,000
January.....	12,200	2,860	5,640	347,000
February.....	3,390	1,670	2,520	140,000
March.....	6,760	2,660	3,150	194,000
April.....	9,990	4,440	7,730	460,000
May.....	12,600	2,860	7,220	444,000
June.....	11,100	2,660	5,610	334,000
July.....	4,620	1,480	2,720	167,000
August.....	2,140	1,440	1,740	107,000
September.....	2,030	1,140	1,450	86,100
The year.....	12,600	992	3,530	2,550,000

Monthly discharge of Yakima River near Prosser--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1923-24				
October.....	2,140	1,180	1,640	101,000
November.....	2,260	1,310	1,620	96,300
December.....	3,960	1,930	2,690	166,000
January.....	3,670	1,870	2,520	156,000
February.....	15,600	4,280	7,400	426,000
March.....	5,640	2,460	3,880	236,000
April.....	4,790	1,440	2,290	137,000
May.....	12,200	2,390	6,540	402,000
June.....	3,640	810	1,910	114,000
July.....	1,450	880	1,100	67,900
August.....	1,610	880	1,100	67,500
September.....	1,250	845	1,040	61,800
The year.....	15,500	810	2,800	2,030,000
1924-25				
October.....	1,870	810	1,100	67,400
November.....	2,760	1,610	2,080	124,000
December.....	11,700	1,980	4,300	264,000
January.....	4,790	2,150	2,910	179,000
February.....	8,060	3,620	5,010	278,000
March.....	4,790	2,830	3,900	240,000
April.....	12,600	2,500	6,440	383,000
May.....	15,500	2,760	8,920	548,000
June.....	5,910	2,900	3,740	222,000
July.....	2,560	1,210	1,500	92,100
August.....	1,820	1,250	1,460	89,900
September.....	2,260	1,340	1,770	106,000
The year.....	15,500	810	3,580	2,590,000
1925-26				
October.....	1,680	1,030	1,260	77,200
November.....	1,680	1,490	1,560	92,800
December.....	4,740	1,490	2,620	161,000
January.....	3,230	1,890	2,440	150,000
February.....	3,760	1,890	2,810	156,000
March.....	6,250	2,540	3,830	235,000
April.....	4,740	1,070	2,690	160,000
May.....	1,940	1,070	1,450	89,000
June.....	1,890	958	1,210	71,700
July.....	993	855	940	57,800
August.....	993	855	931	57,200
September.....	958	730	832	49,500
The year.....	6,250	730	1,880	1,360,000
1926-27				
October.....	2,480	661	1,440	88,500
November.....	3,680	1,530	2,190	130,000
December.....	6,050	2,350	3,640	224,000
January.....	3,760	2,050	2,800	172,000
February.....	6,250	2,350	3,430	191,000
March.....	4,740	3,300	3,960	243,000
April.....	12,200	2,740	4,790	286,000
May.....	12,200	3,450	6,370	392,000
June.....	15,800	3,990	9,200	547,000
July.....	3,830	1,270	1,700	105,000
August.....	1,490	1,220	1,390	85,200
September.....	2,880	1,490	2,260	134,000
The year.....	15,800	661	3,590	2,590,000
1927-28				
October.....	4,400	2,540	3,490	214,000
November.....	9,440	2,540	4,800	286,000
December.....	13,800	3,760	7,220	444,000
January.....	17,900	2,480	6,830	420,000
February.....	4,740	3,020	3,860	222,000
March.....	9,440	2,670	5,170	318,000
April.....	7,300	2,950	4,560	272,000
May.....	12,200	3,160	8,240	506,000
June.....	6,250	1,630	2,990	178,000
July.....	2,110	1,070	1,490	91,700
August.....	1,630	1,110	1,260	77,600
September.....	1,890	1,220	1,530	91,200
The year.....	17,900	1,070	4,300	3,120,000

Monthly discharge of Yakima River near Prosser--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1928-29				
October.....	2,480	1,140	1,660	102,000
November.....	2,000	1,530	1,750	104,000
December.....	1,680	1,350	1,490	91,700
January.....	1,490	1,070	1,360	83,700
February.....	1,580	1,220	1,360	75,400
March.....	2,950	1,630	2,310	142,000
April.....	2,950	742	1,440	85,900
May.....	6,660	1,180	3,360	207,000
June.....	4,740	1,270	3,020	180,000
July.....	1,440	958	1,210	74,300
August.....	1,220	993	1,100	67,700
September.....	1,440	1,110	1,260	75,200
The year.....	6,660	742	1,780	1,290,000
1929-30				
October.....	1,400	1,030	1,160	71,600
November.....	1,270	1,110	1,180	70,000
December.....	1,490	1,140	1,310	80,800
January.....	1,530	1,180	1,330	81,900
February.....	5,280	1,350	2,870	159,000
March.....	7,520	1,530	2,800	172,000
April.....	7,080	2,480	4,110	244,000
May.....	2,540	1,310	1,830	112,000
June.....	1,780	1,110	1,360	80,900
July.....	1,310	1,030	1,160	71,400
August.....	1,180	1,030	1,110	68,400
September.....	1,310	1,030	1,140	67,900
The year.....	7,520	1,030	1,770	1,280,000
1930-31				
October.....	1,680	1,030	1,220	75,300
November.....	1,630	1,350	1,480	88,100
December.....	1,680	1,180	1,420	87,300
January.....	3,350	1,140	1,380	85,000
February.....	3,560	1,440	2,020	112,000
March.....	2,530	851	1,370	84,500
April.....	3,830	838	1,480	88,200
May.....	8,480	1,440	3,960	244,000
June.....	2,590	988	1,510	89,700
July.....	1,220	884	1,020	62,800
August.....	918	763	832	51,100
September.....	988	825	906	55,900
The year.....	8,480	763	1,550	1,120,000

Month	Observed discharge in second-feet			Combined river and power canal*	
	River			Prosser power canal (mean)	Run-off in acre-feet
	Maximum	Minimum	Mean		
1931-32					
October.....	1,580	756	976	-	60,000
November.....	2,220	1,680	1,970	-	117,000
December.....	1,780	1,100	1,480	-	91,100
January.....	5,100	1,340	2,400	-	148,000
February.....	16,400	1,390	2,930	-	168,000
March.....	18,100	3,990	7,600	-	467,000
April.....	7,660	2,740	5,350	-	313,000
May.....	8,780	3,510	6,570	-	404,000
June.....	8,500	3,440	5,390	-	320,000
July.....	3,070	1,060	1,520	-	93,500
August.....	1,350	950	1,080	-	66,600
September.....	1,350	302	679	432	66,100
The year.....	18,100	302	3,160	-	2,320,000
1932-33					
October.....	1,260	180	686	751	88,400
November.....	8,060	1,100	2,980	928	232,000
December.....	5,180	2,660	3,780	684	273,000
January.....	7,830	2,660	4,320	836	317,000
February 1-6.....	2,530	2,160	2,300	843	37,400
The period.....	-	-	-	-	948,000

*Less than 2% of flow escaping from power canal through siphon spillway is not included in the combined records of river and Prosser power canal. The power canal began diverting in September 1932.

Yearly discharge of Yakima River near Prosser

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1914.....	3,660	-	-	2,650,000	3,770	-	-	2,730,000
1915.....	2,240	-	-	1,620,000	-	-	-	-
1920.....	2,000	-	-	1,450,000	2,190	-	-	1,590,000
1921.....	5,070	-	-	3,670,000	5,300	-	-	3,840,000
1922.....	3,210	-	-	2,330,000	2,650	-	-	1,920,000
1923.....	3,530	-	-	2,550,000	3,650	-	-	2,640,000
1924.....	2,800	-	-	2,030,000	2,950	-	-	2,120,000
1925.....	3,580	-	-	2,590,000	3,410	-	-	2,470,000
1926.....	1,880	-	-	1,360,000	2,030	-	-	1,470,000
1927.....	3,590	-	-	2,590,000	4,280	-	-	3,100,000
1928.....	4,300	-	-	3,120,000	3,410	-	-	2,470,000
1929.....	1,780	-	-	1,290,000	1,680	-	-	1,210,000
1930.....	1,770	-	-	1,280,000	1,810	-	-	1,310,000
1931.....	1,550	-	-	1,120,000	1,570	-	-	1,140,000
1932.....	3,190	-	-	2,320,000	3,640	-	-	2,640,000
Highest.....	5,070	-	-	3,670,000	5,300	-	-	3,840,000
Average.....	2,940	-	-	2,130,000	3,020	-	-	2,190,000
Lowest.....	1,550	-	-	1,120,000	1,570	-	-	1,140,000

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, $3\frac{1}{2}$ miles below intake of Kiona canal and 25 miles above mouth. Chain gage prior to Apr. 1, 1915.

Drainage area.- 5,520 square miles.

Records available.- August 1896 to March 1915, February 1933 to September 1935.

Extremes.- Maximum discharge, 71,100 second-feet at 11:59 p.m. Dec. 23, 1933; minimum, 105 second-feet Sept. 11, 1906.

Remarks.- 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.

Monthly discharge of Yakima River at Kiona

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1933				
February 6-28	3,550	1,500	2,900	132,000
March.....	4,000	2,680	3,280	201,000
April.....	10,000	2,360	4,480	267,000
May.....	9,600	4,000	5,940	365,000
June.....	15,800	7,400	10,500	623,000
July.....	8,200	2,420	5,110	314,000
August.....	2,360	1,220	1,600	98,600
September.....	4,000	1,500	2,580	154,000
The period.....	-	-	-	2,150,000
1933-34				
October.....	4,150	1,980	2,988	185,700
November.....	7,200	3,180	4,133	245,900
December.....	59,400	4,300	17,330	1,066,000
January.....	19,900	8,850	14,100	867,200
February.....	14,200	4,850	9,617	534,100
March.....	8,660	4,200	6,502	399,800
April.....	11,300	5,360	8,885	528,700
May.....	8,470	2,300	4,503	276,900
June.....	3,570	732	1,307	77,780
July.....	1,420	813	1,063	65,370
August.....	1,620	1,000	1,244	76,480
September.....	1,680	1,240	1,404	83,560
The year.....	59,400	732	6,085	4,405,000

Monthly discharge of Yakima River at Kiona--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1934-35				
October.....	6,060	1,180	2,107	129,500
November.....	7,520	3,270	4,508	268,300
December.....	6,060	3,050	3,771	231,900
January.....	17,900	2,360	6,367	391,500
February.....	13,200	4,680	7,916	439,700
March.....	5,020	2,500	3,749	230,500
April.....	4,200	1,560	2,737	162,900
May.....	10,700	2,560	5,826	358,200
June.....	10,700	2,770	6,644	395,300
July.....	3,420	1,230	1,718	105,600
August.....	1,500	1,140	1,344	82,630
September.....	2,100	1,450	1,675	99,650
The year.....	17,900	1,140	4,000	2,896,000

Yearly discharge of Yakima River at Kiona

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1897.....	5,810	-	-	4,200,000	5,360	-	-	3,880,000
1898.....	5,330	-	-	3,860,000	4,800	-	-	3,480,000
1899.....	5,040	-	-	3,650,000	5,810	-	-	4,200,000
1900.....	4,410	-	-	3,200,000	4,490	-	-	3,260,000
1901.....	6,260	-	-	4,530,000	5,700	-	-	4,130,000
1902.....	4,650	-	-	3,370,000	4,460	-	-	3,230,000
1903.....	5,450	-	-	3,950,000	5,890	-	-	4,260,000
1904.....	5,490	-	-	3,990,000	5,050	-	-	3,660,000
1905.....	3,120	-	-	2,260,000	3,150	-	-	2,280,000
1906.....	3,000	-	-	2,170,000	4,030	-	-	2,920,000
1907.....	5,750	-	-	4,160,000	4,560	-	-	3,300,000
1908.....	4,050	-	-	2,940,000	4,040	-	-	2,930,000
1909.....	3,130	-	-	2,260,000	4,300	-	-	3,110,000
1910.....	5,970	-	-	4,320,000	5,390	-	-	3,900,000
1911.....	3,380	-	-	2,450,000	3,120	-	-	2,260,000
1912.....	3,850	-	-	2,800,000	3,670	-	-	2,660,000
1913.....	4,260	-	-	3,090,000	4,360	-	-	3,160,000
1914.....	3,560	-	-	2,570,000	3,680	-	-	2,660,000
1934.....	6,085	-	-	4,405,000	4,889	-	-	3,540,000
1935.....	4,000	-	-	2,896,000	-	-	-	-
Highest.....	6,260	-	-	4,530,000	5,890	-	-	4,260,000
Average.....	4,630	-	-	3,350,000	4,570	-	-	3,310,000
Lowest.....	3,000	-	-	2,170,000	3,120	-	-	2,260,000

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. Prior to Aug. 15, 1916, gage was half a mile upstream. Staff gage used prior to July 22, 1913.

Drainage area.- 64 square miles (63 square miles at site used prior to Aug. 15, 1916).

Records available.- October 1903 to September 1935.

Extremes.- Maximum discharge, 2,240 second-feet at 2:15 p.m. Aug. 27, 1920 (computed from gate opening); practically no flow when gates in dam are closed.

Remarks.- No diversions. Flow regulated by storage in Kachess Lake Reservoir.

Monthly discharge of Kachess River near Easton

Month	Observed				Gain or loss in storage in Kachess 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 square miles
	Maximum	Minimum	Mean				Mean	Per square mile	
1919-20									
October..	246	0	43.5	2,670	+660	3,330	54.2	0.847	0.98
November..	249	0	217	12,900	+6,260	19,200	323	5.05	5.63
December..	286	0	137	8,420	+4,100	12,500	203	3.17	3.66
January...	0	0	0	0	+24,000	24,000	390	6.09	7.02
February...	0	0	0	0	+10,400	10,400	181	2.93	3.05
March.....	0	0	0	0	+13,200	13,200	215	3.36	3.87
April.....	0	0	0	0	+14,500	14,500	244	3.81	4.25
May.....	0	0	0	0	+25,900	25,900	421	6.58	7.59
June.....	406	0	38.1	2,260	+17,000	19,300	324	5.06	5.64
July.....	932	0	279	17,200	-9,720	7,480	122	1.91	2.20
August....	1,920	913	1,230	78,700	-77,900	900	13.0	.203	1.23
September	1,800	0	902	53,700	-44,100	9,600	161	2.52	2.81
The year	1,920	0	242	176,000	-15,700	160,000	221	3.45	46.93
1920-21									
October..	448	0	21.9	1,350	+18,900	20,200	329	5.14	5.93
November..	143	0	58.7	3,490	+7,310	10,800	182	2.84	3.17
December..	0	0	0	0	+16,300	16,300	265	4.14	4.77
January...	0	0	0	0	+24,700	24,700	402	6.28	7.24
February...	290	0	34.0	1,890	+19,700	21,600	339	6.08	6.33
March.....	896	0	606	37,300	-19,400	17,900	291	4.55	5.25
April.....	0	0	0	0	+25,700	25,700	432	6.75	7.53
May.....	1,170	0	456	28,000	+19,400	47,400	771	12.0	13.83
June.....	1,130	0	576	34,300	+9,290	43,600	733	11.5	12.83
July.....	0	0	0	0	+14,900	14,900	242	3.78	4.36
August....	2,010	122	1,170	71,900	-67,500	4,400	72	1.12	1.29
September	2,020	388	1,100	65,500	-60,400	5,100	86	1.34	1.50
The year	2,020	0	337	244,000	+8,900	253,000	349	5.45	74.03
1921-22									
October..	233	1	65.2	4,010	+4,510	8,520	139	2.17	2.50
November..	1	1	1	59.5	+12,700	12,800	215	3.36	3.75
December..	1	1	1	61.5	+47,500	47,600	774	12.1	13.95
January...	2	2	2	123	+6,930	7,050	115	1.80	2.08
February...	2	2	2	111	+4,280	4,390	79.0	1.23	1.28
March.....	2	2	2	123	+4,810	4,930	80.2	1.25	1.44
April.....	3	3	3	179	+12,800	13,000	218	3.41	3.80
May.....	1,110	3	447	27,500	+18,100	45,600	742	11.6	13.37
June.....	1,480	3	341	20,300	+16,000	36,300	610	9.53	10.63
July.....	1,610	696	1,320	81,200	-75,400	5,800	94.3	1.47	1.70
August....	1,420	655	1,020	62,700	-55,300	7,400	120	1.08	2.17
September	1,510	728	1,060	63,100	-62,200	900	15.1	.236	.26
The year	1,610	1	358	259,000	-65,300	194,000	268	4.19	56.93
1922-23									
October..	728	1	217	13,300	-11,000	2,300	37.4	.584	.67
November..	1	1	1	59.5	+5,850	5,910	99.3	1.55	1.73
December..	1	1	1	61.5	+12,700	12,800	208	3.25	3.75
January...	2	2	2	123	+31,500	31,600	514	8.03	9.26
February...	2	2	2	111	+7,520	7,630	137	2.14	2.23
March.....	2	2	2	123	+10,300	10,400	169	2.64	3.04
April.....	3	3	3	178	+33,500	33,700	566	8.84	9.86
May.....	3	3	3	184	+47,900	48,100	782	12.2	14.07
June.....	3	3	3	178	+36,000	36,200	608	9.5	10.6
July.....	1,860	3	727	44,700	-30,700	14,000	228	3.56	4.1
August....	1,760	501	982	60,400	-60,200	200	3.25	.051	.06
September	1,380	152	937	55,700	-54,900	800	13.4	.209	.23
The year	1,860	1	242	175,000	+28,500	204,000	281	4.39	59.60
1923-24									
October..	130	1	17.2	1,060	+4,190	5,250	85.4	1.33	1.53
November..	1	1	1.0	59.5	+9,990	10,000	168	2.62	2.92
December..	1	1	1.0	61.5	+17,900	18,000	293	4.58	5.28
January...	2	2	2.0	123	+13,900	14,000	228	3.56	4.10
February...	2	2	2.0	115	+31,800	31,900	555	8.67	9.35
March.....	3	3	3.0	185	+12,500	12,700	207	3.23	3.72
April.....	3	3	3.0	179	+18,800	19,000	319	4.98	5.56
May.....	4	4	4.0	246	+47,800	48,000	781	12.2	14.07
June.....	1,630	4	683	40,600	-20,000	20,600	346	5.41	6.04
July.....	1,680	1,560	1,630	100,000	-94,800	5,200	84.6	1.32	1.52
August....	1,610	438	872	53,600	-50,000	3,600	58.5	.914	1.05
September	910	382	619	36,800	-33,800	3,000	50.4	.788	.88
The year	1,680	1	322	233,000	-41,700	191,000	263	4.11	56.02

Monthly discharge of Kachess River near Easton--Continued

Month	Observed				Gain or loss in storage in Kachess 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	
1924-25									
October..	356	0	24.9	1,530	+5,250	6,780	110	1.72	1.98
November.	1	1	1.0	59.5	+11,900	12,000	202	3.16	3.53
December.	1	1	1.0	61.5	+27,800	27,900	454	7.09	8.17
January..	1	1	1.0	61.5	+14,400	14,500	236	3.69	4.25
February.	1	1	1.0	55.5	+19,100	19,200	346	5.41	5.63
March....	1	1	1.0	61.5	+13,200	13,300	216	3.38	3.90
April.....	2	2	2.0	119	+33,200	33,300	560	8.75	9.76
May.....	2	2	2.0	123	+52,300	52,400	852	13.3	15.33
June.....	2	2	2.0	119	+25,000	25,100	422	6.59	7.35
July.....	479	2	180	11,100	-5,540	5,560	90.4	1.41	1.63
August....	1,560	557	1,180	72,600	-71,100	1,500	24.4	.381	.44
September	1,640	0	1,100	65,400	-65,000	400	6.72	.105	.12
The year	1,640	0	209	151,000	+60,500	212,000	293	4.58	62.09
1925-26									
October..	29	0	7.5	461	+3,080	3,540	57.6	.900	1.04
November.	2	1	1.2	71.4	+6,480	6,550	110	1.72	1.92
December.	1	1	1.0	61.5	+27,700	27,800	452	7.06	8.14
January..	1	1	1.0	61.5	+13,400	13,500	220	3.44	3.97
February.	1	1	1.0	55.5	+11,600	11,700	211	3.30	3.44
March....	5	1	2.5	154	+23,000	23,200	377	5.89	6.79
April.....	5	5	5.0	297	+28,900	29,200	491	7.67	8.66
May.....	5	4	4.2	258	+18,000	18,300	298	4.66	5.37
June.....	1,510	4	840	50,000	-41,700	8,300	139	2.17	2.42
July.....	1,560	1,400	1,520	93,300	-92,200	1,100	17.9	.280	.32
August....	1,370	562	908	55,800	-55,400	400	6.51	.102	.12
September	565	1	246	14,600	-11,100	3,500	58.8	.919	1.03
The year	1,560	0	297	215,000	-68,200	147,000	203	3.17	43.12
1926-27									
October..	1	1	1	61.5	+14,500	14,400	234	3.66	4.22
November.	1	1	1	59.5	+12,200	12,300	207	3.23	3.60
December.	1	1	1	61.5	+19,100	19,200	312	4.88	5.63
January..	1	1	1	61.5	+8,430	8,490	138	2.16	2.49
February.	1	1	1	55.5	+7,770	7,830	141	2.20	2.29
March....	1	1	1	61.5	+6,960	7,020	114	1.78	2.05
April.....	9	2	6.5	389	+22,000	22,400	376	5.88	6.66
May.....	7	4	6.5	399	+45,400	45,800	745	11.6	13.37
June.....	4	1	1.8	105	+51,900	52,000	874	13.7	15.29
July.....	749	1	355	20,600	-6,440	14,200	231	3.61	4.16
August....	902	739	810	49,800	-46,200	3,600	58.5	.914	1.05
September	947	1	765	45,500	-36,600	8,900	150	2.34	2.61
The year	947	1	162	117,000	+98,800	216,000	299	4.67	63.32
1927-28									
October..	947	0	286	17,600	+770	18,400	299	4.67	5.38
November.	0	0	0	0	+39,300	39,300	660	10.3	11.49
December.	981	0	540	33,200	-7,910	25,300	411	6.42	7.40
January..	1,290	168	488	30,000	-1,570	28,400	462	7.22	8.32
February.	210	137	204	11,800	-5,950	5,850	102	1.59	1.72
March....	140	155	137	8,420	+12,500	20,900	340	5.31	6.12
April.....	140	99	109	6,490	+15,600	22,100	371	5.80	6.47
May.....	766	6	109	6,680	+47,600	54,300	883	13.8	15.91
June.....	507	6	173	10,300	+11,200	21,500	361	5.64	6.29
July.....	940	489	769	47,300	-42,900	4,400	71.6	1.12	1.29
August....	940	766	911	56,000	-55,500	500	8.13	.127	.15
September	766	2	292	17,300	-17,100	200	3.36	.052	.06
The year	1,290	0	338	245,000	-3,960	241,000	332	5.19	70.60
1928-29									
October..	5	0	1.48	91.2	+10,800	10,900	177	2.77	3.19
November.	0	0	0	0	+6,320	6,320	106	1.66	1.85
December.	0	0	0	0	+5,660	5,660	92.1	1.44	1.66
January..	0	0	0	0	+4,330	4,330	70.4	1.10	1.27
February.	0	0	0	0	+3,720	3,720	67.0	1.05	1.09
March....	9	0	2.74	169	+11,700	11,900	194	3.03	3.49
April.....	240	3	83.3	4,960	+11,000	16,000	269	4.20	4.69
May.....	132	1	11.9	732	+44,100	44,800	729	11.4	13.14
June.....	736	1	244	14,500	+18,000	32,500	546	8.53	9.52
July.....	1,080	736	876	53,900	-46,000	7,900	128	2.00	2.31
August....	1,120	1	451	27,700	-27,400	300	4.88	.076	.09
September	290	7	39.4	2,340	-2,040	300	5.04	.078	.09
The year	1,120	0	144	104,000	+40,200	145,000	200	3.13	42.39



A. MEASURING RIVER DISCHARGE.



B. GAGING CAR AND GAGING-CAR GARAGE.
YAKIMA RIVER AT UMTANUM, WASH.

Monthly discharge of Kachess River near Easton--Continued

Month	Observed				Gain or loss in storage in Kachess 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	
1929-30									
October..	978	1	288	17,700	-16,800	900	14.6	0.228	0.26
November..	1	1	1.00	59.5	+1,300	1,360	22.9	.358	.40
December..	1	1	1.00	61.5	+6,450	6,510	106	1.66	1.91
January...	1	1	1.00	61.5	+3,590	3,650	59.4	.928	1.07
February...	3	1	1.89	105	+19,600	19,700	355	5.55	5.78
March....	6	2	2.97	182	+18,900	19,100	311	4.86	5.60
April.....	6	2	3.67	218	+34,300	34,500	580	9.06	10.11
May.....	1,540	1	265	16,500	+7,690	24,000	390	6.09	7.02
June.....	1,800	1	633	37,600	-22,500	15,100	254	3.97	4.43
July.....	1,930	823	1,520	93,700	-88,800	4,900	79.7	1.25	1.44
August....	1,090	134	757	46,600	-46,200	400	6.51	1.02	.12
September	711	155	505	30,000	-28,900	1,100	18.5	.289	.32
The year	1,930	1	335	243,000	-111,000	131,000	181	2.83	38.46
1930-31									
October..	332	1	130	7,970	-3,540	4,430	72.0	1.12	1.29
November..	1	1	1.00	59.5	+7,910	7,970	134	2.09	2.33
December..	1	1	1.00	61.5	+4,660	4,720	76.8	1.20	1.38
January...	1	1	1.00	61.5	+8,520	8,580	140	2.19	2.52
February...	1	1	1.00	55.5	+12,400	12,500	225	3.52	3.66
March....	1	1	1.00	61.5	+21,700	21,800	355	5.55	6.40
April.....	2	1	1.57	93.2	+24,200	24,300	408	6.38	7.12
May.....	2	0	.19	11.9	+40,500	40,500	659	10.3	11.87
June.....	781	0	298	17,700	+40	17,700	297	4.64	5.18
July.....	1,380	781	1,210	74,500	-69,200	5,300	86.2	1.35	1.56
August....	1,190	613	792	48,700	-47,200	1,500	24.4	.381	.44
September	756	179	416	24,800	-23,600	1,200	20.2	.316	.35
The year	1,380	0	240	174,000	-23,600	150,000	208	3.25	44.10
1931-32									
October..	165	2	29.70	1,830	+3,900	5,760	93.7	1.46	1.68
November..	11	0	2.13	127	+12,700	12,800	215	3.36	3.75
December..	0	0	0	0	+7,420	7,420	121	1.89	2.18
January...	0	0	0	0	+11,800	11,800	192	3.00	3.46
February...	3	0	.28	15.9	+25,700	25,700	447	6.98	7.53
March....	5	1	2.10	129	+33,800	33,900	551	8.61	9.93
April.....	6	5	5.57	331	+34,100	34,400	578	9.03	10.08
May.....	5	2	3.23	198	+48,000	48,200	784	12.2	14.07
June.....	504	2	89.10	5,500	+35,800	41,100	691	10.8	12.05
July.....	1,380	387	833	51,200	-37,000	14,200	231	3.61	4.16
August....	959	206	727	44,700	-42,100	2,600	42.3	.661	.76
September	1,240	93	717	42,700	-41,200	1,500	25.2	.394	.44
The year	1,380	0	202	147,000	+93,000	239,000	330	5.16	70.09
1932-33									
October..	1,060	1	328	20,100	-13,600	6,500	106	1.66	1.91
November..	8	1	2.47	147	+48,000	48,100	808	12.6	14.06
December..	193	1	8.74	538	+26,800	27,300	444	6.94	8.00
January...	756	193	482	29,600	-5,080	24,500	398	6.22	7.17
February...	319	259	266	14,800	-6,780	8,020	144	2.25	2.34
March....	259	256	258	15,900	-8,500	7,400	120	1.88	2.17
April.....	504	256	286	17,000	+2,990	20,000	336	5.25	5.86
May.....	504	504	504	31,000	+7,870	38,900	633	9.89	11.40
June.....	732	1	169	10,000	+47,900	57,900	973	15.2	16.96
July.....	732	5	427	26,500	+2,110	28,400	462	7.22	8.32
August....	1,540	424	1,010	62,000	-55,000	7,000	114	1.78	2.05
September	1,190	140	1,180	70,400	-62,000	8,400	141	2.20	2.46
The year	1,540	1	411	298,000	-15,300	282,000	390	6.09	82.70
1933-34									
October..	1,190	1	614	37,800	-10,060	27,740	451	7.05	8.13
November..	15	1	2.87	171	+27,450	27,620	464	7.25	8.09
December..	1,590	1	372	22,900	+62,990	75,890	1,234	19.3	22.25
January...	1,430	265	664	40,800	-5,590	35,210	573	8.95	10.32
February...	265	2	188	10,400	+8,380	18,780	338	5.28	5.50
March....	1,320	3	183	11,500	+35,600	46,900	763	11.9	13.72
April.....	1,470	540	931	55,400	-7,810	47,590	800	12.5	13.95
May.....	955	19	142	8,730	+15,740	24,470	398	6.22	7.17
June.....	500	114	307	18,500	-10,110	8,190	138	2.16	2.41
July.....	895	404	528	32,400	-30,320	2,080	33.8	.528	.61
August....	1,200	246	427	26,500	-25,500	800	13.0	.203	.23
September	1,420	452	962	57,200	-55,800	1,400	23.5	.367	.41
The year	1,590	1	444	321,700	-5,030	316,700	437	6.83	92.79

Monthly discharge of Kachess River near Easton--Continued

Month	Observed				Gain or loss in storage in Kachess 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	
1934-35									
October..	444	0	204	12,520	+3,140	15,660	255	3.98	4.59
November.	6	2	2.8	167	+28,530	28,700	482	7.53	8.40
December.	26	3	10.6	653	+18,460	19,110	311	4.86	5.60
January..	1,480	9	340	20,890	+18,070	38,960	634	9.91	11.42
February.	1,430	201	514	28,540	-14,620	13,920	251	3.92	4.08
March....	201	24	69.0	4,240	+11,480	15,720	256	4.00	4.61
April.....	360	2	104	6,190	+10,580	16,770	282	4.41	4.92
May.....	865	3	608	37,400	+8,230	45,630	742	11.6	13.37
June.....	865	555	652	38,770	-2,950	35,820	602	9.41	10.50
July.....	1,280	443	957	58,830	-46,780	12,050	196	3.06	3.53
August....	1,280	190	502	30,850	-29,020	1,830	29.8	.466	.54
September	190	140	170	10,120	-7,660	2,460	41.3	.645	.72
The year	1,480	0	344	249,200	-2,540	246,600	341	5.33	72.28

Yearly discharge of Kachess River near Easton

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1904.....	330	5.24	71.25	240,000	307	4.87	66.26	223,000
1905.....	247	3.92	53.18	179,000	248	3.94	53.49	180,000
1906.....	238	3.78	51.36	173,000	289	4.59	62.15	209,000
1907.....	325	5.16	69.95	235,000	255	4.05	54.99	185,000
1908.....	285	4.52	61.45	207,000	276	4.38	59.57	200,000
1909.....	219	3.43	47.20	158,000	310	4.92	66.79	225,000
1910.....	366	5.61	78.80	265,000	329	5.22	70.87	238,000
1911.....	267	4.24	57.38	193,000	269	4.27	58.05	195,000
1912.....	330	5.24	71.35	240,000	281	4.46	60.76	204,000
1913.....	311	4.94	66.98	225,000	319	5.06	68.65	231,000
1914.....	256	4.06	55.19	185,000	259	4.11	55.32	188,000
1915.....	166	2.63	35.84	120,000	166	2.63	35.66	120,000
1916.....	390	6.18	84.14	268,000	364	5.78	78.62	264,000
1917.....	293	4.58	61.91	212,000	390	6.09	82.75	262,000
1918.....	365	5.70	77.34	264,000	324	5.06	68.67	234,000
1919.....	308	4.81	65.43	225,000	278	4.34	59.03	201,000
1920.....	221	3.45	46.93	160,000	238	3.72	50.53	172,000
1921.....	349	5.45	74.03	253,000	379	5.92	80.36	274,000
1922.....	268	4.19	56.93	194,000	202	3.16	42.88	146,000
1923.....	281	4.39	59.60	204,000	298	4.66	63.18	216,000
1924.....	263	4.11	56.02	191,000	282	4.41	59.97	206,000
1925.....	293	4.58	62.09	212,000	281	4.39	59.51	203,000
1926.....	203	3.17	43.12	147,000	214	3.34	45.47	155,000
1927.....	299	4.67	63.32	216,000	350	5.47	74.14	253,000
1928.....	332	5.19	70.60	241,000	249	3.89	53.03	181,000
1929.....	200	3.13	42.39	145,000	180	2.81	38.26	131,000
1930.....	181	2.83	38.46	131,000	193	3.02	40.89	140,000
1931.....	208	3.25	44.10	160,000	220	3.44	46.71	169,000
1932.....	330	5.16	70.09	239,000	407	6.36	86.45	295,000
1933.....	390	6.09	82.70	282,000	458	7.16	97.20	332,000
1934.....	437	6.83	92.79	316,700	344	5.38	72.91	248,900
1935.....	341	5.33	72.28	246,600	-	-	-	-
Highest.....	437	6.83	92.79	316,700	458	7.16	97.20	332,000
Average.....	290	4.57	62.01	210,000	289	4.55	61.73	209,000
Lowest.....	166	2.63	35.84	120,000	166	2.63	35.66	120,000

Cle Elum River near Roslyn, Wash.

Location.-- Water-stage recorder, lat. $47^{\circ}14'00''$, long. $121^{\circ}03'30''$, in SW $\frac{1}{4}$ sec. 11, T. 20 N., R. 14 E., below Cle Elum Lake and 4 miles northwest of Roslyn. Staff gages, Sept. 5, 1931 to Apr. 19, 1933, and prior to Oct. 14, 1913.

Drainage area.-- 202 square miles.

Records available.-- October 1903 to September 1935.

Extremes.-- Maximum discharge observed, 18,700 second-feet at 2 p.m. Nov. 15, 1906; practically no flow when gates in dam were closed.

Remarks.-- No diversion above station. Flow partly controlled by storage in Cle Elum Lake Reservoir.

Monthly discharge of Cle Elum River near Roslyn

Month	Observed				Gain or loss in storage in Cle Elum 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	
1919-20									
October..	200	44	147	9,010	+1,050	10,100	164	0.812	0.94
November.	1,300	33	443	26,400	+18,900	45,300	761	3.77	4.21
December.	1,540	205	635	39,100	+840	39,900	649	3.21	3.70
January..	2,590	338	880	54,100	+180	54,300	883	4.37	5.04
February.	1,120	329	534	30,700	-1,930	28,800	501	2.48	2.68
March....	850	296	483	29,700	+390	30,100	490	2.43	2.80
April.....	1,080	437	681	40,500	-1,700	38,800	652	3.23	3.60
May.....	2,580	820	1,550	95,600	+1,060	96,700	1,570	7.77	8.96
June.....	1,700	792	1,220	72,600	+6,870	79,500	1,340	6.63	7.40
July.....	1,500	395	801	49,200	-3,660	45,500	740	3.66	4.22
August....	529	305	474	29,200	-11,300	17,900	291	1.44	1.66
September	1,010	326	501	29,800	+3,190	33,000	555	2.75	3.07
The year	2,580	33	697	506,000	+13,900	520,000	716	3.54	48.28
1920-21									
October..	2,340	544	1,160	71,300	-4,480	66,800	1,090	5.40	6.23
November.	850	50	443	26,400	+10,300	36,700	617	3.05	3.40
December.	1,660	262	451	27,700	+1,880	29,600	481	2.38	2.74
January..	2,160	364	834	51,300	-2,680	48,600	790	3.91	4.51
February.	2,880	308	971	53,900	+1,740	55,600	1,000	4.95	5.16
March....	1,300	661	880	54,100	-670	53,400	868	4.30	4.96
April.....	2,080	686	1,160	69,000	+510	69,500	1,170	5.79	6.46
May.....	5,060	975	2,840	175,000	+3,220	178,000	2,890	14.3	16.49
June.....	5,060	1,740	2,990	178,000	-1,280	177,000	2,970	14.7	16.40
July.....	2,100	689	1,080	66,400	-2,470	63,900	1,040	5.15	5.94
August....	667	232	553	34,000	-12,900	21,100	343	1.70	1.96
September	661	50	154	9,160	+12,500	21,700	365	1.81	2.02
The year	5,060	50	1,130	816,000	+5,670	822,000	1,140	5.64	76.27
1921-22									
October..	1,980	224	484	29,800	+1,950	31,800	517	2.56	2.95
November.	1,250	316	514	30,600	-2,790	27,800	467	2.31	2.58
December.	11,000	403	1,720	106,000	+450	106,000	1,720	8.51	9.81
January..	686	39	401	24,700	-10,400	14,300	233	1.15	1.33
February.	63	39	54.2	3,010	+6,090	9,100	164	.812	.85
March....	159	63	92.4	5,680	+3,340	9,020	147	.728	.84
April.....	1,060	172	565	33,600	+2,360	36,000	605	3.00	3.35
May.....	5,580	1,060	2,140	132,000	+3,210	135,000	2,200	10.9	12.57
June.....	4,620	1,290	2,410	143,000	-2,630	140,000	2,350	11.6	12.94
July.....	1,260	441	846	52,000	-16,400	35,600	579	2.87	3.31
August....	418	59	283	17,400	-3,210	14,200	231	1.14	1.31
September	282	174	231	13,700	-1,640	12,100	203	1.00	1.12
The year	11,000	39	817	591,000	-19,700	571,000	789	3.91	52.96
1922-23									
October..	214	28	148	9,130	+2,880	12,000	195	.965	1.11
November.	181	159	172	10,300	+4,290	14,600	245	1.21	1.35
December.	841	159	252	15,500	+13,300	28,800	468	2.32	2.68
January..	3,060	332	980	60,200	-1,540	58,700	955	4.73	5.45
February.	314	245	282	15,700	-290	15,400	277	1.37	1.43
March....	1,090	256	348	21,400	+2,290	23,700	365	1.91	2.20
April.....	2,760	1,320	1,710	102,000	+1,750	104,000	1,750	8.66	9.66
May.....	4,880	1,260	2,650	163,000	-510	162,000	2,630	13.0	14.99
June.....	3,620	1,500	2,080	124,000	+610	125,000	2,100	10.4	11.60
July.....	2,320	529	1,110	68,200	-3,390	64,800	1,050	5.20	6.00
August....	534	498	520	32,000	-15,300	16,700	272	1.35	1.56
September	477	155	255	15,200	-3,800	11,400	192	.95	1.06
The year	4,880	28	879	637,000	+290	637,000	880	4.36	59.09

Monthly discharge of Cle Elum River near Roslyn--Continued

Month	Observed				Gain or loss in storage in Cle Elum 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	
1923-24									
October..	308	133	219	13,500	+1,750	15,200	247	1.22	1.41
November..	267	47	137	8,130	+11,800	19,900	334	1.65	1.84
December..	820	70	421	25,900	+5,380	31,300	509	2.52	2.90
January...	636	279	390	24,000	+210	24,200	394	1.95	2.25
February..	6,280	636	1,400	80,800	+570	81,400	1,420	7.03	7.58
March.....	666	392	511	31,400	-820	30,600	498	2.47	2.85
April.....	1,530	374	899	53,500	+2,100	55,600	834	4.62	5.16
May.....	5,440	1,460	2,910	179,000	+40	179,000	2,910	14.4	16.60
June.....	2,180	765	1,220	72,600	-1,590	71,000	1,190	5.89	6.57
July.....	997	329	528	32,500	-1,030	31,500	512	2.53	2.92
August....	636	265	471	29,000	-14,700	14,300	233	1.15	1.33
September	326	112	194	11,500	-2,550	8,950	150	.743	.83
The year	6,280	47	774	562,000	+1,160	563,000	775	3.84	52.24
1924-25									
October..	312	122	235	14,500	+8,810	23,300	379	1.88	2.17
November..	421	144	263	15,700	+8,050	23,800	400	1.98	2.21
December..	4,540	222	1,160	71,000	+1,050	72,000	1,170	5.79	6.68
January...	508	288	405	24,900	+40	24,900	405	2.00	2.31
February..	1,500	393	684	38,000	-70	37,900	682	3.38	3.52
March.....	807	358	519	31,900	+370	32,300	525	2.60	3.00
April.....	3,660	597	1,790	106,000	+1,820	108,000	1,820	9.01	10.05
May.....	5,230	1,860	3,240	199,000	+730	200,000	3,250	16.1	18.56
June.....	2,580	1,320	1,860	111,000	-770	110,000	1,850	9.16	10.22
July.....	1,390	807	928	57,000	-9,760	47,200	768	3.80	4.58
August....	807	193	419	25,700	-10,400	15,300	249	1.23	1.42
September	351	9	114	6,780	+1,650	8,430	142	.703	.78
The year	5,230	9	970	702,000	+1,520	703,000	971	4.81	65.30
1925-26									
October..	336	28	158	9,700	+780	10,500	171	.847	.98
November..	336	34	224	13,300	-780	12,500	210	1.04	1.16
December..	1,780	29	684	42,100	+16,900	59,000	960	4.75	5.48
January...	1,080	288	542	33,300	-1,090	32,200	524	2.59	2.99
February..	508	266	385	21,400	+630	22,000	396	1.96	2.04
March.....	1,580	400	949	58,400	+1,870	60,300	981	4.86	5.60
April.....	2,780	636	1,670	99,600	+1,540	101,000	1,700	8.42	9.39
May.....	2,120	807	1,230	75,400	-3,300	72,100	1,170	5.79	6.68
June.....	864	544	780	46,400	-11,600	34,800	585	2.90	3.24
July.....	568	186	350	21,500	-6,370	15,100	246	1.22	1.41
August....	188	151	171	10,500	-380	10,100	164	.812	.94
September	181	26	104	6,160	+4,150	10,300	173	.856	.96
The year	2,780	26	605	438,000	+2,330	440,000	608	3.01	40.87
1926-27									
October..	1,050	60	467	28,700	+13,800	42,500	691	3.42	3.94
November..	1,050	269	523	31,100	+1,420	32,500	546	2.70	3.01
December..	1,650	370	773	47,500	-1,380	46,100	750	3.71	4.28
January...	485	228	326	20,000	-452	19,500	317	1.57	1.81
February..	295	166	233	12,900	-23	12,900	232	1.15	1.20
March.....	405	209	253	15,500	+588	16,100	262	1.30	1.50
April.....	3,430	397	1,000	59,700	+3,460	63,200	1,060	5.25	5.86
May.....	4,540	1,280	2,310	142,000	-446	141,500	2,310	11.4	13.14
June.....	5,930	1,920	3,330	198,000	-165	198,000	3,330	16.5	18.41
July.....	1,860	780	1,110	68,500	-3,540	65,000	1,060	5.25	6.05
August....	836	263	611	37,600	-16,900	20,700	337	1.67	1.92
September	446	217	330	19,600	+1,920	21,500	361	1.79	2.00
The year	5,930	60	941	681,000	-1,720	680,000	939	4.65	63.12
1927-28									
October..	1,390	117	678	41,700	+16,000	57,700	938	4.64	5.35
November..	2,580	549	1,440	85,900	+1,680	87,600	1,470	7.28	8.12
December..	3,430	340	992	61,000	-2,460	58,500	951	4.71	5.43
January...	4,410	358	1,080	66,300	+475	66,800	1,090	5.40	6.23
February..	446	263	324	18,600	-611	18,000	313	1.55	1.67
March.....	1,730	242	745	45,800	+1,550	47,400	771	3.82	4.40
April.....	3,310	549	1,030	61,100	+1,790	62,900	1,060	5.25	5.86
May.....	5,650	1,250	3,370	207,000	+258	207,000	3,370	16.7	19.25
June.....	1,990	1,140	1,700	101,000	-1,380	99,600	1,670	8.27	9.23
July.....	1,080	393	693	42,600	-1,810	40,800	664	3.29	3.79
August....	366	160	228	14,000	-746	13,300	216	1.07	1.23
September	699	118	391	23,300	-14,400	8,900	150	.743	.83
The year	5,650	117	1,060	769,000	+346	768,000	1,060	5.25	71.39

Monthly discharge of Cle Elum River near Roslyn--Continued

Month	Observed				Gain or loss in storage in Cle Elum 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	
1928-29									
October..	689	243	501	30,800	+190	31,000	504	2.50	2.88
November..	263	62	177	10,500	+4,450	15,000	252	1.25	1.40
December..	164	40	78.1	4,800	+7,280	12,100	197	.975	1.12
January..	302	36	173	10,600	-1,860	8,740	142	.703	.81
February..	92	36	47.9	2,660	+4,220	6,880	124	.614	.64
March....	779	101	387	23,800	+2,110	25,900	421	2.08	2.40
April.....	1,720	417	711	42,500	+1,740	44,000	739	3.66	4.08
May.....	4,140	1,420	2,380	146,000	+30	146,000	2,380	11.8	13.60
June.....	2,610	1,280	1,910	113,000	-1,070	112,000	1,880	9.31	10.39
July.....	1,210	562	701	43,100	-2,090	41,000	667	3.30	3.60
August....	726	254	486	29,900	-14,800	15,100	246	1.22	1.41
September..	385	15	179	10,700	-4,140	6,560	110	.545	.61
The year	4,140	15	648	468,000	-3,940	464,000	641	3.17	43.14
1929-30									
October..	15	12	12.8	785	+5,600	6,380	104	.515	.59
November..	12	12	12.0	714	+4,300	5,010	84.2	.417	.47
December..	72	12	16.0	986	+8,510	9,500	154	.762	.89
January..	198	72	110	6,790	-90	6,700	109	.540	.62
February..	1,490	144	621	34,500	+1,290	35,800	645	3.19	3.32
March....	2,180	298	701	43,100	+2,920	46,000	748	3.70	4.27
April.....	2,930	1,350	1,900	113,000	-775	112,000	1,880	9.31	10.39
May.....	2,180	1,030	1,420	87,100	-721	86,400	1,410	6.98	8.05
June.....	1,450	779	1,010	60,100	-971	59,100	993	4.92	5.49
July.....	726	499	566	34,800	-5,440	29,400	478	2.37	2.73
August....	535	176	406	24,900	-13,900	11,000	179	.886	1.02
September..	169	111	135	8,020	-1,180	6,840	115	.569	.63
The year	2,930	12	573	415,000	-455	414,000	572	2.83	38.46
1930-31									
October..	157	46	103	6,310	+7,950	14,300	233	1.15	1.33
November..	254	28	86.7	5,160	+11,200	16,400	276	1.37	1.53
December..	204	104	159	9,770	-480	9,290	151	.748	.86
January..	1,570	104	280	17,200	+3,040	20,200	329	1.63	1.88
February..	1,150	319	570	31,700	-1,870	29,800	537	2.66	2.77
March....	1,450	409	692	42,600	+660	43,300	704	3.49	4.02
April.....	3,760	637	1,070	63,400	+4,580	68,000	1,140	5.64	6.29
May.....	4,400	1,120	2,390	147,000	-2,330	145,000	2,360	11.7	13.49
June.....	2,090	752	1,240	74,000	-2,280	71,700	1,200	5.94	6.63
July.....	699	371	626	38,500	-15,000	23,500	382	1.89	2.18
August....	269	113	201	12,400	-4,880	7,520	122	.604	.70
September..	225	115	169	10,000	-1,090	8,910	150	.743	.83
The year	4,400	28	632	458,000	-500	458,000	632	3.13	42.51
1931-32									
October..	568	136	310	19,100	+20,700	39,800	647	3.20	3.69
November..	889	316	621	36,900	-2,180	34,700	583	2.89	3.22
December..	298	201	246	15,100	-390	14,700	239	1.18	1.36
January..	1,000	211	525	32,300	+965	33,300	542	2.68	3.09
February..	6,210	351	965	55,500	+14,800	70,300	1,220	6.04	6.61
March....	3,880	1,000	1,720	106,000	-11,600	94,400	1,540	7.62	8.78
April.....	2,500	874	1,530	91,200	+4,220	95,400	1,600	7.92	8.84
May.....	3,560	1,600	2,730	168,000	-1,630	166,000	2,700	13.4	15.45
June.....	4,120	1,210	2,640	157,000	-2,020	155,000	2,600	12.9	14.39
July.....	1,480	754	1,140	70,200	-7,140	63,100	1,030	5.10	5.88
August....	725	354	503	30,900	-7,920	23,000	374	1.85	2.13
September..	346	205	254	15,100	-3,010	12,100	203	1.00	1.12
The year	6,210	136	1,100	797,000	+4,800	802,000	1,100	5.45	74.46
1932-33									
October..	442	152	237	14,600	+4,580	19,200	312	1.54	1.79
November..	503	0	134	7,970	+104,000	112,000	1,880	9.31	10.39
December..	3,230	0	1,620	99,500	-34,700	64,800	1,050	5.20	6.00
January..	2,550	843	1,710	105,000	-61,500	43,500	711	3.52	4.06
February..	783	0	408	22,600	-8,640	14,000	252	1.25	1.30
March....	362	272	299	18,400	-1,050	17,400	282	1.40	1.61
April.....	1,640	346	855	50,900	+27,300	78,200	1,310	6.49	7.24
May.....	2,140	1,520	1,710	105,000	+24,800	130,000	2,110	10.4	11.99
June.....	2,580	2,180	2,430	145,000	+59,800	205,000	3,450	17.1	19.08
July.....	3,080	1,200	2,680	165,000	-36,300	129,000	2,100	10.4	11.99
August....	2,480	0	621	38,200	+1,680	39,900	649	3.21	3.70
September..	695	11	209	12,400	+14,300	26,700	449	2.22	2.48
The year	3,230	0	1,080	785,000	+94,500	880,000	1,220	6.04	81.62

Monthly discharge of Cle Elum River near Roslyn--Continued

Month	Observed				Gain or loss in storage in Cle Elum 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	
1933-34									
October..	570	0	150	9,190	+78,890	88,080	1,432	7.09	8.17
November..	1,790	0	296	17,600	+65,560	83,160	1,398	6.92	7.72
December..	3,190	1,160	2,330	143,000	+18,560	161,600	2,628	13.0	14.99
January..	2,860	1,200	1,850	114,000	-42,710	71,290	1,159	5.74	6.62
February..	2,000	18	1,310	72,900	-29,880	43,020	775	3.84	4.00
March....	2,770	18	153	9,390	+99,450	108,800	1,769	8.76	10.10
April.....	3,600	34	2,580	154,000	+25,300	179,300	3,013	14.9	16.62
May.....	3,070	592	2,530	155,000	-28,600	126,300	2,054	10.2	11.76
June.....	1,980	1,120	1,640	97,600	-32,550	65,050	1,093	5.41	6.04
July.....	2,080	1,600	1,880	116,000	-85,770	30,230	492	2.44	2.81
August....	1,760	840	1,140	69,900	-55,280	14,620	238	1.18	1.36
September	1,120	253	697	41,500	-30,890	10,610	178	.881	.98
The year	3,600	0	1,380	1,000,000	-17,980	982,100	1,356	6.71	91.17
1934-35									
October..	616	19	208	12,770	+22,100	34,870	567	2.81	3.24
November..	22	5	10.1	601	+84,150	84,750	1,424	7.05	7.87
December..	6	5	5.4	329	+38,680	39,010	634	3.14	3.62
January..	1,640	6	335	20,620	+68,730	89,350	1,453	7.19	8.29
February..	1,640	530	1,000	55,520	-10,890	44,630	804	3.98	4.14
March....	530	252	283	17,380	+16,650	34,030	553	2.74	3.16
April.....	1,010	0	599	35,650	+14,820	50,470	848	4.20	4.69
May.....	3,400	0	1,700	104,600	+53,060	157,700	2,565	12.7	14.64
June.....	3,730	1,600	2,457	146,200	-4,790	141,400	2,376	11.8	13.17
July.....	1,640	602	1,086	66,780	-5,030	61,750	1,004	4.97	5.73
August....	1,950	476	1,427	87,760	-66,050	21,710	353	1.75	2.02
September	2,040	950	1,689	100,500	-84,440	16,060	270	1.34	1.50
The year	3,730	0	896	648,700	+127,000	775,700	1,071	5.30	72.07

Yearly discharge of Cle Elum River near Roslyn

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1904.....	1,090	5.40	73.61	793,000	1,000	4.95	67.47	726,000
1905.....	717	3.55	48.17	519,000	760	3.76	51.23	552,000
1906.....	796	3.94	53.47	576,000	999	4.90	66.49	716,000
1907.....	1,110	5.50	74.37	801,000	848	4.20	56.96	614,000
1908.....	945	4.68	63.75	686,000	963	4.77	64.94	699,000
1909.....	758	3.75	50.86	549,000	1,020	5.05	68.45	738,000
1910.....	1,170	5.79	78.34	844,000	1,060	5.25	70.98	764,000
1911.....	857	4.24	57.76	622,000	750	3.71	50.37	543,000
1912.....	860	4.26	57.95	625,000	810	4.01	54.53	588,000
1913.....	973	4.82	65.47	705,000	1,010	5.00	67.56	722,000
1914.....	844	4.18	56.73	610,000	886	4.39	59.64	642,000
1915.....	579	2.87	38.86	419,000	525	2.60	35.24	280,000
1916.....	1,240	6.14	83.40	897,000	1,180	5.84	79.53	866,000
1917.....	969	4.80	64.99	701,000	1,210	5.99	81.24	876,000
1918.....	1,130	5.59	76.29	821,000	1,030	5.10	69.20	746,000
1919.....	975	4.83	65.47	706,000	921	4.56	61.86	667,000
1920.....	716	3.54	48.28	520,000	768	3.80	51.80	558,000
1921.....	1,140	5.64	76.27	822,000	1,180	5.84	79.24	854,000
1922.....	789	3.91	52.96	571,000	636	3.15	42.76	461,000
1923.....	890	4.36	59.09	637,000	895	4.43	60.10	648,000
1924.....	775	3.84	52.24	563,000	848	4.20	57.15	616,000
1925.....	671	4.21	65.50	703,000	920	4.55	61.86	666,000
1926.....	908	3.01	40.87	440,000	662	3.28	44.48	479,000
1927.....	939	4.65	63.12	680,000	1,050	5.20	70.79	763,000
1928.....	1,060	5.25	71.39	768,000	868	4.25	57.89	625,000
1929.....	641	3.17	43.14	464,000	590	2.92	39.68	427,000
1930.....	572	2.85	38.46	414,000	598	2.96	40.24	435,000
1931.....	632	3.13	42.51	468,000	700	3.47	47.06	507,000
1932.....	1,100	5.45	74.48	802,000	1,250	6.19	84.36	909,000
1933.....	1,220	6.04	81.62	850,000	1,410	6.98	94.33	1,020,000
1934.....	1,356	6.71	91.17	982,100	1,116	5.52	75.02	807,800
1935.....	1,071	5.30	72.07	775,700	-	-	-	-
Highest....	1,356	6.71	91.17	982,100	1,410	6.98	94.33	1,020,000
Average....	921	4.56	61.95	667,000	918	4.54	61.69	665,000
Lowest.....	572	2.83	38.46	414,000	525	2.60	35.24	280,000

Naches River below Tieton River, near Naches, Wash.

Location.- Water-stage recorder, lat. 46°44'40", long. 120°46'50", in sec. 35, T. 15 N., R. 16 E., 600 feet below Tieton River and 5 miles northwest of Naches. Staff gage prior to Dec. 7, 1916.

Drainage area.- 942 square miles.

Records available.- August to October 1905, March 1909 to October 1912, May 1915 to September 1935. October 1928 to September 1935, not previously published, furnished by Bureau of Reclamation.

Extremes.- Maximum discharge observed, 32,200 second-feet from 11 p.m. Dec. 22 to 1 a.m. Dec. 23, 1933; minimum discharge, 57 second-feet Sept. 23, 24, 1924.

Remarks.- Station is above all important diversions except Selah Valley and Tieton canals, and diversion for water supply for city of Yakima. Selah Valley canal diversion for the period May 1915 to June 1920 estimated by averaging records for the period July 1909 to October 1912, July 1920 to September 1922. Flow partly regulated by storage in Bumping Lake and Tieton Reservoirs. Regulation above Tieton Dam began sometime in September 1924. Records of reservoir stage were not kept prior to Apr. 27, 1925. Correction made for accumulated storage October 1924 to April 1925; no correction made for September 1924. Run-off does not take into account depletion due to irrigation above the gaging station amounting to perhaps 6,000 acre-feet a year and unmeasured waste above gaging station on Selah Valley canal which reaches the river below the river gaging station.

Monthly discharge of Naches River below Tieton River, near Naches

Month	Observed				Gain or loss in storage in Bump- ing Lake Reservoir (acre-feet)	Diver- sions* (acre- feet)	Adjusted for storage and diversions			
	Discharge in second-feet			Run-off in acre-feet			Discharge in second-feet		Run- off in inches	
	Maxi- mum	Mini- mum	Mean				Mean	Per square mile		
1915										
May 10-31	2,200	980	1,370	59,800	+12,200	13,400	85,400	†1,960	2.08	1.70
June.....	1,540	420	832	49,500	+3,560	21,200	74,300	†1,250	1.33	1.48
July.....	980	400	518	31,900	-13,400	23,000	41,500	†675	.717	.83
August....	940	298	479	29,400	-19,700	21,000	30,700	†499	.530	.61
September	314	188	247	14,700	-1,740	11,400	24,400	†410	.435	.49
Period..	-	-	-	185,000	-19,100	90,000	256,000	-	-	-
1916										
Apr. 13-30	5,910	2,750	4,200	150,000	+422	3,520	154,000	†4,310	4.68	2.75
May.....	9,960	3,250	5,510	338,000	+4,810	20,200	363,000	†8,900	6.26	7.22
June.....	11,600	4,590	7,000	416,000	+25,500	22,500	464,000	†17,800	8.28	9.24
July.....	10,300	2,390	5,250	323,000	-532	22,400	345,000	†5,610	5.96	6.87
August....	2,590	927	1,600	98,600	-6,110	24,800	117,000	†1,900	2.02	2.33
September	1,160	471	741	44,100	-17,600	18,900	45,400	†763	.810	.90
Period..	-	-	-	1,370,000	+6,490	112,000	1,490,000	-	-	-
1916-17										
October..	553	409	463	28,500	-4,170	3,550	27,900	†454	.482	.56
November.	713	307	473	28,100	-1,720	-	26,400	444	.471	.53
December.	-	-	406	25,000	+414	-	25,400	413	.438	.50
January...	-	-	496	30,500	-2,780	-	27,700	450	.478	.55
February.	-	-	582	32,300	-227	-	32,100	578	.614	.64
March....	511	348	403	24,800	+931	-	25,700	418	.444	.51
April.....	2,000	360	894	53,200	+3,000	4,970	61,200	†1,030	1.09	1.22
May.....	7,900	1,480	4,150	255,000	+19,800	21,100	296,000	†4,810	5.11	5.89
June.....	8,260	3,700	5,760	343,000	+9,260	22,900	375,000	†6,300	6.69	7.46
July.....	6,320	1,200	3,690	227,000	-1,370	24,800	250,000	†4,070	4.32	4.98
August....	1,200	563	904	55,600	-17,900	24,800	62,500	†1,020	1.08	1.24
September	607	327	476	28,300	-13,600	20,600	35,300	†593	.630	.70
The year	8,260	-	1,560	1,130,000	-8,360	123,000	1,250,000	1,720	1.83	24.78
1917-18										
October..	413	234	302	18,600	-790	3,550	21,400	†348	.369	.43
November.	460	205	297	17,700	+3,650	2,620	24,000	403	.428	.48
December.	15,600	271	4,050	249,000	+31,400	-	280,000	4,550	4.83	5.57
January...	14,100	1,460	4,090	251,000	-4,530	-	246,000	4,000	4.25	4.90
February.	2,010	1,200	1,610	89,400	-10,900	-	78,500	1,410	1.50	1.56
March.....	2,060	1,010	1,260	77,500	-8,410	1,240	70,300	†1,140	1.21	1.40
April.....	3,460	1,650	2,260	134,000	+17,000	5,270	156,000	†2,620	2.78	3.10
May.....	3,970	1,550	2,640	162,000	+7,470	24,600	194,000	†3,160	3.35	3.86
June.....	5,370	1,380	3,140	187,000	-680	24,800	211,000	†3,550	3.77	4.21
July.....	1,340	432	804	49,400	-4,860	26,000	70,500	†1,150	1.22	1.41
August....	675	386	519	31,900	-19,200	25,600	38,500	†623	.661	.76
September	369	202	300	17,900	-10,600	20,400	27,700	†466	.495	.55
The year	15,600	202	1,780	1,290,000	-450	134,000	1,420,000	1,960	2.08	28.23

*Diversions by Selah Valley and Tieton canals and from 1929 to 1935 by city of Yakima.
†Estimated.

Monthly discharge of Naches River below Tieton River, near Naches--Continued

Month	Observed				Gain or loss in storage in Bumping Lake Reservoir (acre-feet)	Diversions* (acre-feet)	Adjusted for storage and diversions			
	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	
1918-19										
October..	1,100	411	531	32,600	+3,310	3,550	39,500	†642	0.682	0.79
November..	640	365	494	29,400	+5,120	1,400	35,900	†603	.640	.71
December..	1,750	502	921	56,600	+8,380	571	65,600	†1,070	1.14	1.31
January..	10,300	661	2,270	140,000	+11,200	-	151,000	2,460	2.61	3.01
February..	1,700	940	1,190	66,300	-9,520	-	56,800	1,020	1.08	1.12
March....	2,260	873	1,100	67,500	-11,000	-	56,500	919	.976	1.13
April.....	3,880	1,750	2,590	154,000	+4,770	8,150	167,000	†2,810	2.98	3.32
May.....	5,560	2,260	3,410	210,000	+23,800	25,300	259,000	†4,210	4.47	5.15
June.....	3,880	2,140	2,960	176,000	-760	25,200	200,000	†3,360	3.57	3.98
July.....	2,380	576	1,470	90,600	-810	26,600	116,000	†1,890	2.01	2.32
August....	621	449	557	34,200	-15,300	26,800	45,700	†743	.789	.91
September	601	322	442	26,300	-16,100	21,300	31,500	†529	.562	.63
The year	10,300	322	1,500	1,080,000	+3,090	139,000	1,220,000	1,690	1.79	24.38
1919-20										
October..	526	225	349	21,500	-3,050	3,550	22,000	†358	.380	.44
November..	1,100	322	589	35,000	+9,220	198	44,400	746	.792	.88
December..	1,180	350	688	42,300	+7,400	2,440	52,100	847	.899	1.04
January..	1,970	640	1,010	62,100	+8,510	1,810	72,200	1,170	1.24	1.43
February..	1,420	743	974	56,000	-460	-	55,500	965	1.02	1.10
March.....	1,260	595	800	49,200	-3,560	-	45,800	745	.791	.91
April.....	1,600	601	845	50,300	+3,040	8,420	61,800	†1,040	1.10	1.23
May.....	2,760	1,060	1,770	109,000	+4,870	24,900	139,000	†2,260	2.40	2.77
June.....	2,440	1,140	1,660	98,800	+7,650	24,700	131,000	†2,200	2.34	2.61
July.....	1,800	375	874	53,700	-5,670	25,600	73,600	1,200	1.27	1.46
August....	526	326	427	26,500	-17,100	25,900	35,100	571	.606	.70
September	822	331	548	32,600	-6,540	21,600	47,900	805	.855	.95
The year	2,760	225	877	637,000	+4,510	139,000	780,000	1,070	1.14	15.52
1920-21										
October..	1,750	858	1,070	65,800	+9,720	-	75,500	1,230	1.31	1.51
November..	2,690	576	1,180	70,200	-590	1,740	71,600	1,200	1.27	1.42
December..	2,820	771	1,180	72,600	-6,760	-	65,800	1,070	1.14	1.31
January..	3,030	1,020	1,700	105,000	-1,770	-	103,000	1,680	1.78	2.05
February..	3,530	829	1,910	106,000	-140	-	106,000	1,910	2.03	2.11
March.....	3,870	1,860	2,550	157,000	-6,610	-	150,000	2,440	2.59	2.99
April.....	4,120	2,140	2,850	170,000	+1,450	6,110	178,000	2,990	3.17	3.54
May.....	7,600	2,260	4,830	297,000	+25,000	25,100	347,000	5,640	5.99	6.91
June.....	9,660	3,700	5,810	346,000	+7,910	24,600	379,000	6,370	6.76	7.54
July.....	4,720	1,140	2,170	133,000	+690	27,000	161,000	2,620	2.78	3.20
August....	1,060	647	765	47,000	-11,800	27,000	62,200	1,010	1.07	1.23
September	757	467	614	36,500	-15,400	21,800	42,900	721	.765	.85
The year	9,660	467	2,220	1,610,000	+1,900	133,000	1,740,000	2,410	2.56	34.66
1921-22										
October..	970	450	619	38,100	-3,060	5,640	40,700	662	.703	.81
November..	1,140	360	696	41,400	+120	-	41,500	697	.740	.83
December..	12,200	1,220	2,620	161,000	+16,700	-	178,000	2,890	3.07	3.54
January..	1,460	778	1,210	74,400	-16,000	-	58,400	950	1.01	1.16
February..	750	433	637	35,400	-6,350	-	29,000	522	.554	.68
March.....	627	433	496	30,500	-780	-	29,700	483	.513	.59
April.....	2,260	681	1,340	79,700	+1,030	1,840	82,600	1,390	1.48	1.65
May.....	8,680	2,020	3,680	226,000	+19,900	23,300	268,000	4,360	4.63	5.34
June.....	7,720	1,970	4,450	265,000	+15,400	25,500	306,000	5,140	5.46	6.09
July.....	1,650	514	841	51,700	-3,680	27,000	75,000	1,220	1.30	1.50
August....	634	444	507	31,200	-18,500	27,500	40,200	654	.694	.80
September	514	225	367	21,800	-13,100	23,000	31,700	533	.566	.63
The year	12,200	225	1,460	1,060,000	-9,320	134,000	1,180,000	1,630	1.73	23.52
1922-23										
October..	800	194	336	20,600	+570	3,990	25,200	410	.435	.50
November..	551	273	408	24,300	+830	2,220	27,400	460	.488	.54
December..	1,550	229	590	36,500	+7,810	-	44,100	717	.761	.88
January..	4,300	814	1,670	103,000	+8,380	-	111,000	1,810	1.92	2.21
February..	1,020	750	892	49,500	-12,500	-	37,000	666	.707	.74
March.....	3,080	715	1,030	63,500	-4,550	-	59,000	960	1.02	1.18
April.....	4,580	2,320	3,120	186,000	+14,500	4,360	205,000	3,450	3.66	4.08
May.....	7,260	2,020	4,240	261,000	+20,200	26,000	307,000	4,990	5.30	6.11
June.....	6,800	2,260	3,430	204,000	+550	25,400	230,000	3,870	4.11	4.59
July.....	3,860	660	1,890	116,000	+470	26,100	143,000	2,330	2.47	2.85
August....	985	508	617	37,900	-14,200	26,500	50,200	816	.866	1.00
September	551	273	412	24,500	-15,400	23,100	32,200	541	.574	.64
The year	7,260	194	1,560	1,130,000	+6,660	138,000	1,270,000	1,760	1.87	25.32

*Diversions by Selah Valley and Tieton canals and from 1929 to 1935 by city of Yakima.
†Estimated.

Monthly discharge of Naches River below Tieton River, near Naches--Continued

Month	Observed				Gain or loss in storage in Bump- ing Lake Reservoir (acre-feet)	Diver- sions* (acre- feet)	Adjusted for storage and diversions			
	Discharge in second-feet			Run-off in acre-feet			Run-off in acre-feet	Discharge in second-feet		Run- off in inches
	Maxi- mum	Mini- mum	Mean					Mean	Per square mile	
1923-24										
October..	985	355	508	31,200	-400	2,320	33,100	538	0.571	0.66
November..	910	331	477	28,400	+5,370	832	34,600	581	.617	.69
December..	1,650	621	892	54,800	+790	458	56,000	911	.967	1.11
January....	1,610	532	860	52,900	-2,410	-	50,500	821	.872	1.01
February....	6,800	1,650	2,660	153,000	+11,400	-	164,000	2,850	3.03	3.27
March.....	1,900	1,020	1,430	88,200	-9,610	2,090	80,700	1,310	1.39	1.60
April.....	2,200	822	1,590	94,400	+560	13,400	108,000	1,920	1.93	2.15
May.....	6,800	1,650	3,690	227,000	+23,700	27,300	278,000	4,520	4.80	5.53
June.....	2,320	634	1,300	77,400	+690	26,800	105,000	1,760	1.87	2.09
July.....	778	417	530	32,600	-13,500	27,200	46,400	755	.801	.92
August....	453	269	376	25,100	-17,800	27,500	32,800	533	.566	.65
September	512	57	208	12,400	-5,060	15,800	23,100	388	-	-
The year	6,800	57	1,210	875,000	-6,170	144,000	1,010,000	1,390	1.48	20.14
1924-25										
October..	712	259	392	24,100	+12,600	2,330	39,000	634	.673	.78
November..	705	334	536	31,900	+20,600	1,270	53,800	904	.960	1.07
December..	3,770	531	1,440	88,600	+17,200	-	106,000	1,720	1.83	2.11
January....	1,010	618	794	48,800	+12,200	-	61,000	992	1.05	1.21
February....	2,340	828	1,150	64,000	+21,200	253	85,500	1,540	1.63	1.70
March.....	1,450	678	951	56,500	+11,900	2,310	72,700	1,180	1.25	1.44
April.....	4,780	1,020	2,710	161,000	+21,400	11,000	193,000	3,240	3.44	3.84
May.....	7,800	2,280	4,760	293,000	+16,300	25,600	335,000	5,450	5.79	6.68
June.....	4,460	1,700	2,690	160,000	+4,000	26,400	190,000	3,190	3.39	3.78
July.....	2,210	1,340	1,660	102,000	-49,300	28,000	80,700	1,310	1.39	1.60
August....	1,340	416	846	52,000	-42,600	27,600	37,000	602	.639	.74
September	537	354	421	25,100	-22,900	20,200	22,600	380	.403	.45
The year	7,800	259	1,530	1,110,000	+22,700	145,000	1,280,000	1,760	1.87	25.40
1925-26										
October..	456	204	290	17,800	+3,780	1,730	23,300	379	.402	.46
November..	323	230	294	17,500	-5,440	1,110	13,200	222	.236	.26
December..	1,060	323	516	31,700	+29,100	133	60,900	990	1.05	1.21
January....	798	411	502	30,800	+15,400	-	46,200	751	.797	.92
February....	605	406	491	27,200	+16,000	64	43,300	780	.828	.86
March.....	1,790	432	950	58,400	+32,900	3,030	94,300	1,530	1.62	1.87
April.....	3,160	867	1,850	110,000	+33,500	17,800	161,000	2,710	2.88	3.21
May.....	2,500	1,130	1,720	106,000	-15,900	27,000	117,000	1,900	2.02	2.33
June.....	1,430	519	821	48,800	-18,900	26,200	56,100	943	1.00	1.12
July.....	691	458	589	36,200	-34,400	26,900	28,700	467	.496	.57
August....	1,290	363	850	52,300	-51,200	26,500	27,600	449	.477	.55
September	1,240	121	469	27,900	-27,600	12,300	12,600	212	.225	.25
The year	3,160	121	780	564,000	-22,800	143,000	684,000	945	1.00	13.61
1926-27										
October..	1,080	136	356	21,900	+16,500	1,820	40,200	654	.694	.80
November..	1,240	368	530	31,500	+18,100	958	50,600	850	.902	1.01
December..	2,080	543	903	55,500	+36,400	196	92,100	1,500	1.59	1.83
January....	1,480	502	720	44,300	+8,100	-	52,400	852	.904	1.04
February....	1,160	463	575	31,900	+14,700	-	46,600	839	.891	.93
March.....	1,110	537	725	44,500	+15,300	559	60,400	982	1.04	1.20
April.....	5,400	791	1,780	106,000	+31,500	7,620	145,000	2,440	2.59	2.89
May.....	5,940	1,960	3,160	194,000	+51,700	24,200	270,000	4,590	4.66	5.37
June.....	9,010	2,760	5,160	307,000	+30,500	23,900	361,000	6,070	6.44	7.18
July.....	2,560	1,200	1,800	110,000	-8,430	26,600	128,000	2,080	2.21	2.55
August....	1,380	1,090	1,220	74,900	-55,100	27,000	46,800	761	.806	.93
September	1,120	508	706	42,000	-23,600	18,400	36,800	618	.656	.73
The year	9,010	136	1,470	1,060,000	+136,000	131,000	1,330,000	1,840	1.95	26.46
1927-28										
October..	1,380	579	743	45,700	+18,900	3,150	67,800	1,100	1.17	1.35
November..	3,030	598	1,340	79,700	+37,500	1,300	118,000	1,980	2.10	2.34
December..	5,050	859	2,380	147,000	-31,400	-	116,000	1,690	2.01	2.32
January....	4,710	837	1,930	119,000	+10,200	-	129,000	2,100	2.23	2.57
February....	1,490	627	965	55,500	-12,600	938	43,800	761	.808	.93
March.....	3,200	596	1,390	85,700	+16,100	1,860	104,000	1,690	1.79	2.06
April.....	2,460	1,170	1,500	89,200	+17,700	6,510	113,000	1,900	2.02	2.25
May.....	7,220	2,400	4,720	291,000	+41,800	24,200	357,000	5,810	6.17	7.11
June.....	2,920	1,590	2,310	138,000	-2,780	25,400	161,000	2,710	2.88	3.21
July.....	1,740	794	1,080	66,700	-20,700	26,700	72,700	1,180	1.25	1.44
August....	1,170	522	735	45,200	-43,700	26,800	28,400	462	.490	.56
September	1,300	751	1,110	66,300	-66,300	20,500	20,500	345	.366	.41
The year	7,220	522	1,690	1,230,000	-35,300	137,000	1,330,000	1,830	1.94	26.50

*Diversions by Selah Valley and Tieton canals and from 1929 to 1935 by city of Yakima.

Monthly discharge of Naches River below Tieton River, near Naches--Continued

Month	Observed				Gain or loss in storage in Bump- ing Lake Reservoir (acre-feet)	Diver- sions* (acre- feet)	Adjusted for storage and diversions			
	Discharge in second-feet			Run-off in acre-feet			Run-off in acre-feet	Discharge in second-feet		Run- off in inches
	Maxi- mum	Mini- mum	Mean					Mean	Per square mile	
1928-29										
October..	907	300	537	33,000	-7,520	14,400	39,900	649	0.689	0.79
November..	614	358	486	28,900	-3,180	2,690	28,400	477	.506	.56
December..	608	285	379	23,300	+210	924	24,400	397	.421	.49
January..	416	135	263	16,200	+150	869	17,200	280	.297	.34
February..	370	169	249	13,800	-210	869	14,500	261	.277	.29
March....	573	296	407	25,000	+10,500	1,690	37,200	605	.642	.74
April.....	1,840	281	918	54,600	-6,270	8,670	57,000	958	1.02	1.14
May.....	3,420	1,050	2,000	123,000	+67,600	26,600	217,000	3,530	3.75	4.32
June.....	2,580	1,260	1,840	109,000	+48,200	26,700	184,000	3,090	3.28	3.66
July.....	1,540	435	1,010	61,900	-16,100	28,000	73,800	1,200	1.27	1.46
August....	2,460	464	1,330	81,500	-81,600	28,500	28,400	462	.490	.56
September	2,160	304	1,360	81,100	-86,100	24,100	19,100	321	.341	.38
The year	3,420	135	900	652,000	-74,300	164,000	741,000	1,020	1.08	14.73
1929-30										
October..	602	153	266	16,300	-5,130	5,920	17,100	278	.295	.34
November..	252	172	207	12,300	-5,480	4,950	11,800	198	.210	.25
December..	379	216	275	16,900	+7,050	954	24,900	405	.430	.50
January..	320	185	256	15,700	+670	896	17,300	281	.298	.34
February..	1,050	250	501	27,800	+31,000	1,410	60,200	1,080	1.15	1.20
March....	2,040	285	602	37,000	+28,800	3,490	69,300	1,130	1.20	1.38
April.....	3,220	1,040	1,960	116,000	+54,000	15,400	185,000	3,110	3.30	3.68
May.....	2,160	962	1,640	101,000	+25,600	27,400	154,000	2,600	2.65	3.06
June.....	2,160	473	1,480	87,800	-530	26,500	114,000	1,920	2.04	2.28
July.....	866	512	668	41,100	-18,900	28,300	50,500	821	.872	1.01
August....	1,920	714	1,180	72,300	-72,400	28,700	28,600	465	.494	.57
September	1,980	292	886	52,800	-56,600	23,000	19,200	323	.343	.38
The year	3,220	153	825	597,000	-11,900	167,000	752,000	1,040	1.10	14.97
1930-31										
October..	398	184	271	16,600	-2,810	3,940	17,700	288	.306	.35
November..	437	209	295	17,600	-380	1,500	18,700	314	.333	.37
December..	296	163	246	15,100	-1,650	1,420	14,900	242	.257	.30
January..	789	124	297	18,300	+13,700	884	32,900	535	.568	.65
February..	593	296	370	20,500	+17,700	1,960	40,200	724	.769	.80
March....	701	281	388	23,900	+21,600	5,660	51,200	833	.884	1.02
April.....	3,220	569	1,100	65,300	+43,400	11,600	120,000	2,020	2.14	2.39
May.....	4,680	1,420	2,690	166,000	+58,400	21,300	246,000	4,000	4.25	4.90
June.....	1,760	575	1,070	63,900	+8,680	21,400	94,000	1,580	1.68	1.87
July.....	1,460	838	1,090	67,200	-59,700	26,400	33,900	551	.585	.67
August....	1,280	917	1,090	67,200	-70,800	27,200	23,600	384	.408	.47
September	1,120	146	669	39,800	-42,700	20,200	17,300	291	.309	.34
The year	4,680	124	803	581,000	-14,600	143,000	710,000	981	1.04	14.13
1931-32										
October..	413	149	193	11,900	+2,220	4,360	18,500	301	.320	.37
November..	512	253	317	18,900	+8,400	2,460	29,800	501	.532	.59
December..	442	151	281	17,200	+10,800	922	28,900	470	.499	.58
January..	810	226	382	23,500	+14,500	896	38,900	633	.672	.77
February..	4,080	273	772	44,400	+22,600	896	67,900	1,180	1.25	1.35
March....	2,280	569	1,150	70,900	+55,700	2,180	129,000	2,100	2.23	2.57
April.....	2,970	1,160	1,880	112,000	+36,200	9,890	158,000	2,660	2.82	3.15
May.....	4,410	1,820	3,250	200,000	+53,600	24,200	278,000	4,520	4.80	5.53
June.....	2,410	2,040	3,220	192,000	+28,700	25,800	246,000	4,130	4.38	4.89
July.....	2,640	960	1,550	95,600	-20,900	28,000	103,000	1,680	1.78	2.05
August....	960	575	801	49,200	-39,200	28,100	38,000	618	.656	.76
September	952	485	678	40,300	-40,400	24,100	24,000	403	.428	.48
The year	4,410	149	1,210	876,000	+132,000	152,000	1,160,000	1,600	1.70	23.09
1932-33										
October..	605	321	442	27,200	-7,190	4,420	24,400	397	.421	.49
November..	4,060	357	1,510	89,700	+37,600	2,070	129,000	2,170	2.30	2.67
December..	2,520	880	1,310	80,600	+1,740	585	82,900	1,350	1.43	1.65
January..	1,820	842	1,030	63,100	-4,840	585	58,800	956	1.01	1.16
February..	1,120	635	844	46,800	-18,000	1,330	30,100	542	.575	.60
March....	880	635	717	44,100	-6,780	2,940	40,300	655	.695	.80
April.....	4,770	721	1,780	106,000	+34,300	8,500	149,000	2,500	2.65	2.96
May.....	5,670	1,420	2,540	156,000	+62,900	21,300	240,000	3,900	4.14	4.77
June.....	10,500	4,570	6,250	372,000	-2,120	25,700	396,000	6,660	7.07	7.89
July.....	4,400	1,520	3,270	201,000	-650	26,500	227,000	3,890	3.92	4.52
August....	1,630	1,230	1,380	85,000	-43,000	27,700	69,700	1,130	1.20	1.38
September	1,420	1,230	1,290	77,000	-60,200	23,600	40,400	679	.721	.80
The year	10,500	321	1,860	1,350,000	-6,240	145,000	1,490,000	2,050	2.18	29.59

*Diversions by Selah Valley and Tieton canals and from 1929 to 1935 by city of Yakima.

Monthly discharge of Naches River below Tieton River, near Naches--Continued

Month	Observed				Gain or loss in storage in Bump- ing Lake Reservoir (acre-feet)	Diver- sions* (acre- feet)	Adjusted for storage and diversions			
	Discharge in second-feet			Run-off in acre-feet			Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maxi- mum	Mini- mum	Mean					Mean	Per square mile	
1933-34										
October..	1,370	505	876	53,820	+17,220	3,820	74,860	1,217	1.29	1.49
November..	2,320	632	1,130	67,080	+19,360	2,200	88,640	1,490	1.58	1.76
December..	26,400	1,060	6,820	419,300	+40,910	631	460,800	7,494	7.96	9.18
January..	9,590	2,890	4,710	289,300	-25,480	631	264,500	4,302	4.57	5.27
February..	4,370	1,320	2,780	154,200	-31,050	632	123,800	2,229	2.37	2.47
March.....	3,540	1,270	2,500	154,000	+65,610	6,330	225,900	3,674	3.90	4.50
April.....	5,870	2,390	4,050	241,200	+17,930	18,740	277,900	4,670	4.96	5.53
May.....	3,610	1,820	2,610	160,600	+1,280	26,420	188,300	3,062	3.25	3.75
June.....	2,000	1,180	1,580	94,060	-20,710	26,930	100,300	1,686	1.79	2.00
July.....	1,420	1,120	1,270	77,950	-51,080	27,870	54,740	890	.945	1.09
August.....	1,220	864	1,020	62,940	-57,060	28,170	34,050	554	.588	.68
September	1,640	417	955	56,820	-34,990	20,990	42,820	720	.764	.85
The year	26,400	417	2,530	1,831,000	-58,060	163,400	1,937,000	2,675	2.84	38.57
1934-35										
October..	1,930	410	593	36,470	+15,620	4,860	56,950	926	.983	1.13
November..	3,200	538	1,530	91,210	+57,990	1,620	150,800	2,534	2.69	3.00
December..	2,180	932	1,370	84,480	+4,870	1,310	90,660	1,474	1.56	1.80
January..	5,040	950	1,970	121,000	+5,540	680	127,200	2,069	2.20	2.54
February..	2,640	1,140	1,840	102,500	-1,980	680	101,200	1,822	1.93	2.01
March.....	1,400	880	1,100	67,690	+1,190	4,970	73,850	1,201	1.27	1.46
April.....	2,780	948	1,630	97,060	+8,850	12,460	118,400	1,990	2.11	2.35
May.....	6,160	2,350	3,470	213,100	+50,770	26,090	290,000	4,716	5.01	5.78
June.....	5,220	2,220	3,660	218,000	+21,620	25,890	265,500	4,462	4.74	5.29
July.....	2,220	1,460	1,730	106,100	-28,180	27,570	105,500	1,716	1.82	2.10
August.....	1,460	712	1,110	68,500	-57,890	27,950	38,360	624	.662	.76
September	980	615	761	45,290	-39,210	26,090	32,170	541	.574	.64
The year	6,160	410	1,730	1,251,000	+39,190	160,200	1,451,000	2,004	2.13	28.66

*Diversions by Selah Valley and Tieton canals and from 1929 to 1935 by city of Yakima.

Yearly discharge of Naches River below Tieton River, near Naches

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1909.....	1,680	1.78	24.15	1,210,000	2,120	2.25	30.62	1,540,000
1910.....	2,620	2.78	37.80	1,900,000	2,380	2.53	34.31	1,720,000
*1911.....	1,680	1.78	24.18	1,220,000	1,460	1.55	20.94	1,050,000
*1912.....	1,650	1.75	23.85	1,200,000	-	-	-	-
1917.....	1,720	1.83	24.78	1,250,000	2,060	2.19	29.67	1,490,000
1918.....	1,960	2.08	28.23	1,420,000	1,700	1.80	24.56	1,230,000
1919.....	1,690	1.79	24.38	1,220,000	1,660	1.76	23.93	1,200,000
1920.....	1,070	1.14	15.52	780,000	1,210	1.28	17.40	875,000
1921.....	2,410	2.56	34.66	1,740,000	2,470	2.62	35.60	1,790,000
1922.....	1,630	1.73	23.52	1,180,000	1,410	1.50	20.26	1,020,000
1923.....	1,760	1.87	25.32	1,270,000	1,790	1.90	25.86	1,300,000
1924.....	1,390	1.48	20.14	1,010,000	1,500	1.59	21.64	1,090,000
1925.....	1,760	1.87	25.40	1,280,000	1,620	1.72	23.37	1,170,000
1926.....	945	1.00	31.61	684,000	1,060	1.13	15.32	770,000
1927.....	1,840	1.95	26.46	1,330,000	2,000	2.12	28.83	1,450,000
1928.....	1,830	1.94	26.50	1,330,000	1,550	1.65	22.32	1,120,000
1929.....	1,020	1.08	14.73	741,000	970	1.03	13.96	702,000
1930.....	1,040	1.10	14.97	752,000	1,040	1.10	14.92	749,000
1931.....	981	1.04	14.13	710,000	1,020	1.08	14.65	736,000
1932.....	1,600	1.70	23.09	1,160,000	1,820	1.93	26.26	1,320,000
1933.....	2,050	2.18	29.59	1,490,000	2,590	2.75	37.31	1,880,000
1934.....	2,675	2.84	38.57	1,937,000	2,225	2.36	32.07	1,610,000
1935.....	2,004	2.13	28.86	1,451,000	-	-	-	-
Highest....	2,675	2.84	38.57	1,937,000	2,590	2.75	37.31	1,880,000
Average....	1,700	1.80	24.45	1,230,000	1,700	1.80	24.47	1,230,000
Lowest.....	945	1.00	13.61	684,000	970	1.03	13.96	702,000

*Adjustment for storage from November 1932 to October 1911 revised since publication of Water-Supply Papers 369 and 492.

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. Staff gages prior to June 17, 1913.

Drainage area.- 68 square miles.

Records available.- June to July 1906, April 1909 to September 1935.

Extremes.- Maximum discharge recorded, 5,130 second-feet at 5 p.m. Dec. 29, 1917; practically no flow when gates in outlet conduit are closed.

Remarks.- No diversion. Flow partly regulated by storage in Bumping Lake Reservoir.

Monthly discharge of Bumping River near Nile

Month	Observed				Gain or loss in storage in Bump- ing 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	
1919-20									
October..	256	2	93.6	5,760	-3,050	2,710	44.1	0.649	0.75
November.	96	4	32.1	1,910	+9,220	11,100	187	2.75	3.05
December.	310	5	132	8,120	+7,400	15,500	252	3.71	4.28
January..	419	7	142	8,750	+8,310	17,100	278	4.09	4.72
February.	234	65	207	11,900	-460	11,400	198	2.91	3.14
March....	223	127	199	12,200	-3,360	8,840	144	2.12	2.44
April.....	112	8	61.2	3,640	+3,040	6,680	112	1.65	1.84
May.....	609	64	325	20,000	+4,870	24,900	405	5.96	6.87
June.....	731	21	347	20,600	+7,650	28,200	474	6.97	7.78
July.....	448	23	233	17,400	-5,670	11,700	190	2.79	3.22
August....	391	293	341	21,000	-17,100	3,900	63.4	.932	1.07
September	340	144	279	16,600	-6,340	10,300	173	2.54	2.83
The year	731	2	204	148,000	+4,510	152,000	210	3.09	42.01
1920-21									
October..	295	50	132	11,200	+9,720	20,900	340	5.00	5.76
November.	560	108	317	13,900	-390	13,500	311	4.57	5.10
December.	510	17	332	20,400	-6,760	13,600	221	3.25	3.75
January..	493	147	343	21,100	-1,770	19,300	314	4.62	5.33
February.	499	92	331	18,400	-140	18,300	330	4.85	5.05
March....	741	260	438	26,900	-6,610	20,300	330	4.85	5.59
April.....	498	223	317	18,900	+1,450	20,400	343	5.04	5.62
May.....	630	106	360	22,100	+25,000	47,100	766	11.3	13.05
June.....	1,870	589	1,170	69,600	+7,910	77,500	1,300	19.1	21.31
July.....	1,190	272	567	34,900	+690	35,600	579	8.51	9.81
August....	477	233	336	20,700	-11,800	8,900	145	2.13	2.46
September	477	268	367	21,800	-15,400	6,400	108	1.59	1.77
The year	1,870	17	421	305,000	+1,900	307,000	424	6.24	84.58
1921-22									
October..	340	70	174	10,700	-3,060	7,640	124	1.82	2.10
November.	499	26	146	8,690	+120	8,810	148	2.18	2.43
December.	606	38	384	23,600	+16,700	40,300	655	9.63	11.10
January..	451	268	383	23,600	-16,000	7,600	124	1.82	2.10
February.	295	87	171	9,480	-6,350	3,130	56.4	.829	.86
March....	108	61	69.1	4,250	-780	3,470	58.1	.854	.98
April.....	156	62	92.6	5,510	+1,030	6,540	110	1.62	1.81
May.....	346	23	262	16,100	+18,900	35,000	569	8.37	9.65
June.....	1,230	203	791	47,100	+15,400	62,500	1,050	15.4	17.18
July.....	333	90	247	15,200	-3,680	11,500	187	2.75	3.17
August....	472	333	389	23,900	-18,500	5,400	87.8	1.29	1.49
September	426	63	268	15,900	-13,100	2,800	47.1	.693	.77
The year	1,230	23	282	204,000	-9,520	195,000	269	3.96	53.64
1922-23									
October..	122	44	63.9	3,930	+570	4,500	73.2	1.08	1.24
November.	106	58	70.1	4,170	+830	5,000	84.0	1.24	1.38
December.	60	13	47.5	2,920	+7,810	10,700	174	2.56	2.95
January..	328	12	232	14,300	+8,380	22,700	369	5.43	6.26
February.	401	241	348	19,300	-12,500	6,800	122	1.79	1.86
March....	250	32	152	9,370	-4,550	4,820	78.4	1.15	1.33
April.....	264	24	123	7,300	+14,500	21,800	366	5.38	6.00
May.....	1,100	27	460	28,300	+20,200	48,500	789	11.6	13.37
June.....	1,480	529	817	48,600	+550	49,200	827	12.2	13.61
July.....	1,060	23	429	26,400	+470	26,900	437	6.43	7.41
August....	374	234	344	21,100	-14,200	6,900	112	1.65	1.90
September	419	206	335	19,900	-15,400	4,500	75.6	1.11	1.24
The year	1,480	12	284	206,000	+6,660	212,000	293	4.31	58.55

Monthly discharge of Bumping River near Nile--Continued

Month	Observed				Gain or loss in storage in Bump- ing 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	
1923-24									
October..	206	7	84.6	5,200	-400	4,800	78.1	1.15	1.33
November..	33	5	11.0	654	+5,370	6,020	101	1.49	1.66
December..	316	52	143	8,820	+790	9,610	156	2.29	2.64
January...	305	77	161	9,900	-2,410	7,490	122	1.79	2.06
February...	414	268	360	20,700	+11,400	32,100	558	8.21	8.86
March.....	379	293	342	21,000	-9,610	11,400	185	2.72	3.14
April.....	405	15	180	10,700	+560	11,300	190	2.79	3.11
May.....	1,130	19	413	25,400	+23,700	49,100	799	11.8	13.60
June.....	620	168	334	19,900	+590	20,500	345	5.07	5.66
July.....	405	116	333	20,500	-13,300	7,200	117	1.72	1.98
August....	401	316	374	23,000	-17,800	5,200	84.6	1.24	1.43
September	345	50	132	7,860	-5,060	2,800	47.1	.693	.77
The year	1,130	5	239	174,000	-6,170	168,000	231	3.40	46.24
1924-25									
October..	155	58	81.6	5,020	+550	5,570	90.6	1.33	1.53
November..	139	5	28.9	1,720	+8,580	10,300	173	2.54	2.83
December..	410	133	238	14,700	+5,190	19,900	324	4.76	5.49
January...	261	110	162	9,950	+240	10,200	166	2.44	2.81
February...	142	103	130	7,210	+9,160	16,400	295	4.34	4.52
March....	142	116	123	7,560	-60	7,500	122	1.79	2.06
April.....	405	139	304	18,100	+9,310	27,400	460	6.76	7.54
May.....	1,720	424	1,030	63,200	+910	64,100	1,040	15.3	17.64
June.....	1,170	275	676	40,200	+2,470	42,700	718	10.6	11.83
July.....	529	414	431	26,500	-12,500	14,000	228	3.35	3.86
August....	414	92	350	21,500	-16,600	4,900	79.7	1.17	1.35
September	112	39	82.3	4,890	-2,090	2,800	47.1	.693	.77
The year	1,720	5	305	221,000	+5,160	226,000	312	4.59	62.23
1925-26									
October..	39	-20	35.1	2,160	-30	2,130	34.6	.509	.59
November..	32	31	31.1	1,850	+600	2,450	41.2	.606	.68
December..	160	28	66.2	4,070	+9,340	13,400	218	3.21	3.70
January...	272	62	156	9,560	+1,820	11,400	185	2.72	3.14
February...	272	19	118	6,570	+1,050	7,620	137	2.01	2.09
March....	38	6	13.1	803	+11,100	11,900	194	2.85	3.29
April.....	820	15	345	20,500	+6,770	27,300	459	6.75	7.53
May.....	681	225	360	22,200	+220	22,400	364	5.35	6.17
June.....	340	212	266	15,800	-6,620	9,180	154	2.26	2.52
July.....	336	316	325	20,000	-16,500	3,500	56.9	.837	.96
August....	320	52	243	14,900	-13,000	1,900	30.0	.441	.51
September	74	31	45.0	2,680	+40	2,720	45.7	.672	.75
The year	820	6	167	121,000	-5,210	116,000	160	2.35	31.93
1926-27									
October..	206	64	98.4	6,050	+4,780	10,800	176	2.59	2.99
November..	203	6	88.2	5,250	+5,630	10,900	183	2.69	3.00
December..	221	12	96.1	5,910	+11,300	17,200	280	4.12	4.75
January...	675	76	352	21,700	-6,900	14,800	241	3.54	4.08
February...	301	9	167	9,290	-969	8,320	150	2.21	2.30
March....	158	62	133	8,160	-1,070	7,090	115	1.69	1.95
April.....	477	151	211	12,500	+2,560	14,900	250	3.68	4.11
May.....	614	273	478	29,400	+14,700	44,100	717	10.5	12.11
June.....	1,960	37	1,130	67,200	+4,670	71,900	1,210	17.8	19.86
July.....	746	431	553	34,000	-8,920	25,100	408	6.00	6.92
August....	566	244	483	29,700	-23,300	6,400	104	1.53	1.76
September	212	1	88.6	5,270	-769	4,500	75.6	1.11	1.24
The year	1,960	1	324	234,000	+1,510	236,000	326	4.79	65.07
1927-28									
October..	351	2	179	11,000	+1,280	12,300	200	2.94	3.39
November..	332	212	265	15,800	+8,740	24,500	412	6.06	6.76
December..	370	160	291	17,900	-1,010	16,900	275	4.04	4.66
January...	431	58	271	16,600	+6,640	23,200	377	5.54	6.39
February...	474	42	111	6,380	+837	7,220	126	1.85	2.00
March....	508	42	232	14,300	+1,290	15,600	254	3.74	4.31
April.....	508	23	312	18,500	-2,800	15,700	264	3.88	4.33
May.....	1,710	26	759	46,700	+18,700	65,400	1,060	15.6	17.99
June.....	771	371	583	34,700	+671	35,400	595	8.75	9.76
July.....	371	86	201	12,300	-630	11,700	190	2.79	3.22
August....	461	55	178	10,900	-6,490	4,410	71.7	1.05	1.21
September	484	393	455	27,100	-22,400	4,700	79.0	1.16	1.29
The year	1,710	2	320	232,000	+4,830	237,000	326	4.79	65.31

Monthly discharge of Bumping River near Nile--Continued

Month	Observed				Gain or loss in storage in Bump- ing 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	
1928-29	265	4	36.3	2,230	+2,480	4,710	76.6	1.13	1.30
October..	438	4	228	13,600	-7,340	6,260	105	1.54	1.72
November..	127	74	95.1	5,850	-1,170	4,680	76.1	1.12	1.29
December..	83	45	56.9	3,500	-250	3,250	52.9	.778	.90
January...	50	46	46.7	2,590	-40	2,550	45.9	.675	.70
February...	48	4	28.4	1,750	+2,180	3,930	63.9	.940	1.08
March....	221	4	101	5,990	+970	6,960	117	1.72	1.92
April.....	461	12	143	8,780	+28,400	37,200	605	8.90	10.26
May.....	954	180	563	33,500	+5,220	38,700	650	9.56	10.67
June.....	461	164	346	21,300	-9,480	11,800	192	2.82	3.25
July.....	461	272	367	22,600	-17,800	4,800	78.1	1.15	1.33
August....	461	3	183	10,900	-8,360	2,540	42.7	.628	.70
September									
The year	954	3	183	133,000	-5,190	127,000	176	2.59	35.12
1929-30									
October..	30	2	16.4	1,010	+979	1,990	32.4	.476	.55
November..	30	19	25.0	1,370	+54	1,420	23.9	.351	.39
December..	138	18	48.6	2,990	+988	3,980	64.7	.951	1.10
January...	140	48	96.5	5,930	-3,080	2,850	46.4	.682	.79
February...	136	9	57.0	3,170	+10,100	13,300	239	3.51	3.66
March....	17	7	8.71	536	+7,730	8,270	134	1.97	2.27
April.....	715	17	239	14,200	+14,500	28,700	482	7.09	7.91
May.....	771	30	469	28,800	+2,050	30,800	501	7.37	8.50
June.....	771	15	500	29,800	-5,720	24,100	405	5.96	6.65
July.....	221	44	102	6,290	+495	6,780	110	1.62	1.87
August....	438	71	342	21,000	-16,900	4,100	66.7	.981	1.13
September	438	36	243	14,500	-12,400	2,100	35.3	.519	.58
The year	771	2	179	130,000	-1,200	128,000	177	2.60	35.40
1930-31									
October..	46	19	34.4	2,110	+20	2,130	34.6	.509	.59
November..	98	35	60.1	3,570	+30	3,600	60.5	.890	.99
December..	51	35	45.4	2,790	-60	2,730	44.4	.653	.75
January...	60	3	35.3	2,170	+4,890	7,060	115	1.69	1.95
February...	110	3	56.8	3,160	+6,300	9,460	170	2.50	2.60
March....	91	5	55.1	3,390	+6,620	10,000	163	2.40	2.77
April.....	557	7	122	7,230	+11,200	18,400	309	4.54	5.06
May.....	1,160	68	754	46,400	+3,850	50,200	816	12.0	13.83
June.....	688	23	289	17,200	+1,680	18,900	318	4.68	5.22
July.....	569	206	333	20,500	-14,700	5,800	94.3	1.39	1.60
August....	371	206	354	21,800	-17,800	4,000	65.1	.957	1.10
September	206	31	60.1	3,570	-2,130	1,440	24.2	.356	.40
The year	1,160	3	185	134,000	-100	134,000	185	2.72	36.86
1931-32									
October..	102	28	42.5	2,610	+357	2,970	48.3	.710	.82
November..	172	0	112	6,670	+1,560	8,230	138	2.03	2.26
December..	162	2	72.4	4,450	+1,280	5,730	93.2	1.37	1.58
January...	140	3	89.0	5,470	+2,430	7,900	128	1.88	2.17
February...	206	36	135	7,770	+5,010	12,800	223	3.28	3.54
March....	33	6	14.7	904	+19,700	20,600	335	4.93	5.68
April.....	508	17	329	19,600	+2,100	21,700	365	5.37	5.99
May.....	1,120	521	800	49,200	+346	49,500	805	11.8	13.60
June.....	1,480	657	988	58,800	+319	59,100	993	14.6	16.29
July.....	686	226	341	20,900	+1,940	22,800	371	5.46	6.30
August....	400	242	379	23,300	-16,000	7,300	119	1.75	2.02
September	400	242	373	22,800	-16,900	5,300	89.1	1.31	1.46
The year	1,480	0	306	222,000	+2,140	224,000	308	4.53	61.71
1932-33									
October..	220	1	29.3	1,800	+1,920	3,720	60.5	.890	1.03
November..	296	2	143	8,510	+18,900	27,400	460	6.76	7.54
December..	315	296	310	19,100	-1,360	17,700	288	4.24	4.89
January...	296	260	284	17,500	-5,840	11,700	190	2.79	3.22
February...	260	210	234	13,000	-7,380	5,620	101	1.49	1.55
March....	210	89	139	8,550	-2,630	5,920	96.3	1.42	1.64
April.....	155	93	107	6,370	+5,980	12,400	208	3.06	3.41
May.....	746	155	194	12,000	+20,700	32,700	532	7.82	9.02
June.....	2,070	841	1,310	78,200	+638	78,800	1,320	19.4	21.64
July.....	1,250	418	919	56,500	-851	55,600	904	13.3	15.33
August....	418	349	373	22,900	-8,980	13,900	226	3.32	3.85
September	371	108	349	20,800	-12,500	8,300	139	2.04	2.28
The year	2,070	1	366	265,000	+8,600	274,000	378	5.56	75.38

Monthly discharge of Bumping River near Nile--Continued

Month	Observed				Gain or loss in storage in Bump- ing 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	
1933-34									
October..	577	6	202	12,400	+7,020	19,420	316	4.65	5.36
November.	494	10	252	15,000	+5,650	20,650	347	5.10	5.69
December.	3,500	468	936	57,500	+8,510	66,010	1,074	15.8	18.22
January...	947	494	611	37,600	-1,160	36,440	593	8.72	10.05
February.	549	468	502	27,900	-11,790	16,110	290	4.26	4.44
March....	468	22	371	22,800	+12,300	35,100	571	8.40	9.68
April.....	1,380	522	855	50,900	+1,540	52,440	881	13.0	14.50
May.....	1,090	442	656	40,300	-159	40,140	653	9.60	11.07
June.....	494	418	455	27,100	-8,420	18,680	314	4.62	5.16
July.....	442	207	342	21,000	-13,370	7,630	124	1.82	2.10
August....	272	64	236	14,500	-10,710	3,790	61.6	.906	1.04
September	57	2	25.7	1,530	+1,720	3,250	54.6	.803	.90
The year	3,500	2	454	328,500	-8,870	319,700	442	6.50	88.21
1934-35									
October..	24	2	6.1	375	+14,270	14,640	238	3.50	4.04
November.	639	14	399	23,740	+12,490	36,230	609	8.96	10.00
December.	442	150	281	17,250	-2,830	14,420	235	3.46	3.99
January...	280	171	235	14,420	+3,800	18,220	296	4.35	5.02
February.	414	262	371	20,580	-5,120	15,460	278	4.09	4.26
March....	414	414	414	25,460	-12,630	12,830	209	3.07	3.54
April.....	414	14	248	14,780	-2,000	12,780	215	3.16	3.53
May.....	1,230	26	359	22,080	+23,480	45,560	741	10.9	12.57
June.....	1,550	640	1,019	60,620	-546	60,070	1,010	14.9	16.62
July.....	578	135	355	20,610	-1,160	19,450	316	4.65	5.36
August....	374	64	139	8,520	-2,730	5,790	94.2	1.39	1.60
September	465	366	457	27,170	-20,680	6,490	109	1.60	1.78
The year	1,550	2	353	255,600	+6,340	261,900	362	5.32	72.31

Yearly discharge of Bumping River near Nile

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1910.....	392	5.76	78.28	284,000	370	5.44	73.82	268,000
1911.....	292	4.29	58.26	211,000	250	3.68	49.97	181,000
1912.....	287	4.22	57.59	209,000	291	4.28	58.56	211,000
1913.....	322	4.74	64.07	233,000	327	4.81	65.20	237,000
1914.....	294	4.32	58.64	213,000	319	4.69	63.53	231,000
1915.....	207	3.04	41.51	150,000	175	2.57	34.99	127,000
1916.....	442	6.50	88.54	321,000	428	6.29	85.70	311,000
1917.....	291	4.28	58.16	211,000	361	5.31	72.19	261,000
1918.....	335	4.93	66.90	243,000	284	4.18	56.60	205,000
1919.....	307	4.51	61.26	222,000	308	4.53	61.45	223,000
1920.....	210	3.09	42.01	152,000	242	3.56	48.52	176,000
1921.....	424	6.24	84.58	307,000	429	6.31	85.60	311,000
1922.....	269	3.96	53.64	195,000	218	3.21	43.58	158,000
1923.....	293	4.31	58.55	212,000	294	4.32	58.61	213,000
1924.....	231	3.40	46.24	168,000	252	3.71	50.46	183,000
1925.....	312	4.59	62.23	226,000	287	4.22	57.35	208,000
1926.....	160	2.35	31.93	116,000	189	2.78	37.70	137,000
1927.....	326	4.79	65.07	236,000	346	5.09	69.14	251,000
1928.....	326	4.79	65.31	237,000	274	4.03	54.81	199,000
1929.....	176	2.59	35.12	127,000	165	2.43	32.85	119,000
1930.....	177	2.60	35.40	128,000	179	2.63	35.69	129,000
1931.....	185	2.72	36.86	134,000	196	2.88	39.19	142,000
1932.....	308	4.53	61.71	224,000	352	5.18	70.51	256,000
1933.....	378	5.56	75.38	274,000	457	6.72	91.19	331,000
1934.....	442	6.50	88.21	319,700	385	5.66	76.97	278,000
1935.....	362	5.32	72.31	261,900	-	-	-	-
Highest.....	442	6.50	88.54	321,000	457	6.72	91.19	331,000
Average.....	298	4.38	59.53	216,000	295	4.34	59.96	214,000
Lowest.....	160	2.35	31.93	116,000	165	2.43	32.85	119,000

Tieton River at Tieton Dam, near Naches, Wash.

(Formerly called Tieton River at McAllister Meadows near Naches, and at Rimrock)

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. Prior to Oct. 1, 1914, staff gage at McAllister Meadows, half a mile above mouth of Wild Cat Creek. Oct. 1, 1918, to Mar. 31, 1919, staff gage on highway bridge at Rimrock, 100 feet above Wild Cat Creek. Apr. 27, 1925, to Apr. 23, 1933, water-stage recorder and staff gage 200 feet above Wild Cat Creek.

Drainage area.- 187 square miles.

Records available.- August 1908 to September 1914 (fragmentary), October 1918 to March 1919, April 1925 to September 1935.

Extremes.- Maximum discharge, 8,450 second-feet at 9 p.m. Dec. 22, 1923; no flow Apr. 4-6, 1930.

Remarks.- No diversion. Flow partly regulated by Clear Creek Reservoir during the period October 1918 to March 1919. Regulation above Tieton Dam began sometime in September 1924.

Monthly discharge of Tieton River at Tieton Dam, near Naches

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						
1918-19									
October..	426	166	247	15,200	-	-	-	-	-
November.	307	166	208	12,300	-	-	-	-	-
December.	385	166	306	18,800	-	-	-	-	-
January..	2,530	185	677	41,600	-	-	-	-	-
February.	496	229	304	16,900	-	-	-	-	-
March....	426	206	243	15,000	-	-	-	-	-
Period..	-	-	-	120,000	-	-	-	-	-
1925									
Apr. 27-30	235	123	176	1,400	+3,600	5,000	630	3.37	0.50
May.....	2,390	158	1,170	71,900	+15,400	87,300	1,420	7.59	8.75
June.....	1,760	424	1,050	62,300	+1,510	63,800	1,070	5.72	6.38
July.....	1,710	1,110	1,300	80,100	-36,800	43,300	704	3.76	4.34
August....	1,280	576	761	46,800	-26,000	20,800	338	1.81	2.09
September	652	404	525	31,300	-20,700	10,600	178	.952	1.06
Period..	-	-	-	294,000	-63,000	231,000	-	-	-
1925-26									
October..	247	112	168	10,300	+3,810	14,100	229	1.22	1.41
November.	249	167	179	10,700	-6,040	4,660	78.3	.419	.47
December.	249	3	56.1	3,450	+19,800	23,200	377	2.02	2.33
January..	4	2	2.4	145	+13,600	13,700	223	1.19	1.37
February.	4	2	2.7	151	+15,000	15,200	274	1.47	1.53
March....	53	3	13.8	849	+21,800	22,600	368	1.97	2.27
April.....	669	42	231	13,700	+26,700	40,400	679	3.63	4.05
May.....	1,790	318	895	55,000	-16,100	38,900	633	3.39	3.91
June.....	1,160	445	637	37,900	-12,300	25,600	430	2.30	2.57
July.....	713	504	604	37,100	-17,900	19,200	312	1.67	1.92
August....	1,540	409	977	60,100	-38,200	21,900	356	1.90	2.19
September	1,540	65	575	34,200	-27,600	6,600	111	.594	.66
The year	1,780	2	364	264,000	-17,400	246,000	340	1.82	24.68
1926-27									
October..	127	2	85.0	5,220	+11,700	16,900	275	1.47	1.70
November.	89	36	61.4	3,650	+12,500	16,200	272	1.45	1.62
December.	49	3	4.94	303	+25,100	25,400	413	2.21	2.55
January..	3	3	3.00	184	+15,000	15,200	247	1.32	1.52
February.	8	3	4.75	264	+15,700	16,000	288	1.54	1.60
March....	11	8	8.94	549	+16,400	16,900	275	1.47	1.70
April.....	90	6	17.4	1,040	+29,100	30,100	506	2.71	3.02
May.....	1,400	141	405	24,900	+37,000	61,900	1,010	5.40	6.23
June.....	2,160	440	1,170	69,700	+25,800	95,500	1,600	8.56	9.55
July.....	902	587	705	43,300	+488	43,800	712	3.81	4.39
August....	1,040	632	844	51,800	-31,800	20,100	327	1.75	2.02
September	1,000	513	667	39,700	-22,800	16,900	284	1.52	1.70
The year	2,160	2	333	241,000	+134,000	375,000	518	2.77	37.60

Monthly discharge of Tieton River at Tieton Dam, near Naches--Continued

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 square miles	
	Maximum	Minimum	Mean				Mean	Per square mile		
1927-28										
October..	513	4	174	10,700	+17,600	28,300	460	2.46	2.84	
November..	901	5	99.0	5,890	+28,800	34,700	583	3.12	3.48	
December..	1,550	304	960	59,000	-30,400	28,600	465	2.49	2.87	
January..	966	13	578	35,600	+3,610	39,200	638	3.41	3.93	
February..	974	342	488	28,100	-13,400	14,700	256	1.37	1.48	
March....	405	12	229	14,100	+14,800	28,900	470	2.51	2.89	
April.....	974	6	161	9,600	+20,500	30,100	506	2.71	3.02	
May.....	1,860	808	1,050	64,300	+23,100	87,400	1,420	7.59	8.75	
June.....	1,190	908	936	55,700	-3,450	52,200	877	4.69	5.23	
July.....	974	639	853	52,400	-20,100	32,300	525	2.81	3.24	
August....	1,120	808	893	54,900	-37,200	17,700	288	1.54	1.78	
September	1,120	475	919	54,700	-43,900	10,800	182	.973	1.09	
The year	1,860	4	613	445,000	-40,000	405,000	558	2.98	40.60	
1928-29										
October..	645	263	408	25,100	-10,000	15,100	246	1.32	1.52	
November..	317	10	117	6,960	+4,160	11,100	187	1.00	1.12	
December..	279	81	138	8,480	+1,380	9,860	160	.856	.99	
January..	170	88	123	7,590	+400	7,990	130	.695	.80	
February..	136	104	122	6,750	-170	6,580	118	.631	.66	
March....	120	9	41.5	2,550	+8,340	10,900	177	.947	1.09	
April.....	1,270	9	375	22,500	-7,240	15,100	254	1.36	1.52	
May.....	283	219	249	15,300	+39,200	54,500	886	4.74	5.46	
June.....	302	252	279	16,600	+43,000	59,600	1,000	5.35	5.97	
July.....	1,020	306	680	41,800	-6,660	35,100	571	3.05	3.52	
August....	2,450	510	1,340	82,500	-63,800	18,700	304	1.63	1.88	
September	2,160	376	1,500	89,400	-77,700	11,700	197	1.05	1.17	
The year	2,450	9	449	325,000	-69,100	256,000	354	1.89	25.70	
1929-30										
October..	590	120	230	14,100	-6,110	7,990	130	.695	.80	
November..	171	86	139	8,280	-5,530	2,750	46.2	.247	.28	
December..	128	9	80.2	4,930	+6,060	11,000	179	.957	1.10	
January..	89	9	71.9	4,420	+3,750	8,170	133	.711	.82	
February..	74	5	9.61	534	+20,900	21,400	385	2.06	2.14	
March....	17	4	7.26	446	+21,100	21,500	350	1.87	2.16	
April.....	333	0	84.0	5,000	+39,500	44,500	748	4.00	4.46	
May.....	569	246	310	19,100	+23,500	42,600	693	3.71	4.28	
June.....	1,210	270	553	32,900	+5,190	38,100	640	3.42	3.82	
July.....	981	337	743	45,700	-19,400	26,300	428	2.29	2.64	
August....	1,960	981	1,260	77,700	-55,500	22,200	361	1.93	2.22	
September	2,010	496	964	57,400	-44,200	13,200	222	1.19	1.33	
The year	2,010	0	374	270,000	-10,700	260,000	359	1.92	26.05	
1930-31										
October..	372	134	202	12,400	-2,830	9,570	156	.834	.96	
November..	177	78	123	7,290	-410	6,880	116	.620	.69	
December..	173	82	106	6,520	-1,590	4,930	80.2	.429	.49	
January..	101	4	45.7	2,810	+8,780	11,600	189	1.01	1.16	
February..	6	5	5.07	282	+11,400	11,700	211	1.13	1.18	
March....	6	5	5.03	309	+15,000	15,300	249	1.33	1.53	
April.....	81	6	17.8	1,060	+32,200	33,300	560	2.99	3.34	
May.....	512	84	180	11,100	+54,600	65,700	1,070	5.72	6.60	
June.....	861	182	492	29,500	+7,000	36,500	610	3.26	3.64	
July.....	1,260	799	1,010	62,100	-45,000	17,100	278	1.49	1.72	
August....	1,260	1,020	1,110	68,400	-53,000	15,400	250	1.34	1.54	
September	1,390	119	833	49,500	-40,600	8,900	150	.802	.89	
The year	1,390	4	347	251,000	-14,400	237,000	327	1.75	23.74	
1931-32										
October..	170	34	128	7,880	+1,860	9,740	158	.845	.97	
November..	116	3	37.2	2,210	+6,840	9,050	152	.813	.91	
December..	5	4	4.45	274	+9,570	9,840	160	.856	.99	
January..	30	4	11.9	732	+12,100	12,800	208	1.11	1.28	
February..	54	11	15.3	883	+17,600	18,500	322	1.72	1.86	
March....	20	2	5.77	355	+36,000	36,400	592	3.17	3.66	
April.....	134	1	32.5	1,930	+34,100	36,000	605	3.24	3.62	
May.....	235	123	181	11,100	+53,300	64,400	1,050	5.61	6.47	
June.....	1,410	227	718	42,800	+28,400	71,200	1,200	6.42	7.16	
July.....	1,230	757	997	61,300	-22,800	38,500	626	3.35	3.86	
August....	892	517	692	42,500	-23,300	19,200	312	1.67	1.92	
September	830	451	596	35,400	-23,500	11,900	200	1.07	1.19	
The year	1,410	1	286	207,000	+130,000	338,000	465	2.49	33.89	

Monthly discharge of Tieton River at Tieton Dam, near Naches--Continued

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	
1932-33									
October..	474	172	359	22,100	-9,110	13,000	211	1.13	1.30
November..	739	230	405	24,100	+18,700	42,800	719	3.84	4.28
December..	522	255	358	22,000	+5,100	25,100	408	2.18	2.51
January..	311	270	294	18,100	+1,000	19,100	311	1.66	1.91
February..	522	282	390	21,600	-10,600	11,000	198	1.06	1.10
March....	292	285	286	17,600	-4,150	13,400	218	1.17	1.35
April....	321	5	66.2	3,940	+28,300	32,200	541	2.89	3.22
May.....	1,390	6	200	12,300	+42,200	54,500	986	4.74	5.46
June.....	3,180	1,110	1,760	105,000	-2,760	102,000	1,710	9.14	10.20
July.....	1,440	822	1,120	69,600	+201	69,800	1,120	5.99	6.91
August....	1,200	792	1,000	61,500	-34,000	27,500	447	2.39	2.76
September	1,090	1,060	1,080	64,200	-47,700	16,500	277	1.48	1.65
The year	3,180	5	608	441,000	-14,800	426,000	588	3.14	42.65
1933-34									
October..	1,080	4	357	22,000	+10,200	32,200	524	2.80	3.23
November..	678	5	276	16,400	+13,710	30,110	506	2.71	3.02
December..	6,650	318	1,610	98,900	+32,400	131,300	2,135	11.4	13.14
January..	2,790	606	1,590	98,000	-24,320	73,680	1,198	6.41	7.39
February..	1,570	7	931	51,700	-19,260	32,440	584	3.12	3.25
March....	15	7	8.63	534	+55,310	53,840	876	4.68	5.40
April....	1,530	15	797	47,400	+16,390	63,790	1,072	5.73	6.39
May.....	1,140	639	828	50,900	+1,440	52,340	851	4.55	5.25
June.....	910	644	788	46,900	-12,290	34,610	582	3.11	3.47
July.....	1,320	896	1,070	66,100	-37,710	28,390	462	2.47	2.85
August....	1,190	832	1,050	64,500	-46,350	18,150	295	1.58	1.82
September	1,140	494	775	46,100	-36,710	9,390	158	.845	.94
The year	6,650	4	842	609,400	-49,190	560,200	774	4.14	56.15
1934-35									
October..	418	6	286	17,560	+1,350	18,910	308	1.65	1.90
November..	42	6	14.6	871	+45,500	46,370	779	4.17	4.65
December..	579	42	288	17,730	+7,700	25,430	414	2.21	2.55
January..	692	279	446	27,410	+1,740	29,150	474	2.53	2.92
February..	680	113	387	21,490	+3,140	24,630	443	2.37	2.47
March....	114	113	114	7,000	+13,820	20,820	339	1.81	2.09
April....	846	8	245	14,460	+10,850	25,310	425	2.27	2.53
May.....	1,760	149	546	33,550	+27,290	60,840	989	5.29	6.10
June.....	1,080	548	832	49,530	+22,170	71,700	1,205	6.44	7.18
July.....	1,380	698	1,105	67,840	-27,020	40,820	664	3.55	4.09
August....	1,380	814	1,164	71,560	-55,160	16,400	267	1.43	1.65
September	698	477	529	31,460	-18,530	12,930	217	1.16	1.29
The year	1,760	6	498	360,500	+32,850	393,300	543	2.90	39.42

Yearly discharge of Tieton River at Tieton Dam, near Naches

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1909.....	433	2.32	31.43	313,000	533	2.85	38.68	386,000
1910.....	668	3.57	48.51	484,000	608	3.25	44.10	440,000
1911.....	456	2.44	35.10	330,000	412	2.20	29.90	298,000
1912.....	481	2.57	35.04	350,000	474	2.53	34.52	344,000
1926.....	340	1.82	24.68	246,000	365	1.94	26.54	263,000
1927.....	518	2.77	37.60	375,000	564	3.02	40.32	408,000
1928.....	558	2.98	40.60	405,000	481	2.57	35.04	349,000
1929.....	354	1.89	25.70	256,000	334	1.79	24.25	242,000
1930.....	359	1.92	26.05	260,000	368	1.91	26.01	259,000
1931.....	327	1.75	23.74	237,000	337	1.80	24.47	244,000
1932.....	465	2.49	33.89	338,000	577	2.87	39.11	390,000
1933.....	588	3.14	42.65	426,000	744	3.98	53.95	538,000
1934.....	774	4.14	56.15	560,200	632	3.38	45.86	457,300
1935.....	543	2.90	39.42	393,300	-	-	-	-
Highest....	774	4.14	56.15	560,200	744	3.98	53.95	538,000
Average....	490	2.62	35.61	355,000	491	2.62	35.63	355,000
Lowest.....	327	1.75	23.74	237,000	334	1.79	24.25	242,000

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, 16 miles southwest of Naches.

Staff gages prior to July 28, 1909.

Drainage area.- 240 square miles.

Records available.- April to September 1906 (fragmentary gage heights), July 1907 to September 1935.

Extremes.- Maximum discharge, 8,910 second-feet 8 to 11:59 p.m. Dec. 22, 1933; no flow at times in 1926, 1929, 1931, 1932, and 1934.

Remarks.- Regulation by storage in Tieton Reservoir began sometime in September 1924.

Records of reservoir stage were not kept prior to Apr. 27, 1925. Adjustment made for accumulated storage, October 1924 to April 1925; no adjustment made for September 1924.

Monthly discharge of Tieton River at headworks of Tieton canal, near Naches

Month	Observed				Diverted by Tieton 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 square inches
	Maximum	Minimum	Mean				Mean	Per square mile	
1918-19									
October..	-	-	-	-	-	16,000	*260	1.08	1.24
November..	-	-	-	-	-	13,100	*220	.917	1.02
December..	-	-	-	-	-	20,900	*340	1.42	1.64
January..	-	-	-	-	-	44,900	*730	3.04	3.50
February..	-	-	-	-	-	19,400	*350	1.46	1.52
March....	-	-	-	-	-	18,400	*300	1.25	1.44
April.....	842	516	648	38,600	6,160	44,800	753	3.14	3.50
May.....	1,780	404	787	48,400	19,000	67,400	1,100	4.58	5.28
June.....	936	466	673	40,000	18,500	58,500	983	4.10	4.57
July.....	580	111	352	21,600	19,500	41,100	668	2.78	3.20
August....	116	33	61.0	3,750	19,400	23,200	377	1.57	1.81
September	213	22	62.3	3,710	14,900	18,600	313	1.30	1.45
The year	-	-	-	-	97,500	386,000	534	2.22	30.17
1919-20									
October..	255	142	174	10,700	0	10,700	174	.725	.84
November..	409	150	246	14,600	198	14,800	249	1.04	1.16
December..	450	129	242	14,900	2,440	17,300	281	1.17	1.35
January..	785	181	354	21,800	1,810	23,600	384	1.60	1.84
February..	527	244	329	18,900	0	18,900	329	1.37	1.48
March....	296	109	223	13,700	0	13,700	223	.929	1.07
April.....	330	100	216	12,900	6,450	19,300	324	1.35	1.51
May.....	649	111	323	19,900	18,600	38,500	626	2.61	3.01
June.....	731	121	403	24,000	18,000	42,000	706	2.94	3.28
July.....	586	53	221	13,600	18,600	32,200	524	2.18	2.51
August....	79	11	46.3	2,850	18,900	21,800	355	1.48	1.71
September	296	17	105	6,250	15,300	21,600	363	1.51	1.68
The year	785	11	240	174,000	100,000	274,000	378	1.58	21.44
1920-21									
October..	731	343	420	25,800	0	25,800	420	1.75	2.02
November..	876	175	355	21,100	1,740	22,800	383	1.60	1.78
December..	995	211	355	21,800	0	21,800	355	1.48	1.71
January..	1,050	380	617	37,900	0	37,900	617	2.57	2.96
February..	1,120	309	675	37,500	0	37,500	675	2.81	2.93
March....	1,220	668	823	50,600	0	50,600	823	3.43	3.95
April.....	1,010	592	781	46,500	3,430	49,900	839	3.50	3.90
May.....	1,940	455	1,040	64,000	18,400	82,400	1,340	5.58	6.43
June.....	2,480	910	1,530	91,000	18,000	109,000	1,830	7.62	8.50
July.....	1,460	357	628	38,600	19,700	58,300	948	3.95	4.55
August....	357	18	165	10,100	19,700	29,800	485	2.02	2.33
September	223	19	104	6,190	15,100	21,300	358	1.49	1.66
The year	2,480	18	623	451,000	96,100	547,000	756	3.15	42.72
1921-22									
October..	414	153	259	15,900	3,650	19,600	319	1.33	1.53
November..	598	255	292	17,400	0	17,400	292	1.22	1.36
December..	3,790	554	966	59,400	0	59,400	966	4.02	4.64
January..	555	248	400	24,600	0	24,600	400	1.67	1.92
February..	292	184	216	12,000	0	12,000	216	.900	.94
March....	255	178	198	12,200	0	12,200	198	.825	.95
April.....	592	259	407	24,200	738	24,900	418	1.74	1.94
May.....	1,510	380	770	47,300	16,800	64,100	1,040	4.33	4.99
June.....	2,240	662	1,240	73,800	18,400	92,200	1,550	6.46	7.21
July.....	662	78	265	16,300	19,700	36,000	585	2.44	2.81
August....	148	31	61.0	3,750	19,800	23,600	384	1.60	1.84
September	229	26	80.4	4,780	15,900	20,700	348	1.45	1.62
The year	3,790	26	430	312,000	95,000	407,000	562	2.34	31.75

*Estimated on basis of records for Tieton River at Tieton Dam, near Naches.

Monthly discharge of Tieton River at headworks of Tieton canal, near Naches--Continued

Month	Observed				Diverted by Tieton 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		
1922-23										
October..	450	118	200	12,300	959	13,300	216	0.900	1.04	
November..	263	20	153	9,100	2,220	11,300	190	.792	.88	
December..	689	116	286	17,600	0	17,600	286	1.19	1.37	
January..	1,840	380	689	42,400	0	42,400	689	2.87	3.31	
February..	409	236	295	16,400	0	16,400	295	1.23	1.28	
March....	995	229	354	21,800	0	21,800	354	1.48	1.71	
April....	1,260	630	876	52,100	2,770	54,900	923	3.85	4.30	
May.....	1,780	455	991	60,900	18,600	79,500	1,290	5.38	6.20	
June.....	1,840	493	911	54,200	18,100	72,300	1,220	5.08	5.67	
July.....	1,310	211	649	39,900	18,600	58,500	951	3.96	4.56	
August....	296	70	121	7,410	19,500	26,900	437	1.82	2.10	
September	116	26	56.2	3,340	15,900	19,200	323	1.35	1.51	
The year	1,840	20	466	337,000	96,600	434,000	600	2.50	33.93	
1923-24										
October..	439	139	251	15,400	1,460	16,900	275	1.15	1.33	
November..	424	175	228	13,600	833	14,400	242	1.01	1.13	
December..	493	204	312	19,200	458	19,700	320	1.33	1.53	
January..	809	214	332	20,400	0	20,400	332	1.38	1.59	
February..	1,670	419	815	46,900	0	46,900	815	3.40	3.67	
March....	493	304	424	26,100	454	26,600	433	1.80	2.08	
April....	499	178	350	20,800	7,740	28,500	479	2.00	2.23	
May.....	1,670	172	868	53,300	19,500	72,800	1,180	4.92	5.67	
June.....	604	128	322	19,100	19,200	38,300	644	2.68	2.99	
July.....	284	8	71.3	4,380	19,800	24,200	394	1.64	1.89	
August....	40	2	17.2	1,050	19,600	20,600	335	1.40	1.61	
September	267	2	88.4	5,260	9,760	15,000	252	1.05	1.17	
The year	1,670	2	338	245,000	98,800	344,000	474	1.98	26.89	
Month	Observed				Gain or loss in storage in Tieton Reservoir (acre-feet)	Divert- ed by Tieton canal (acre- feet)	Adjusted for storage and diversions			
	Discharge in second-feet			Run-off in acre-feet			Run-off in acre-feet	Discharge in second-feet		Run-off in inches
	Maxi- mum	Mini- mum	Mean					Mean	Per square mile	
1924-25										
October..	248	194	223	13,700	+84,100	0	199,000	473	1.97	15.53
November..	275	15	214	12,700		1,270				
December..	2,480	207	465	28,600		0				
January..	280	134	221	13,600		0				
February..	366	148	201	11,200		230				
March....	263	101	188	11,500		500				
April....	1,230	34	270	16,100		5,880				
May.....	2,180	48	1,000	61,600	+15,400	18,600	95,600	1,550	6.46	7.45
June.....	1,630	184	739	43,900	+1,510	18,700	64,100	1,080	4.50	5.02
July.....	1,360	769	899	55,300	-36,800	19,800	38,300	623	2.60	3.00
August....	876	317	482	29,600	-26,000	19,400	23,000	374	1.56	1.80
September	482	304	349	20,800	-20,700	13,300	13,400	225	.938	1.05
The year	2,480	15	440	319,000	+17,500	97,700	433,000	599	2.50	33.85
1925-26										
October..	300	126	182	11,200	+3,810	0	15,000	244	1.02	1.18
November..	194	109	176	10,500	-6,040	1,110	5,570	93.6	.390	.44
December..	229	17	81.5	5,010	+19,800	133	24,900	405	1.69	1.95
January..	49	15	24.6	1,510	+13,600	0	15,100	246	1.02	1.18
February..	81	16	44.6	2,480	+15,000	0	17,500	315	1.31	1.36
March....	109	0	56.3	3,460	+21,800	1,260	26,500	431	1.80	2.08
April....	671	5	92.1	5,480	+26,700	12,500	44,700	751	3.13	3.49
May.....	1,620	48	631	38,800	-16,100	19,300	42,000	683	2.85	3.29
June.....	851	140	344	20,500	-12,300	18,600	26,800	450	1.88	2.10
July.....	400	195	304	18,700	-17,900	19,100	19,900	324	1.35	1.56
August....	1,300	134	670	41,200	-38,200	19,100	22,100	359	1.50	1.73
September	1,300	52	448	26,700	-27,600	7,570	6,670	112	.467	.52
The year	1,620	0	256	185,000	-17,400	98,700	267,000	368	1.53	20.88

Monthly discharge of Tieton River at headworks of Tieton canal, near Naches--Continued

Month	Observed				Gain or loss in storage in Tieton Reservoir (acre-feet)	Diverted by Tieton canal (acre-feet)	Adjusted for storage and diversions			
	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	
1926-27										
October..	202	18	101	6,190	+11,700	0	17,900	291	1.21	1.40
November.	119	0	61.4	3,650	+12,500	958	17,100	287	1.20	1.34
December.	-	-	-	-	+25,100	196	28,600	*465	1.94	2.24
January...	-	-	-	-	+15,000	0	16,900	*275	1.15	1.33
February.	-	-	-	-	+15,700	0	18,200	*328	1.37	1.43
March.....	-	-	-	-	+16,400	0	20,200	*328	1.37	1.58
April.....	212	7	98.6	5,870	+29,100	3,300	38,500	644	2.68	2.99
May.....	1,110	15	223	13,700	+37,000	16,700	67,400	1,100	4.58	5.28
June.....	2,200	311	1,030	61,600	+25,800	16,600	104,000	1,750	7.29	8.13
July.....	596	290	405	24,900	+488	18,800	44,200	719	3.00	3.46
August....	773	334	560	34,400	-31,800	18,900	21,500	350	1.46	1.68
September	729	316	471	28,000	-22,800	12,400	17,600	296	1.23	1.37
The year	2,200	0	-	-	+134,000	37,900	412,000	569	2.37	32.23
1927-28										
October..	546	13	196	12,100	+17,600	0	29,700	433	2.01	2.32
November.	967	12	138	8,200	+23,800	1,300	33,500	644	2.68	2.99
December.	1,920	324	1,130	69,600	-30,400	0	39,200	638	2.66	3.07
January...	1,160	172	689	42,400	+3,610	0	46,000	743	3.12	3.60
February.	1,030	324	519	29,800	-13,400	938	17,500	301	1.25	1.35
March.....	475	104	325	20,000	+14,800	238	35,000	569	2.37	2.73
April.....	950	35	193	11,500	+20,500	2,660	34,700	583	2.43	2.71
May.....	2,020	551	941	57,900	+23,100	16,900	97,900	1,590	6.62	7.63
June.....	950	564	688	40,900	-3,450	17,900	55,400	931	3.88	4.33
July.....	699	371	586	36,000	-20,100	18,600	34,500	561	2.34	2.70
August....	851	534	605	37,200	-37,200	18,700	18,700	304	1.27	1.46
September	908	347	729	43,400	-43,900	14,000	13,500	227	.946	1.06
The year	2,020	12	562	409,000	-40,900	91,200	460,000	634	2.64	35.95
1928-29										
October..	546	212	335	20,600	-10,000	9,320	19,900	324	1.35	1.56
November.	338	16	115	6,850	+4,160	1,820	12,800	215	.896	1.00
December.	324	38	159	9,750	+1,380	56	11,200	182	.758	.87
January...	282	104	167	10,300	+400	0	10,700	174	.725	.84
February.	160	119	143	7,950	-170	0	7,780	140	.583	.61
March.....	163	3	62.0	3,810	+8,340	821	13,000	211	.879	1.01
April.....	1,330	1	342	20,400	-7,240	4,900	18,100	304	1.27	1.42
May.....	54	4	26.8	1,650	+39,200	18,100	59,000	960	4.00	4.61
June.....	26	5	15.1	897	+43,000	18,500	62,200	1,050	4.38	4.89
July.....	758	18	398	24,500	-6,660	19,200	37,000	602	2.51	2.89
August....	2,280	218	1,110	68,000	-63,800	19,500	23,700	385	1.60	1.84
September	1,880	210	1,250	74,500	-77,700	17,300	14,100	237	.988	1.10
The year	2,280	1	344	249,000	-69,100	109,000	289,000	400	1.67	22.64
1929-30										
October..	632	8	204	12,600	-6,110	2,320	8,810	143	.596	.69
November.	129	3	79.2	4,710	-5,530	3,640	2,820	47.4	.198	.22
December.	118	11	*79.9	4,910	+6,060	58	11,000	*179	.746	.86
January...	90	11	*73.8	4,540	+3,750	0	8,290	*135	.562	.65
February.	93	1	32.1	1,780	+20,900	510	23,200	418	1.74	1.81
March.....	125	28	57.2	3,510	+21,100	391	25,000	407	1.70	1.96
April.....	85	2	20.9	1,240	+39,500	8,530	49,100	825	3.44	3.84
May.....	281	7	47.5	2,920	+23,500	18,600	45,000	732	3.05	3.52
June.....	934	6	279	16,600	+5,190	17,800	39,600	666	2.73	3.10
July.....	652	61	440	27,000	-19,400	19,100	28,700	434	1.81	2.09
August....	1,710	678	973	59,900	-55,500	19,500	23,700	385	1.60	1.84
September	1,770	245	724	43,100	-44,200	16,500	15,400	259	1.08	1.20
The year	1,770	1	252	183,000	-10,700	107,000	279,000	385	1.60	21.78
1930-31										
October..	395	140	221	13,600	-2,830	0	10,800	176	.733	.85
November.	197	90	117	6,970	-410	611	7,170	120	.500	.56
December.	112	32	99.5	6,120	-1,580	541	5,070	82.5	.344	.40
January...	-	-	*53.5	3,290	+8,780	0	12,100	*197	.821	.95
February.	-	0	12.6	700	+11,400	492	12,600	227	.946	.99
March.....	113	0	5.00	307	+15,000	1,710	17,000	276	1.15	1.33
April.....	140	0	15.7	936	+32,200	3,690	37,000	622	2.89	2.89
May.....	328	1	34.1	2,100	+54,600	12,800	69,500	1,130	4.71	5.43
June.....	608	1	281	16,700	+7,000	13,200	36,900	620	2.58	2.88
July.....	1,100	538	765	43,300	-45,000	17,900	21,200	345	1.44	1.66
August....	1,090	762	919	56,500	-53,000	18,500	22,000	358	1.49	1.72
September	1,330	118	672	40,000	-40,500	13,400	12,800	215	.896	1.00
The year	1,330	0	270	196,000	-14,400	83,000	264,000	365	1.52	20.66

*Estimated on basis of records for Tieton River at Tieton Dam, near Naches.

Monthly discharge of Tieton River at headworks of Tieton canal, near Naches--Continued

Month	Observed				Gain or loss in storage in Tieton Reservoir (acre-feet)	Divert- ed by Tieton canal (acre- feet)	Adjusted for storage and diversions			
	Discharge in second-feet			Run-off in acre-feet			Run-off in acre-feet	Discharge in second-feet		Run- off in inches
	Maxi- mum	Mini- mum	Mean					Mean	Per square mile	
1931-32										
October..	180	15	132	8,120	+1,860	0	9,980	162	.675	.78
November..	140	2	23.9	1,420	+6,840	1,320	9,580	161	.671	.75
December..	21	8	10.1	619	+9,570	26	10,200	166	.692	.80
January....	35	9	16.6	1,020	+12,100	0	13,100	213	.888	1.02
February..	505	15	57.2	3,290	+17,600	0	20,900	363	1.51	1.63
March.....	233	47	93.3	5,740	+36,000	216	42,000	683	2.65	3.29
April.....	96	0	46.2	2,570	+34,100	4,300	41,000	689	2.87	3.20
May.....	38	3	12.9	793	+53,300	15,700	69,800	1,140	4.75	5.48
June.....	1,230	2	459	27,300	+28,400	17,300	73,000	1,230	5.13	5.72
July.....	974	461	716	44,100	-22,800	19,100	40,400	657	2.74	3.16
August....	620	143	406	25,000	-23,300	19,100	20,300	338	1.41	1.63
September	584	172	347	20,600	-23,500	16,200	13,300	224	.933	1.04
The year	1,230	0	194	141,000	+130,000	93,300	364,000	502	2.09	28.50
1932-33										
October..	488	212	377	23,200	-9,110	0	14,100	229	0.954	1.10
November..	706	241	400	23,800	+18,700	1,110	43,600	733	3.05	3.40
December..	578	265	393	24,200	+3,100	0	27,300	444	1.85	2.13
January..	415	328	354	21,800	+1,000	0	22,800	371	1.55	1.79
February..	608	237	409	22,700	-10,500	749	12,800	230	.958	1.00
March....	585	237	339	20,900	-4,150	227	17,000	276	1.15	1.33
April.....	494	48	167	9,920	+28,300	2,230	40,400	679	2.63	3.16
May.....	1,280	8	106	6,530	+42,200	13,300	62,000	1,010	4.21	4.85
June.....	2,960	940	1,640	97,300	-2,760	17,300	112,000	1,880	7.63	8.74
July.....	1,320	502	884	54,400	+201	17,900	72,500	1,180	4.92	5.67
August....	1,050	496	747	45,900	-34,000	18,800	30,700	499	2.08	2.40
September	967	846	860	51,200	-47,700	16,200	19,700	331	1.38	1.54
The year	2,960	8	555	402,000	-14,800	87,800	475,000	656	2.73	37.11
1933-34										
October..	1,100	14	363	22,300	+10,200	0	32,500	529	2.20	2.54
November..	620	31	288	17,100	+13,710	1,090	31,900	536	2.23	2.49
December..	7,310	344	1,860	115,000	+32,400	0	147,400	2,397	9.99	11.52
January..	2,770	761	1,840	113,000	-24,320	0	88,680	1,442	6.01	6.93
February..	1,980	90	1,170	64,800	-19,260	0	45,540	820	3.42	3.56
March....	204	29	104	6,380	+53,310	3,020	62,710	1,020	4.25	4.90
April.....	1,470	1	751	44,700	+16,390	11,650	72,740	1,222	5.09	5.68
May.....	853	378	589	36,200	+1,440	17,970	55,610	904	3.77	4.35
June.....	629	350	457	27,200	-12,290	18,490	33,400	561	2.34	2.61
July.....	1,080	640	804	49,500	-37,710	19,070	30,860	502	2.09	2.41
August....	930	541	764	47,000	-46,350	19,230	19,880	323	1.35	1.56
September	895	312	559	33,300	-36,710	14,960	11,550	194	.808	.90
The year	7,310	1	796	576,500	-49,190	105,500	632,800	874	3.64	49.45
1934-35										
October..	440	39	309	19,010	+1,350	0	20,360	331	1.38	1.59
November..	158	0	53.4	3,180	+45,500	936	49,620	834	3.48	3.88
December..	740	0	338	20,780	+7,700	631	29,110	473	1.97	2.27
January..	1,160	350	607	37,340	+1,740	0	39,080	636	2.65	3.06
February..	876	155	491	27,270	+3,140	0	30,410	548	2.28	2.57
March....	173	108	138	8,470	+13,820	2,290	24,580	400	1.67	1.92
April.....	636	46	253	15,070	+10,850	5,950	31,870	536	2.23	2.49
May.....	1,910	24	456	28,060	+27,290	17,770	73,120	1,189	4.95	5.71
June.....	900	281	616	36,640	+22,170	17,610	76,420	1,284	5.35	5.97
July.....	1,200	420	862	53,000	-27,020	18,660	44,640	726	3.02	3.48
August....	1,200	529	938	57,670	-55,160	18,840	21,350	347	1.45	1.67
September	420	192	259	15,410	-18,530	17,750	14,630	246	1.02	1.14
The year	1,910	0	445	321,900	+32,850	100,400	455,200	629	2.62	35.55

Yearly discharge of Tieton River at headworks of Tieton canal, near Naches

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1908.....	636	2.65	36.05	462,000	641	2.67	36.40	466,000
1909.....	506	2.11	28.63	366,000	616	2.57	34.82	446,000
1910.....	752	3.13	42.52	544,000	679	2.83	38.40	492,000
1911.....	507	2.11	28.68	367,000	464	1.93	26.27	336,000
1912.....	542	2.26	30.78	394,000	530	2.21	30.08	385,000
1913.....	616	2.57	34.79	446,000	623	2.60	35.20	451,000
1914.....	532	2.22	30.08	385,000	557	2.32	31.54	404,000
1915.....	382	1.59	21.57	276,000	351	1.46	20.07	254,000
1916.....	810	3.38	45.82	588,000	-	-	-	-
1919.....	534	2.22	30.17	386,000	524	2.18	29.62	379,000
1920.....	378	1.58	21.44	274,000	416	1.73	23.60	302,000
1921.....	756	3.15	42.72	547,000	792	3.30	44.74	573,000
1922.....	562	2.34	31.75	407,000	487	2.03	27.51	352,000
1923.....	600	2.50	33.93	434,000	612	2.55	34.63	443,000
1924.....	474	1.98	26.89	344,000	531	2.21	30.11	386,000
1925.....	599	2.50	33.85	433,000	535	2.23	30.24	387,000
1926.....	368	1.53	20.88	267,000	393	1.64	22.29	285,000
1927.....	569	2.37	32.23	412,000	629	2.62	35.63	456,000
1928.....	634	2.64	35.95	460,000	547	2.28	31.00	397,000
1929.....	400	1.67	22.64	289,000	370	1.54	20.98	268,000
1930.....	385	1.60	21.78	279,000	385	1.60	21.82	279,000
1931.....	365	1.52	20.66	264,000	374	1.56	21.18	271,000
1932.....	502	2.09	28.50	364,000	578	2.41	32.80	419,000
1933.....	656	2.73	37.11	475,000	831	3.46	47.03	601,000
1934.....	874	3.64	49.45	632,800	718	2.99	40.64	520,100
1935.....	629	2.62	35.55	455,200	-	-	-	-
Highest.....	874	3.64	49.45	632,800	831	3.46	47.03	601,000
Average.....	560	2.33	31.71	406,000	549	2.29	31.11	398,000
Lowest.....	365	1.52	20.66	264,000	351	1.46	20.07	254,000

North Fork of Ahtanum Creek near Tappico, 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 Tappico. Staff gages prior to Apr. 2, 1913, and from Aug. 20, 1915, to Sept. 5, 1916.

Drainage area.- 69 square miles.

Records available.- August 1907 to September 1924 (fragmentary), March 1931 to September 1935.

Extremes.- Maximum discharge recorded, 755 second-feet at 4:10 p.m. Dec. 22, 1933; minimum discharge, 5.9 second-feet Nov. 22, 1931.

Remarks.- No diversions of importance. No regulation.

Monthly discharge of North Fork of Ahtanum Creek near Tappico

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	26	18.5	22.0	0.319	0.37	1,350
November.....	41	14.5	25.1	.364	.41	1,490
April.....	-	27	45.4	.658	.72	2,700
May.....	173	68	111	1.61	1.86	6,820
June.....	122	54	85.3	1.24	1.38	5,080
July.....	56	19.5	31.1	.451	.52	1,910
August.....	27	14.7	17.3	.251	.29	1,060
September.....	29	14.1	17.4	.252	.28	1,040
1920-21						
October.....	20	14.1	17.9	.259	.30	1,100
November 1-9.....	17.7	11.0	14.3	.207	.07	255
April.....	-	117	156	2.26	2.52	9,280
May.....	-	115	305	4.42	5.10	18,800
June.....	480	186	310	4.49	5.01	18,400
July.....	177	42	89.2	1.29	1.49	5,480
August.....	41	23	30.3	.439	.51	1,860
September.....	25	20	22.2	.322	.36	1,320
1921-22						
October.....	25	19	20.5	.297	.34	1,260
November 1-26.....	27	7.6	17.8	.258	.25	918
April 17-30.....	136	48	96.7	1.40	.73	2,690
May.....	411	106	198	2.87	3.31	12,200
June.....	379	81	202	2.93	3.27	12,000
July.....	77	31	44.9	.651	.75	2,760
August.....	30	17	23.3	.338	.39	1,430
September.....	-	-	17.2	.249	.28	1,020

Monthly discharge of North Fork of Ahtanum Creek near Tampico--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923						
July.....	176	42	83.4	1.21	1.40	5,130
August.....	42	23	31.7	.459	.53	1,950
September.....	24	16	19.1	.277	.31	1,140
The period	-	-	-	-	-	8,220
1923-24						
October 1-13.....	20	16	17.5	.254	.12	451
April 21-30.....	115	78	89.9	1.30	.48	1,780
May.....	286	92	169	2.45	2.82	10,400
June.....	92	32	56.5	.819	.91	3,560
July.....	30	18	23.4	.339	.39	1,440
August.....	18	13	16.1	.233	.27	990
September.....	16	12	13.6	.197	.22	809
1931						
March.....	18	8.6	11.6	.168	.19	713
April.....	176	36	60.8	.881	.98	3,620
May.....	214	51	118	1.71	1.97	7,260
June.....	61	29	38.0	.551	.61	2,260
July.....	28	12	17.3	.251	.29	1,060
August.....	12	9.0	10.4	.151	.17	640
September.....	12	7.4	9.56	.139	.16	569
The period	-	-	-	-	-	16,100
1931-32						
October.....	20	9.4	11.8	.171	.20	726
November.....	18	6.0	12.7	.184	.21	756
December.....	18	11	13.3	.193	.22	818
January.....	35	9.8	15.0	.217	.25	922
February.....	183	9.4	27.1	.393	.42	1,560
March.....	131	34	62.5	.906	1.04	3,840
April.....	160	61	94.3	1.37	1.53	5,610
May.....	240	131	188	2.72	3.14	11,600
June.....	206	81	153	2.22	2.48	9,100
July.....	76	29	45.3	.657	.76	2,790
August.....	28	17	21.3	.309	.36	1,310
September.....	17	13	15.1	.219	.24	898
The year.....	240	60	55.0	.797	10.85	39,900
1932-33						
October.....	18	13	15.4	.223	.26	947
November.....	63	16	31.3	.454	.51	1,860
December.....	44	17	26.4	.383	.44	1,620
January.....	22	9.4	16.5	.239	.28	1,010
February.....	-	-	*15.0	.217	.23	833
March.....	45	13	25.2	.365	.42	1,550
April.....	286	44	103	1.49	1.66	6,130
May.....	313	86	159	2.30	2.65	9,780
June.....	403	200	280	4.06	4.53	16,700
July.....	202	49	112	1.62	1.87	6,890
August.....	51	25	34.1	.494	.57	2,100
September.....	26	20	23.0	.333	.37	1,370
The year.....	403	9.4	70.1	1.02	13.79	50,800
1933-34						
October.....	37	17	23.8	.345	.40	1,460
November.....	52	17	26.6	.386	.43	1,580
December.....	665	17	175	2.54	2.93	10,740
January.....	420	80	163	2.36	2.72	10,020
February.....	158	67	103	1.49	1.55	5,700
March.....	172	70	117	1.70	1.96	7,190
April.....	250	125	184	2.67	2.98	10,950
May.....	168	116	142	2.06	2.38	8,720
June.....	107	41	71.6	1.04	1.16	4,260
July.....	38	22	30.0	.435	.50	1,840
August.....	27	11	18.1	.262	.30	1,110
September.....	22	12	16.3	.236	.26	970
The year.....	665	11	89.2	1.29	17.57	64,540

*Estimated.

Monthly discharge of North Fork of Ahtanum Creek near Tampico--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
October.....	85	14	27.3	0.396	0.46	1,680
November.....	148	41	72.2	1.05	1.17	4,300
December.....	108	29	51.3	.743	.86	3,160
January.....	266	22	81.1	1.18	1.36	4,990
February.....	126	50	80.6	1.17	1.22	4,470
March.....	61	42	52.2	.757	.87	3,210
April.....	168	52	99.1	1.44	1.61	5,900
May.....	266	165	210	3.04	3.50	12,900
June.....	255	90	169	2.45	2.73	10,080
July.....	85	33	52.1	.755	.87	3,200
August.....	34	19	24.4	.354	.41	1,500
September.....	19	15	16.7	.242	.27	996
The year.....	266	14	77.9	1.13	15.33	56,390

Yearly discharge of North Fork of Ahtanum Creek near Tampico

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1910.....	114	1.65	22.48	82,600	105	1.52	20.76	76,200
1911.....	66.8	.968	13.16	48,400	65.1	.943	12.81	47,100
1912.....	90.3	1.31	17.80	65,600	90.2	1.31	17.78	65,600
1913.....	73.8	1.07	14.52	53,500	74.7	1.08	14.69	54,100
1914.....	83.8	1.21	16.51	60,700	85.6	1.24	16.85	62,000
1915.....	56.3	.816	11.05	40,700	-	-	-	-
1932.....	55.0	.797	10.85	39,900	57.9	.839	11.43	42,100
1933.....	70.1	1.02	13.79	50,800	83.0	1.20	16.34	60,100
1934.....	89.2	1.29	17.57	64,540	82.7	1.20	16.30	59,900
1935.....	77.9	1.13	15.33	56,390	-	-	-	-
Highest.....	114	1.65	22.48	82,600	105	1.52	20.76	76,200
Average.....	77.7	1.13	15.31	56,300	80.5	1.17	15.87	58,400
Lowest.....	55.0	.797	10.85	39,900	57.9	.839	11.43	42,100

South Fork of Ahtanum Creek at Conrad ranch, near Tampico, Wash.

(Formerly called South Fork of Ahtanum Creek near Tampico)

Location.-- Staff gage, lat. 46°30'30", long. 120°54'50", in W $\frac{1}{2}$ sec. 23, T. 12 N., R. 15 E., at Conrad ranch, 2 $\frac{1}{2}$ miles above North Fork and 2 $\frac{1}{2}$ miles southwest of Tampico.
Prior to Mar. 15, 1915, equivalent records from staff gage at site 1 $\frac{1}{2}$ miles down-stream.

Drainage area.-- 26 square miles (28 square miles at site used prior to Mar. 15, 1915).

Records available.-- January 1908 to September 1924 (fragmentary), March 1931 to September 1935.

Extremes.-- Maximum discharge observed, 424 second-feet at 6:30 a.m. Dec. 23, 1933; minimum, 2.6 second-feet Aug. 23, 25, 1931.

Remarks.-- Small irrigation diversions above gage.

Monthly discharge of South Fork of Ahtanum Creek at Conrad ranch, near Tampico

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	6.8	5.9	6.20	381
April.....	26	7.8	13.0	774
May.....	33	18.7	25.5	1,570
June.....	21	11.2	16.7	994
July.....	10.7	5.4	7.74	476
August.....	7.0	4.5	5.14	316
September.....	8.7	4.8	5.19	309
1920-21				
October.....	6.2	4.8	5.42	333
April.....	62	35	42.6	2,530
May.....	144	31	87.2	5,360
June.....	151	35	83.7	4,980
July.....	32	13	19.5	1,200
August.....	13	8.2	10.1	621
September.....	8.7	7.7	8.25	491

Monthly discharge of South Fork of Ahtanum Creek at Conrad ranch, near Tampico--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1921-22				
October.....	9.2	7.3	7.89	485
April.....	47	17	29.5	1,740
May.....	131	28	55.2	3,390
June.....	144	21	65.0	3,870
July.....	18	9.7	12.6	775
August.....	9.7	6.2	8.06	496
September.....	7.0	5.4	6.01	358
1922-23				
October 1-14.....	6.2	5.8	6.09	169
April.....	70	33	49.6	2,950
May.....	90	35	61.0	3,750
June.....	67	27	45.2	2,690
July.....	37	15	23.4	1,440
August.....	15	8.9	11.5	707
September.....	8.9	7.3	7.79	464
1923-24				
April 21-30.....	31	19	23.5	466
May.....	60	24	40.2	2,470
June.....	21	10	14.1	839
July.....	9.0	5.1	7.03	432
August.....	5.4	4.2	5.05	311
September.....	4.8	3.9	4.46	265
The period.....	-	-	-	4,780
1931				
March.....	21	4.4	6.10	375
April.....	29	8.4	12.8	762
May.....	36	10	21.8	1,340
June.....	20	7.2	9.21	548
July.....	7.2	4.1	5.07	312
August.....	4.1	3.2	3.56	219
September.....	4.4	3.2	3.70	220
The period.....	-	-	-	3,780
1931-32				
October.....	5.7	3.9	4.44	273
November.....	5.4	-	4.37	260
December.....	5.4	-	4.13	254
January.....	11	-	5.25	323
February.....	90	-	13.6	782
March.....	52	12	23.7	1,460
April.....	32	17	23.6	1,400
May.....	58	34	46.0	2,830
June.....	43	17	31.8	1,890
July.....	17	9.3	12.5	769
August.....	9.7	6.6	7.97	490
September.....	6.9	6.0	6.28	374
The year.....	90	-	15.3	11,100
1932-33				
October.....	6.5	5.3	5.89	362
November.....	12	5.9	8.19	487
December.....	9.7	5.3	6.80	418
January.....	6.5	5.3	6.90	363
February.....	5.9	-	4.89	272
March.....	23	5.6	10.8	664
April.....	62	15	29.6	1,760
May.....	72	24	37.1	2,280
June.....	110	44	72.1	4,290
July.....	39	13	22.7	1,400
August.....	14	8.9	10.8	664
September.....	8.9	7.3	7.97	474
The year.....	110	-	18.6	13,400
1933-34				
October.....	9.7	6.2	7.55	464
November.....	11	6.5	7.94	472
December.....	403	6.2	72.3	4,450
January.....	275	32	72.1	4,440
February.....	54	21	31.9	1,770
March.....	48	20	30.2	1,860
April.....	76	35	54.3	3,230
May.....	54	24	36.3	2,230
June.....	24	12	16.1	958
July.....	11	6.8	8.52	524
August.....	7.6	4.8	5.72	352
September.....	7.2	4.2	5.27	314
The year.....	403	4.2	29.1	21,060

Monthly discharge of South Fork of Ahtanum Creek at Conrad ranch, near Tampico--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1934-35				
October.....	25	4.8	8.60	529
November.....	28	11	19.8	1,180
December.....	49	11	18.9	1,160
January.....	121	12	36.9	2,270
February.....	46	16	26.8	1,490
March.....	25	15	19.7	1,210
April.....	43	20	30.4	1,810
May.....	74	42	56.6	3,480
June.....	71	22	44.0	2,620
July.....	21	11	14.4	887
August.....	11	7.4	8.87	546
September.....	7.4	6.2	6.86	408
The year.....	121	4.8	24.3	17,590

Yearly discharge of South Fork of Ahtanum Creek at Conrad ranch, near Tampico

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1909.....	17.8	12,900	20.9	15,100
1910.....	38.3	27,800	34.8	25,200
1911.....	14.8	10,700	14.9	10,800
1912.....	16.9	12,200	17.4	12,600
1913.....	23.2	16,800	22.8	16,500
1914.....	31.3	22,700	-	-
1932.....	15.3	11,100	16.0	11,600
1933.....	18.6	13,400	24.2	17,600
1934.....	29.1	21,060	25.6	18,560
1935.....	24.3	17,590	-	-
Highest.....	38.3	27,800	34.8	25,200
Average.....	23.0	16,600	22.1	16,000
Lowest.....	14.8	10,700	14.9	10,800

Toppenish Creek near Fort Simcoe, Wash.

Location.- Staff gage, lat. 46°18'40", long. 120°46'50", in sec. 35, T. 10 N., R. 16 E., 30 feet above dam and headworks of Toppenish feeder canal, 3 miles south of Fort Simcoe, and 5½ miles southeast of White Swan. Prior to Aug. 19, 1915, chain and staff gages about a mile downstream. Aug. 19, 1915, to Sept. 30, 1922, water-stage recorder 1¼ miles downstream.

Drainage area.- 124 square miles.

Records available.- February 1909 to September 1924.

Extremes.- Maximum discharge observed, 1,650 second-feet at noon May 4, 1916; minimum observed, 2.4 second-feet Sept. 18, 1924.

Remarks.- Diversions through Toppenish feeder canal, and Nicol and Abe Lincoln ditches added to records of flow of creek at the gage after March 1920. Prior to that time amount diverted past gaging station was only a small percent of the flow.

Monthly discharge of Toppenish Creek near Fort Simcoe

Month	Discharge in second-feet					Run-off in acre-feet (combined)
	Maximum (combined)	Minimum (combined)	Mean			
			Creek	Canal	Combined	
1919-20						
October.....	-	-	15.5	0	15.5	953
November.....	-	-	18.7	0	18.7	1,110
December.....	-	-	29.1	0	29.1	1,790
January.....	-	-	57.8	0	57.8	3,550
February.....	-	-	46.0	0	46.0	2,640
March.....	-	-	91.0	0	91.0	5,600
April.....	161	63	90.9	2.60	93.5	5,560
May.....	133	54	72.6	18.3	90.9	5,590
June.....	51	19	16.7	16.8	33.5	1,990
July.....	21	11	8.55	6.39	14.9	916
August.....	15	7.4	5.87	4.39	10.3	633
September.....	21	8.4	8.39	2.80	11.2	666
The year....	-	-	38.4	4.28	42.7	31,000

Monthly discharge of Toppenish Creek near Fort Simcoe--Continued

Month	Discharge in second-feet					Run-off in acre-feet (combined)
	Maximum (combined)	Minimum (combined)	Mean			
			Creek	Canal	Combined	
1920-21						
October.....	-	-	16.0	-	16.0	984
November.....	-	-	39.4	-	39.4	2,540
December.....	-	-	76.5	-	76.5	4,700
January.....	-	-	134	-	134	8,240
February.....	-	-	242	-	242	13,400
March.....	-	-	334	-	334	20,500
April.....	431	244	331	2.60	334	19,900
May.....	397	140	269	14.2	283	17,400
June.....	133	45	52.0	20.0	72.0	4,280
July.....	43	22	9.16	19.6	28.8	1,770
August.....	22	16	8.21	9.56	17.8	1,090
September.....	19	17	8.72	8.94	17.7	1,050
The year....	-	-	126	-	132	95,700
1921-22						
October.....	32	18	15.2	7.3	22.5	1,380
November.....	176	-	29.3	5.7	35.0	2,080
December.....	313	43	86.9	1.6	88.5	5,440
January.....	-	-	25.1	1.7	26.8	1,650
February.....	42	-	31.5	2.1	33.6	1,870
March.....	150	-	66.0	2.3	68.3	4,200
April.....	338	89	211	2.3	213	12,700
May.....	487	112	259	12.7	272	16,700
June.....	98	29	35.4	22.0	57.4	3,420
July.....	28	15	4.77	14.7	19.5	1,200
August.....	18	13	4.71	10.1	14.8	910
September.....	17	13	4.78	9.7	14.5	863
The year....	487	13	64.7	7.7	72.4	52,400
1922-23						
October.....	25	17	8.71	9.69	18.4	1,130
November.....	24	18	12.7	9.32	22.0	1,310
December.....	176	-	38.5	3.40	41.9	2,580
January.....	1,030	-	248	2.45	250	15,400
February.....	87	41	54.0	2.40	56.4	3,130
March.....	322	72	108	2.40	110	6,760
April.....	363	193	259	5.76	265	15,800
May.....	265	63	110	18.8	129	7,930
June.....	61	25	20.1	23.4	43.5	2,590
July.....	59	16	9.84	16.2	26.0	1,600
August.....	25	14	5.39	10.6	16.0	984
September.....	-	-	4.47	10.2	14.7	875
The year....	1,030	-	73.4	9.58	83.0	60,100
1923-24						
October.....	42	18	12.9	9.35	22.2	1,360
November.....	42	22	15.7	9.27	25.0	1,490
December.....	282	24	45.1	3.85	49.0	3,010
January.....	231	30	37.8	3.01	40.8	2,510
February.....	343	97	181	3.13	184	10,600
March.....	104	57	71.3	3.10	74.4	4,570
April.....	130	55	73.8	14.2	88.0	5,240
May.....	88	28	30.1	20.6	50.7	3,120
June.....	31	14	8.88	13.4	22.3	1,330
July.....	14	10	5.58	6.29	11.9	732
August.....	14	9.1	5.85	4.56	10.4	640
September.....	16	-	6.04	5.30	11.3	672
The year....	343	-	40.5	8.01	48.6	35,300

Yearly discharge of Toppenish Creek near Fort Simcoe

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1910.....	175	127,000	151	109,000
1911.....	81.5	59,100	76.4	55,300
1912.....	67.8	49,300	72.7	52,800
1913.....	96.2	69,700	92.6	67,000
1914.....	141	102,000	143	104,000
1915.....	56.4	40,800	60.6	43,900
1916.....	214	155,000	208	151,000
1917.....	72.9	52,700	82.1	59,400
1918.....	76.5	55,300	65.2	47,200
1919.....	76.2	55,100	76.4	55,300
1920.....	42.7	31,000	48.4	35,200
1921.....	132	95,700	133	96,500
1922.....	72.4	52,400	67.0	48,500
1923.....	83.0	60,100	84.2	60,900
1924.....	48.6	35,300	-	-
Highest.....	214	155,000	208	151,000
Average.....	95.7	69,400	97.2	70,400
Lowest.....	42.7	31,000	48.4	35,200

Simcoe Creek below Spring Creek, near Fort Simcoe, Wash.

(Formerly called Simcoe Creek near Fort Simcoe)

Location.- Water-stage recorder, lat. 46°23'30", long. 120°48'20", in sec. 34, T. 11

N., R. 16 E., at site of proposed reservoir, 4 miles northeast of Fort Simcoe.

Prior to Nov. 20, 1915, chain and staff gages just above Spring Creek.Drainage area.- 77 square miles.Records available.- February 1909 to September 1923.Extremes.- Maximum discharge observed, 1,340 second-feet Mar. 2, 1910; no flow Sept. 13 to Oct. 10, 1909, Sept. 30, 1923.Remarks.- After April 1920 Simcoe Creek flume diverted from 0.1 second-foot to 6 second-feet past gage. Other diversions for irrigation above gage.

Monthly discharge of Simcoe Creek below Spring Creek and Simcoe Creek flume near Fort Simcoe

Month	Discharge in second-feet					Combined run-off in acre-feet
	Creek			Flume mean	Combined mean	
	Maximum	Minimum	Mean			
1919-20						
October.....	0.6	0.3	0.35	-	0.35	21.5
November.....	1.5	.4	.90	-	.90	53.6
December.....	3.5	-	2.07	-	2.07	127
January.....	-	3.2	6.29	-	6.29	387
February.....	10.3	8.9	9.43	-	9.43	542
March.....	24	10.0	15.3	-	15.3	941
April.....	24	14.9	18.7	-	18.7	1,110
May.....	26	6.5	15.4	2.0	17.4	1,070
June.....	5.2	1.8	3.18	3.5	6.7	399
July.....	2.7	.2	.95	1.5	2.4	148
August.....	.2	.1	.15	.5	.6	36.9
September.....	.2	.1	.14	.4	.5	29.8
The year.....	26	.1	6.07	-	6.70	4,870
1920-21						
October.....	-	-	.10	-	.10	6.1
November.....	.7	.2	.28	-	.28	16.7
December.....	132	.2	9.56	1	10.6	652
January.....	194	22	57.1	3	60.1	3,700
February.....	266	22	99.2	5	104	5,780
March.....	139	65	102	4	106	6,520
April.....	106	53	76.1	3	79.1	4,710
May.....	116	32	61.9	8	69.9	4,300
June.....	29	6.8	15.8	4	19.8	1,180
July.....	5.8	1.7	3.24	1	4.24	261
August.....	2.3	1.0	1.88	1	2.88	177
September.....	.9	.5	.66	1	1.66	98.8
The year.....	266	-	35.3	2.6	37.9	27,400

Monthly discharge of Simcoe Creek below Spring Creek and Simcoe Creek flume near Fort Simcoe--Continued

Month	Discharge in second-feet					Combined run-off in acre-feet
	Creek			Flume mean	Combined mean	
	Maximum	Minimum	Mean			
1921-22						
October.....	1.2	0.4	0.67	0.1	0.77	47.3
November.....	16	.4	1.56	.3	1.86	111
December.....	162	13	36.4	-	36.4	2,240
January.....	15	8.8	13.1	-	13.1	806
February.....	18	10	13.2	-	13.2	733
March.....	40	14	27.0	-	27.0	1,660
April.....	94	33	56.4	.2	56.6	3,370
May.....	120	31	62.9	5	67.9	4,180
June.....	27	3.8	9.11	6	15.1	898
July.....	4.7	2.0	3.07	1.5	4.57	281
August.....	2.0	.2	1.10	.7	1.80	111
September.....	.3	.1	.16	.5	.66	39.3
The year.....	162	.1	18.8	-	20.0	14,500
1922-23						
October.....	.8	.1	.20	.4	.60	36.9
November.....	1.3	.5	.91	.1	1.01	60.1
December.....	3.8	1.3	2.10	-	2.10	129
January.....	-	3.8	72.6	-	72.6	4,460
February.....	43	15	22.2	-	22.2	1,230
March.....	86	34	46.1	-	46.1	2,630
April.....	94	48	67.6	6.0	73.6	4,380
May.....	-	10	40.5	5.0	45.5	2,800
June.....	10	3.0	5.62	4.5	10.1	601
July.....	9.4	1.3	3.43	3.0	6.43	395
August.....	1.4	.5	.90	1.5	2.40	148
September.....	.8	.1	.51	.5	1.01	60.1
The year.....	-	.1	21.9	-	23.6	17,100

Yearly discharge of Simcoe Creek below Spring Creek, near Fort Simcoe

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1910.....	67.1	48,600	63.9	46,300
1911.....	14.9	10,800	13.7	9,930
1912.....	25.0	18,200	25.4	18,400
1913.....	25.4	18,400	26.1	18,900
1914.....	43.4	31,500	43.1	31,200
1915.....	22.2	16,100	23.9	17,300
1916.....	61.4	44,600	59.8	43,400
1917.....	12.2	8,320	18.0	13,000
1918.....	27.8	20,100	21.4	15,500
1919.....	20.5	14,800	20.4	14,600
1920.....	6.70	4,870	7.35	5,340
1921.....	37.9	27,400	40.2	29,100
1922.....	20.0	14,500	17.0	12,300
1923.....	23.6	17,100	-	-
Highest.....	67.1	48,600	63.9	46,300
Average.....	29.2	21,100	29.2	21,200
Lowest.....	6.70	4,870	7.35	5,340

Reservation drain at Alfalfa, Wash.

Location.—Water-stage recorder, lat. 46°19'10", long. 120°13'20", in sec. 29, T. 10 N., R. 21 E., at highway bridge a quarter of a mile southeast of Alfalfa and 2 miles above mouth of drain. Staff gage prior to Oct. 9, 1922.

Records available.—December 1912 to September 1923.

Extremes.—Maximum discharge, 1,500 second-feet (estimated) Jan. 2, 1918 (stage determined from high-water marks); minimum, 131 second-feet Mar. 18, 1922.

Remarks.—Reservation drain carries the return water from irrigation and the underflow of Toppenish Valley. During the low-water period practically the whole flow of Toppenish Creek seeps into this drain.

Monthly discharge of Reservation drain at Alfalfa

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	367	262	331	20,400
November.....	273	251	259	15,400
December.....	240	200	219	13,500
January.....	240	210	223	13,700
February.....	230	200	219	12,600
March.....	190	190	190	11,700
April.....	210	190	200	11,900
May.....	317	190	238	14,600
June.....	546	317	445	26,500
July.....	452	362	410	25,200
August.....	430	339	363	22,300
September.....	499	407	448	26,700
The year.....	546	190	295	214,000
1920-21				
October.....	362	268	306	18,800
November.....	268	236	242	14,400
December.....	226	216	220	13,500
January.....	301	216	247	15,200
February.....	390	216	275	15,500
March.....	323	236	278	17,100
April.....	301	196	269	16,000
May.....	530	301	383	23,600
June.....	624	506	574	34,200
July.....	576	436	496	30,500
August.....	506	436	471	29,000
September.....	553	436	515	30,600
The year.....	624	196	357	258,000
1921-22				
October.....	420	329	369	22,700
November.....	329	254	279	16,600
December.....	374	243	292	18,000
January.....	243	223	228	14,000
February.....	213	213	223	12,400
March.....	223	131	183	11,300
April.....	233	-	203	12,100
May.....	365	223	286	17,600
June.....	533	374	459	27,300
July.....	533	420	472	29,000
August.....	556	510	528	32,500
September.....	510	442	475	28,300
The year.....	556	131	334	242,000
1922-23				
October.....	437	329	366	22,500
November.....	329	264	297	17,700
December.....	254	194	231	14,200
January.....	307	223	252	15,500
February.....	-	-	220	12,200
March.....	243	-	212	13,000
April.....	285	213	246	14,600
May.....	556	203	353	21,700
June.....	625	465	570	33,900
July.....	717	465	564	34,700
August.....	-	-	*550	33,800
September.....	-	-	*600	35,700
The year.....	717	194	372	270,000

Yearly discharge of Reservation drain at Alfalfa

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1913.....	-	-	198	144,000
1914.....	208	151,000	207	150,000
1915.....	184	133,000	176	127,000
1917.....	237	171,000	257	186,000
1918.....	297	215,000	287	208,000
1919.....	295	214,000	302	218,000
1920.....	295	214,000	292	212,000
1921.....	357	258,000	371	269,000
1922.....	334	242,000	330	239,000
1923.....	372	270,000	-	-

*Estimated.

Satus Creek below Dry Creek, near Toppenish, Wash.

(Formerly called Satus Creek near Toppenish)

Location.- Water-stage recorder, lat. 46°15'00" long. 120°22'50", in sec. 24, T. 9 N., R. 19 E., at dam site 1 mile below mouth of Dry Creek and 9 miles southwest of Toppenish. Prior to July 1, 1913, staff gage 1 mile above mouth of Dry Creek.

Drainage areas.- 427 square miles (254 square miles at former location).

Records available.- November 1908 to September 1924.

Extremes.- Maximum discharge, 3,870 second-feet Dec. 22, 1915; minimum, 1.9 second-feet Sept. 4, 5, 1924.

Remarks.- Entire flow of Satus Creek above Lazy Creek is diverted for irrigation during July and August. No regulation.

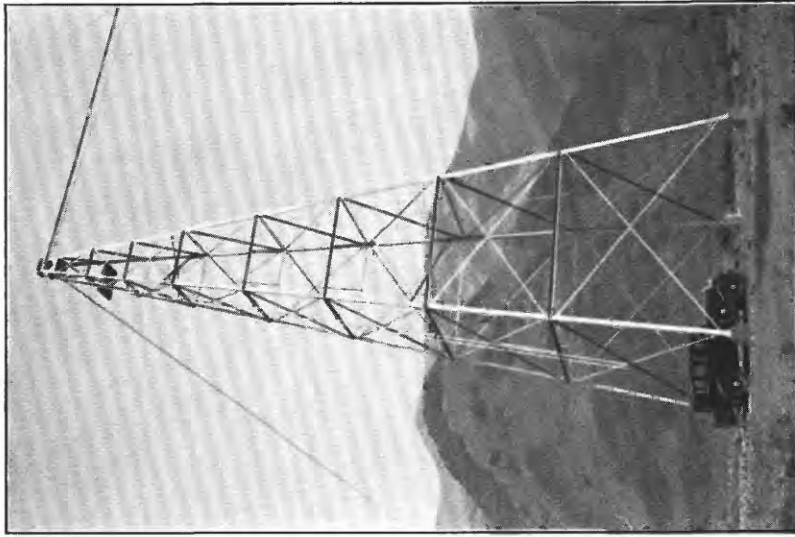
Monthly discharge of Satus Creek below Dry Creek, near Toppenish

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	42	22	29.1	1,790
November.....	61	-	46.9	2,790
December.....	-	-	*50.0	3,070
January.....	-	-	*120	7,380
February.....	-	49	88.8	5,110
March.....	421	54	118	7,260
April.....	183	81	127	7,560
May.....	150	48	90.5	5,560
June.....	54	20	34.6	2,060
July.....	18	8.5	11.1	682
August.....	12	8.2	9.33	574
September.....	16	9.9	11.4	678
The year.....	421	8.2	61.3	44,500
1920-21				
October.....	18	9.6	14.3	879
November.....	106	19	43.1	2,560
December.....	1,240	35	109	6,700
January.....	682	99	245	15,100
February.....	1,830	97	*439	24,400
March.....	1,020	215	409	25,100
April.....	279	150	196	11,700
May.....	220	131	170	10,500
June.....	172	40	99.7	5,930
July.....	40	16	23.9	1,470
August.....	16	13	13.8	848
September.....	17	14	14.8	881
The year.....	1,830	9.6	146	106,000
1921-22				
October.....	27	15	18.1	1,110
November.....	582	-	50.5	3,000
December.....	1,000	76	196	12,100
January.....	-	-	44.8	2,750
February.....	105	-	64.7	3,590
March.....	-	57	219	13,500
April.....	728	203	351	20,900
May.....	261	166	213	13,100
June.....	191	34	105	6,250
July.....	30	14	18.3	1,130
August.....	13	10	11.6	713
September.....	12	9	10.5	625
The year.....	1,000	9	109	78,800
1922-23				
October.....	-	12	*19.1	1,170
November.....	30	-	*25.3	1,510
December.....	-	-	*81.9	5,040
January.....	1,440	124	*569	35,000
February.....	243	115	138	7,660
March.....	390	164	271	16,700
April.....	394	164	247	14,700
May.....	215	118	167	10,300
June.....	127	53	94.9	5,650
July.....	102	22	38.6	2,370
August.....	24	19	21.0	1,290
September.....	19	17	18.3	1,090
The year.....	1,440	12	142	102,000

*Estimated.



4. RECORDING-GAGE SHELTER AND STILLING WELL.



B. SOUTH CABLE TOWER.
Tower, 71 feet high; cable span, 1,016 feet

Snake River near Clarkston, Wash.

Monthly discharge of Satus Creek below Dry Creek, near Toppenish--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1923-24				
October.....	-	15	17.8	1,090
November.....	-	-	*30.0	1,790
December.....	-	-	73.3	4,510
January.....	-	72	77.6	4,770
February.....	-	144	365	21,000
March.....	144	59	88.5	5,440
April.....	73	59	65.5	3,900
May.....	68	26	48.7	2,990
June.....	24	-	18.2	1,080
July.....	-	-	9.20	566
August.....	11	3.3	7.10	437
September.....	11	2.0	6.48	386
The year.....	-	2.0	66.0	48,000

*Estimated.

Yearly discharge of Satus Creek below Dry Creek, near Toppenish

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1909.....	-	-	115	83,200
1910.....	177	128,000	162	117,000
1911.....	86.4	62,600	75.6	54,700
1912.....	102	73,300	106	77,200
1913.....	122	88,100	116	83,800
1914.....	131	95,100	131	95,200
1915.....	77.7	56,300	106	76,500
1916.....	275	199,000	249	181,000
1917.....	101	73,200	124	89,900
1918.....	132	95,500	108	78,400
1919.....	138	100,000	140	102,000
1920.....	61.3	44,500	64.7	47,000
1921.....	146	106,000	155	112,000
1922.....	109	78,800	97.1	70,300
1923.....	142	102,000	141	102,000
1924.....	66.0	48,000	-	-
Highest.....	275	199,000	249	181,000
Average.....	124	90,000	126	91,300
Lowest.....	61.3	44,500	64.7	47,000

SNAKE RIVER BASIN

Snake River at Riparia, Wash.

Location.- Chain gage, lat. 46°35', long. 118°05', in sec. 31, T. 13 N., R. 38 E., on Oregon-Washington Railway & Navigation Co.'s bridge at Riparia.

Drainage area.- 104,000 square miles (revised).

Records available.- October 1915 to September 1922, August 1928 to September 1935.

Extremes.- Maximum discharge observed, 270,000 second-feet May 20, 1921; minimum daily discharge observed, 10,600 second-feet Aug. 14, 18, 20, 24-28, 30, 31, Sept. 1, 2, 5, 1931.

Maximum discharge known, about 409,000 second-feet June 5, 1894.

Remarks.- Flow controlled to a large extent by storage in Jackson Lake, Arrowrock, Deer Flat, and many other reservoirs. Many diversions for irrigation.

Monthly discharge of Snake River at Riparia

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	20,400	12,300	16,500	1,010,000
November.....	26,200	17,400	22,100	1,320,000
December.....	-	-	24,400	1,500,000
January.....	67,200	-	30,500	1,880,000
February.....	46,500	23,200	29,200	1,680,000
March.....	59,800	23,200	35,800	2,200,000
April.....	77,900	33,200	56,400	3,360,000
May.....	134,000	64,600	108,000	6,640,000
June.....	148,000	71,100	114,000	6,780,000
July.....	75,100	19,200	39,900	2,450,000
August.....	19,200	13,900	15,900	978,000
September.....	23,200	13,900	17,500	1,040,000
The year.....	148,000	-	42,500	30,800,000

Monthly discharge of Snake River at Riparia--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1920-21				
October.....	33,200	21,800	29,700	1,830,000
November.....	57,400	26,200	35,600	2,120,000
December.....	42,500	27,800	32,300	1,990,000
January.....	77,900	35,000	46,400	2,850,000
February.....	89,300	29,600	48,600	2,700,000
March.....	131,000	52,900	82,200	5,050,000
April.....	141,000	72,400	98,600	5,870,000
May.....	270,000	95,300	191,000	11,700,000
June.....	241,000	89,300	179,000	10,700,000
July.....	83,500	24,400	43,500	2,670,000
August.....	23,700	16,700	19,700	1,210,000
September.....	25,100	17,300	18,900	1,120,000
The year.....	270,000	16,700	68,800	49,800,000
1921-22				
October.....	23,800	17,500	22,200	1,360,000
November.....	53,100	21,700	29,600	1,760,000
December.....	63,800	27,300	39,300	2,420,000
January.....	29,500	19,900	25,600	1,570,000
February.....	28,000	24,500	25,800	1,430,000
March.....	76,000	23,100	39,500	2,430,000
April.....	113,000	48,700	81,400	4,840,000
May.....	219,000	110,000	156,000	9,590,000
June.....	233,000	77,400	164,000	9,760,000
July.....	71,800	20,500	34,900	2,150,000
August.....	21,700	16,000	18,600	1,140,000
September.....	17,000	14,500	15,600	928,000
The year.....	233,000	14,500	54,400	39,400,000
1928				
August 6-31.....	20,700	16,100	17,800	918,000
September.....	19,000	16,100	17,600	1,050,000
The period.....	-	-	-	1,970,000
1928-29				
October.....	29,000	18,000	24,100	1,480,000
November.....	27,400	20,100	24,600	1,460,000
December.....	25,200	16,100	21,100	1,300,000
January.....	24,500	-	21,400	1,320,000
February.....	-	-	18,800	1,040,000
March.....	55,200	22,500	39,100	2,400,000
April.....	70,800	39,100	53,800	3,200,000
May.....	155,000	60,000	89,900	5,530,000
June.....	121,000	64,800	93,500	5,560,000
July.....	61,200	18,000	29,900	1,840,000
August.....	17,500	13,800	15,600	959,000
September.....	19,500	13,100	15,600	928,000
The year.....	155,000	13,100	37,300	27,000,000
1929-30				
October.....	20,700	18,000	18,700	1,150,000
November.....	25,900	18,500	23,400	1,390,000
December.....	44,500	19,500	27,400	1,680,000
January.....	23,800	-	20,300	1,250,000
February.....	43,400	-	30,900	1,720,000
March.....	54,000	23,800	33,300	2,050,000
April.....	95,600	46,800	71,000	4,220,000
May.....	92,400	61,400	74,900	4,610,000
June.....	92,400	35,400	60,800	3,620,000
July.....	31,900	15,500	21,800	1,340,000
August.....	18,000	13,900	15,800	972,000
September.....	18,000	13,100	16,000	952,000
The year.....	95,600	13,100	34,500	25,000,000

Monthly discharge of Snake River at Riparia--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1930-31				
October.....	22,200	16,400	19,900	1,220,000
November.....	27,100	19,800	21,400	1,270,000
December.....	22,900	16,400	20,800	1,280,000
January.....	22,200	17,400	20,200	1,240,000
February.....	23,600	19,200	20,300	1,130,000
March.....	55,400	19,800	32,700	2,010,000
April.....	107,000	40,700	55,200	3,280,000
May.....	98,800	59,000	76,100	4,680,000
June.....	61,400	19,800	35,900	2,140,000
July.....	21,600	11,200	14,600	898,000
August.....	12,000	10,600	11,000	676,000
September.....	15,400	10,600	12,800	762,000
The year.....	107,000	10,600	28,400	20,600,000
1931-32				
October.....	20,400	14,400	15,900	978,000
November.....	19,200	15,400	17,900	1,070,000
December.....	19,800	15,800	18,000	1,110,000
January.....	21,600	-	17,900	1,100,000
February.....	43,400	-	18,800	1,080,000
March.....	123,000	29,400	62,200	3,820,000
April.....	128,000	64,800	89,400	5,320,000
May.....	219,000	99,500	152,000	9,350,000
June.....	147,000	80,900	111,000	6,600,000
July.....	73,900	21,000	37,300	2,290,000
August.....	21,000	15,400	17,300	1,060,000
September.....	16,200	15,800	16,700	994,000
The year.....	219,000	14,400	47,900	34,800,000
1932-33				
October.....	21,600	16,700	18,900	1,160,000
November.....	37,100	20,400	26,000	1,550,000
December.....	31,000	15,400	25,200	1,430,000
January.....	34,400	18,700	22,800	1,400,000
February.....	28,700	-	19,200	1,070,000
March.....	49,600	21,000	34,700	2,130,000
April.....	128,000	38,000	64,600	3,840,000
May.....	141,000	62,400	91,400	5,620,000
June.....	245,000	78,100	168,000	10,000,000
July.....	76,700	20,400	37,700	2,320,000
August.....	19,800	16,700	18,000	1,110,000
September.....	20,400	15,800	17,600	1,050,000
The year.....	245,000	-	45,100	32,700,000
1933-34				
October.....	39,800	16,700	21,700	1,334,000
November.....	48,500	23,600	30,140	1,793,000
December.....	149,000	22,200	50,490	3,104,000
January.....	96,000	34,400	52,650	3,237,000
February.....	41,600	33,500	37,230	2,068,000
March.....	109,000	33,500	55,730	3,427,000
April.....	118,000	66,000	93,360	5,556,000
May.....	96,000	47,400	69,810	4,292,000
June.....	46,400	21,600	32,620	1,941,000
July.....	22,900	14,400	17,060	1,049,000
August.....	14,900	12,200	12,930	794,800
September.....	15,400	12,200	13,460	800,900
The year.....	149,000	12,200	40,600	29,400,000
1934-35				
October.....	27,100	14,400	17,090	1,051,000
November.....	26,400	19,800	22,090	1,315,000
December.....	31,000	17,200	21,290	1,309,000
January.....	25,700	15,000	20,870	1,283,000
February.....	25,700	18,700	21,840	1,213,000
March.....	47,400	21,000	28,010	1,722,000
April.....	96,000	25,700	57,700	3,434,000
May.....	130,000	68,600	90,850	5,586,000
June.....	118,000	38,000	80,120	4,767,000
July.....	41,600	17,700	25,440	1,564,000
August.....	17,200	13,100	14,920	917,400
September.....	14,900	13,100	14,400	856,700
The year.....	130,000	13,100	34,560	25,020,000

Yearly discharge of Snake River at Riparia

Year	. Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1916.....	64,100	46,500,000	64,500	46,800,000
1917.....	63,800	46,300,000	66,800	48,300,000
1918.....	58,800	42,600,000	55,700	40,300,000
1919.....	40,000	28,900,000	39,000	28,200,000
1920.....	42,500	30,800,000	45,400	32,900,000
1921.....	68,800	49,800,000	68,200	49,400,000
1922.....	54,400	39,400,000	-	-
1929.....	37,300	27,000,000	37,300	27,000,000
1930.....	34,500	25,000,000	33,800	24,500,000
1931.....	28,400	20,600,000	27,600	20,000,000
1932.....	47,900	34,800,000	49,300	35,800,000
1933.....	45,100	32,700,000	48,000	34,800,000
1934.....	40,600	29,400,000	37,070	26,840,000
1935.....	34,560	25,020,000	-	-
Highest.....	68,800	49,800,000	68,200	49,400,000
Average.....	47,200	34,200,000	47,700	34,600,000
Lowest.....	28,400	20,600,000	27,600	20,000,000

Asotin Creek near Asotin, Wash.

Location.- Staff gage, lat. 46°20', long. 117°12', in sec. 20, T. 10 N., R. 45 E., half a mile above Washington Water Power Co.'s diversion for water supply and irrigation and 8 miles west of Asotin.

Drainage area.- 171 square miles.

Records available.- March 1904 to November 1906, August 1910 to October 1911 (fragmentary), August 1928 to September 1935.

Extremes.- Maximum discharge observed, 1,180 second-feet Apr. 15, 1904; minimum (estimated), 19 second-feet Jan. 18, 21, 22, 1930.

Remarks.- No important diversion or regulation.

Monthly discharge of Asotin Creek near Asotin

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1928				
August 13-31.....	36	30	31.2	1,180
September.....	33	29	30.3	1,800
The period.....	-	-	-	2,980
1928-29				
October.....	36	31	33.5	2,060
November.....	37	33	35.0	2,080
December.....	36	29	33.1	2,040
January.....	-	-	31.9	1,960
February.....	-	-	33.0	1,830
March.....	70	34	52.6	3,230
April.....	105	46	65.2	3,880
May.....	187	81	114	7,010
June.....	121	58	91.6	5,450
July.....	56	33	42.7	2,630
August.....	34	27	29.3	1,600
September.....	33	28	29.5	1,760
The year.....	187	27	49.3	35,700
1929-30				
October.....	33	30	30.5	1,880
November.....	35	29	31.2	1,960
December.....	67	29	39.6	2,430
January.....	36	-	26.7	1,640
February.....	110	36	72.3	4,020
March.....	93	41	57.3	3,520
April.....	118	75	90.5	5,390
May.....	157	57	86.0	5,290
June.....	63	40	47.0	2,600
July.....	40	28	32.7	2,010
August.....	30	24	26.5	1,630
September.....	36	24	28.6	1,700
The year.....	157	-	47.2	34,200

Monthly discharge of Asotin Creek near Asotin--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1930-31				
October.....	38	32	33.6	2,070
November.....	35	32	33.2	1,980
December.....	35	30	32.4	1,990
January.....	56	31	35.6	2,190
February.....	38	31	33.0	1,830
March.....	105	32	45.5	2,800
April.....	518	58	113	6,720
May.....	128	50	87.3	5,370
June.....	48	33	39.7	2,360
July.....	33	23	26.5	1,630
August.....	23	20	21.5	1,320
September.....	26	21	23.8	1,420
The year.....	518	20	43.8	31,700
1931-32				
October.....	34	24	27.5	1,690
November.....	37	26	30.1	1,790
December.....	41	-	27.2	1,670
January.....	58	31	38.3	2,360
February.....	183	-	57.0	3,280
March.....	218	54	115	7,070
April.....	252	103	162	9,640
May.....	322	108	222	13,600
June.....	137	53	97.3	5,790
July.....	56	32	42.1	2,590
August.....	33	25	28.8	1,770
September.....	30	24	26.7	1,590
The year.....	322	-	72.9	52,800
1932-33				
October.....	36	25	29.0	1,780
November.....	93	30	44.2	2,630
December.....	-	-	*38.2	2,350
January.....	82	38	48.4	2,980
February.....	-	-	36.3	2,020
March.....	108	40	70.6	4,340
April.....	300	71	153	9,100
May.....	290	85	162	9,960
June.....	323	84	201	12,000
July.....	79	35	49.4	3,040
August.....	43	27	31.6	1,940
September.....	124	28	33.6	2,000
The year.....	323	25	74.7	54,100
1933-34				
October.....	54	29	34.1	2,100
November.....	60	41	46.7	2,780
December.....	500	41	112	6,870
January.....	268	48	108	6,610
February.....	117	69	86.7	4,810
March.....	143	72	109	6,700
April.....	128	95	109	6,510
May.....	97	44	67.3	4,140
June.....	57	33	41.5	2,470
July.....	37	27	30.0	1,850
August.....	28	24	25.3	1,560
September.....	30	25	27.1	1,610
The year.....	500	24	66.3	48,010
1934-35				
October.....	53	28	33.9	2,080
November.....	51	36	40.3	2,400
December.....	83	35	45.5	2,790
January.....	62	30	44.9	2,760
February.....	64	42	49.9	2,770
March.....	55	40	46.5	2,860
April.....	164	49	96.6	5,750
May.....	164	103	118	7,270
June.....	120	44	73.2	4,350
July.....	48	29	35.4	2,180
August.....	30	25	27.7	1,700
September.....	27	25	26.6	1,580
The year.....	164	25	53.2	38,490

*Estimated.

Yearly discharge of Asotin Creek near Asotin

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1929.....	49.3	35,700	49.3	35,700
1930.....	47.2	34,200	47.0	34,000
1931.....	43.8	31,700	42.5	30,800
1932.....	72.9	52,800	75.0	54,400
1933.....	74.7	54,100	81.7	59,100
1934.....	66.3	48,010	60.1	43,530
1935.....	53.2	38,490	-	-

Tucannon River near Pomeroy, Wash.

Location.- Staff gage, lat. 46°27', long. 117°45', in sec. 13, T. 11 N., R. 40 E., at bridge at Marengo, 7½ miles southwest of Pomeroy.

Drainage area.- 109 square miles.

Records available.- August 1913 to June 1915, March 1924 to September 1930.

Extremes.- Maximum discharge observed, 1,630 second-feet at 4 p.m. Jan. 13, 1928; minimum, 25 second-feet Dec. 24, 1914.

Remarks.- Several small diversions for irrigation above station.

Monthly discharge of Tucannon River near Pomeroy

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1924				
March.....	162	110	131	8,060
April.....	268	122	184	10,900
May.....	359	122	252	15,500
June.....	118	64	89.0	5,300
July.....	77	51	59.0	3,630
August.....	58	44	50.6	3,110
September.....	62	49	54.9	3,270
The year.....	-	-	-	49,800
1924-25				
October.....	77	56	59.8	3,680
November.....	292	73	115	6,840
December.....	192	-	100	6,150
January.....	260	98	153	9,410
February.....	624	134	251	13,900
March.....	205	120	159	9,780
April.....	437	172	273	16,200
May.....	342	212	280	17,200
June.....	202	84	132	7,860
July.....	105	57	68.8	4,230
August.....	74	51	57.2	3,520
September.....	68	55	61.8	3,680
The year.....	624	-	142	102,000
1925-26				
October.....	80	63	66.5	4,090
November.....	79	68	70.1	4,170
December.....	127	71	86.1	5,290
January.....	116	72	80.0	4,920
February.....	305	79	154	8,550
March.....	152	103	123	7,560
April.....	229	110	163	9,700
May.....	193	85	120	7,380
June.....	98	51	68.8	4,090
July.....	54	42	47.6	2,930
August.....	54	42	46.0	2,830
September.....	87	51	58.9	3,500
The year.....	305	42	89.9	65,000
1926-27				
October.....	89	59	68.0	4,180
November.....	358	65	118	7,020
December.....	450	87	162	9,960
January.....	207	-	131	8,060
February.....	490	124	226	12,600
March.....	258	158	205	12,600
April.....	602	149	244	14,500
May.....	566	222	324	19,900
June.....	530	143	292	17,400
July.....	134	71	94.2	5,790
August.....	75	61	65.3	4,020
September.....	121	62	87.6	5,210
The year.....	602	59	167	121,000

Monthly discharge of Tucannon River near Pomeroy--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1927-28				
October.....	164	83	101	6,210
November.....	900	89	257	15,300
December.....	404	110	205	12,600
January.....	1,410	115	403	24,800
February.....	179	68	124	7,130
March.....	710	63	275	16,900
April.....	458	210	289	17,200
May.....	458	261	379	23,300
June.....	247	96	151	8,980
July.....	111	58	79.8	4,910
August.....	63	56	58.7	3,610
September.....	65	56	60.0	3,570
The year.....	1,410	56	199	145,000
1928-29				
October.....	75	65	71.5	4,400
November.....	83	73	76.8	4,570
December.....	79	71	74.5	4,580
January.....	83	-	75.5	4,640
February.....	-	-	66.1	3,670
March.....	232	73	168	10,300
April.....	245	102	164	9,760
May.....	300	162	219	13,500
June.....	195	79	150	8,930
July.....	77	54	61.9	3,810
August.....	54	50	51.4	3,160
September.....	59	50	53.6	3,190
The year.....	300	50	103	74,500
1929-30				
October.....	62	55	57.3	3,520
November.....	65	56	62.1	3,700
December.....	122	62	79.4	4,880
January.....	-	-	73.8	4,540
February.....	345	111	195	10,800
March.....	315	98	158	9,720
April.....	228	154	188	11,200
May.....	185	95	132	8,120
June.....	108	63	78.0	4,640
July.....	58	42	49.6	3,050
August.....	45	41	42.8	2,630
September.....	65	42	50.0	2,980
The year.....	345	-	96.3	69,800

Yearly discharge of Tucannon River near Pomeroy

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1914.....	116	83,700	113	82,100
1925.....	142	102,000	137	99,300
1926.....	89.9	65,000	100	75,600
1927.....	167	121,000	185	134,000
1928.....	199	145,000	171	124,000
1929.....	103	74,500	101	73,100
1930.....	96.3	69,800	-	-

Tucannon River near Starbuck, Wash.

Location.- Staff gage, lat. 46°31', long. 118°00', in sec. 23, T. 12 N., R. 38 E., three-quarters of a mile below Pataha Creek and 5½ miles east of Starbuck. Prior to Oct. 1, 1917, staff gage a quarter of a mile upstream.

Records available.- November 1914 to September 1917, August 1928 to September 1931.

Extremes.- Maximum discharge observed, 6,000 second-feet (estimated) Feb. 2, 1930; minimum, 15 second-feet July 11, 12, 1930.

Remarks.- Many small diversions for irrigation above station.

Monthly discharge of Tucannon River near Starbuck

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1928				
August 9-31	51	49	50.4	2,300
September.....	56	50	53.2	3,170
The year.....	-	-	-	5,470
1928-29				
October.....	75	56	67.5	4,150
November.....	85	74	80.5	4,790
December.....	102	67	77.6	4,770
January.....	109	-	92.2	5,670
February.....	341	-	117	6,500
March.....	581	152	226	13,900
April.....	201	117	158	9,400
May.....	294	167	205	12,600
June.....	224	60	161	9,580
July.....	60	32	51.0	3,140
August.....	41	32	34.9	2,150
September.....	56	36	44.4	2,640
The year.....	581	32	109	79,300
1929-30				
October.....	64	47	51.7	3,180
November.....	64	53	60.0	3,570
December.....	134	56	84.8	5,210
January.....	-	-	77.9	4,790
February.....	-	172	349	19,400
March.....	560	113	207	12,700
April.....	294	172	209	12,400
May.....	218	72	123	7,560
June.....	107	31	58.9	3,500
July.....	115	15	32.9	2,020
August.....	34	16	25.6	1,570
September.....	65	16	51.0	3,030
The year.....	-	15	109	78,900
1930-31				
October.....	84	56	64.4	3,960
November.....	110	56	78.4	4,670
December.....	115	65	81.5	5,010
January.....	740	80	141	8,670
February.....	110	68	84.0	4,670
March.....	550	77	133	8,180
April.....	2,400	139	343	20,400
May.....	241	102	168	10,300
June.....	96	62	74.6	4,440
July.....	89	17	34.5	2,120
August.....	27	18	21.5	1,320
September.....	56	26	42.2	2,510
The year.....	2,400	17	105	76,200

Yearly discharge of Tucannon River near Starbuck

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1915.....	-	-	110	79,600
1916.....	271	197,000	279	202,000
1917.....	290	210,000	-	-
1929.....	109	79,300	107	77,500
1930.....	109	78,900	111	80,600
1931.....	105	76,200	-	-

South Fork of Palouse River above Paradise Creek, near Pullman, Wash.

Location.- Water-stage recorder, lat. 46°42'20", long. 117°09'55", in SE $\frac{1}{4}$ sec. 8, T. 14 N., R. 45 E., 1 mile above Paradise Creek and 2 miles southeast of Pullman.

Records available.- May 1934 to September 1935.

Extremes.- Maximum discharge recorded, 394 second-feet 3:15-4:30 a.m. Jan. 25, 1935; minimum discharge, 0.01 second-foot Aug. 13-15, 1935.

Remarks.- No diversion or regulation.



A. DURING LOW FLOW.



B. DURING MEDIUM FLOW.

GAGING STATION FOR MEASURING FLOW AND DETERMINING SILT
MOVEMENT ON SOUTH FORK OF PALOUSE RIVER ABOVE PARADISE
CREEK, NEAR PULLMAN, WASH.

Monthly discharge of South Fork of Palouse River above Paradise Creek, near Pullman

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1934				
May 22-31.....	2.2	1.3	1.70	34
June.....	16.5	.4	2.45	146
July.....	1.0	.04	.351	22
August.....	.09	.03	.052	3.2
September.....	37	.04	.199	12
The period.....	-	-	-	217
1934-35				
October.....	6.6	.36	1.37	84
November.....	5.3	1.3	2.46	147
December.....	82	2.3	12.7	780
January.....	292	9.0	58.3	3,580
February.....	75	18.6	35.9	1,990
March.....	180	19.8	54.9	3,380
April.....	242	27	71.4	4,250
May.....	26	5.5	13.8	849
June.....	5.1	1.0	2.58	154
July.....	1.3	.04	.514	32
August.....	.12	.01	.041	2.5
September.....	.12	.04	.067	4.0
The year.....	292	.01	21.1	15,250

South Fork of Palouse River at Pullman, Wash.

Location.- Water-stage recorder, lat. 46°43'50", long. 117°11'00", in NE¼ sec. 6, T. 14 N., R. 45 E., at State Street in Pullman, 600 feet above Missouri Flat Creek.

Records available.- February 1934 to September 1935.

Extremes.- Maximum discharge recorded, 940 second-feet at 10:30 p.m. Jan. 24, 1935; minimum discharge, 0.31 second-foot Aug. 14, 1935.

Remarks.- No important diversion above station. Slight regulation on Paradise Creek caused by Moscow sewage disposal plant.

Monthly discharge of South Fork of Palouse River at Pullman

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1934				
February.....	81	24	44.4	2,470
March.....	718	19.7	94.2	5,790
April.....	141	7.9	25.0	1,490
May.....	22	2.7	5.75	354
June.....	67	1.9	7.29	434
July.....	2.6	1.5	1.80	110
August.....	1.6	.7	1.10	68
September.....	1.7	.6	1.11	66
The period.....	-	-	-	10,780
1934-35				
October.....	11.9	-	2.91	179
November.....	9.3	2.2	4.32	257
December.....	139	4.0	23.4	1,440
January.....	568	15.1	109	6,700
February.....	128	32	63.6	3,530
March.....	347	35	92.1	5,660
April.....	424	43	124	7,370
May.....	38	7.1	17.8	1,100
June.....	6.5	2.2	3.99	237
July.....	2.9	.68	1.56	96
August.....	1.1	.48	.747	46
September.....	1.1	.68	.814	48
The year.....	568	.48	36.8	26,660

Paradise Creek near Pullman, Wash.

Location.- Water-stage recorder, lat. 46°43'10", long. 117°09'30", in SW $\frac{1}{4}$ sec. 4, T. 14 N., R. 45 E., 2,500 feet above mouth and 1 mile southeast of Pullman.

Records available.- April 1934 to September 1935.

Extremes.- Maximum discharge recorded, 262 second-feet at 12:15 a.m. Jan. 25, 1935; minimum, 0.2 second-foot May 28, 1934.

Remarks.- No important diversion. Slight regulation caused by Moscow sewage disposal plant.

Monthly discharge of Paradise Creek near Pullman

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1934				
April 10-30.....	4.6	1.1	2.82	117
May.....	6.0	.2	1.63	100
June.....	14.8	.8	2.37	141
July.....	1.6	.4	.87	54
August.....	1.0	.4	.62	38
September.....	1.1	.43	.666	40
The period.....	-	-	-	490
1934-35				
October.....	4.4	.60	1.21	74
November.....	2.5	.84	1.31	78
December.....	47	1.2	6.87	422
January.....	151	4.1	36.6	2,250
February.....	57	7.7	21.9	1,220
March.....	115	9.9	29.2	1,790
April.....	117	9.1	38.0	2,260
May.....	7.6	1.5	3.43	211
June.....	1.6	.74	1.10	65
July.....	1.1	.56	.687	42
August.....	.69	.29	.537	33
September.....	.94	.51	.714	45
The year.....	151	.29	11.7	8,490

Dry Fork of South Fork of Palouse River at Pullman, Wash.

Location.- Water-stage recorder, lat. 46°43'25", long. 117°11'10", in NE $\frac{1}{4}$ sec. 6, T. 14 N., R. 45 E., at Pullman, half a mile above mouth.

Records available.- December 1934 to September 1935.

Remarks.- No diversion or regulation.

Monthly discharge of Dry Fork of South Fork of Palouse River at Pullman

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1934-35				
December.....	16.6	0.2	2.09	128
January.....	44	1.1	6.36	391
February.....	8.0	1.5	3.22	179
March.....	33	1.4	5.05	311
April.....	23	.84	5.76	343
May.....	.69	.06	.280	17
June.....	.10	0	.023	1.4
July.....	0	0	0	0
August.....	0	0	0	0
September.....	0	0	0	0
The period.....	-	-	-	1,370

Missouri Flat Creek at Pullman, Wash.

Location.- Water-stage recorder, lat. 46°43'50", long. 117°11'00", in NE $\frac{1}{4}$ sec. 6, T. 14 N., R. 45 E., at State Street Crossing in Pullman, 600 feet above mouth.

Records available.- February 1934 to September 1935.

Extremes.- Maximum discharge recorded, 290 second-feet at 6 p.m. Jan. 24, 1935; no flow July 14-28, 30, 31, Aug. 1-17, 22, 1935.

Remarks.- No diversion or regulation.

Monthly discharge of Missouri Flat Creek at Pullman

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1934				
February.....	18.0	2.5	7.90	439
March.....	102	2.5	14.2	872
April.....	29	.7	3.00	179
May.....	2.7	.1	.60	37
June.....	8.0	.02	.840	50
July.....	.09	.02	.046	2.9
August.....	.05	.01	*.023	1.4
September.....	.01	.01	.010	.6
The period.....	-	-	-	1,580
1934-35				
October.....	4.2	.01	.346	21
November.....	1.1	.12	.377	22
December.....	38	.28	4.90	301
January.....	164	3.3	31.9	1,960
February.....	46	6.6	18.0	1,000
March.....	91	6.9	23.0	1,410
April.....	85	3.4	24.5	1,460
May.....	2.9	.28	1.08	66
June.....	.42	.04	.135	8.0
July.....	.16	0	.027	1.7
August.....	.01	0	.004	.26
September.....	.01	.01	.010	.60
The year.....	164	0	8.64	6,250

*Estimated.

Fourmile Creek at Shawnee, Wash.

Location.- Water-stage recorder, lat. 46°49'55", long. 117°16'20", in SW $\frac{1}{4}$ sec. 33, T. 16 N., R. 44 E., half a mile above mouth and three-quarters of a mile north of Shawnee.

Records available.- March 1934 to September 1935.

Extremes.- Maximum discharge recorded, 786 second-feet at 6:45 p.m. Jan. 24, 1935; no flow July 11 to Oct. 21, 1934, July 16 to Sept. 30, 1935.

Remarks.- No diversion or regulation.

Monthly discharge of Fourmile Creek at Shawnee

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1934				
March 27-31.....	100	26	45.2	448
April.....	35	2.3	8.62	513
May.....	6.8	.5	1.79	110
June.....	17.1	.1	1.65	98
July.....	.5	0	.068	4.2
August.....	0	0	0	0
September.....	0	0	0	0
The period.....	-	-	-	1,170
1934-35				
October.....	2.9	0	.357	22
November.....	3.5	.56	1.34	80
December.....	88	1.2	13.8	850
January.....	502	9.2	74.0	4,650
February.....	117	21	42.4	2,350
March.....	224	24	57.4	3,530
April.....	199	18.5	60.9	3,620
May.....	14.7	1.4	5.64	347
June.....	1.4	.14	.619	37
July.....	.34	0	.077	4.7
August.....	0	0	0	0
September.....	0	0	0	0
The year.....	502	0	21.3	15,390

WALLA WALLA RIVER BASIN

Walla Walla River near Wallula, Wash.

Location.- Staff gage, lat. 46°04'00", long. 118°51'20", in NW¼ sec. 30, T. 7 N., R. 32 E., at Attalia Irrigation District canal crossing, just above Inland Empire Highway Bridge, 3 miles east of Wallula.

Drainage area.- 1,480 square miles.

Records available.- May 1924 to September 1925.

Extremes.- Maximum discharge observed, 5,740 second-feet at 2:30 p.m. Feb. 5, 1925; no flow Aug. 1-15, 1924, June 28-30, 1925.

Remarks.- Entire low-water flow above station appropriated for irrigation. Records include diversion through Attalia Irrigation District canal.

Monthly discharge of Walla Walla River and Attalia Irrigation District canal near Wallula

Month	Discharge in second-feet					Run-off in acre-feet (combined)
	Maximum (combined)	Minimum (combined)	Mean			
			River	Canal	Combined	
1924						
May 17-31.....	166	55	76.4	20.5	96.9	2,880
June.....	76	16.0	19.0	18.6	37.6	2,240
July.....	20	9.4	2.8	10.4	13.2	812
August.....	18.9	6.6	.4	10.3	10.7	658
September.....	32	11.1	5.6	12.6	18.2	1,080
The period...	-	-	-	-	-	7,670
1924-25						
October.....	159	34	96.7	10.4	107	6,580
November.....	2,260	164	545	-	545	32,400
December.....	-	-	519	-	519	31,900
January.....	2,080	605	1,220	-	1,220	75,000
February.....	5,740	700	1,560	-	1,560	86,600
March.....	-	385	640	8.04	648	39,800
April.....	-	-	808	30.4	838	49,900
May.....	-	-	451	32.0	483	29,700
June.....	-	20	127	23.8	151	8,980
July.....	51	11.8	3.65	15.4	19.0	1,170
August.....	26	8.6	3.95	9.87	13.8	848
September.....	31	15.5	11.3	10.5	21.8	1,300
The year.....	5,740	8.6	491	-	503	364,000

Touchet River at Bolles, Wash.

Location.- Water-stage recorder, lat. 46°17', long. 118°13', in sec. 8, T. 9 N., R. 37 E., half a mile above highway bridge, three-quarters of a mile southeast of Bolles, and 3 miles west of Waiatsburg.

Drainage area.- 362 square miles (revised).

Records available.- February 1924 to October 1929.

Extremes.- Maximum discharge, 4,470 second-feet at 4:30 a.m. Jan. 13, 1928; minimum, 1.4 second-feet July 30, 1926.

Remarks.- Several small ditches divert water above gage for irrigation.

Monthly discharge of Touchet River at Bolles

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
February 1924.....	-	255	471	27,100
March.....	251	-	174	10,700
April.....	288	-	206	12,300
May.....	-	58	145	8,920
June.....	77	21	45.5	2,710
July.....	40	14	21.8	1,340
August.....	51	11	17.8	1,090
September.....	40	-	26.0	1,550
The period.....	-	-	-	65,700
October 1924.....	75	34	45.2	2,780
November.....	1,110	80	232	13,800
December.....	-	-	221	13,600
January 1925.....	829	201	437	26,900
February.....	1,960	239	646	35,900
March.....	380	201	276	17,000
April.....	512	196	338	20,100
May.....	309	140	206	12,700
June.....	148	-	91.4	5,440
July.....	-	6.2	17.2	1,060
August.....	30	3.8	14.2	873
September.....	46	24	35.3	2,100
Water year 1924-25.....	1,960	3.8	210	152,000

Monthly discharge of Touchet River at Bolles--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1925	87	44	56.7	3,490
November.....	92	67	75.4	4,480
December.....	201	56	92.6	5,690
Calendar year 1925.....	1,960	3.8	187	136,000
January 1926.....	269	44	105	6,460
February.....	1,320	150	397	22,000
March.....	261	131	179	11,000
April.....	248	101	161	10,800
May.....	77	47	78.1	4,800
June.....	25	9.2	28.8	1,710
July.....	42	2.6	12.2	760
August.....	104	3.0	16.1	990
September.....	104	23	45.6	2,710
Water year 1925-26.....	1,320	2.6	103	74,900
October 1926.....	139	18	54.9	3,380
November.....	1,220	18	271	16,100
December.....	950	21.6	*359	22,100
Calendar year 1926.....	1,320	2.6	142	103,000
January 1927.....	790	175	363	23,600
February.....	2,390	344	780	43,300
March.....	950	414	590	36,300
April.....	820	264	435	25,900
May.....	527	207	337	20,700
June.....	327	93	173	10,300
July.....	77	28	48.0	2,850
August.....	51	20	33.2	2,040
September.....	175	44	80.0	4,760
Water year 1926-27.....	2,390	18	292	211,000
October 1927.....	255	70	107	6,580
November.....	3,100	83	530	31,500
December.....	830	85	322	19,800
Calendar year 1927.....	3,100	20	315	228,000
January 1928.....	3,970	130	919	56,500
February.....	395	152	252	14,500
March.....	2,270	137	748	46,000
April.....	2,140	498	784	46,700
May.....	640	161	365	22,400
June.....	152	45	85.7	5,100
July.....	72	12	38.5	2,370
August.....	32	14	19.5	1,200
September.....	55	23	37.7	2,240
Water year 1927-28.....	3,970	12	351	255,000
October 1928.....	66	40	55.3	3,400
November.....	94	61	69.5	4,140
December.....	75	63	68.2	4,190
Calendar year 1928.....	3,970	12	288	209,000
January 1929.....	-	67	69.7	4,290
March 7-31.....	739	214	349	17,300
April.....	-	168	282	16,800
May.....	352	184	275	16,900
June.....	168	53	115	6,840
July.....	52	17	38.8	2,390
August.....	43	11	19.3	1,190
September.....	66	15	31.2	1,860

*Estimated.

Klickitat River Basin

Klickitat River near Glenwood, Wash.

Location.- Water-stage recorder, lat. 46°05'30", long. 121°15'30", in SE $\frac{1}{4}$ sec. 14, T. 7 N., R. 12 E., half a mile below Dairy Creek and 5 miles north of Glenwood. Water-stage recorder at site 1 mile upstream July 19 to Dec. 16, 1910; prior to July 19, 1910, staff gage at site 1 mile upstream.

Drainage areas.- 356 square miles; 350 square miles at former site.

Records available.- October 1909 to September 1935 (September 1924 to September 1925, fragmentary gage heights).

Extremes.- Maximum discharge recorded, 9,870 second-feet at 6:15 p.m. Dec. 22, 1933; minimum discharge, 204 second-feet Nov. 28, 1931.

Remarks.- No diversion or regulation.

Monthly discharge of Klickitat River near Glenwood

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	-	414	442	1.24	1.43	27,200
November.....	636	427	524	1.47	1.64	31,200
December.....	1,430	-	657	1.85	2.13	40,400
January.....	1,550	432	703	1.97	2.27	45,200
February.....	-	456	592	1.66	1.79	34,100
March.....	1,280	466	538	1.51	1.74	33,100
April.....	972	-	*628	1.76	1.96	37,400
May.....	1,700	846	1,210	3.40	3.92	74,400
June.....	1,260	770	996	2.80	3.12	59,300
July.....	971	544	698	1.96	2.26	42,900
August.....	574	445	508	1.43	1.65	31,200
September.....	634	429	524	1.47	1.64	31,200
The year.....	1,700	-	669	1.88	25.55	486,000
1921						
May 22-31.....	3,590	2,630	3,130	8.79	3.27	62,100
June.....	3,680	1,890	2,610	7.33	8.18	155,000
July.....	1,960	940	1,320	3.71	4.28	81,200
August.....	940	680	806	2.26	2.61	49,600
September.....	680	516	574	1.61	1.80	34,200
1921-22						
October.....	626	492	566	1.59	1.83	34,800
November 1-21.....	528	444	486	1.37	1.07	20,200
April 9-30.....	1,020	516	739	2.08	1.70	32,300
May.....	3,080	1,050	1,800	5.06	5.83	111,000
June.....	3,340	-	1,960	5.51	6.15	117,000
July.....	-	-	844	2.37	2.73	51,900
August.....	738	522	595	1.67	1.92	36,600
September.....	555	-	*506	1.42	1.58	30,100
1923						
April 15-30.....	1,780	1,250	1,510	4.24	2.52	47,900
May.....	3,000	1,330	2,050	5.76	6.64	126,000
June.....	2,280	1,330	1,600	4.49	5.01	95,200
July.....	1,660	762	1,120	3.15	3.63	68,900
August.....	826	655	711	2.00	2.31	43,700
September.....	-	-	-	-	-	-
The period.....	-	-	-	-	-	382,000
1923-24						
October.....	669	486	519	1.46	1.68	31,900
November 1-25.....	895	466	612	1.44	1.34	25,400
April 20-30.....	1,150	870	959	2.69	1.10	20,900
May.....	2,160	1,120	1,510	4.24	4.98	92,600
June.....	1,110	734	878	2.47	2.78	52,800
July.....	815	544	631	1.77	2.04	38,800
August.....	-	511	594	1.67	1.92	36,500
September 1-10.....	573	500	540	1.52	.57	10,700
1925-26						
October.....	428	391	406	1.14	1.31	25,000
November.....	440	391	405	1.14	1.27	24,100
December.....	768	435	499	1.40	1.61	30,700
January.....	550	407	450	1.26	1.45	27,700
February.....	687	414	531	1.49	1.55	29,500
March.....	1,000	-	*716	2.01	2.32	44,000
April.....	1,690	745	1,140	3.20	3.57	67,800
May.....	1,390	768	916	2.57	2.96	56,300
June.....	-	-	*570	1.60	1.78	33,900
The year.....	-	-	-	-	-	339,000

*Estimated.

Monthly discharge of Klickitat River near Glenwood--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927						
April.....	2,470	672	1,070	3.01	3.36	63,700
May.....	3,580	1,450	2,250	6.32	7.29	138,000
June.....	4,360	1,450	2,360	6.63	7.40	140,000
July.....	1,410	788	1,060	2.98	3.44	65,200
The period	-	-	-	-	-	407,000
1927-28						
October.....	-	471	601	1.69	1.95	37,000
November.....	2,180	471	835	2.35	2.62	49,700
June.....	1,570	-	1,240	3.48	3.88	73,800
July.....	-	740	866	2.43	2.80	53,200
August.....	740	513	613	1.72	1.98	37,700
September.....	583	-	470	1.32	1.47	28,000
1928-29						
October.....	605	-	465	1.31	1.51	28,600
November.....	735	-	*494	1.39	1.55	29,400
December.....	-	-	428	1.20	1.38	26,300
January.....	-	-	*399	1.12	1.29	24,500
February.....	-	-	*318	.893	.93	17,700
March.....	619	296	446	1.25	1.44	27,400
April.....	1,240	475	650	1.83	2.04	38,700
May.....	2,500	1,080	1,650	4.63	5.34	101,000
June.....	1,790	1,060	1,400	3.93	4.38	83,300
July.....	1,020	577	748	2.10	2.42	46,000
August.....	638	452	524	1.47	1.70	32,200
September.....	476	332	400	1.12	1.25	23,600
The year.....	2,500	296	662	1.86	25.23	479,000
1929-30						
October.....	353	296	320	.899	1.04	19,700
November.....	353	283	327	.919	1.03	19,500
December.....	763	324	404	1.13	1.30	24,800
January.....	-	264	343	.963	1.11	21,100
February.....	1,460	452	718	2.02	2.10	39,900
March.....	1,190	510	659	1.85	2.13	40,500
April.....	1,520	979	1,250	3.46	3.86	73,200
May.....	1,240	832	1,010	2.84	3.27	62,100
June.....	885	590	726	2.04	2.28	43,200
July.....	620	440	532	1.49	1.72	32,700
August.....	466	368	412	1.16	1.34	25,300
September.....	-	302	*338	.949	1.06	20,100
The year.....	1,520	264	583	1.64	22.24	422,000
1930-31						
October.....	516	279	316	.888	1.02	19,400
November.....	360	282	306	.860	.96	18,200
December.....	344	285	322	.904	1.04	19,800
January.....	620	306	394	1.11	1.28	24,200
February.....	532	338	400	1.12	1.17	22,200
March.....	1,220	344	458	1.29	1.49	28,200
April.....	1,920	756	995	2.79	3.11	59,200
May.....	2,150	892	1,580	3.88	4.47	84,800
June.....	948	500	692	1.94	2.16	41,200
July.....	530	427	478	1.34	1.54	29,400
August.....	435	359	382	1.07	1.23	23,500
September.....	383	285	318	.893	1.00	15,900
The year.....	2,150	279	537	1.51	20.47	389,000

*Estimated.

Monthly discharge of Klickitat River near Glenwood--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	435	245	290	0.815	0.94	17,800
November.....	500	236	338	.949	1.06	20,100
December.....	444	245	326	1.916	1.06	20,000
January.....	552	295	359	1.01	1.16	22,100
February.....	1,540	265	443	1.24	1.34	25,500
March.....	1,500	563	894	2.51	2.89	55,000
April.....	1,790	956	1,290	3.62	4.04	76,800
May.....	2,500	1,400	2,050	5.70	6.57	125,000
June.....	1,890	1,220	1,540	4.33	4.83	91,600
July.....	1,220	563	811	2.28	2.63	49,900
August.....	597	412	493	1.38	1.59	30,500
September.....	466	359	396	1.11	1.24	23,600
The year.....	2,500	236	767	2.15	29.35	558,000
1932-33						
October.....	525	343	381	1.07	1.23	23,400
November.....	2,290	404	865	2.43	2.71	51,500
December.....	1,070	445	593	1.67	1.92	36,500
January.....	682	435	500	1.40	1.61	30,700
February.....	440	291	388	1.09	1.14	21,500
March.....	570	347	450	1.21	1.40	26,400
April.....	2,570	550	1,050	2.95	3.29	62,500
May.....	3,200	1,150	1,760	5.00	5.76	109,000
June.....	3,720	1,490	2,540	7.13	7.96	151,000
July.....	1,490	770	1,130	3.17	3.66	69,500
August.....	770	530	652	1.83	2.11	40,100
September.....	571	463	513	1.44	1.61	30,500
The year.....	3,720	291	902	2.53	34.40	653,000
1933-34						
October.....	1,000	414	589	1.65	1.90	36,220
November.....	1,230	494	625	1.76	1.96	37,170
December.....	8,790	468	2,248	6.31	7.28	138,200
January.....	3,620	1,240	1,846	5.19	5.98	113,500
February.....	1,680	1,030	1,261	3.54	3.69	70,020
March.....	2,520	1,040	1,495	4.20	4.84	91,950
April.....	2,030	1,420	1,729	4.86	5.42	102,900
May.....	1,460	898	1,126	3.16	3.64	69,240
June.....	930	660	793	2.23	2.49	47,180
July.....	702	530	625	1.76	2.03	38,450
August.....	624	477	517	1.45	1.67	31,810
September.....	515	396	441	1.24	1.38	26,270
The year.....	8,790	396	1,109	3.12	42.28	802,900
1934-35						
October.....	1,500	389	564	1.58	1.82	34,670
November.....	2,520	649	1,011	2.84	3.17	60,170
December.....	1,360	517	717	2.01	2.32	44,100
January.....	1,140	430	688	1.93	2.22	42,330
February.....	836	601	719	2.02	2.10	39,910
March.....	844	535	635	1.78	2.05	39,030
April.....	1,440	571	877	2.46	2.74	52,190
May.....	2,250	1,490	1,963	5.23	6.03	114,500
June.....	2,050	1,030	1,533	4.31	4.81	91,200
July.....	964	619	799	2.24	2.58	49,110
August.....	613	475	535	1.50	1.73	32,890
September.....	445	352	393	1.10	1.23	23,370
The year.....	2,520	352	861	2.42	32.80	623,500

Yearly discharge of Klickitat River near Glenwood

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1910.....	1,160	3.31	45.12	842,000	1,060	3.03	41.20	769,000
1911.....	835	2.35	31.94	605,000	788	2.21	30.04	570,000
1912.....	800	2.25	30.58	581,000	804	2.26	30.71	583,000
1913.....	881	2.47	33.63	638,000	889	2.50	33.94	644,000
1914.....	954	2.68	36.38	691,000	979	2.75	37.34	709,000
1915.....	667	1.87	25.45	483,000	624	1.75	23.81	452,000
1916.....	1,200	3.37	45.93	872,000	1,230	3.46	46.96	891,000
1917.....	877	2.46	33.43	635,000	957	2.69	36.45	692,000
1918.....	1,030	2.89	39.24	745,000	961	2.70	36.63	695,000
1919.....	934	2.62	35.58	676,000	923	2.59	35.15	668,000
1920.....	669	1.88	25.55	486,000	-	-	-	-
1929.....	662	1.86	25.23	479,000	633	1.78	24.16	459,000
1930.....	583	1.64	22.24	422,000	574	1.61	21.89	416,000
1931.....	537	1.51	20.47	389,000	538	1.51	20.51	390,000
1932.....	767	2.15	29.35	558,000	842	2.37	32.15	611,000
1933.....	902	2.53	34.40	653,000	1,040	2.92	39.68	753,000
1934.....	1,109	3.12	42.28	802,900	1,009	2.83	38.45	730,300
1935.....	861	2.42	32.80	623,500	-	-	-	-
Highest.....	1,200	3.37	45.93	872,000	1,230	3.46	46.96	891,000
Average.....	857	2.41	32.76	621,000	866	2.44	33.07	627,000
Lowest.....	537	1.51	20.47	389,000	538	1.51	20.51	390,000

Klickitat River at Pitt, Wash.

(Formerly called Klickitat River at Klickitat)

Location.- Staff gage, lat. 45°48', long. 121°12', in NE¼ sec. 32, T. 4 N., R. 13 E., at Pitt, 3 miles southwest of Klickitat and 10½ miles above mouth. Prior to Feb. 1, 1912, staff gage at site 3½ miles upstream.

Drainage area.- 1,160 square miles; 1,090 square miles at former site.

Records available.- July 1909 to January 1912, October 1928 to September 1935.

Extremes.- Maximum discharge observed, 21,000 second-feet at 5 p.m. Dec. 22, 1933;

minimum observed, 485 second-feet Dec. 28-31, 1930.

Remarks.- Small diversions for irrigation above station; no regulation.

Monthly discharge of Klickitat River at Pitt

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	960	740	778	0.671	0.77	47,800
November.....	1,080	740	785	.677	.76	46,700
December.....	960	670	751	.647	.75	46,200
January.....	960	638	725	.625	.72	44,600
February.....	1,510	605	894	.771	.80	49,600
March.....	1,710	960	1,370	1.18	1.36	84,200
April.....	1,910	960	1,340	1.16	1.29	79,700
May.....	3,010	1,510	2,080	1.80	2.08	129,000
June.....	2,130	1,310	1,700	1.47	1.64	101,000
July.....	1,260	810	970	.836	.96	59,600
August.....	880	670	746	.643	.74	45,900
September.....	705	594	644	.555	.62	38,300
The year.....	3,010	594	1,070	.922	12.49	773,000
1929-30						
October.....	630	584	597	.515	.59	36,700
November.....	606	510	563	.485	.54	33,500
December.....	1,080	535	739	.637	.73	45,400
January.....	-	-	622	.536	.62	38,200
February.....	4,820	870	2,180	1.88	1.96	121,000
March.....	2,130	950	1,300	1.12	1.29	79,900
April.....	2,130	1,500	1,790	1.54	1.72	107,000
May.....	1,700	1,120	1,370	1.18	1.36	84,200
June.....	1,210	832	1,030	.888	.99	61,300
July.....	910	692	792	.683	.79	48,700
August.....	692	618	660	.569	.66	40,600
September.....	636	535	594	.512	.57	35,300
The year.....	4,820	510	1,010	.871	11.82	732,000

Monthly discharge of Klickitat River at Pitt--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	795	530	556	0.479	0.55	34,200
November.....	660	510	555	.478	.53	33,000
December.....	584	490	521	.449	.52	32,000
January.....	1,070	520	669	.577	.67	41,100
February.....	1,030	589	723	.623	.65	40,200
March.....	5,700	660	1,070	.922	1.06	65,800
April.....	8,600	1,280	2,120	1.83	2.04	126,000
May.....	2,890	1,190	1,790	1.54	1.78	110,000
June.....	1,240	795	963	.830	.93	57,300
July.....	760	642	685	.591	.68	42,100
August.....	636	567	598	.516	.59	36,800
September.....	624	520	564	.486	.54	33,600
The year.....	8,600	490	900	.776	10.54	652,000
1931-32						
October.....	762	510	564	.486	.56	34,700
November.....	814	505	627	.541	.60	37,300
December.....	966	505	668	.576	.66	41,100
January.....	4,550	638	1,260	1.09	1.26	77,500
February.....	6,840	626	1,690	1.46	1.58	97,200
March.....	5,060	1,740	3,020	2.60	3.00	186,000
April.....	2,930	2,020	2,400	2.07	2.31	143,000
May.....	3,360	1,960	2,700	2.33	2.69	166,000
June.....	2,320	1,540	1,940	1.67	1.86	115,000
July.....	1,500	878	1,130	.974	1.12	69,500
August.....	926	727	822	.709	.82	50,500
September.....	762	638	690	.595	.66	41,100
The year.....	6,840	505	1,460	1.26	17.12	1,060,000
1932-33						
October.....	783	608	648	.559	.64	39,800
November.....	2,720	671	1,180	1.02	1.14	70,200
December.....	3,140	762	1,180	1.02	1.18	72,600
January.....	2,860	806	1,580	1.19	1.37	84,800
February.....	3,860	590	1,150	.991	1.03	63,900
March.....	3,220	1,280	2,020	1.74	2.01	124,000
April.....	4,360	1,970	2,740	2.36	2.63	163,000
May.....	4,360	2,090	2,840	2.45	2.82	175,000
June.....	4,870	2,220	3,480	3.00	3.35	207,000
July.....	2,220	1,150	1,680	1.45	1.67	103,000
August.....	1,150	790	971	.837	.96	59,700
September.....	910	720	786	.678	.76	46,800
The year.....	4,870	590	1,670	1.44	19.56	1,210,000
1933-34						
October.....	1,850	685	931	.803	.93	57,240
November.....	2,090	790	1,005	.866	.97	59,800
December.....	19,600	755	5,582	4.81	5.54	343,200
January.....	11,000	3,300	5,092	4.39	5.06	313,100
February.....	3,430	1,750	2,583	2.05	2.14	132,400
March.....	3,560	1,850	2,378	2.05	2.36	146,200
April.....	2,910	1,950	2,350	2.03	2.26	139,800
May.....	1,950	1,350	1,566	1.35	1.56	96,300
June.....	1,350	1,020	1,177	1.01	1.13	70,040
July.....	1,060	880	993	.856	.99	61,060
August.....	1,100	840	896	.772	.89	56,110
September.....	880	720	763	.675	.75	46,570
The year.....	19,600	685	2,101	1.81	24.58	1,521,000
1934-35						
October.....	1,950	720	917	.791	.91	56,400
November.....	3,430	1,200	1,658	1.43	1.60	99,680
December.....	4,080	1,060	1,874	1.62	1.87	116,200
January.....	4,080	970	2,111	1.82	2.10	129,800
February.....	2,560	1,650	1,979	1.71	1.79	109,900
March.....	1,950	1,450	1,740	1.50	1.73	107,000
April.....	2,350	1,650	1,960	1.69	1.89	116,600
May.....	2,910	2,360	2,571	2.22	2.56	159,100
June.....	2,560	1,450	1,971	1.70	1.90	117,300
July.....	1,350	925	1,154	.995	1.15	70,960
August.....	1,970	840	890	.767	.88	54,740
September.....	880	720	779	.672	.75	46,330
The year.....	4,090	720	1,631	1.41	19.12	1,181,000

Yearly discharge of Klickitat River at Pitt

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1910.....	2,450	2.24	30.43	1,770,000	2,270	2.08	28.29	1,650,000
1911.....	1,530	1.40	19.07	1,110,000	1,410	1.29	17.53	1,020,000
1929.....	1,070	.922	12.49	773,000	1,030	.888	12.07	748,000
1930.....	1,010	.871	11.82	732,000	988	.852	11.56	715,000
1931.....	900	.776	10.54	652,000	920	.793	10.76	666,000
1932.....	1,460	1.26	17.12	1,060,000	1,550	1.34	18.26	1,130,000
1933.....	1,670	1.44	19.56	1,210,000	2,054	1.77	24.04	1,487,000
1934.....	2,101	1.81	24.58	1,521,000	1,838	1.58	21.52	1,331,000
1935.....	1,631	1.41	19.12	1,181,000	-	-	-	-

WHITE SALMON RIVER BASIN

White Salmon River near Trout Lake, Wash.

(Formerly called White Salmon River near Guler)

Location.- Staff gage, lat. 45°59', long. 120°29', in SE $\frac{1}{4}$ sec. 24, T. 6 N., R. 10 E., a quarter of a mile below mouth of Trout Creek and 2 miles southeast of Trout Lake. Prior to Oct. 1, 1918, chain gage at site a half a mile downstream.

Records available.- July to September 1918 (fragmentary), October 1928 to September 1931.

Extremes.- Maximum discharge observed, 3,000 second-feet Apr. 1, 1931; minimum observed, 35 second-feet Aug. 26, 1931.

Remarks.- Diversions for irrigation above station. No regulation.

Monthly discharge of White Salmon River near Trout Lake

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October, 1928.....	-	-	175	10,800
November.....	525	136	236	14,000
December.....	670	150	246	15,100
January 1929.....	218	150	175	10,800
February.....	158	136	146	8,110
March.....	425	152	237	14,600
April.....	960	231	430	25,600
May.....	1,150	670	881	54,200
June.....	725	277	531	31,600
July.....	246	103	160	9,840
August.....	117	81	94.8	5,830
September.....	102	74	90.6	5,390
Water year 1928-29.....	1,150	74	284	206,000
October 1929.....	115	97	104	6,400
November.....	120	95	104	6,190
December.....	525	102	202	12,400
Calendar year 1929.....	1,150	74	264	191,000
January 1930.....	-	-	142	8,730
February.....	1,780	245	726	40,300
March.....	790	246	413	25,400
April.....	840	562	707	42,100
May.....	585	245	353	21,700
June.....	260	96	153	9,100
July.....	114	59	77.5	4,770
August.....	63	48	54.6	3,360
September.....	72	44	59.8	3,560
Water year 1929-30.....	1,780	44	254	184,000
October 1930.....	150	68	105	6,460
November.....	173	105	123	7,320
December.....	129	92	110	6,760
Calendar year 1930.....	1,780	44	248	180,000
January 1931.....	435	100	176	10,800
February.....	518	150	229	12,700
March.....	1,400	197	426	26,200
April.....	2,800	540	875	52,100
May.....	1,110	265	601	37,000
June.....	328	140	203	12,100
July.....	140	60	87.3	5,370
August.....	62	36	44.7	2,750
September.....	90	42	60.5	3,600
Water year 1930-31.....	2,800	36	253	183,000

White Salmon River at Husum, Wash.

Location.- Water-stage recorder, lat. 45°47'50", long. 121°29'15", in SW $\frac{1}{4}$ sec. 30, T. 4 N., R. 11 E., at Husum, 500 feet upstream from Rattlesnake Creek. Prior to Nov. 1, 1919, water-stage recorder (Oct. 12, 1912 to Feb. 19, 1915) and staff gage at site three-quarters of a mile upstream from Rattlesnake Creek.

Drainage area.- 300 square miles.

Records available.- September 1909 to October 1919, October 1929 to September 1935.

Extremes.- Maximum discharge recorded, 10,800 second-feet 2-6 p.m. Dec. 22, 1933; minimum, 340 second-feet Dec. 30, 1930.

Remarks.- Several diversions for irrigation near Trout Lake. Prior to 1914 flow was affected occasionally by operation of splash dam 10 miles upstream. Springs increase flow by a large amount in a few miles above station.

Monthly discharge of White Salmon River at Husum

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1929-30				
October.....	-	-	*432	26,600
November.....	416	378	398	23,700
December.....	785	383	486	29,900
January.....	483	392	416	25,600
February.....	2,320	442	1,150	63,900
March.....	1,240	685	863	53,100
April.....	1,300	1,060	1,190	70,800
May.....	1,060	745	868	53,400
June.....	785	595	648	38,600
July.....	580	472	522	32,100
August.....	472	424	450	27,700
September.....	442	416	424	25,200
The year.....	2,320	378	650	471,000
1930-31				
October.....	475	386	409	25,100
November.....	430	370	387	23,000
December.....	380	344	366	22,500
January.....	695	360	447	27,500
February.....	775	398	485	26,900
March.....	2,540	464	766	47,100
April.....	4,220	985	1,360	80,900
May.....	1,460	795	1,090	67,000
June.....	962	655	759	45,200
July.....	638	454	511	31,400
August.....	454	402	427	26,300
September.....	425	393	406	24,200
The year.....	4,220	344	618	447,000
1931-32				
October.....	552	379	421	25,900
November.....	614	400	465	27,700
December.....	835	367	501	30,800
January.....	1,210	477	661	40,600
February.....	1,750	504	684	39,300
March.....	2,280	940	1,430	87,900
April.....	1,870	1,270	1,550	92,200
May.....	2,070	1,510	1,810	111,000
June.....	1,790	1,300	1,530	91,000
July.....	1,300	795	991	60,900
August.....	-	-	734	45,100
September.....	648	537	580	34,500
The year.....	2,280	367	948	687,000
1932-33				
October.....	614	502	543	33,400
November.....	1,790	567	1,040	61,900
December.....	1,330	665	817	50,200
January.....	1,420	755	953	58,600
February.....	895	-	719	39,900
March.....	1,240	795	943	58,000
April.....	1,750	1,060	1,240	73,800
May.....	1,950	1,300	1,570	96,500
June.....	3,550	1,540	2,030	121,000
July.....	1,540	1,010	1,300	79,900
August.....	985	795	887	54,500
September.....	875	775	809	48,100
The year.....	3,550	502	1,070	776,000

*Estimated.

Monthly discharge of White Salmon River at Husum--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1933-34				
October.....	1,580	630	797	49,040
November.....	1,580	630	845	50,300
December.....	10,300	630	3,101	190,600
January.....	6,030	2,410	3,088	189,900
February.....	2,410	1,480	1,863	103,500
March.....	2,410	1,350	1,795	110,300
April.....	2,090	1,160	1,388	82,570
May.....	1,200	855	983	60,440
June.....	878	735	813	48,390
July.....	755	635	694	42,640
August.....	684	571	627	38,540
September.....	619	556	587	34,940
The year.....	10,300	556	1,383	1,001,000
1934-35				
October.....	1,360	564	692	42,540
November.....	2,590	797	1,218	72,490
December.....	2,590	816	1,209	74,360
January.....	1,700	915	1,197	73,610
February.....	1,330	1,080	1,169	64,920
March.....	1,240	938	1,053	64,740
April.....	1,330	915	1,065	63,380
May.....	1,680	1,270	1,473	90,590
June.....	1,640	1,100	1,348	80,210
July.....	1,120	797	918	56,460
August.....	797	680	731	44,970
September.....	695	605	642	38,200
The year.....	2,590	564	1,059	766,500

Yearly discharge of White Salmon River at Husum

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1910.....	1,220	879,000	1,160	838,000
1911.....	980	710,000	897	649,000
1912.....	952	691,000	971	705,000
1913.....	1,010	728,000	1,010	728,000
1914.....	973	704,000	985	713,000
1915.....	788	570,000	768	556,000
1916.....	1,280	927,000	1,280	932,000
1917.....	927	672,000	1,040	756,000
1918.....	1,110	806,000	993	719,000
1919.....	989	716,000	-	-
1930.....	650	471,000	637	461,000
1931.....	618	447,000	637	461,000
1932.....	948	687,000	1,030	748,000
1933.....	1,070	776,000	1,270	921,000
1934.....	1,383	1,001,000	1,244	900,600
1935.....	1,059	766,500	-	-
Highest.....	1,383	1,001,000	1,280	932,000
Average.....	997	722,000	994	721,000
Lowest.....	618	447,000	637	461,000

White Salmon River near Underwood, Wash.

Location.- Water-stage recorder, lat. 45°45'00", long. 121°31'30", in NW¼ sec. 14, T. 3 N., R. 10 E., 200 yards below Northwestern Electric Co.'s power plant and 2 miles north of Underwood. Prior to Feb. 27, 1913, reference point at dam 1 mile above.

Drainage area.- 384 square miles.

Records available.- October 1912 to February 1913, March 1915 to September 1930.

Extremes.- Maximum discharge, about 9,700 second-feet Dec. 29, 1917; practically no flow at times when power plant was shut down.

Remarks.- Diversions for irrigation above station near Trout Lake. Flow regulated by operation of Northwestern Electric Co.'s power plant. Figures of daily discharge have been adjusted for pondage above plant.

Monthly discharge of White Salmon River near Underwood

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	672	516	582	35,800
November.....	856	490	680	40,500
December.....	1,540	460	816	50,200
January.....	3,240	662	1,120	68,900
February.....	1,330	732	946	54,400
March.....	1,570	722	942	57,900
April.....	1,150	872	1,040	61,900
May.....	1,380	918	1,090	67,000
June.....	1,110	684	860	51,200
July.....	744	534	634	39,000
August.....	720	500	573	35,200
September.....	1,000	542	683	40,600
The year.....	3,240	460	830	603,000
1920-21				
October.....	1,780	626	861	52,900
November.....	2,430	550	1,020	60,700
December.....	3,330	870	1,170	71,900
January.....	3,400	1,120	1,870	115,000
February.....	3,330	1,240	1,840	102,000
March.....	4,110	1,510	2,140	132,000
April.....	2,160	1,300	1,690	101,000
May.....	2,240	1,540	1,870	115,000
June.....	2,060	1,330	1,650	98,200
July.....	1,390	944	1,120	68,900
August.....	1,110	788	895	55,000
September.....	850	682	777	46,200
The year.....	4,110	550	1,410	1,020,000
1921-22				
October.....	972	610	691	42,500
November.....	2,290	491	732	43,600
December.....	3,360	875	1,520	93,500
January.....	902	742	816	50,200
February.....	850	650	760	42,200
March.....	1,350	676	867	53,300
April.....	1,740	1,060	1,360	80,900
May.....	2,500	1,360	1,720	108,000
June.....	2,480	1,080	1,610	95,800
July.....	1,120	794	940	57,800
August.....	858	693	779	47,900
September.....	724	578	648	38,600
The year.....	3,360	491	1,040	752,000
1922-23				
October.....	676	485	568	34,900
November.....	684	504	594	35,300
December.....	2,310	484	816	50,200
January.....	6,280	1,040	1,980	122,000
February.....	1,420	943	1,210	67,200
March.....	1,420	943	1,200	73,800
April.....	1,490	1,240	1,400	83,300
May.....	1,820	1,090	1,410	86,700
June.....	1,280	888	1,080	64,300
July.....	1,030	733	868	53,400
August.....	772	616	659	40,500
September.....	635	544	590	35,100
The year.....	6,280	484	1,030	747,000
1923-24				
October.....	732	466	535	32,900
November.....	1,020	447	560	33,300
December.....	1,370	547	778	47,800
January.....	2,420	594	733	45,100
February.....	2,850	1,230	1,750	101,000
March.....	1,280	914	1,060	65,200
April.....	1,040	832	918	54,600
May.....	1,050	666	840	51,600
June.....	737	524	628	37,400
July.....	586	436	489	30,100
August.....	504	400	448	27,500
September.....	492	387	425	25,300
The year.....	2,850	387	760	552,000

Monthly discharge of White Salmon River near Underwood--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1924-25				
October.....	568	397	461	28,300
November.....	1,790	543	872	51,900
December.....	1,310	656	862	53,000
January.....	3,350	848	1,360	83,600
February.....	4,800	1,170	2,210	123,000
March.....	1,940	1,250	1,530	94,100
April.....	2,150	1,200	1,590	94,600
May.....	2,120	1,320	1,660	102,000
June.....	1,320	926	1,130	67,200
July.....	961	792	858	52,900
August.....	788	620	693	42,600
September.....	638	577	599	35,600
The year.....	4,800	397	1,140	829,000
1925-26				
October.....	583	491	536	33,000
November.....	627	489	531	31,600
December.....	1,140	527	668	41,100
January.....	824	584	649	39,900
February.....	2,550	619	1,310	72,800
March.....	1,250	942	1,110	68,200
April.....	1,220	874	1,060	63,100
May.....	1,090	689	848	52,100
June.....	697	586	626	37,200
July.....	578	475	526	32,500
August.....	502	453	479	29,600
September.....	593	437	477	26,400
The year.....	2,550	437	732	529,000
1926-27				
October.....	1,130	467	587	36,100
November.....	2,430	471	789	46,900
December.....	3,260	813	1,170	71,900
January.....	2,620	958	1,360	85,600
February.....	4,140	1,130	2,020	112,000
March.....	1,770	1,320	1,450	89,200
April.....	2,010	1,190	1,380	82,100
May.....	2,270	1,390	1,700	105,000
June.....	2,190	1,260	1,630	97,000
July.....	1,200	878	989	60,800
August.....	884	741	815	50,100
September.....	880	647	745	44,500
The year.....	4,140	467	1,210	879,000
1927-28				
October.....	1,060	647	752	46,200
November.....	4,260	651	1,340	79,700
December.....	2,000	827	1,160	71,500
January.....	2,400	-	1,400	86,100
February.....	1,040	862	956	55,000
March.....	4,390	835	2,050	126,000
April.....	2,670	1,480	1,730	103,000
May.....	2,100	1,400	1,820	112,000
June.....	1,360	924	1,150	68,400
July.....	1,010	726	878	54,000
August.....	754	595	695	42,700
September.....	689	587	631	37,500
The year.....	4,390	587	1,220	882,000
1928-29				
October.....	711	484	584	35,900
November.....	942	475	595	35,400
December.....	978	451	612	37,600
January.....	772	458	558	34,500
February.....	611	405	508	28,200
March.....	1,080	616	824	50,700
April.....	1,420	692	1,000	59,500
May.....	1,640	1,180	1,350	83,000
June.....	1,280	738	1,060	63,100
July.....	761	610	680	41,800
August.....	628	524	581	35,700
September.....	557	414	486	28,900
The year.....	1,640	405	738	534,000

Monthly discharge of White Salmon River near Underwood--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1929-30				
October.....	487	421	450	27,700
November.....	417	375	396	23,600
December.....	781	366	527	32,400
January.....	552	401	446	27,400
February.....	2,990	500	1,460	81,100
March.....	1,430	784	1,020	62,700
April.....	1,400	1,130	1,280	76,200
May.....	1,130	795	915	56,300
June.....	834	611	682	40,600
July.....	604	470	538	33,100
August.....	481	421	451	27,700
September.....	467	410	434	25,800
The year.....	2,990	366	712	515,000

Yearly discharge of White Salmon River near Underwood

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1916.....	1,490	1,080,000	1,480	1,080,000
1917.....	1,050	760,000	1,220	882,000
1918.....	1,350	978,000	1,180	855,000
1919.....	1,110	805,000	1,100	797,000
1920.....	830	603,000	911	662,000
1921.....	1,410	1,020,000	1,400	1,010,000
1922.....	1,040	752,000	957	693,000
1923.....	1,030	747,000	1,020	740,000
1924.....	760	552,000	787	571,000
1925.....	1,140	829,000	1,110	801,000
1926.....	732	529,000	799	578,000
1927.....	1,210	879,000	1,270	921,000
1928.....	1,220	882,000	1,090	794,000
1929.....	738	534,000	703	509,000
1930.....	712	515,000	-	-
Highest.....	1,490	1,080,000	1,480	1,080,000
Average.....	1,050	764,000	1,070	778,000
Lowest.....	712	515,000	703	509,000

WIND RIVER BASIN

Wind River near Carson, Wash.

Location.-- Water-stage recorder, lat. 45°44'10", long. 121°48'10", in SW 1/4 sec. 21, T. 3 N., R. 8 E., three-quarters of a mile above Little Wind River and 1 mile northeast of Carson. Discharge measurements made at section just below mouth of Little Wind River.

Drainage area.-- 224 square miles at measuring section.

Records available.-- December 1934 to September 1935 (including flow of Little Wind River).

Remarks.-- No diversion or regulation.

Monthly discharge of Wind River near Carson

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
December.....	6,270	822	2,266	10.1	11.64	139,300
January.....	3,830	735	1,764	7.88	9.08	108,500
February.....	2,910	1,080	1,542	6.88	7.16	85,650
March.....	2,840	805	1,345	6.00	6.92	82,720
April.....	2,000	960	1,448	6.46	7.21	86,140
May.....	1,870	1,000	1,411	6.30	7.26	86,760
June.....	1,000	470	703	3.14	3.50	41,810
July.....	530	273	342	1.53	1.76	21,030
August.....	290	212	241	1.08	1.24	14,810
September.....	250	176	196	.875	.98	11,690
The period.....	-	-	-	-	-	678,400

LEWIS RIVER BASIN

Lewis River above Muddy River, near Cougar, Wash.

Location.- Water-stage recorder, lat. 46°03'30", long. 121°59'00", in SW¼ sec. 30, T. 7 N., R. 7 E., 2 miles above mouth of Muddy River and 15 miles east of Cougar. Prior to Nov. 1, 1909, staff gage at site half a mile downstream.

Drainage area.- 227 square miles (revised).

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

Extremes.- Maximum discharge, 27,000 second-feet Dec. 21, 1933 (stage determined from floodmarks); minimum, 175 second-feet Nov. 21, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Lewis River above Muddy River, near Cougar

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acres-feet
1927						
August 15-31	404	344	372	1.64	1.04	12,500
September	1,340	344	509	2.24	2.50	30,300
1927-28						
October	3,780	582	1,110	4.89	5.64	68,200
November	12,900	663	2,890	12.7	14.17	172,000
December	3,550	549	1,320	5.81	6.70	81,200
January	5,500	761	1,670	7.36	8.48	103,000
February	-	582	842	3.71	4.00	48,400
March	5,120	560	2,180	9.60	11.07	134,000
April	3,120	1,200	1,780	7.84	8.75	106,000
May	3,480	1,470	2,550	11.2	12.91	157,000
June	1,380	768	1,050	4.63	5.17	62,500
July	900	460	625	2.75	3.17	38,400
August	451	343	394	1.74	2.01	24,200
September	351	290	317	1.40	1.56	18,900
The year	12,900	290	1,400	6.17	83.63	1,010,000
1928-29						
October	1,340	286	527	2.32	2.68	32,400
November	2,300	347	854	3.76	4.20	50,800
December	2,930	455	877	3.86	4.45	53,900
January	800	364	509	2.24	2.58	31,300
February	389	308	336	1.48	1.54	18,700
March	1,950	336	798	3.52	4.06	49,100
April	2,300	647	1,330	5.86	6.54	79,100
May	3,550	1,700	2,410	10.6	12.22	148,000
June	2,540	1,080	1,760	7.75	8.65	105,000
July	1,000	430	597	2.63	3.03	36,700
August	450	319	360	1.59	1.83	22,100
September	305	234	270	1.19	1.33	16,100
The year	3,550	234	888	3.91	53.11	643,000
1929-30						
October	294	213	234	1.03	1.19	14,400
November	219	186	308	.916	1.02	12,400
December	2,360	192	679	2.99	3.45	41,800
January	800	333	487	2.15	2.48	29,900
February	5,460	820	2,510	11.1	11.56	139,000
March	2,850	600	1,090	4.80	5.53	67,000
April	2,250	1,500	1,780	7.84	8.75	106,000
May	1,950	875	1,220	5.37	6.19	75,000
June	1,120	454	750	3.22	3.59	43,400
July	464	-	375	1.65	1.90	23,100
August	328	244	280	1.23	1.42	17,200
September	264	202	232	1.02	1.14	13,800
The year	5,460	186	805	3.54	48.22	583,000
1930-31						
October	447	200	241	1.06	1.22	14,800
November	-	-	*277	1.22	1.36	16,500
December	480	245	331	1.46	1.68	20,400
January	2,940	292	896	3.95	4.55	55,100
February	3,770	505	1,100	4.85	5.05	61,100
March	7,640	718	1,780	7.84	9.04	109,000
April	8,080	1,280	2,280	10.0	11.16	136,000
May	2,630	935	1,570	6.92	7.98	96,500
June	1,020	515	689	3.04	3.39	41,000
July	581	311	396	1.74	2.01	24,300
August	503	233	259	1.14	1.31	15,900
September	274	206	224	.987	1.10	13,300
The year	8,080	200	835	3.68	49.85	604,000

*Estimated.

†Published in error in Water-Supply Paper 709.

Monthly discharge of Lewis River above Muddy River, near Cougar--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	1,270	180	371	1.63	1.88	22,800
November.....	1,830	465	836	3.68	4.11	49,700
December.....	2,460	339	904	3.98	4.59	55,600
January.....	2,690	620	1,140	5.02	5.79	70,100
February.....	5,990	398	1,100	4.85	5.23	63,300
March.....	5,770	1,100	2,430	10.7	12.34	149,000
April.....	3,560	1,590	2,310	10.2	11.38	137,000
May.....	-	1,980	2,730	12.0	13.83	168,000
June.....	3,410	1,830	2,340	10.3	11.49	139,000
July.....	2,130	555	1,040	4.58	5.28	64,000
August.....	560	373	451	1.99	2.29	27,700
September.....	369	281	327	1.44	1.61	19,500
The year.....	5,990	180	1,330	5.86	79.82	966,000
1932-33						
October.....	-	245	*359	1.58	1.82	22,100
November.....	-	-	*1,770	7.80	8.70	105,000
December.....	-	810	*1,340	5.90	6.80	82,400
January.....	-	664	1,450	6.39	7.37	89,200
February.....	637	450	544	2.40	2.50	30,200
March.....	1,460	571	1,030	4.54	5.23	63,300
April.....	2,810	1,110	1,560	6.87	7.66	92,800
May.....	3,870	1,730	2,450	10.8	12.45	151,000
June.....	8,920	2,240	3,880	17.1	19.08	231,000
July.....	2,340	930	1,710	7.53	8.68	105,000
August.....	1,070	450	*646	2.85	3.29	39,700
September.....	1,050	-	595	2.62	2.92	35,400
The year.....	8,920	245	1,450	6.39	86.50	1,050,000
1933-34						
October.....	5,240	425	1,222	5.38	6.20	75,140
November.....	5,550	582	1,363	6.00	6.69	81,120
December.....	22,500	571	*6,954	30.6	35.28	427,600
January.....	10,000	1,500	*3,794	16.7	19.25	233,300
February.....	2,000	841	1,314	5.79	6.03	72,950
March.....	3,990	925	2,109	9.29	10.71	129,700
April.....	4,800	883	1,563	6.89	7.69	92,990
May.....	1,700	527	784	3.45	3.98	48,190
June.....	494	388	434	1.91	2.13	25,830
July.....	405	310	360	1.59	1.83	22,160
August.....	342	265	291	1.28	1.48	17,910
September.....	340	229	256	1.13	1.26	15,220
The year.....	22,500	229	1,716	7.56	102.53	1,242,000

*Estimated.

Yearly discharge of Lewis River above Muddy River, near Cougar

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1928.....	1,400	6.17	83.63	1,010,000	1,140	5.02	68.45	830,000
1929.....	888	3.91	53.11	643,000	794	3.50	47.44	575,000
1930.....	805	3.54	48.22	583,000	782	3.44	46.82	566,000
1931.....	835	3.68	49.85	604,000	940	4.14	56.17	680,000
1932.....	1,330	5.86	79.82	966,000	1,440	6.34	86.56	1,050,000
1933.....	1,450	6.39	86.50	1,050,000	1,960	8.63	117.35	1,420,000
1934.....	1,716	7.56	102.53	1,242,000	-	-	-	-

Lewis River near Cougar, Wash.

Location.— Water-stage recorder, lat. 46°03'30", long. 122°12'50", in SE $\frac{1}{4}$ sec. 29, T. 7 N., R. 5 E., 1 mile below Swift Creek and 4 miles east of Cougar. Prior to Dec. 28, 1934, water-stage recorder on opposite bank.

Drainage area.— 485 square miles.

Records available.— June 1924 to September 1935.

Extremes.— Maximum discharge recorded, 54,400 second-feet about 11 p.m. Dec. 21, 1933;

minimum recorded, 454 second-feet Oct. 21, 1931.

Remarks.— No diversion or regulation.

Monthly discharge of Lewis River near Cougar

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924						
June 19-30	1,080	880	970	2.01	0.90	23,100
July.....	928	720	811	1.68	1.94	49,900
August.....	832	619	676	1.40	1.61	41,600
September.....	960	500	631	1.31	1.46	37,500
The year.....	-	-	-	-	-	152,000
1924-25						
October.....	4,360	656	1,250	2.59	2.99	76,900
November.....	9,960	2,180	5,010	10.40	11.60	298,000
December.....	8,610	2,120	3,740	7.74	8.92	230,000
January.....	15,600	2,120	4,690	9.71	11.20	288,000
February.....	21,000	2,460	6,840	14.20	14.79	380,000
March.....	3,850	2,080	2,640	5.47	6.31	162,000
April.....	6,750	2,260	4,020	8.32	9.28	239,000
May.....	5,840	2,760	4,230	8.76	10.10	260,000
June.....	3,030	1,860	2,600	5.38	6.00	155,000
July.....	1,750	1,070	1,280	2.65	3.06	78,700
August.....	1,070	772	904	1.87	2.16	55,600
September.....	804	677	739	1.53	1.71	44,000
The year.....	21,000	656	3,130	6.48	88.12	2,270,000
1925-26						
October.....	756	579	661	1.37	1.58	40,600
November.....	2,140	572	1,090	2.26	2.52	64,900
December.....	8,840	1,860	3,620	7.50	8.65	223,000
January.....	3,500	1,920	2,370	4.91	5.66	146,000
February.....	10,800	2,020	4,750	9.83	10.24	264,000
March.....	4,090	2,210	2,970	6.15	7.09	183,000
April.....	3,000	1,840	2,350	4.87	5.43	140,000
May.....	3,000	1,610	2,060	4.27	4.92	127,000
June.....	1,610	906	1,150	2.38	2.66	68,400
July.....	890	694	*793	1.64	1.89	48,800
August.....	806	620	671	1.39	1.60	41,300
September.....	1,780	542	736	1.52	1.70	43,800
The year.....	10,800	542	1,920	3.98	53.94	1,390,000
1926-27						
October.....	10,400	806	2,430	5.03	5.80	149,000
November.....	11,800	-	*3,730	7.72	8.61	222,000
December.....	-	1,960	3,700	7.66	8.83	228,000
January.....	12,200	1,840	4,060	8.41	9.70	250,000
February.....	9,290	2,280	4,430	9.17	9.55	246,000
March.....	3,780	2,220	2,710	5.61	6.47	167,000
April.....	6,520	2,220	3,100	6.42	7.16	184,000
May.....	-	-	*4,690	10.1	11.64	301,000
June.....	-	2,610	4,370	9.05	10.10	260,000
July.....	2,480	1,170	1,780	3.49	4.25	109,000
August.....	1,150	852	976	2.02	2.33	60,600
September.....	2,960	844	1,220	2.53	2.82	72,600
The year.....	12,200	806	3,110	6.44	87.26	2,250,000
1927-28						
October.....	6,520	1,550	2,500	5.18	5.97	154,000
November.....	24,900	1,700	6,590	13.6	15.17	392,000
December.....	9,160	1,600	3,500	7.25	8.36	215,000
January.....	12,300	1,660	4,120	8.53	9.83	253,000
February.....	3,080	1,710	2,350	4.87	5.25	135,000
March.....	12,500	1,660	5,650	11.7	13.49	347,000
April.....	8,000	3,000	4,450	9.21	10.28	265,000
May.....	7,500	-	5,070	10.5	12.11	315,000
June.....	2,780	1,610	2,120	4.39	4.90	126,000
July.....	1,900	1,060	1,360	2.82	3.25	83,600
August.....	1,050	827	905	1.87	2.16	55,600
September.....	806	656	714	1.48	1.65	42,500
The year.....	24,900	656	3,280	6.79	92.42	2,380,000

*Estimated.

Monthly discharge of Lewis River near Cougar--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	2,350	688	1,180	2.44	2.81	72,600
November.....	5,960	819	2,160	4.47	4.99	129,000
December.....	7,200	1,230	2,440	5.05	5.82	150,000
January.....	3,160	1,100	1,670	3.46	3.99	103,000
February.....	1,230	889	998	2.07	2.16	55,400
March.....	5,500	1,100	2,320	4.90	6.53	145,000
April.....	5,290	1,900	3,490	7.23	8.07	208,000
May.....	6,450	3,230	4,610	9.96	11.48	296,000
June.....	4,300	2,300	3,420	7.08	7.90	204,000
July.....	2,100	980	1,510	2.71	3.12	80,600
August.....	980	777	846	1.75	2.02	52,000
September.....	763	598	673	1.39	1.55	40,000
The year.....	7,200	598	2,120	4.39	59.44	1,530,000
1929-30						
October.....	716	540	581	1.20	1.38	35,700
November.....	560	495	523	1.08	1.20	31,100
December.....	7,450	490	2,120	4.39	5.06	130,000
January.....	2,560	-	3,460	3.02	3.48	89,800
February.....	9,460	2,800	5,760	11.9	12.39	312,000
March.....	4,750	1,460	2,690	5.57	6.42	165,000
April.....	4,340	2,860	3,450	7.14	7.97	205,000
May.....	4,240	1,820	2,480	5.13	5.91	152,000
June.....	2,220	1,110	1,550	3.21	3.58	92,200
July.....	-	796	873	1.81	2.09	53,700
August.....	768	-	705	1.46	1.68	43,300
September.....	-	550	608	1.26	1.41	36,200
The year.....	9,460	490	1,870	3.87	52.57	1,350,000
1930-31						
October.....	1,010	550	650	1.35	1.56	40,000
November.....	1,370	566	856	1.77	1.98	50,900
December.....	1,880	845	1,100	2.28	2.63	67,600
January.....	7,200	873	2,700	5.59	6.44	166,000
February.....	7,700	1,510	2,940	6.09	6.34	163,000
March.....	14,500	1,940	4,530	8.96	10.35	266,000
April.....	16,100	2,940	5,020	10.4	11.60	299,000
May.....	4,830	1,880	3,000	6.21	7.16	184,000
June.....	2,550	-	1,480	3.06	3.41	88,100
July.....	1,510	824	1,050	2.17	2.50	64,600
August.....	824	644	715	1.48	1.71	44,000
September.....	-	-	657	1.36	1.52	39,100
The year.....	16,100	550	2,030	4.20	57.18	1,470,000
1931-32						
October.....	4,120	464	1,140	2.36	2.72	70,100
November.....	3,650	-	2,490	5.16	5.76	148,000
December.....	6,840	1,100	2,690	5.57	6.42	166,000
January.....	6,730	-	3,270	6.77	7.80	201,000
February.....	13,100	-	4,730	5.65	6.09	157,000
March.....	12,700	2,940	6,180	12.8	14.76	380,000
April.....	8,600	-	5,600	11.4	12.72	327,000
May.....	6,730	4,110	5,640	11.7	13.49	347,000
June.....	6,520	3,680	4,630	9.59	10.70	276,000
July.....	4,020	1,340	2,240	4.64	5.35	138,000
August.....	1,340	950	1,130	2.34	2.70	69,500
September.....	940	771	857	1.77	1.98	51,000
The year.....	13,100	464	3,210	6.65	90.49	2,330,000
1932-33						
October.....	1,530	708	1,010	2.09	2.41	62,100
November.....	10,700	2,620	5,830	12.1	13.50	347,000
December.....	9,100	1,960	3,620	7.49	8.64	225,000
January.....	9,100	1,780	3,750	7.76	8.95	231,000
February.....	2,550	1,300	1,630	3.37	3.51	90,500
March.....	4,750	1,840	3,390	7.02	8.09	208,000
April.....	6,100	2,860	3,930	8.14	9.08	234,000
May.....	7,610	4,460	5,880	11.6	13.37	345,000
June.....	15,300	4,850	7,580	15.7	17.52	451,000
July.....	4,850	2,020	3,670	7.39	8.52	220,000
August.....	2,550	1,120	1,610	3.13	3.61	92,800
September.....	2,420	1,020	1,460	3.02	3.37	86,900
The year.....	15,300	708	3,580	7.41	100.57	2,590,000

*Estimated.

Monthly discharge of Lewis River near Cougar--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	10,200	1,080	2,761	5.72	6.60	169,700
November.....	11,000	1,530	3,243	6.71	7.49	193,000
December.....	45,000	1,480	13,390	27.7	31.94	823,300
January.....	24,200	3,500	*8,541	17.7	20.41	525,200
February.....	5,120	2,270	3,431	7.10	7.39	190,600
March.....	8,500	2,300	4,632	9.59	11.05	284,800
April.....	7,000	2,000	3,217	6.66	7.43	191,400
May.....	3,790	1,370	1,885	3.90	4.50	115,900
June.....	1,320	1,020	1,161	2.40	2.68	69,060
July.....	1,060	840	931	1.93	2.22	57,270
August.....	890	690	*761	1.58	1.82	46,770
September.....	965	625	693	1.43	1.60	41,240
The year.....	45,000	625	3,741	7.75	105.14	2,708,000
1934-35						
October.....	12,400	577	2,257	4.67	5.38	138,800
November.....	19,200	2,880	6,793	14.1	15.73	404,200
December.....	11,300	2,500	4,840	10.0	11.53	297,600
January.....	7,400	1,700	*3,813	7.89	9.10	234,400
February.....	5,110	2,520	3,689	7.64	7.96	204,900
March.....	4,460	1,910	*2,866	5.93	6.84	176,200
April.....	4,570	2,200	3,173	6.57	7.33	188,800
May.....	6,610	4,260	5,128	10.6	12.22	315,300
June.....	6,120	2,590	3,852	7.98	8.90	229,200
July.....	2,590	1,070	1,631	3.38	3.90	100,300
August.....	1,070	862	949	1.96	2.26	58,370
September.....	995	709	809	1.67	1.86	46,140
The year.....	19,200	577	3,310	6.85	93.01	2,396,000

*Estimated.

Yearly discharge of Lewis River near Cougar

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1925.....	3,130	6.48	88.12	2,270,000	2,750	5.69	77.36	1,990,000
1926.....	1,920	3.98	53.94	1,390,000	2,290	4.74	64.43	1,660,000
1927.....	3,110	6.44	87.26	2,250,000	3,330	6.89	93.52	2,410,000
1928.....	3,280	6.79	92.42	2,380,000	2,720	5.63	76.54	1,970,000
1929.....	2,120	4.39	59.44	1,530,000	1,900	3.93	53.46	1,380,000
1930.....	1,870	3.87	52.57	1,350,000	1,820	3.77	51.10	1,310,000
1931.....	2,030	4.20	57.18	1,470,000	2,340	4.84	65.91	1,700,000
1932.....	3,210	6.65	90.49	2,330,000	3,550	7.35	100.14	2,580,000
1933.....	3,580	7.41	100.57	2,590,000	4,340	8.99	122.05	3,140,000
1934.....	3,741	7.75	105.14	2,708,000	3,264	6.76	91.75	2,363,000
1935.....	3,310	6.85	93.01	2,396,000	-	-	-	-
Highest.....	3,741	7.75	105.14	2,708,000	4,340	8.99	122.05	3,140,000
Average.....	2,850	5.89	80.01	2,060,000	2,850	5.86	79.63	2,050,000
Lowest.....	1,870	3.87	52.57	1,350,000	1,820	3.77	51.10	1,310,000

Lewis River near Amboy, Wash.

Location.-- Staff gage, lat. 45°58', long. 122°23', in sec. 36, T. 6 N., R. 3 E., at a former river crossing known as Cresap Ferry, 5 miles northeast of Amboy.

Drainage area.-- 665 square miles.

Records available.-- January 1911 to April 1931.

Extremes.-- Maximum discharge observed, about 60,000 second-feet Dec. 18, 1917; minimum discharge, 660 second-feet Sept. 5-14, 19-22, 1924.

Remarks.-- No diversion or regulation.

Monthly discharge of Lewis River near Amboy

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	2,600	1,020	1,310	1.97	2.27	80,600
November.....	9,220	2,600	5,240	7.88	8.79	312,000
December.....	19,900	1,720	5,390	8.11	9.35	331,000
January.....	19,900	2,360	5,570	8.38	9.66	342,000
February.....	6,360	1,940	3,160	4.75	5.12	182,000
March.....	14,400	1,800	4,010	6.03	6.95	247,000
April.....	7,160	3,600	4,950	7.44	8.30	295,000
May.....	6,100	3,020	4,070	6.12	7.06	250,000
June.....	-	-	*3,690	5.55	6.19	220,000
July.....	3,200	1,140	1,760	2.65	3.06	108,000
August.....	1,230	1,000	1,100	1.65	1.90	67,600
September.....	9,220	920	4,120	6.20	6.92	245,000
The year.....	19,900	920	3,690	5.55	75.57	2,680,000
1920-21						
October.....	13,000	2,870	7,470	11.2	12.91	459,000
November.....	19,900	1,840	6,060	9.11	10.16	361,000
December.....	38,600	3,500	8,110	12.2	14.07	499,000
January.....	29,600	1,970	8,540	12.8	14.76	525,000
February.....	20,300	2,400	7,300	11.0	11.45	405,000
March.....	29,000	3,500	7,220	10.9	12.57	444,000
April.....	15,200	3,500	6,020	9.05	10.10	358,000
May.....	7,500	4,560	5,930	8.92	10.28	365,000
June.....	6,800	2,870	4,630	6.96	7.76	276,000
July.....	3,590	1,540	2,150	3.23	3.72	132,000
August.....	1,540	1,160	1,300	1.95	2.25	79,900
September.....	1,970	880	1,210	1.82	2.03	72,000
The year.....	38,600	880	5,490	8.26	112.06	3,980,000
1921-22						
October.....	14,100	970	2,700	4.06	4.68	166,000
November.....	29,600	1,900	6,900	10.38	11.60	411,000
December.....	32,000	2,450	8,730	13.13	15.10	537,000
January.....	3,220	1,780	2,290	3.44	3.97	141,000
February.....	3,310	1,660	2,310	3.47	3.61	128,000
March.....	5,150	1,550	2,660	4.00	4.61	164,000
April.....	9,360	3,590	5,110	7.68	8.57	304,000
May.....	12,300	5,510	7,960	11.97	13.83	489,000
June.....	11,300	3,220	6,200	9.32	10.40	369,000
July.....	3,060	1,330	1,650	2.78	3.20	114,000
August.....	1,440	1,100	1,250	1.88	2.17	76,900
September.....	2,100	960	1,280	1.92	2.14	76,200
The year.....	32,000	960	4,110	6.18	83.88	2,980,000
1922-23						
October.....	5,630	1,100	1,850	2.78	3.20	114,000
November.....	3,140	1,550	2,090	3.13	3.49	124,000
December.....	29,600	1,330	6,300	9.47	10.92	397,000
January.....	47,000	2,950	13,100	19.7	22.71	806,000
February.....	2,780	1,860	2,310	3.47	3.61	128,000
March.....	6,800	2,470	3,680	5.53	6.38	228,000
April.....	6,520	4,630	5,830	8.77	9.78	347,000
May.....	8,000	3,780	5,080	7.64	8.81	312,000
June.....	5,080	2,330	3,390	5.10	5.69	202,000
July.....	3,680	1,310	2,000	3.01	3.47	123,000
August.....	1,260	1,010	1,140	1.71	1.97	70,100
September.....	1,220	780	913	1.37	1.53	54,300
The year.....	47,000	780	4,000	6.02	81.56	2,890,000
1923-24						
October.....	3,400	810	1,220	1.83	2.11	75,000
November.....	8,000	884	1,820	2.74	3.06	108,000
December.....	20,800	2,330	5,290	7.95	9.16	325,000
January.....	23,900	4,100	6,170	6.17	7.11	252,000
February.....	22,800	4,520	9,980	15.0	16.18	575,000
March.....	5,080	2,050	2,800	4.21	4.85	172,000
April.....	3,680	2,190	2,840	4.27	4.76	169,000
May.....	4,520	1,620	2,850	4.29	4.95	175,000
June.....	1,620	1,000	1,290	1.94	2.16	76,800
July.....	1,010	840	917	1.37	1.58	56,100
August.....	1,410	685	802	1.21	1.40	49,500
September.....	1,620	660	760	1.14	1.27	45,200
The year.....	23,900	660	2,870	4.32	58.59	2,080,000

*Estimated.

Monthly discharge of Lewis River near Amboy--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924-25						
October.....	8,000	1,030	2,090	3.14	3.62	129,000
November.....	14,100	3,580	7,580	11.3	12.72	451,000
December.....	12,600	2,470	5,530	8.32	9.59	340,000
January.....	22,800	3,120	8,270	12.4	14.30	506,000
February.....	35,600	3,580	10,400	15.6	16.24	578,000
March.....	5,570	2,950	3,960	5.96	6.87	243,000
April.....	8,000	3,120	5,340	8.03	8.96	318,000
May.....	6,520	3,490	4,950	7.44	8.58	304,000
June.....	3,880	2,190	3,170	4.77	5.32	189,000
July.....	2,050	1,170	1,490	2.24	2.58	91,600
August.....	1,170	933	1,040	1.56	1.80	64,000
September.....	926	822	876	1.32	1.47	52,100
The year.....	35,600	822	4,510	6.78	92.05	3,270,000
1925-26						
October.....	864	750	781	1.17	1.35	48,000
November.....	4,410	750	1,800	2.71	3.02	107,000
December.....	17,200	2,950	5,940	8.93	10.30	365,000
January.....	5,830	2,520	3,560	5.35	6.17	219,000
February.....	19,900	3,040	7,600	11.4	11.87	422,000
March.....	5,570	2,970	4,070	6.12	7.06	250,000
April.....	3,490	3,320	2,920	4.39	4.90	174,000
May.....	3,880	2,250	2,920	4.39	5.06	180,000
June.....	2,250	1,180	1,570	2.36	2.63	93,400
July.....	1,130	890	1,020	1.53	1.76	62,700
August.....	1,090	785	874	1.31	1.51	53,700
September.....	5,320	720	1,290	1.94	2.16	76,800
The year.....	19,900	720	2,830	4.26	57.79	2,050,000
1926-27						
October.....	17,200	1,320	3,800	5.71	6.58	234,000
November.....	18,500	1,570	5,760	8.66	9.66	343,000
December.....	17,200	2,960	5,850	8.80	10.14	360,000
January.....	21,800	2,700	6,340	9.53	10.99	390,000
February.....	16,400	3,140	7,400	11.1	11.56	411,000
March.....	6,700	3,140	4,310	6.48	7.47	265,000
April.....	8,720	3,140	4,440	6.68	7.45	264,000
May.....	10,000	4,380	6,250	9.40	10.84	384,000
June.....	10,000	2,960	5,300	7.97	8.89	315,000
July.....	2,960	1,410	2,050	3.05	3.52	125,000
August.....	1,360	1,020	1,150	1.73	1.99	70,700
September.....	5,900	1,160	1,930	2.90	3.24	115,000
The year.....	21,800	1,020	4,520	6.80	92.33	3,280,000
1927-28						
October.....	12,000	2,120	4,020	6.05	6.98	247,000
November.....	47,000	2,620	9,990	15.0	16.74	594,000
December.....	12,300	2,180	4,820	7.25	8.36	296,000
January.....	21,800	2,400	6,830	10.5	11.87	420,000
February.....	5,120	2,520	3,540	5.32	5.74	204,000
March.....	19,400	2,180	8,260	12.4	14.30	508,000
April.....	12,300	4,620	7,000	10.5	11.71	417,000
May.....	11,600	3,700	6,540	9.83	11.33	402,000
June.....	3,500	1,900	2,570	3.86	4.31	153,000
July.....	2,470	1,290	1,710	2.57	2.96	105,000
August.....	1,290	828	1,060	1.69	1.83	65,200
September.....	1,090	754	857	1.29	1.44	51,000
The year.....	47,000	754	4,770	7.17	97.57	3,460,000
1928-29						
October.....	4,520	794	1,990	2.99	3.45	122,000
November.....	11,900	1,130	3,580	5.38	6.00	213,000
December.....	11,600	1,990	4,020	6.05	6.98	247,000
January.....	7,120	1,670	2,940	4.42	5.10	181,000
February.....	3,000	1,290	1,720	2.59	2.70	95,500
March.....	8,900	2,560	4,190	6.30	7.26	258,000
April.....	9,540	2,700	5,390	8.11	9.05	321,000
May.....	8,280	3,890	6,080	9.14	10.54	374,000
June.....	6,840	2,780	4,180	6.29	7.02	249,000
July.....	2,620	1,140	1,630	2.45	2.82	100,000
August.....	1,180	910	999	1.50	1.73	61,400
September.....	870	720	772	1.16	1.29	45,900
The year.....	11,900	720	3,130	4.71	63.94	2,270,000

Monthly discharge of Lewis River near Amboy--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	905	740	763	1.15	1.33	46,900
November.....	842	770	807	1.21	1.35	48,000
December.....	14,200	849	3,890	5.85	6.74	239,000
January.....	4,750	1,430	2,440	3.67	4.23	150,000
February.....	15,000	4,300	9,550	14.4	15.00	530,000
March.....	8,590	2,100	4,230	6.36	7.33	260,000
April.....	-	-	*4,440	6.68	7.45	264,000
May.....	-	-	*3,660	5.50	6.34	225,000
June.....	-	-	*2,240	3.37	3.76	133,000
July.....	-	956	1,130	1.70	1.96	69,500
August.....	948	740	844	1.27	1.46	51,900
September.....	835	690	739	1.11	1.24	44,000
The year.....	15,000	690	2,850	4.29	58.19	2,060,000
1930-31						
October.....	1,490	690	891	1.34	1.54	54,800
November.....	2,640	740	1,680	2.53	2.82	100,000
December.....	3,000	1,430	2,130	3.20	3.69	131,000
January.....	10,200	1,550	4,770	7.17	8.27	293,000
February.....	12,600	1,910	4,910	7.38	7.68	273,000
March.....	3,400	2,850	7,440	11.9	13.72	457,000
April.....	25,000	3,890	7,430	11.2	12.50	442,000
The period.....	-	-	-	-	-	1,750,000

*Estimated.

Yearly discharge of Lewis River near Amboy

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1912.....	3,760	5.65	76.94	2,730,000	4,180	6.29	85.53	3,030,000
1913.....	4,530	6.81	92.42	3,280,000	4,270	6.42	87.26	3,090,000
1914.....	4,440	6.68	90.59	3,210,000	4,460	6.71	91.08	3,230,000
1915.....	3,120	4.69	63.60	2,260,000	3,410	5.13	69.58	2,470,000
1916.....	5,550	8.35	113.74	4,030,000	4,940	7.43	101.30	3,590,000
1917.....	3,840	5.77	78.42	2,780,000	4,730	7.11	96.57	3,420,000
1918.....	4,460	6.71	91.09	3,230,000	3,900	5.86	79.76	2,830,000
1919.....	4,420	6.65	90.14	3,200,000	4,400	6.62	89.77	3,190,000
1920.....	3,690	5.55	75.57	2,680,000	4,510	6.78	92.30	3,280,000
1921.....	5,490	8.26	112.06	3,980,000	5,210	7.83	106.30	3,770,000
1922.....	4,110	6.18	83.88	2,980,000	3,440	5.17	70.11	2,490,000
1923.....	4,000	6.02	81.56	2,890,000	3,830	5.76	78.28	2,780,000
1924.....	2,870	4.32	58.59	2,080,000	3,430	5.16	70.19	2,490,000
1925.....	4,510	6.78	92.05	3,270,000	3,960	5.95	80.79	2,870,000
1926.....	2,830	4.26	57.79	2,050,000	3,410	5.13	69.50	2,470,000
1927.....	4,520	6.80	92.33	3,280,000	4,800	7.22	98.03	3,480,000
1928.....	4,770	7.17	97.57	3,460,000	4,000	6.02	81.92	2,910,000
1929.....	3,130	4.71	63.94	2,270,000	2,790	4.20	56.93	2,020,000
1930.....	2,850	4.29	58.19	2,060,000	2,780	4.18	56.82	2,010,000
Highest.....	5,550	8.35	113.74	4,030,000	5,210	7.83	106.30	3,770,000
Average.....	4,050	6.09	82.66	2,930,000	4,020	6.05	82.21	2,920,000
Lowest.....	2,830	4.26	57.79	2,050,000	2,780	4.18	56.82	2,010,000

Lewis River at Ariel, Wash.

(Formerly called Lewis River near Ariel)

Location.— Water-stage recorder, lat. 45°57', long. 122°34', in NW¼ sec. 4, T. 5 N., R. 2 E., at Ariel, half a mile below Ariel Dam and power plant. July 27, 1922, to Apr. 20, 1930, staff gage at site half a mile downstream; prior to Dec. 1, 1909, staff gage at site 3 miles upstream.

Drainage area.— 733 square miles.

Records available.— July to November 1909, July 1922 to September 1935.

Extremes.— Maximum discharge, 129,000 second-feet Dec. 22, 1933 (from floodmarks); no flow at times June 30, July 1-3, 6-9, 1931 (caused by regulation during construction of Ariel Dam); minimum daily discharge, 1 second-foot July 6, 1931, result of regulation.

Remarks.— No diversions above station. Regulation caused by operation of power plant and storage in Lake Merwin reservoir since March 1931.

Monthly discharge of Lewis River at Ariel

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1922						
July 27-31	1,390	1,320	1,350	1.84	0.54	13,400
August	1,640	1,090	1,250	1.71	1.97	76,900
September	2,200	1,030	1,300	1.77	1.98	77,400
The year	-	-	-	-	-	168,000
1923						
October 1-28	6,120	1,070	1,700	2.32	2.42	94,400
August	1,210	1,070	1,130	1.54	1.78	69,500
September	-	860	949	1.30	1.45	56,500
1923-24						
October	4,480	890	1,210	1.65	1.90	74,400
November	9,600	955	1,980	2.70	3.01	118,000
December	19,800	2,400	6,270	8.55	9.86	386,000
January	27,500	2,350	4,680	6.38	7.36	288,000
February	26,200	5,560	12,000	16.4	17.69	690,000
March	5,560	1,860	2,920	3.98	4.59	180,000
April	4,220	2,140	2,950	4.02	4.48	176,000
May	5,000	1,410	2,920	3.98	4.59	180,000
June	-	1,010	1,290	1.76	1.96	76,800
July	1,010	870	913	1.25	1.44	56,100
August	1,010	785	840	1.15	1.33	51,600
September	1,240	760	822	1.12	1.25	48,900
The year	27,500	760	3,210	4.38	59.46	2,330,000
1924-25						
October	10,400	1,180	2,390	3.26	3.76	147,000
November	18,200	3,960	8,690	11.9	13.28	517,000
December	16,600	2,700	6,760	9.22	10.63	416,000
January	27,100	3,440	9,970	13.6	15.68	613,000
February	38,400	4,060	12,700	17.3	18.01	705,000
March	6,750	3,370	4,620	6.30	7.26	284,000
April	9,150	3,370	5,700	7.78	8.68	339,000
May	6,750	3,600	5,170	7.05	8.13	318,000
June	4,060	2,150	3,240	4.42	4.93	193,000
July	2,510	1,200	1,520	2.07	2.39	93,500
August	1,200	950	1,070	1.46	1.68	65,800
September	950	860	914	1.25	1.40	54,400
The year	38,400	860	5,170	7.05	95.83	3,740,000
1925-26						
October	1,030	826	871	1.19	1.37	53,600
November	5,010	810	2,100	2.87	3.20	125,000
December	22,300	3,600	8,100	11.0	12.68	498,000
January	7,950	2,930	4,390	5.99	6.91	270,000
February	25,500	3,600	9,720	13.3	13.85	540,000
March	6,450	2,930	4,830	6.59	7.60	297,000
April	3,370	2,240	2,950	4.02	4.48	176,000
May	4,060	2,240	3,100	4.23	4.88	191,000
June	2,320	1,190	1,580	2.16	2.41	94,000
July	1,190	950	1,060	1.45	1.67	65,200
August	1,190	874	988	1.35	1.56	60,800
September	5,860	794	1,390	1.90	2.12	82,700
The year	25,500	794	3,390	4.62	62.73	2,450,000

Monthly discharge of Lewis River at Ariel--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926-27						
October.....	18,500	1,620	4,490	6.13	7.04	276,000
November.....	22,300	1,810	6,700	9.14	10.20	399,000
December.....	23,000	3,600	6,920	9.44	10.88	425,000
January.....	23,000	3,150	7,490	10.2	11.76	461,000
February.....	20,400	3,600	8,410	11.5	11.98	467,000
March.....	6,750	3,600	4,670	6.37	7.34	287,000
April.....	9,150	3,600	4,670	6.37	7.11	278,000
May.....	11,000	4,520	6,360	8.68	10.01	391,000
June.....	10,100	2,940	5,460	7.45	8.31	325,000
July.....	2,940	1,470	2,020	2.76	3.18	124,000
August.....	1,470	1,050	1,200	1.64	1.89	73,800
September.....	7,050	1,200	2,010	2.74	3.06	120,000
The year.....	23,000	1,050	5,010	6.83	92.76	3,630,000
1927-28						
October.....	15,300	2,200	4,280	5.84	6.73	263,000
November.....	51,600	2,550	12,300	16.8	18.74	732,000
December.....	15,600	2,920	5,920	8.08	9.32	364,000
January.....	14,700	3,140	7,240	9.88	11.39	445,000
February.....	5,570	2,400	3,900	5.32	5.74	224,000
March.....	26,500	2,040	9,360	12.8	14.76	576,000
April.....	14,700	6,450	9,060	12.4	13.83	539,000
May.....	13,700	4,290	7,270	9.92	11.44	447,000
June.....	3,830	1,960	2,830	3.66	4.31	168,000
July.....	2,810	1,260	1,790	2.44	2.81	110,000
August.....	1,240	935	1,070	1.46	1.68	65,800
September.....	1,180	770	933	1.27	1.42	55,500
The year.....	51,600	770	5,500	7.50	102.17	3,990,000
1928-29						
October.....	4,290	810	2,340	3.19	3.68	144,000
November.....	14,100	1,180	3,960	5.40	6.02	236,000
December.....	13,800	2,150	4,660	6.36	7.33	287,000
January.....	8,800	1,900	3,440	4.69	5.41	212,000
February.....	3,580	1,430	1,940	2.65	2.76	108,000
March.....	11,900	2,890	4,970	6.78	7.82	306,000
April.....	12,200	3,180	6,180	8.43	9.40	368,000
May.....	8,500	4,340	6,730	9.18	10.58	414,000
June.....	7,600	2,890	4,420	6.03	6.73	263,000
July.....	2,700	1,180	1,720	2.35	2.71	106,000
August.....	1,180	922	1,040	1.42	1.64	64,000
September.....	994	740	807	1.10	1.23	48,000
The year.....	14,100	740	3,530	4.82	65.31	2,560,000
1929-30						
October.....	922	740	815	1.11	1.28	50,100
November.....	946	795	838	1.14	1.27	49,900
December.....	16,400	795	4,500	6.14	7.08	277,000
January.....	5,320	1,670	2,760	3.77	4.35	170,000
February.....	18,700	4,920	11,300	15.4	16.04	628,000
March.....	9,550	2,280	4,600	6.28	7.24	283,000
April.....	5,900	3,780	4,720	6.44	7.18	281,000
May.....	8,090	2,600	3,850	5.25	6.05	237,000
June.....	3,680	1,530	2,330	3.18	3.55	139,000
July.....	1,480	999	1,170	1.60	1.84	71,900
August.....	978	790	879	1.20	1.38	54,000
September.....	873	715	770	1.05	1.17	45,800
The year.....	18,700	715	3,150	4.30	58.43	2,290,000

Monthly discharge of Lewis River at Ariel--Continued

Month	Observed				Gain or loss in storage in Lake Merwin 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	
1930-31									
October..	1,530	715	933	57,400	0	57,400	933	1.27	1.46
November..	2,740	838	1,790	107,000	0	107,000	1,790	2.44	2.73
December..	3,920	1,630	2,510	142,000	0	142,000	2,510	3.15	3.63
January..	11,000	1,730	5,270	324,000	0	324,000	5,270	7.19	8.29
February..	13,900	2,350	4,770	265,000	0	265,000	4,770	6.51	6.78
March....	19,500	3,220	7,010	431,000	+11,040	442,000	7,190	9.81	11.31
April....	30,200	4,000	8,920	531,000	-11,040	520,000	8,740	11.9	13.28
May.....	6,020	147	1,980	122,000	+97,620	220,000	3,580	4.88	5.63
June.....	299	34	183	10,900	+117,380	128,000	2,150	2.93	3.27
July.....	225	1	121	7,440	+83,800	91,200	1,480	2.02	2.33
August....	328	60	200	12,300	+42,800	55,100	896	1.22	1.41
September	1,780	243	793	42,700	+4,200	51,400	864	1.18	1.32
The year	30,200	1	2,840	2,060,000	+346,000	2,400,000	3,320	4.53	61.43
1931-32									
October..	2,550	806	1,940	119,000	+19,400	138,000	2,240	3.06	3.53
November..	12,300	1,020	5,220	311,000	+10,400	321,000	5,390	7.35	8.20
December..	16,800	1,940	5,020	309,000	+13,500	322,000	5,240	7.15	8.24
January..	16,900	2,390	6,490	399,000	-200	399,000	6,490	8.85	10.20
February..	36,400	2,020	5,950	342,000	-3,800	338,000	5,880	8.02	8.65
March....	30,600	4,680	12,300	756,000	-400	756,000	12,300	16.8	19.37
April....	14,100	5,110	8,670	516,000	+17,800	534,000	8,970	12.2	13.61
May.....	8,860	4,680	7,280	448,000	-150	448,000	7,290	9.95	11.47
June.....	8,840	4,000	5,570	331,000	0	331,000	5,570	7.60	8.48
July.....	5,260	1,030	2,570	158,000	-950	157,000	2,550	3.48	4.01
August....	2,140	759	1,760	108,000	-24,300	83,700	1,360	1.86	2.14
September	2,470	597	1,970	117,000	-55,200	61,800	1,040	1.42	1.58
The year	36,400	597	5,390	3,910,000	-23,900	3,890,000	5,360	7.31	99.48
1932-33									
October..	3,640	658	2,140	132,000	-31,100	101,000	1,640	2.24	2.58
November..	22,900	2,220	8,760	521,000	+110,000	631,000	10,600	14.5	16.18
December..	25,400	2,880	7,510	462,000	0	462,000	7,510	10.2	11.76
January..	30,500	2,900	8,160	502,000	0	502,000	8,160	11.1	12.80
February..	7,900	1,870	3,540	197,000	-12,500	184,000	3,310	4.52	4.71
March....	12,000	3,930	7,160	440,000	-3,400	437,000	7,110	9.70	11.18
April....	9,630	4,180	6,270	373,000	+400	373,000	6,270	8.55	9.54
May.....	12,500	6,800	8,530	524,000	0	524,000	8,520	11.6	13.37
June.....	22,900	6,300	10,300	613,000	+19,300	632,000	10,600	14.5	16.18
July.....	5,610	2,560	4,310	265,000	+6,900	272,000	4,420	6.03	6.95
August....	3,230	1,040	1,830	113,000	-1,700	111,000	1,810	2.47	2.85
September	5,000	555	2,290	156,000	+1,700	158,000	2,320	3.17	3.64
The year	30,300	555	5,910	4,280,000	+89,600	4,370,000	6,040	8.24	111.64
1933-34									
October..	24,100	1,460	5,448	335,000	-11,500	323,500	5,261	7.18	8.28
November..	22,100	2,160	5,221	310,700	+4,700	315,400	5,300	7.23	8.07
December..	114,000	2,070	28,350	1,743,000	-3,500	1,740,000	28,300	38.6	44.50
January..	41,100	7,110	16,730	1,029,000	-3,900	1,025,000	16,670	22.7	26.17
February..	7,290	2,710	4,838	268,700	-400	268,300	4,831	6.59	6.86
March....	16,800	2,180	7,139	439,000	+6,600	445,600	7,247	9.89	11.40
April....	11,100	1,050	4,244	252,600	+11,400	264,000	4,437	6.05	6.75
May.....	6,070	972	2,842	174,700	-7,900	166,800	2,713	3.70	4.27
June.....	2,850	528	1,746	103,900	-17,900	86,000	1,445	1.97	2.20
July.....	1,970	518	1,245	76,540	-4,600	71,940	1,170	1.60	1.84
August....	2,800	432	1,813	111,500	-51,200	60,300	981	1.34	1.54
September	3,540	333	2,579	153,400	-98,700	54,700	919	1.25	1.40
The year	114,000	333	6,903	4,998,000	-177,000	4,822,000	6,660	9.09	123.28
1934-35									
October..	3,240	935	1,865	114,700	+150,500	265,200	4,313	5.88	6.78
November..	32,400	3,070	11,180	665,100	+15,300	680,400	11,430	15.6	17.40
December..	25,200	2,400	8,529	524,400	+2,100	526,500	8,563	11.7	13.49
January..	16,200	1,970	6,686	411,100	-100	411,000	6,684	9.12	10.51
February..	9,130	3,740	6,047	335,800	-200	335,600	6,043	8.24	8.58
March....	13,900	2,430	4,753	292,200	+2,300	294,500	4,790	6.53	7.53
April....	6,650	3,090	4,679	278,400	+2,200	280,600	4,716	6.43	7.17
May.....	7,770	4,820	6,148	378,000	+500	378,500	6,156	8.40	9.68
June.....	-	1,930	4,107	244,400	+10,900	255,300	4,290	5.85	6.53
July.....	3,360	616	2,093	128,700	-5,200	123,500	2,009	2.74	3.16
August....	2,400	616	1,698	104,400	-33,300	71,100	1,156	1.58	1.82
September	3,260	266	2,544	151,400	-86,600	64,800	1,089	1.49	1.66
The year	324,000	266	5,012	3,629,000	+58,400	3,687,000	5,093	6.95	94.31

Note.- Regulation in Lake Merwin reservoir began in March 1931.

Yearly discharge of Lewis River at Ariel

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1924.....	3,210	4.38	59.46	2,330,000	3,890	5.31	72.56	2,830,000
1925.....	5,170	7.05	95.83	3,740,000	4,620	6.30	85.41	3,340,000
1926.....	3,390	4.62	62.73	2,450,000	3,970	5.42	73.60	2,880,000
1927.....	5,010	6.83	92.76	3,630,000	5,370	7.33	99.43	3,890,000
1928.....	5,500	7.50	102.17	3,990,000	4,540	6.19	84.41	3,300,000
1929.....	3,530	4.82	65.31	2,560,000	3,130	4.27	57.91	2,270,000
1930.....	3,150	4.30	58.43	2,290,000	3,060	4.17	56.61	2,220,000
1931.....	3,320	4.53	61.43	2,400,000	3,970	5.42	73.59	2,880,000
1932.....	5,360	7.31	99.48	3,890,000	5,930	8.09	110.03	4,300,000
1933.....	6,040	8.24	111.64	4,370,000	7,670	10.5	141.97	5,550,000
1934.....	6,660	9.09	123.28	4,822,000	5,407	7.38	100.10	3,915,000
1935.....	5,093	6.95	94.31	3,687,000	-	-	-	-
Highest.....	6,660	9.09	123.28	4,822,000	7,670	10.5	141.97	5,550,000
Average.....	4,620	6.30	85.57	3,350,000	4,690	6.40	86.86	3,400,000
Lowest.....	3,150	4.30	58.43	2,290,000	3,060	4.17	56.61	2,220,000

Big Creek below Skookum Meadow, Wash.

Location.- Water-stage recorder, lat. 46°05'30", long. 121°51'30", in NE¼ sec. 13, T. 7 N., R. 7 E., below Skookum Meadow, 3 miles above mouth and 17 miles northwest of Guler.

Records available.- October 1927 to September 1931.

Extremes.- Maximum discharge, 766 second-feet at 10 p.m. Mar. 31, 1931; minimum, 4 second-feet Nov. 20, 21, Dec. 2, 1929, Sept. 2-4, 19-26, 29, 30, Oct. 1-5, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Big Creek below Skookum Meadow

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1927.....	-	28	*68.3	4,200
November.....	-	36	138	8,210
December.....	194	18	58.9	3,620
January 1928.....	199	32	68.4	4,210
February.....	41	19	28.6	1,650
March.....	222	18	102	6,270
April.....	178	51	88.9	5,290
May.....	194	70	143	8,790
June.....	64	26	43.0	2,560
July.....	49	13	23.0	1,410
August.....	13	8.9	10.7	658
September.....	13	8	9.06	539
Water year 1927-28.....	-	8	65.3	47,400
October 1928.....	67	9	28.8	1,770
November.....	114	14	44.9	2,670
December.....	146	21	40.4	2,480
Calendar year 1928.....	222	8	52.8	38,300
January 1929.....	26	14	18.3	1,130
February.....	20	11	14.1	783
March.....	91	13	32.3	1,990
April.....	142	28	70.7	4,210
May.....	242	109	177	10,900
June.....	127	35	85.0	5,060
July.....	33	10	17.0	1,050
August.....	10	7	8.1	498
September.....	9	6	6.5	387
Water year 1928-29.....	242	6	45.4	32,900

*Estimated.

Monthly discharge of Big Creek below Skookum Meadow--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
October 1929.....	11	5	5.7	350
November.....	7	4	5.2	309
December.....	153	4	32.9	2,020
Calendar year 1929.....	242	4	39.6	28,700
January 1930.....	32	14	20.4	1,250
February.....	325	50	139	7,720
March.....	111	28	49.9	3,070
April.....	173	73	125	7,440
May.....	124	52	74.6	4,590
June.....	68	17	31.1	1,850
July.....	16	8	11.1	682
August.....	8	5	5.8	357
September.....	6	4	4.6	274
Water year 1929-30.....	325	4	41.3	29,900
October 1930.....	21	4	9.0	553
November.....	30	7	11.6	690
December.....	19	11	12.7	781
Calendar year 1930.....	325	4	40.4	29,300
January 1931.....	104	11	29.8	1,830
February.....	90	20	38.4	2,130
March.....	510	24	83.5	5,130
April.....	-	-	*130	7,740
May.....	-	27	*72.3	4,450
June.....	54	19	27.8	1,650
July.....	25	11	15.4	947
August.....	10	7	8.7	535
September.....	17	7	8.8	524
Water year 1930-31.....	-	4	37.3	27,000

*Estimated.

Rush Creek above Meadow Creek, near Guler, Wash

Location.- Water-stage recorder, lat. 46°02'20", long. 121°51'30", on line between sec. 36, T. 7 N., R. 7 E., and sec. 1, T. 6 N., R. 7 E., an eighth of a mile upstream from Meadow Creek and 16 miles west of Guler.

Records available.- June 1929 to September 1930.

Extremes.- Maximum discharge, 271 second-feet at 1 a.m. Feb. 20, 1930; minimum, 0.1 second-foot Nov. 23, 24, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Rush Creek above Meadow Creek, near Guler

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1929				
June 28-30.....	108	72	91.3	543
July.....	67	4.1	17.8	1,090
August.....	4.0	1.4	2.45	151
September.....	1.4	.4	.78	46
The period.....	-	-	-	1,830
1929-30				
October.....	.4	.2	.23	14
November.....	.7	.1	.22	13
December.....	97	.1	11.0	676
January.....	8.0	.6	2.20	135
February.....	204	3.3	63.7	3,540
March.....	38	2.2	9.71	597
April.....	91	15	41.1	2,450
May.....	164	14	48.8	3,000
June.....	95	6.7	37.3	2,220
July.....	5.4	1.1	1.76	108
August.....	1.0	.6	.82	50
September.....	.6	.5	.51	30
The year.....	204	.1	17.7	12,800

Rush Creek above falls, Wash.

Location.- Water-stage recorder, lat. 46°03'00", long. 121°54'20", on line between secs. 27 and 34, T. 7 N., R. 7 E., 500 feet above falls, 2 miles above mouth, and 18 miles east of Cougar.

Records available.- December 1927 to September 1931.

Extremes.- Maximum discharge, 578 second-feet at 3 a.m. Apr. 1, 1931; minimum, 79 second-feet Jan. 24-27, 29, Nov. 6, 7, 1930.

Remarks.- No diversion or regulation.

Monthly discharge of Rush Creek above falls

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
December 14-31, 1927.....	155	118	131	4,680
January 1928.....	282	118	155	9,530
February.....	-	117	*128	7,360
March.....	330	121	191	11,700
April.....	252	-	*172	10,200
May.....	418	200	296	18,200
June.....	266	172	217	12,900
July.....	200	124	145	8,920
August.....	124	115	120	7,380
September.....	115	104	108	6,430
The period.....	-	-	-	97,300
October 1928.....	200	100	116	7,130
November.....	314	92	121	7,200
December.....	276	89	107	6,580
Calendar year 1928.....	418	89	156	114,000
January 1929.....	100	90	91.6	5,630
February.....	-	86	87.9	4,880
March.....	125	-	100	6,150
April.....	148	89	107	6,370
May.....	382	125	206	12,700
June.....	500	219	296	17,600
July.....	228	136	156	9,690
August.....	136	115	127	7,810
September.....	116	107	111	6,600
Water year 1928-29.....	500	86	136	98,200
October 1929.....	100	91	95.1	5,850
November.....	91	84	87.6	5,210
December.....	291	84	108	6,640
Calendar year 1929.....	500	84	131	95,000
January 1930.....	99	79	84.6	5,200
February.....	455	111	212	11,800
March.....	160	93	113	6,950
April.....	249	135	193	11,500
May.....	368	130	180	11,100
June.....	221	111	154	9,160
July.....	108	99	102	6,270
August.....	100	93	96.7	5,950
September.....	93	84	88.7	5,280
Water year 1929-30.....	455	79	125	90,900
October 1930.....	100	82	86.2	5,300
November.....	128	79	86.6	5,150
December.....	92	80	83.5	5,130
Calendar year 1930.....	455	79	123	86,800
January 1931.....	185	80	99.9	6,140
February.....	190	84	105	5,830
March.....	386	89	132	8,120
April.....	535	128	204	12,100
May.....	300	158	220	13,500
June.....	177	113	130	7,740
July.....	112	101	106	6,520
August.....	101	96	97.6	6,000
September.....	97	89	93.4	5,560
Water year 1930-31.....	535	79	120	87,100

*Estimated.

Meadow Creek below Lone Butte Meadow, Wash.

Location.- Water-stage recorder, lat. 46°02'50", long. 121°51'20", in sec. 36, T. 7 N., R. 7 E., below Lone Butte Meadow, half a mile above junction with Rush Creek, and 16 miles northwest of Guler.

Records available.- September to December 1927 (fragmentary), January 1928 to September 1931.

Extremes.- Maximum discharge, 232 second-feet Mar. 31, 1931; minimum, 47 second-feet Dec. 29-31, 1930, Jan. 1-3, 19-21, 1931.

Remarks.- No diversion or regulation.

Monthly discharge of Meadow Creek below One Butte Meadow

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
January 1928.....	165	-	99.1	6,090
February.....	84	75	80.4	4,620
March.....	167	75	107	6,580
April.....	131	85	100	5,950
May.....	181	102	144	8,850
June.....	193	89	*119	7,080
July.....	111	80	87.4	5,370
August.....	80	74	77.2	4,750
September.....	75	68	72.1	4,290
The period.....	-	-	-	53,600
October 1928.....	91	67	71.0	4,370
November.....	142	68	81.3	4,840
December.....	182	-	80.9	4,970
Calendar year 1928.....	193	67	93.3	67,800
January 1929.....	78	63	71.0	4,370
February.....	63	56	60.0	3,330
March.....	70	-	61.7	3,790
April.....	85	61	71.8	4,240
May.....	-	85	126	7,750
June.....	175	100	123	7,620
July.....	93	72	79.5	4,890
August.....	72	66	68.6	4,220
September.....	66	61	63.0	3,750
Water year 1928-29.....	175	56	80.3	58,100
October 1929.....	-	-	58.8	3,620
November.....	57	55	56.5	3,360
December.....	145	53	67.9	4,180
Calendar year 1928.....	175	53	76.1	55,100
January 1930.....	66	58	60.3	3,710
February.....	191	70	111	6,160
March.....	87	65	73.2	4,500
April.....	134	83	106	6,310
May.....	141	82	95.3	5,860
June.....	106	63	79.5	4,730
July.....	67	62	64.0	3,940
August.....	62	56	59.4	3,650
September.....	56	53	54.5	3,240
Water year 1929-30.....	191	53	73.6	53,300
October 1930.....	-	52	54.9	3,380
November.....	63	49	51.7	3,080
December.....	56	47	49.3	3,030
Calendar year 1930.....	191	47	71.3	51,600
January 1931.....	90	47	57.0	3,500
February.....	92	51	58.6	3,250
March.....	-	50	73.8	4,540
April.....	-	-	*116	6,900
May.....	-	74	95.9	5,900
June.....	89	65	69.0	4,110
July.....	67	58	60.4	3,710
August.....	58	54	55.9	3,440
September.....	57	50	52.1	3,100
Water year 1930-31.....	-	47	66.2	47,900

*Estimated.

Muddy River near Cougar, Wash.

Location.— Water-stage recorder, lat. 46°04'30", long. 122°00'00", in SE $\frac{1}{4}$ sec. 24, T. 7 N., R. 6 E., three-quarters of a mile above mouth and 14 miles east of Cougar. Prior to Nov. 1, 1909, staff gage at site a quarter of a mile downstream.

Drainage area.— 136 square miles.

Records available.— August to October 1909, August 1927 to September 1934.

Extremes.— Maximum discharge recorded, about 17,500 second-feet Dec. 21, 1933; minimum recorded, 94 second-feet Dec. 5-7, 1929.

Remarks.— No diversion or regulation.

Monthly discharge of Muddy River near Cougar

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927						
August 12-31.....	218	188	197	1.45	1.08	7,810
September.....	539	220	269	1.98	2.21	16,000
1927-28						
October.....	1,580	383	622	4.57	5.27	38,200
November.....	6,690	440	1,810	13.3	14.84	108,000
December.....	1,990	357	861	6.33	7.30	52,900
January.....	2,960	338	1,160	8.53	9.83	71,300
February.....	982	420	671	4.93	5.32	38,600
March.....	2,740	396	1,510	11.1	12.80	92,800
April.....	2,090	889	1,200	8.82	9.84	71,400
May.....	2,110	730	1,360	10.0	11.53	83,600
June.....	688	354	486	3.57	3.98	28,900
July.....	368	193	270	1.99	2.29	16,600
August.....	190	146	167	1.23	1.42	10,300
September.....	154	118	134	.985	1.10	7,970
The year.....	6,690	118	855	6.29	85.52	621,000
1928-29						
October.....	437	127	224	1.65	1.90	13,800
November.....	1,560	166	624	4.59	5.12	37,100
December.....	2,280	341	740	5.44	6.27	45,500
January.....	790	302	441	3.24	3.74	27,100
February.....	306	215	254	1.87	1.95	14,100
March.....	1,610	240	638	4.69	5.41	39,200
April.....	1,660	492	1,060	7.79	8.69	63,100
May.....	2,010	950	1,500	11.0	12.68	92,200
June.....	1,560	614	999	7.35	8.20	59,400
July.....	568	194	308	2.26	2.61	18,900
August.....	191	132	158	1.16	1.34	9,720
September.....	132	113	123	.904	1.01	7,320
The year.....	2,280	113	590	4.34	58.92	427,000
1929-30						
October.....	124	105	113	.831	.96	6,950
November.....	113	96	102	.750	.84	6,070
December.....	2,990	94	739	5.43	6.26	45,400
January.....	858	276	497	3.58	4.13	29,900
February.....	4,290	695	1,880	13.8	14.37	104,000
March.....	1,560	413	847	6.23	7.18	52,100
April.....	1,480	872	1,110	8.16	9.10	66,000
May.....	1,340	505	750	5.51	6.35	46,100
June.....	669	244	418	3.07	3.42	24,900
July.....	237	147	183	1.35	1.56	11,300
August.....	147	128	136	1.00	1.15	8,360
September.....	147	118	126	.926	1.03	7,500
The year.....	4,290	94	566	4.16	56.35	409,000
1930-31						
October.....	237	113	145	1.07	1.23	8,920
November.....	359	120	211	1.55	1.73	12,600
December.....	499	237	313	2.30	2.65	19,200
January.....	2,630	248	1,010	7.43	8.57	62,100
February.....	-	-	*1,000	7.35	7.65	55,500
March.....	3,720	639	1,500	11.0	12.68	92,200
April.....	4,430	940	1,720	12.6	14.06	102,000
May.....	2,080	506	1,040	7.65	8.82	64,000
June.....	828	297	391	2.88	3.21	23,300
July.....	408	180	255	1.88	2.17	15,700
August.....	177	131	153	1.12	1.29	9,410
September.....	180	115	132	.971	1.08	7,860
The year.....	4,430	113	653	4.80	65.14	473,000

*Estimated.

Monthly discharge of Muddy River near Cougar--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	1,280	118	325	2.39	2.76	20,000
November.....	1,100	413	755	5.55	6.19	44,900
December.....	3,010	293	989	7.27	8.38	60,800
January.....	2,110	518	1,030	7.57	8.73	65,300
February.....	4,780	301	887	6.52	7.03	51,000
March.....	4,010	823	1,930	14.2	16.37	119,000
April.....	2,970	1,320	1,830	13.5	15.06	109,000
May.....	2,120	1,200	1,760	12.9	14.87	108,000
June.....	2,420	1,120	1,470	10.8	12.05	87,500
July.....	1,040	293	590	4.34	5.00	36,300
August.....	290	190	233	1.71	1.97	14,300
September.....	196	159	175	1.29	1.44	10,400
The year.....	4,780	118	998	7.34	99.85	724,000
1932-33						
October.....	349	135	194	1.43	1.65	11,900
November.....	3,160	582	1,820	13.4	14.95	108,000
December.....	3,230	562	1,120	8.24	9.50	68,900
January.....	2,840	446	1,080	7.94	9.15	66,400
February.....	-	-	*422	3.10	3.23	25,400
March.....	1,430	-	1,040	7.65	8.82	34,000
April.....	2,240	834	1,270	9.34	10.42	75,600
May.....	-	1,430	*1,820	13.4	15.45	112,000
June.....	-	1,700	*2,340	17.2	19.19	139,000
July.....	-	-	*1,130	8.31	9.58	69,500
August.....	-	-	*438	3.22	3.71	26,900
September.....	612	-	*354	2.60	2.90	21,100
The year.....	-	135	1,090	8.01	108.55	787,000
1933-34						
October.....	-	-	*750	5.51	6.35	46,120
November.....	3,490	560	*1,059	7.79	8.69	63,030
December.....	-	-	*4,200	30.9	35.62	258,200
January.....	-	-	*2,600	19.1	22.02	159,900
February.....	-	-	*968	7.12	7.41	53,750
March.....	2,060	570	*1,159	8.62	9.82	71,250
April.....	1,200	414	694	5.10	5.69	41,310
May.....	922	292	425	3.12	3.60	26,160
June.....	286	189	232	1.71	1.91	13,820
July.....	192	138	162	1.19	1.37	9,960
August.....	138	116	124	.912	1.05	7,620
September.....	185	-	122	.897	1.00	7,290
The year.....	-	-	1,048	7.71	104.53	758,400

*Estimated.

Yearly discharge of Muddy River near Cougar

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1928.....	855	6.29	85.52	621,000	713	5.24	71.40	518,000
1929.....	590	4.34	58.92	427,000	538	3.96	53.69	389,000
1930.....	566	4.16	56.35	409,000	540	3.97	53.90	391,000
1931.....	653	4.80	65.14	473,000	770	5.66	76.86	558,000
1932.....	998	7.34	99.85	724,000	1,080	7.94	108.62	788,000
1933.....	1,090	8.01	108.55	787,000	1,330	9.78	133.11	965,000
1934.....	1,048	7.71	104.53	758,400	-	-	-	-

Swift Creek near Cougar, Wash.

Location.— Water-stage recorder, lat. 46°03'50", long. 122°11'50", in NW¼ sec. 28, T. 7 N., R. 5 E., an eighth of a mile above mouth, 1½ miles east of Peterson's ranch, and 5 miles east of Cougar. Prior to Nov. 1, 1909, staff gage at site an eighth of a mile upstream.

Drainage area.— 26 square miles.

Records available.— July to October 1909, June 1924 to November 1933.

Extremes.— Maximum discharge recorded, 1,900 second-feet at midnight Nov. 24, 1927; minimum recorded, 80 second-feet Sept. 17, 21, Oct. 7, 1924, Oct. 20, 1931.

Remarks.— No diversion or regulation.

Monthly discharge of Swift Creek near Cougar

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1924						
June 18-50	110	98	102	3.92	1.90	2,630
July.....	102	87	92.9	3.57	4.12	5,710
August.....	-	84	*93.9	3.61	4.16	5,770
September.....	142	80	98.9	3.80	4.24	5,880
The period.....	-	-	-	-	-	20,000
1924-25						
October.....	276	80	128	4.92	5.67	7,870
November.....	455	150	248	9.54	10.64	14,800
December.....	540	-	243	9.35	10.78	14,900
January.....	720	161	306	11.80	13.60	18,800
February.....	1,150	191	402	15.50	16.14	22,300
March.....	231	185	201	7.73	8.91	12,400
April.....	281	193	227	8.73	9.74	13,500
May.....	258	196	229	8.81	10.16	14,100
June.....	258	166	188	7.23	8.07	11,200
July.....	169	151	159	6.12	7.06	9,780
August.....	151	127	142	5.46	6.50	8,730
September.....	125	106	116	4.46	4.98	6,900
The year.....	1,150	80	214	8.23	112.05	155,000
1925-26						
October.....	123	112	116	4.46	5.14	7,130
November.....	320	114	160	6.15	6.86	9,520
December.....	680	159	250	9.62	11.09	15,400
January.....	233	150	172	6.62	7.63	10,600
February.....	590	159	272	10.5	10.93	15,100
March.....	248	176	202	7.77	8.96	12,400
April.....	198	147	168	6.46	7.21	10,000
May.....	212	147	179	6.88	7.93	11,000
June.....	163	133	144	5.54	6.18	8,570
July.....	133	119	*125	4.81	5.54	7,690
August.....	145	106	113	4.35	5.02	6,950
September.....	203	100	121	4.65	5.19	7,200
The year.....	680	100	168	6.46	87.68	122,000
1926-27						
October.....	855	129	204	7.85	9.05	12,500
November.....	505	140	227	8.73	9.74	13,500
December.....	455	159	217	8.35	9.63	13,300
January.....	560	163	246	9.46	10.91	15,100
February.....	552	176	276	10.6	11.04	15,300
March.....	276	176	209	8.04	9.27	12,900
April.....	266	176	198	7.62	8.50	11,800
May.....	335	208	247	9.50	10.95	15,200
June.....	450	199	246	9.46	10.56	14,600
July.....	199	149	171	6.58	7.59	10,500
August.....	160	123	137	5.27	6.08	8,420
September.....	208	116	144	5.54	6.18	8,570
The year.....	855	116	210	8.08	109.50	152,000
1927-28						
October.....	450	142	191	7.35	8.47	11,700
November.....	1,210	155	349	13.4	14.95	20,800
December.....	-	152	*214	8.23	9.49	13,200
January.....	-	-	*259	9.96	11.48	15,900
February.....	-	160	205	7.88	8.50	11,800
March.....	650	155	291	11.2	12.91	17,900
April.....	-	231	303	11.7	13.05	18,000
May.....	406	273	308	11.8	13.60	18,900
June.....	262	176	224	8.62	9.62	13,300
July.....	190	161	171	6.58	7.59	10,500
August.....	164	118	143	5.50	6.34	8,790
September.....	159	102	117	4.50	5.02	6,960
The year.....	1,210	102	231	8.88	121.02	168,000

*Estimated.

Monthly discharge of Swift Creek near Cougar--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	266	118	161	6.19	7.14	9,900
November.....	386	119	181	6.96	7.76	10,800
December.....	410	112	182	7.00	8.07	11,200
January.....	303	-	165	6.35	7.32	10,100
February.....	134	114	120	4.62	4.81	6,660
March.....	-	124	163	6.27	7.23	10,000
April.....	263	139	192	7.38	8.23	11,400
May.....	270	188	217	8.35	9.65	13,300
June.....	303	180	213	8.19	9.14	12,700
July.....	177	144	158	6.08	7.01	9,720
August.....	142	117	129	4.96	5.72	7,930
September.....	116	102	108	4.15	4.65	6,430
The year.....	410	102	166	6.38	86.69	120,000
1929-30						
October.....	111	95	98.8	3.80	4.38	6,080
November.....	99	92	94.5	3.63	4.05	5,620
December.....	464	91	178	6.85	7.90	10,900
January.....	204	-	126	4.85	5.59	7,750
February.....	495	182	298	11.5	11.98	16,600
March.....	347	140	191	7.35	8.47	11,700
April.....	224	164	187	7.19	8.02	11,100
May.....	283	146	174	6.69	7.71	10,700
June.....	182	132	148	5.69	6.35	8,810
July.....	131	107	119	4.58	5.28	7,320
August.....	107	98	102	3.92	4.52	6,270
September.....	101	94	96.1	3.70	4.13	5,720
The year.....	495	91	150	5.77	78.38	109,000
1930-31						
October.....	122	94	97.9	3.77	4.35	6,020
November.....	162	93	114	4.38	4.89	6,780
December.....	175	101	121	4.65	5.36	7,440
January.....	343	104	178	6.85	7.90	10,900
February.....	553	120	178	6.85	7.13	9,890
March.....	1,050	140	252	9.69	11.17	15,500
April.....	593	190	258	9.92	11.07	15,400
May.....	232	153	187	7.19	8.29	11,500
June.....	235	136	152	5.85	6.53	9,040
July.....	153	114	127	4.88	5.63	7,810
August.....	114	97	104	4.00	4.61	6,400
September.....	125	92	95.7	3.68	4.11	5,690
The year.....	1,050	92	155	5.96	81.04	112,000
1931-32						
October.....	568	81	145	5.58	6.43	8,920
November.....	281	118	188	7.23	8.07	11,200
December.....	364	109	182	7.00	8.07	11,200
January.....	510	131	208	8.00	9.22	12,800
February.....	850	101	189	7.27	7.84	10,900
March.....	804	173	346	13.3	15.33	21,300
April.....	530	278	335	12.9	14.39	19,900
May.....	343	282	306	11.8	13.60	18,800
June.....	-	275	307	11.8	13.17	18,300
July.....	446	209	266	10.2	11.76	16,400
August.....	212	160	185	7.12	8.21	11,400
September.....	158	133	144	5.54	6.18	8,570
The year.....	850	81	234	9.00	122.27	170,000
1932-33						
October.....	264	123	159	6.12	7.06	9,780
November.....	760	215	380	14.6	16.29	22,600
December.....	726	202	307	11.8	13.60	18,900
January.....	765	185	310	11.9	13.72	19,100
February.....	221	148	171	6.58	6.85	9,500
March.....	390	163	238	9.15	10.55	14,600
April.....	263	176	205	7.88	8.79	12,200
May.....	386	212	281	10.8	12.45	17,300
June.....	732	302	395	15.2	16.96	23,500
July.....	357	259	317	12.2	14.07	19,500
August.....	314	185	233	8.96	10.33	14,300
September.....	287	168	203	7.81	8.71	12,100
The year.....	765	123	267	10.3	139.38	193,000

Monthly discharge of Swift Creek near Cougar--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933						
October.....	609	146	260	10.0	11.53	16,000
November.....	817	-	246	9.46	10.56	14,600
The period.....	-	-	-	-	-	30,600

Yearly discharge of Swift Creek near Cougar

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1925.....	214	8.23	112.05	155,000	207	7.96	108.05	150,000
1926.....	168	6.46	87.68	122,000	178	6.85	93.01	129,000
1927.....	210	8.08	109.50	152,000	218	8.38	113.99	158,000
1928.....	231	8.88	121.02	168,000	212	8.15	111.08	154,000
1929.....	166	6.38	86.69	120,000	153	5.88	80.05	111,000
1930.....	150	5.77	78.38	109,000	147	5.65	76.65	106,000
1931.....	155	5.96	81.04	112,000	171	6.58	89.01	123,000
1932.....	234	9.00	122.27	170,000	261	10.0	136.65	190,000
1933.....	267	10.3	139.38	193,000	-	-	-	-

Canyon Creek near Amboy, Wash.

Location.- Water-stage recorder, lat. 45°56', long. 122°20', in SW¼ sec. 4, T. 5 N., R. 4 E., at wagon bridge, 2 miles above mouth, and 6 miles northeast of Amboy.

Drainage area.- 62 square miles.

Records available.- July 1922 to September 1934.

Extremes.- Maximum discharge, 11,700 second-feet at 11:45 p.m. Dec. 21, 1933; minimum daily discharge, 12 second-feet Sept. 8, 1934.

Remarks.- No diversion or regulation.

Monthly discharge of Canyon Creek near Amboy

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1922						
July 25-31.....	47	43	44.9	0.724	0.19	623
August.....	79	35	43.1	.695	.80	2,650
September.....	170	39	66.6	1.07	1.19	3,960
The period.....	-	-	-	-	-	7,230
1922-23						
October.....	700	50	186	3.00	3.46	11,400
November.....	480	122	242	3.90	4.35	14,400
December.....	8,000	110	1,330	21.5	24.79	81,800
January.....	7,430	240	2,190	35.3	40.70	135,000
February.....	541	122	235	3.79	3.95	13,100
March.....	1,000	346	562	9.06	10.44	34,600
April.....	715	276	427	6.89	7.69	25,400
May.....	541	150	290	4.68	5.40	17,800
June.....	402	92	187	3.02	3.37	11,100
July.....	670	55	137	2.21	2.55	8,420
August.....	62	31	40.1	.647	.75	2,470
September.....	34	19	23.6	.381	.43	1,400
The year.....	8,000	19	493	7.95	107.88	357,000

Monthly discharge of Canyon Creek near Amboy--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1923-24						
October.....	383	19	64.3	1.04	1.20	3,950
November.....	1,350	30	212	3.42	3.82	12,600
December.....	4,350	245	922	14.9	17.18	56,700
January.....	2,400	208	539	8.69	10.02	33,100
February.....	3,360	388	1,030	16.6	17.90	59,200
March.....	540	127	229	3.69	4.25	14,100
April.....	501	155	286	4.61	5.14	17,000
May.....	216	66	124	2.00	2.31	7,620
June.....	116	41	56.1	.905	1.01	3,340
July.....	40	30	35.0	.565	.65	2,150
August.....	82	27	34.1	.550	.63	2,100
September.....	112	25	40.3	.650	.73	2,400
The year.....	4,350	19	295	4.76	64.84	214,000
1924-25						
October.....	1,530	114	332	5.35	6.17	20,400
November.....	2,180	324	982	15.8	17.63	58,400
December.....	3,200	-	912	14.7	16.95	56,100
January.....	3,250	340	1,350	21.8	25.13	83,000
February.....	4,570	399	1,270	20.5	21.35	70,500
March.....	715	273	429	6.92	7.98	26,400
April.....	903	262	418	6.74	7.52	24,900
May.....	347	154	247	3.98	4.59	15,200
June.....	326	96	203	3.27	3.65	12,100
July.....	96	38	61.1	.985	1.14	3,760
August.....	50	26	31.9	.515	.59	1,960
September.....	40	20	23.2	.374	.42	1,380
The year.....	4,570	20	517	8.34	113.12	374,000
1925-26						
October.....	56	17	22.8	.368	.42	1,400
November.....	761	20	238	3.84	4.28	14,200
December.....	3,140	301	825	13.3	15.33	50,700
January.....	832	239	451	7.27	8.38	27,700
February.....	3,690	384	1,030	16.6	17.29	57,200
March.....	603	176	306	4.94	5.70	18,800
April.....	243	104	162	2.61	2.91	9,640
May.....	412	98	284	4.58	5.28	17,500
June.....	238	57	122	1.97	2.20	7,260
July.....	55	29	38.8	.626	.72	2,390
August.....	99	23	39.5	.637	.73	2,430
September.....	976	29	169	2.73	3.05	10,100
The year.....	3,690	17	303	4.89	66.29	219,000
1926-27						
October.....	2,360	192	477	7.69	8.87	29,300
November.....	2,770	152	706	11.4	12.72	42,000
December.....	1,500	286	663	10.7	12.34	40,800
January.....	3,580	228	791	12.8	14.76	48,600
February.....	3,300	237	999	16.1	16.77	55,500
March.....	935	279	483	7.79	8.98	29,700
April.....	628	250	349	5.63	6.28	20,800
May.....	628	294	417	6.73	7.76	25,600
June.....	650	134	288	4.65	5.19	17,100
July.....	131	52	81.3	1.31	1.51	5,000
August.....	51	33	40.5	.653	.75	2,490
September.....	1,010	52	234	3.77	4.21	13,900
The year.....	3,580	33	457	7.37	100.14	331,000
1927-28						
October.....	2,250	196	538	8.68	10.01	33,100
November.....	6,860	267	1,290	20.8	23.21	78,800
December.....	1,570	147	418	6.74	7.77	25,700
January.....	3,640	200	849	13.7	15.79	52,200
February.....	484	168	280	4.52	4.88	16,100
March.....	3,080	149	896	14.5	16.72	55,100
April.....	1,430	388	676	10.9	12.16	40,200
May.....	1,280	155	359	5.79	6.68	22,100
June.....	143	72	103	1.66	1.85	6,130
July.....	212	53	95.2	1.54	1.78	5,850
August.....	52	29	38.7	.624	.72	2,380
September.....	83	23	31.2	.503	.56	1,860
The year.....	6,860	23	465	7.50	102.13	338,000

Monthly discharge of Canyon Creek near Amboy--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1928-29						
October.....	746	24	265	4.27	4.92	16,300
November.....	2,200	98	452	7.29	8.13	26,900
December.....	1,800	172	527	8.50	9.80	32,400
January.....	-	172	399	6.44	7.42	24,500
February.....	554	-	217	3.50	3.64	12,100
March.....	1,250	364	596	9.61	11.08	36,600
April.....	2,100	264	611	9.85	10.99	36,400
May.....	608	211	391	6.31	7.28	24,000
June.....	666	147	270	4.35	4.85	16,100
July.....	138	50	80.9	1.30	1.50	4,970
August.....	48	33	37.8	.610	.70	2,320
September.....	33	26	28.2	.455	.51	1,680
The year.....	2,200	24	324	5.23	70.82	234,000
1929-30						
October.....	36	26	27.6	.445	.51	1,700
November.....	35	25	26.7	.431	.48	1,590
December.....	2,050	25	496	8.00	9.22	30,500
January.....	687	-	255	4.11	4.74	15,700
February.....	2,500	345	1,340	21.6	22.49	74,400
March.....	1,150	130	392	6.32	7.29	24,100
April.....	337	170	245	3.95	4.41	14,600
May.....	1,120	144	311	5.02	5.79	19,100
June.....	329	77	167	2.69	3.00	9,940
July.....	74	37	50.1	.808	.93	3,080
August.....	38	25	30.6	.494	.57	1,880
September.....	34	24	26.5	.427	.48	1,580
The year.....	2,500	24	274	4.42	59.91	198,000
1930-31						
October.....	167	24	50.0	.806	.93	3,070
November.....	649	42	238	3.84	4.28	14,200
December.....	492	110	238	3.84	4.43	14,600
January.....	976	153	588	9.48	10.93	36,200
February.....	1,270	135	366	5.90	6.14	20,300
March.....	7,290	267	887	14.3	16.49	54,500
April.....	3,880	200	665	10.7	11.94	39,600
May.....	219	69	136	2.19	2.52	8,360
June.....	577	53	147	2.37	2.64	8,750
July.....	219	44	86.5	1.40	1.61	5,320
August.....	44	26	32.8	.529	.61	2,020
September.....	91	27	34.3	.553	.62	2,040
The year.....	7,290	24	289	4.66	63.14	209,000
1931-32						
October.....	2,250	31	290	4.68	5.40	17,800
November.....	2,460	206	782	12.6	14.06	46,500
December.....	1,910	158	582	9.39	10.83	35,800
January.....	2,490	222	771	12.4	14.30	47,400
February.....	4,540	142	649	10.5	11.32	37,500
March.....	4,440	-	1,610	26.0	29.98	99,000
April.....	1,170	474	720	11.6	12.94	42,800
May.....	560	259	370	5.97	6.88	22,800
June.....	310	117	209	3.37	3.76	12,400
July.....	170	48	64.0	1.35	1.56	5,160
August.....	51	40	45.3	.698	.80	2,660
September.....	42	22	28.7	.463	.52	1,710
The year.....	4,540	22	512	8.26	112.35	371,000
1932-33						
October.....	-	19	98.6	1.59	1.83	6,060
November.....	-	297	*1,080	17.4	19.41	64,300
December.....	3,170	175	948	15.3	17.64	58,300
January.....	-	228	996	16.1	18.56	61,200
February.....	1,440	191	438	7.06	7.35	24,300
March.....	-	421	997	16.1	18.56	61,300
April.....	-	-	577	9.31	10.39	34,300
May.....	1,050	498	687	11.1	12.80	42,200
June.....	2,680	289	660	10.6	11.83	39,300
July.....	262	76	163	2.63	3.03	10,000
August.....	159	45	64.4	1.04	1.20	3,960
September.....	774	45	227	3.66	4.08	13,500
The year.....	-	19	578	9.32	126.68	419,000

*Estimated.

Monthly discharge of Canyon Creek near Amboy--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1933-34						
October.....	2,970	87	610	9.84	11.34	37,500
November.....	2,490	163	475	7.66	8.55	28,240
December.....	9,280	-	2,770	44.7	51.53	170,300
January.....	4,750	519	1,537	24.8	28.59	94,480
February.....	466	124	273	4.40	4.58	15,180
March.....	1,960	129	643	10.4	11.99	39,530
April.....	1,640	114	321	5.18	5.78	19,100
May.....	644	98	201	3.24	3.74	12,370
June.....	95	42	58.0	.935	1.04	3,450
July.....	51	27	35.1	.566	.65	2,160
August.....	32	17	22.0	.355	.41	1,350
September.....	46	12	20.9	.337	.38	1,240
The year.....	9,280	12	587	9.47	128.58	424,900

Yearly discharge of Canyon Creek near Amboy

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1923.....	493	7.95	107.88	357,000	446	7.19	97.48	323,000
1924.....	295	4.76	64.84	214,000	380	6.13	83.39	276,000
1925.....	517	8.34	113.12	374,000	422	6.51	92.40	306,000
1926.....	303	4.89	66.29	219,000	366	5.90	80.19	286,000
1927.....	457	7.37	100.14	331,000	489	7.89	107.20	354,000
1928.....	465	7.50	102.13	338,000	382	6.16	83.99	278,000
1929.....	324	5.23	70.82	234,000	266	4.29	58.16	192,000
1930.....	274	4.42	59.91	198,000	271	4.37	59.34	197,000
1931.....	289	4.66	63.14	209,000	383	6.18	83.79	277,000
1932.....	512	8.26	112.35	371,000	551	8.89	120.94	400,000
1933.....	578	9.32	126.68	419,000	726	11.7	159.22	526,000
1934.....	587	9.47	128.58	424,900	-	-	-	-
Highest.....	587	9.47	128.58	424,900	726	11.7	159.22	526,000
Average.....	424	6.85	92.89	307,000	426	6.86	93.28	308,000
Lowest.....	274	4.42	59.91	198,000	266	4.29	58.16	192,000

East Fork of Lewis River near Heisson, Wash.

Location.- Water-stage recorder, lat. 45°50', long. 122°28', in N $\frac{1}{2}$ sec. 17, T. 4 N., R. 3 E., just above Basket Creek, $\frac{1}{2}$ mile northeast of Heisson.

Drainage area.- 124 square miles.

Records available.- September 1929 to September 1935.

Extremes.- Maximum discharge recorded, 15,600 second-feet at 2 a.m. Dec. 22, 1933;

minimum recorded, 33 second-feet Sept. 3, 1934.

Remarks.- No diversion or regulation.

Monthly discharge of East Fork of Lewis River near Heisson

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	88	46	54.2	0.437	0.50	3,330
November.....	76	47	54.8	.442	.49	3,260
December.....	4,540	47	1,010	8.15	9.40	62,100
January.....	1,410	-	615	4.96	5.72	37,800
February.....	3,710	725	2,130	17.2	17.91	118,500
March.....	1,870	315	731	5.90	6.80	44,900
April.....	1,640	320	455	3.67	4.10	27,100
May.....	2,100	282	557	4.49	5.18	34,200
June.....	680	163	334	2.69	3.00	19,900
July.....	160	78	109	.879	1.01	6,700
August.....	77	55	65.6	.529	.61	4,030
September.....	95	50	59.7	.481	.54	3,550
The year.....	4,540	46	505	4.07	55.26	365,000

Monthly discharge of East Fork of Lewis River near Heisson--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	-	54	*145	11.7	1.35	8,920
November.....	1,240	108	488	3.94	4.40	29,000
December.....	845	232	437	3.52	4.06	26,900
January.....	-	-	*1,030	8.31	9.58	63,300
February.....	2,660	264	672	5.42	5.64	37,300
March.....	12,300	450	1,460	11.8	13.60	89,800
April.....	7,000	340	1,200	9.68	10.80	71,400
May.....	334	112	198	1.60	1.84	12,200
June.....	925	90	282	2.27	2.53	16,800
July.....	312	79	141	1.14	1.31	8,670
August.....	76	50	62.8	.506	.58	3,860
September.....	292	50	77.3	.623	.70	4,600
The year.....	12,300	50	515	4.15	56.39	373,000
1931-32						
October.....	3,500	59	514	4.15	4.78	31,600
November.....	3,740	339	1,340	10.8	12.05	79,700
December.....	3,000	-	1,080	8.71	10.04	66,400
January.....	4,580	451	1,480	11.9	13.72	91,000
February.....	5,620	339	1,140	9.19	9.91	65,600
March.....	7,350	765	2,430	19.6	22.60	149,000
April.....	2,100	890	1,340	10.8	12.05	79,700
May.....	1,100	330	542	4.37	5.04	33,300
June.....	325	108	219	1.77	1.98	13,000
July.....	169	66	94.6	.763	.88	5,820
August.....	85	53	61.3	.494	.57	3,770
September.....	77	44	50.4	.406	.45	3,000
The year.....	7,350	44	858	6.92	94.07	622,000
1932-33						
October.....	659	42	191	1.54	1.78	11,700
November.....	3,630	528	1,800	14.5	16.18	107,000
December.....	4,960	339	1,740	14.0	16.14	107,000
January.....	6,610	493	1,780	14.4	16.60	109,000
February.....	2,400	-	887	7.15	7.44	49,300
March.....	3,350	415	1,650	13.3	15.33	101,000
April.....	1,600	546	949	7.65	8.54	56,500
May.....	1,980	958	1,250	10.1	11.64	76,900
June.....	3,440	364	914	7.37	8.22	54,400
July.....	-	-	*203	1.64	1.89	12,500
August.....	276	53	95.8	.773	.89	5,890
September.....	1,190	68	365	2.94	3.28	21,700
The year.....	6,610	42	*986	7.95	107.93	713,000
1933-34						
October.....	5,180	139	925	7.46	8.60	56,890
November.....	4,170	336	886	7.15	7.98	52,700
December.....	13,500	364	3,957	31.9	36.78	243,300
January.....	5,950	855	2,156	17.4	20.06	132,500
February.....	750	251	424	3.42	3.56	23,560
March.....	2,530	248	894	7.21	8.31	54,990
April.....	2,120	234	541	4.36	4.86	32,160
May.....	972	157	328	2.65	3.06	20,200
June.....	161	85	113	.911	1.02	6,730
July.....	105	56	71.7	.578	.67	4,410
August.....	71	40	48.5	.391	.45	2,980
September.....	227	35	58.1	.469	.52	3,460
The year.....	13,500	35	876	7.06	95.87	633,900
1934-35						
October.....	3,840	50	573	4.62	5.33	35,230
November.....	5,430	495	1,981	16.0	17.85	117,900
December.....	6,940	535	1,839	14.8	17.06	113,100
January.....	3,710	373	1,363	11.2	12.91	85,040
February.....	1,620	460	834	6.73	7.01	46,300
March.....	3,200	430	1,045	8.43	9.72	64,270
April.....	1,350	688	902	7.27	8.11	53,650
May.....	842	256	440	3.55	4.09	27,040
June.....	253	96	163	1.31	1.46	9,710
July.....	240	64	99.4	.802	.92	6,110
August.....	106	42	57.2	.461	.53	3,520
September.....	125	37	48.2	.389	.43	2,870
The year.....	6,940	37	780	6.29	85.42	564,700

*Estimated.

Yearly discharge of East Fork of Lewis River near Heisson

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1930.....	505	4.07	55.26	365,000	499	4.02	54.68	361,000
1931.....	515	4.15	56.39	373,000	671	5.41	73.45	486,000
1932.....	858	6.92	94.07	622,000	923	7.44	101.30	670,000
1933.....	986	7.95	107.93	713,000	1,160	9.35	127.19	840,000
1934.....	876	7.06	95.87	633,900	756	6.10	82.75	547,200
1935.....	780	6.29	85.42	564,700	-	-	-	-

KALAMA RIVER BASIN

Kalama River near Kalama, Wash.

Location.— Staff gage, lat. 46°01', long. 122°44', in sec. 7, T. 6 N., R. 1 E., 150 feet below power plant of Puget Sound Power & Light Co. and 6 miles east of Kalama.

Drainage area.— 184 square miles.

Records available.— July 1911 to September 1913 (fragmentary), August 1916 to September 1931.

Extremes.— Maximum discharge observed, 13,200 second-feet at 2 a.m. Nov. 25, 1927; minimum observed, 156 second-feet Dec. 4, 1929.

Remarks.— No diversions for irrigation. Slight fluctuation caused by operation of power plant above gage.

Monthly discharge of Kalama River near Kalama

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	765	250	351	1.91	2.20	21,600
November.....	2,410	665	1,250	6.79	7.58	74,400
December.....	5,770	-	1,470	7.99	9.21	90,400
January.....	3,880	552	1,210	6.58	7.59	74,400
February.....	1,700	465	902	4.90	5.28	51,900
March.....	4,660	445	1,090	5.92	6.82	67,000
April.....	3,750	990	1,620	8.80	9.82	96,400
May.....	1,110	600	789	4.29	4.95	48,500
June.....	1,110	326	653	3.55	3.96	38,900
July.....	600	259	330	1.79	2.06	20,300
August.....	309	179	202	1.10	1.27	12,400
September.....	2,930	166	1,210	6.58	7.34	72,000
The year.....	5,770	166	920	5.00	68.08	668,000
1920-21						
October.....	4,660	783	2,010	10.9	12.57	124,000
November.....	4,270	482	1,610	8.75	9.76	95,800
December.....	9,500	1,610	2,720	14.8	17.06	167,000
January.....	9,500	1,180	2,930	15.9	18.33	180,000
February.....	6,360	1,390	2,610	14.2	14.79	145,000
March.....	9,900	1,110	2,880	12.4	14.30	140,000
April.....	4,530	990	1,820	9.89	11.03	108,000
May.....	2,350	930	1,440	7.83	9.03	88,500
June.....	1,050	765	926	5.03	5.61	55,100
July.....	870	355	521	2.83	3.26	32,000
August.....	355	280	311	1.69	1.95	19,100
September.....	700	265	344	1.87	2.09	20,500
The year.....	9,900	265	1,620	8.80	119.78	1,180,000
1921-22						
October.....	4,140	227	775	4.21	4.85	47,700
November.....	6,360	756	2,200	12.0	13.39	131,000
December.....	6,360	760	2,290	12.4	14.30	141,000
January.....	1,270	660	759	4.12	4.75	46,700
February.....	1,480	660	1,150	6.25	6.51	63,900
March.....	3,050	970	1,400	7.61	8.77	86,100
April.....	2,950	1,210	1,660	9.02	10.06	98,800
May.....	3,050	1,090	1,670	9.08	10.47	103,000
June.....	1,860	542	1,030	6.60	6.25	61,300
July.....	520	325	390	2.12	2.44	24,000
August.....	542	277	320	1.74	2.01	19,700
September.....	475	271	359	1.95	2.18	21,400
The year.....	6,360	227	1,170	6.36	85.98	845,000

Monthly discharge of Kalama River near Kalama--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1922-23						
October.....	1,860	280	498	2.71	3.12	30,600
November.....	970	395	525	2.85	3.18	31,200
December.....	8,370	360	1,860	10.1	11.64	114,000
January.....	9,700	975	3,520	19.1	22.02	216,000
February.....	1,000	590	776	4.22	4.39	43,100
March.....	1,690	915	1,200	6.52	7.52	73,800
April.....	1,550	825	1,120	6.09	6.80	66,600
May.....	1,140	520	763	4.15	4.78	46,900
June.....	885	475	598	3.25	3.63	35,600
July.....	1,000	283	419	2.28	2.63	25,800
August.....	277	223	249	1.35	1.56	15,300
September.....	253	195	211	1.15	1.28	12,600
The year.....	9,700	195	983	5.34	72.55	712,000
1923-24						
October.....	945	190	284	1.54	1.78	17,500
November.....	1,410	200	350	1.90	2.12	20,800
December.....	4,140	435	1,250	6.79	7.83	76,900
January.....	6,660	715	1,260	6.85	7.90	77,500
February.....	4,930	1,000	2,250	12.2	13.16	129,000
March.....	1,550	520	788	4.28	4.93	48,500
April.....	1,070	542	700	3.80	4.24	41,700
May.....	590	295	415	2.26	2.61	25,500
June.....	342	229	274	1.49	1.66	16,300
July.....	223	190	207	1.12	1.29	12,700
August.....	435	171	195	1.06	1.22	12,000
September.....	455	158	205	1.11	1.24	12,200
The year.....	6,660	158	677	3.68	49.98	491,000
1924-25						
October.....	4,240	289	990	5.38	6.20	60,900
November.....	4,080	1,000	2,250	12.2	13.61	134,000
December.....	4,730	900	1,840	10.0	11.53	113,000
January.....	5,700	1,310	2,780	15.1	17.41	171,000
February.....	8,640	1,240	3,170	17.2	17.91	176,000
March.....	1,820	900	1,260	6.85	7.90	77,500
April.....	2,100	900	1,230	6.68	7.45	73,200
May.....	1,100	495	749	4.07	4.69	46,100
June.....	840	370	565	3.07	3.42	33,600
July.....	370	258	306	1.66	1.91	18,800
August.....	285	212	239	1.30	1.50	14,700
September.....	252	191	208	1.13	1.26	12,400
The year.....	8,640	191	1,290	7.01	94.79	931,000
1925-26						
October.....	270	173	193	1.05	1.21	11,900
November.....	1,900	178	689	3.74	4.17	41,000
December.....	5,980	720	1,870	10.20	11.76	115,000
January.....	1,900	630	1,160	6.30	7.26	71,300
February.....	5,560	1,170	2,510	13.60	14.16	139,000
March.....	1,820	605	1,040	5.65	6.51	64,000
April.....	1,720	412	534	2.90	3.24	31,800
May.....	1,100	395	726	3.95	4.55	44,600
June.....	580	310	398	2.16	2.41	23,700
July.....	295	233	261	1.42	1.64	16,000
August.....	632	212	246	1.34	1.54	15,100
September.....	1,240	207	329	1.79	2.00	19,600
The year.....	5,980	173	820	4.46	60.45	593,000
1926-27						
October.....	5,420	360	1,100	5.98	6.89	67,600
November.....	4,470	395	1,600	8.70	9.71	95,200
December.....	4,210	1,030	1,770	9.62	11.09	109,000
January.....	6,280	1,100	2,200	12.0	13.83	135,000
February.....	5,980	1,000	2,490	13.5	14.06	138,000
March.....	1,900	900	1,360	7.39	8.52	83,600
April.....	1,590	900	1,140	6.20	6.92	67,800
May.....	2,300	900	1,260	6.85	7.90	77,500
June.....	1,590	495	790	4.29	4.79	47,000
July.....	472	300	380	2.07	2.39	23,400
August.....	300	246	273	1.48	1.71	16,800
September.....	1,660	270	512	2.78	3.10	30,500
The year.....	6,280	246	1,230	6.68	90.91	891,000

Monthly discharge of Kalama River near Kalama--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927-28						
October.....	3,910	495	1,090	5.92	6.82	67,000
November.....	10,300	750	2,400	13.0	14.50	143,000
December.....	2,930	725	1,320	7.17	8.27	81,200
January.....	4,270	880	1,870	10.2	11.76	115,000
February.....	1,530	535	934	5.08	5.48	53,700
March.....	5,770	515	2,160	11.7	13.49	133,000
April.....	4,010	1,290	2,210	12.0	13.39	132,000
May.....	3,510	625	1,120	6.09	7.02	68,900
June.....	580	378	458	2.49	2.78	27,300
July.....	625	292	376	2.04	2.35	23,100
August.....	292	218	252	1.37	1.58	15,500
September.....	342	197	220	1.20	1.34	13,100
The year.....	10,300	197	1,200	6.52	88.78	873,000
1928-29						
October.....	1,370	208	485	2.64	3.04	29,800
November.....	3,150	276	894	4.86	5.42	53,200
December.....	4,270	455	1,190	6.47	7.46	73,200
January.....	3,150	558	1,060	5.76	6.64	65,200
February.....	1,140	415	603	3.28	3.42	33,500
March.....	2,930	880	1,300	7.07	8.15	79,900
April.....	3,560	775	1,540	8.37	9.34	91,600
May.....	1,370	580	919	4.99	5.75	56,500
June.....	1,530	455	682	3.71	4.14	40,600
July.....	455	276	340	1.85	2.13	20,900
August.....	308	213	244	1.33	1.53	15,000
September.....	218	187	200	1.09	1.22	11,900
The year.....	4,270	187	789	4.29	58.24	571,000
1929-30						
October.....	218	173	187	1.02	1.18	11,500
November.....	205	163	175	.951	1.06	10,400
December.....	4,930	156	1,190	6.47	7.46	73,200
January.....	1,700	380	722	3.92	4.52	44,400
February.....	4,400	1,230	2,560	13.9	14.47	142,000
March.....	2,560	595	1,150	6.25	7.21	70,700
April.....	1,090	620	814	4.42	4.93	48,400
May.....	2,110	480	781	4.24	4.89	48,000
June.....	725	360	472	2.57	2.87	28,100
July.....	342	231	281	1.53	1.76	17,300
August.....	231	185	203	1.10	1.27	12,500
September.....	213	165	181	.984	1.10	10,800
The year.....	4,930	156	714	3.88	52.72	517,000
1930-31						
October.....	460	170	230	1.25	1.44	14,100
November.....	840	198	488	2.65	2.96	29,000
December.....	1,230	400	573	3.11	3.58	35,200
January.....	3,170	440	1,480	8.04	9.27	91,000
February.....	4,690	480	1,170	6.36	6.62	65,000
March.....	8,550	840	1,820	9.89	11.40	112,000
April.....	6,960	780	1,760	9.57	10.68	105,000
May.....	840	360	527	2.86	3.30	32,400
June.....	1,230	325	460	2.50	2.79	27,400
July.....	480	243	315	1.71	1.97	19,400
August.....	243	188	211	1.15	1.33	13,000
September.....	400	182	212	1.15	1.28	12,600
The year.....	8,550	170	768	4.17	56.62	556,000

Yearly discharge of Kalama River near Kalama

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1917.....	1,080	5.87	79.68	784,000	1,260	6.85	92.98	912,000
1918.....	1,190	6.47	87.82	858,000	1,100	5.98	81.18	796,000
1919.....	1,200	6.52	88.50	867,000	1,150	6.25	84.84	834,000
1920.....	920	5.00	68.08	668,000	1,200	6.52	88.48	869,000
1921.....	1,620	8.80	119.78	1,180,000	1,530	8.32	112.93	1,110,000
1922.....	1,170	6.56	85.98	845,000	968	5.26	71.36	701,000
1923.....	983	5.54	72.55	712,000	899	4.89	66.34	651,000
1924.....	677	3.68	49.98	491,000	941	5.11	69.59	685,000
1925.....	1,290	7.01	94.79	931,000	1,090	5.92	80.59	791,000
1926.....	820	4.46	60.45	593,000	963	5.23	71.00	697,000
1927.....	1,230	6.68	90.91	891,000	1,260	6.85	92.81	911,000
1928.....	1,200	6.52	88.78	873,000	1,020	5.54	75.11	738,000
1929.....	789	4.29	58.24	571,000	705	3.83	52.02	510,000
1930.....	714	3.88	52.72	517,000	691	3.76	51.00	500,000
1931.....	768	4.17	56.62	556,000	-	-	-	-
Highest....	1,620	8.80	119.78	1,180,000	1,530	8.32	112.93	1,110,000
Average....	1,040	5.67	76.99	756,000	1,060	5.74	77.88	765,000
Lowest.....	677	3.68	49.98	491,000	691	3.76	51.00	500,000

COWLITZ RIVER BASIN

Cowlitz River at Packwood, Wash.

(Formerly called Cowlitz River at Lewis)

Location.-- Water-stage recorder, lat. 46°36'40", long. 121°40'45", in SE¼ sec. 16, T. 13 N., R. 9 E., half a mile above Skate Creek and half a mile northwest of Packwood.

Prior to Jan. 1, 1920, staff gage at site 1 mile upstream.

Drainage area.-- 287 square miles (revised).

Records available.-- July 1911 to December 1919, September 1929 to September 1935.

Extremes.-- Maximum discharge, 36,600 second-feet at 8:30 p.m. Dec. 21, 1933; minimum, 160 second-feet Nov. 21, 1929.

Remarks.-- No diversion or regulation.

Monthly discharge of Cowlitz River at Packwood

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919						
October.....	345	184	265	0.923	1.06	16,300
November.....	3,960	424	1,590	4.84	5.40	82,700
December.....	8,380	455	2,000	6.97	8.04	125,000
The year.....	-	-	-	-	-	222,000
1929-30						
October.....	441	224	298	1.04	1.20	18,300
November.....	272	164	201	.700	.78	12,000
December.....	2,410	180	706	2.46	2.84	43,400
January.....	1,030	336	512	1.78	2.05	31,500
February.....	4,690	990	2,230	7.77	8.09	124,000
March.....	3,400	594	1,180	4.11	4.74	72,600
April.....	3,510	1,620	2,500	8.01	8.94	137,000
May.....	4,000	1,220	2,150	7.49	8.64	132,000
June.....	3,650	1,460	2,140	7.46	8.32	127,000
July.....	1,600	741	1,120	3.90	4.50	68,900
August.....	785	468	616	2.15	2.48	37,900
September.....	563	260	431	1.50	1.67	26,600
The year.....	4,690	164	1,150	4.01	54.25	830,000

Monthly discharge of Cowlitz River at Packwood--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930-31						
October.....	629	225	354	1.23	1.42	21,800
November.....	1,170	269	599	2.09	2.33	35,600
December.....	890	499	684	2.38	2.74	42,100
January.....	6,410	504	1,650	5.75	6.63	101,000
February.....	2,760	630	1,120	3.90	4.06	62,200
March.....	4,510	820	1,310	4.56	5.26	80,600
April.....	4,690	1,030	1,900	6.62	7.39	113,000
May.....	5,040	1,340	3,050	10.6	12.22	188,000
June.....	3,690	1,140	1,860	6.48	7.23	111,000
July.....	1,140	672	860	3.00	3.46	52,900
August.....	736	457	564	1.97	2.27	34,700
September.....	606	253	381	1.33	1.48	22,700
The year.....	6,410	225	1,200	4.18	56.49	866,000
1931-32						
October.....	2,710	208	543	1.89	2.18	33,400
November.....	3,480	666	1,210	4.22	4.71	72,000
December.....	2,850	558	1,050	3.66	4.22	64,600
January.....	4,040	654	1,180	4.11	4.74	72,600
February.....	12,400	450	1,520	5.30	5.72	87,400
March.....	4,720	1,120	2,090	7.28	8.39	129,000
April.....	2,940	1,460	2,050	7.14	7.97	122,000
May.....	4,070	1,880	3,030	10.6	12.22	186,000
June.....	5,420	2,250	3,910	13.6	15.17	233,000
July.....	4,720	1,130	2,400	8.36	9.64	148,000
August.....	1,380	546	929	3.24	3.74	57,100
September.....	696	363	505	1.76	1.96	30,000
The year.....	12,400	208	1,700	5.92	80.66	1,240,000
1932-33						
October.....	1,330	309	646	2.25	2.59	39,700
November.....	13,000	1,050	3,390	11.8	13.17	202,000
December.....	8,570	650	1,580	5.51	6.35	97,200
January.....	6,570	478	1,440	5.02	5.79	88,500
February.....	586	320	396	1.38	1.44	22,000
March.....	1,150	435	796	2.77	3.19	48,900
April.....	3,560	795	1,460	5.09	5.68	86,900
May.....	5,640	1,310	2,560	8.92	10.28	157,000
June.....	9,620	3,560	5,180	18.0	20.08	308,000
July.....	6,160	2,500	4,260	14.8	17.06	262,000
August.....	2,820	740	1,690	5.89	6.79	104,000
September.....	2,440	534	939	3.27	3.65	55,900
The year.....	13,000	309	2,030	7.07	96.07	1,470,000
1933-34						
October.....	9,440	421	2,586	9.01	10.39	159,000
November.....	8,730	720	1,939	6.76	7.54	115,400
December.....	24,200	720	6,025	21.0	24.21	370,500
January.....	11,800	1,660	3,349	11.7	13.49	205,900
February.....	2,670	961	1,499	5.22	5.44	83,230
March.....	8,400	1,660	3,157	11.0	12.68	194,100
April.....	4,400	2,340	3,185	11.1	12.38	189,500
May.....	5,280	1,960	2,767	9.64	11.11	170,100
June.....	2,020	848	1,437	5.01	5.59	85,520
July.....	1,180	594	858	2.99	3.45	52,760
August.....	718	524	618	2.15	2.48	37,980
September.....	672	240	397	1.38	1.54	23,640
The year.....	24,200	240	2,331	8.12	110.30	1,688,000
1934-35						
October.....	17,100	241	1,901	6.62	7.63	116,900
November.....	15,100	1,190	3,205	11.2	12.50	190,700
December.....	5,850	891	1,679	5.85	6.74	103,200
January.....	7,090	551	1,709	5.95	6.86	105,100
February.....	3,240	954	1,617	5.63	5.86	89,820
March.....	2,200	641	954	3.32	3.83	58,690
April.....	2,090	616	1,172	4.08	4.55	69,720
May.....	4,740	1,960	2,968	10.3	11.87	182,500
June.....	6,510	2,440	3,904	13.6	15.17	232,300
July.....	3,040	1,010	1,865	6.51	7.50	114,800
August.....	963	641	769	2.75	3.17	46,530
September.....	819	473	600	2.09	2.33	35,700
The year.....	17,100	241	1,862	6.49	88.01	1,348,000

Yearly discharge of Cowlitz River at Packwood

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1912.....	1,410	4.91	66.83	1,020,000	1,390	4.84	65.88	1,010,000
1913.....	1,540	5.37	72.89	1,110,000	1,540	5.37	72.89	1,120,000
1914.....	1,390	4.84	65.70	1,010,000	1,570	5.47	74.25	1,140,000
1915.....	1,150	4.01	54.44	829,000	1,030	3.59	48.73	743,000
1916.....	2,210	7.70	104.81	1,600,000	2,030	7.07	96.23	1,470,000
1917.....	1,650	5.75	78.05	1,190,000	2,180	7.60	103.16	1,580,000
1918.....	1,950	6.79	92.17	1,420,000	1,600	5.57	75.61	1,160,000
1919.....	1,590	5.54	75.20	1,150,000	1,590	5.54	75.20	1,150,000
1920.....	1,150	4.01	54.25	830,000	1,180	4.11	55.92	856,000
1921.....	1,200	4.18	56.49	866,000	1,290	4.49	61.11	936,000
1922.....	1,700	5.92	80.66	1,240,000	1,930	6.72	91.66	1,400,000
1923.....	2,030	7.07	96.07	1,470,000	2,450	8.57	116.10	1,780,000
1924.....	2,331	8.12	110.30	1,688,000	2,008	7.00	95.03	1,454,000
1925.....	1,862	6.49	88.01	1,348,000	-	-	-	-
Highest.....	2,331	8.12	110.30	1,688,000	2,450	8.57	116.10	1,780,000
Average.....	1,650	5.76	78.28	1,200,000	1,680	5.84	79.37	1,220,000
Lowest.....	1,150	4.01	54.25	829,000	1,030	3.59	48.73	743,000

Cowlitz River at Mossy Rock, Wash.

Location.- Staff and wire-weight gages, lat. 46°33'00", long. 122°29'30", in sec. 1, T. 12 N., R. 2 E., at Harmony Bridge, 1 mile north of Mossy Rock.
Drainage area.- 1,170 square miles.
Records available.- January 1912 to September 1917 (fragmentary), March 1926 to July 1932, August 1932 to September 1935.
Extremes.- Maximum discharge observed, 81,000 second-feet at 11:30 p.m. Dec. 22, 1933; minimum observed, 630 second-feet Nov. 21-24, Dec. 3, 5-8, 1929.
Remarks.- No diversion or regulation.

Monthly discharge of Cowlitz River at Mossy Rock

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926						
March 12-31	8,120	3,800	5,220	4.46	3.32	207,000
April.....	7,060	3,350	4,690	4.01	4.47	279,000
May.....	6,040	3,200	4,000	3.42	3.94	246,000
June.....	3,800	1,950	2,550	2.18	2.43	152,000
July.....	2,080	1,240	1,620	1.38	1.59	99,600
August.....	1,700	1,090	1,300	1.11	1.28	79,900
September.....	2,900	910	1,250	1.07	1.19	74,400
The year.....	-	-	-	-	-	1,140,000
1926-27						
October.....	16,300	1,350	3,820	3.26	3.76	235,000
November.....	15,200	1,820	5,030	4.30	4.80	299,000
December.....	21,700	3,390	6,830	5.88	6.78	423,000
January.....	16,500	2,880	6,070	5.19	5.98	373,000
February.....	11,800	3,050	5,840	4.99	5.20	324,000
March.....	5,430	3,390	4,080	3.49	4.02	251,000
April.....	14,400	2,880	5,290	4.52	5.04	315,000
May.....	17,900	5,780	8,720	7.45	8.59	536,000
June.....	19,700	6,500	11,000	9.40	10.49	655,000
July.....	6,680	2,880	4,470	3.82	4.40	275,000
August.....	2,880	1,580	2,070	1.77	2.04	127,000
September.....	4,750	1,580	2,210	1.89	2.11	132,000
The year.....	21,700	1,350	5,450	4.66	63.21	3,940,000

Monthly discharge of Cowlitz River at Mossy Rock--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927-28						
October.....	18,700	2,710	5,580	4.77	5.50	343,000
November.....	29,600	2,880	10,700	9.15	10.21	637,000
December.....	20,800	2,430	6,830	5.84	6.73	420,000
January.....	26,700	2,710	9,900	8.46	9.75	609,000
February.....	4,240	2,570	3,500	2.99	3.22	201,000
March.....	12,800	2,430	6,580	5.62	6.48	405,000
April.....	9,300	4,560	6,270	5.36	5.98	375,000
May.....	13,800	6,580	10,500	8.97	10.34	646,000
June.....	5,900	3,920	4,920	4.21	4.70	293,000
July.....	4,720	2,300	3,350	2.85	3.29	205,000
August.....	2,170	1,490	1,780	1.52	1.75	109,000
September.....	1,490	950	1,200	1.04	1.16	72,600
The year.....	29,600	950	5,940	5.08	69.11	4,310,000
1928-29						
October.....	4,130	1,050	2,200	1.88	2.17	135,000
November.....	4,610	1,330	2,490	2.13	2.38	148,000
December.....	5,950	1,560	2,860	2.44	2.81	176,000
January.....	3,680	1,680	2,460	2.10	2.42	151,000
February.....	2,360	1,280	1,620	1.38	1.44	90,000
March.....	7,170	2,500	4,030	3.44	3.97	248,000
April.....	5,780	3,380	4,500	3.85	4.30	268,000
May.....	17,300	5,780	11,100	9.49	10.94	682,000
June.....	13,300	6,460	9,660	8.26	9.22	575,000
July.....	5,950	2,360	3,610	3.09	3.56	222,000
August.....	2,500	1,380	1,880	1.61	1.86	116,000
September.....	1,680	870	1,180	1.01	1.13	70,200
The year.....	17,300	870	3,980	3.40	46.20	2,880,000
1929-30						
October.....	1,140	790	909	.777	.90	55,900
November.....	790	630	710	.607	.68	42,200
December.....	8,040	630	2,930	2.50	2.88	180,000
January.....	4,330	-	2,340	2.00	2.31	144,000
February.....	19,100	2,640	9,480	8.10	8.44	526,000
March.....	11,000	2,500	4,760	4.07	4.69	293,000
April.....	8,600	5,700	7,000	5.98	6.67	417,000
May.....	9,380	3,850	5,620	4.80	5.53	346,000
June.....	6,420	3,080	4,490	3.84	4.28	267,000
July.....	3,380	1,700	2,410	2.06	2.38	148,000
August.....	1,700	1,130	1,430	1.22	1.41	87,900
September.....	1,210	775	1,010	.863	.96	60,100
The year.....	19,100	630	3,550	3.03	41.13	2,570,000
1930-31						
October.....	2,500	740	1,140	.974	1.12	70,100
November.....	2,930	890	1,540	1.32	1.47	91,600
December.....	2,220	1,490	1,820	1.56	1.80	112,000
January.....	14,700	1,390	4,960	4.24	4.89	305,000
February.....	10,200	2,500	4,470	3.82	3.98	248,000
March.....	13,100	2,220	4,940	4.22	4.86	304,000
April.....	28,000	3,970	8,040	6.87	7.66	478,000
May.....	11,000	3,670	6,750	5.77	6.65	415,000
June.....	5,470	2,640	3,660	3.13	3.49	218,000
July.....	2,780	1,590	1,990	1.70	1.96	122,000
August.....	1,590	1,080	1,320	1.13	1.30	81,200
September.....	1,410	840	1,040	.889	.99	61,900
The year.....	28,000	740	3,460	2.96	40.17	2,510,000
1931-32						
October.....	7,010	760	1,550	1.32	1.52	95,300
November.....	5,770	2,000	3,310	2.83	3.16	197,000
December.....	9,640	1,590	3,520	3.01	3.47	216,000
January.....	14,200	2,640	4,760	4.07	4.69	293,000
February.....	29,200	1,790	4,950	4.23	4.56	285,000
March.....	19,200	5,150	9,890	8.45	9.74	608,000
April.....	11,700	5,790	8,280	7.08	7.90	493,000
May.....	13,300	6,430	10,100	8.63	9.95	621,000
June.....	15,200	6,750	9,690	8.28	9.24	577,000
July.....	8,740	-	4,700	4.02	4.64	289,000
August.....	-	-	*1,900	1.62	1.87	117,000
September.....	-	-	*1,090	.932	1.04	64,900
The year.....	29,200	-	5,310	4.54	61.78	3,860,000

*Computed on basis of records for Cowlitz River at Packwood and near Castle Rock, Cispus River near Randle, and Toutle River near Castle Rock.

Monthly discharge of Cowlitz River at Mossy Rock--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	-	-	*1,580	1.35	1.56	97,200
November.....	-	-	*10,100	8.63	9.63	601,000
December.....	-	-	*6,340	5.42	6.25	390,000
January.....	-	-	*6,710	5.74	6.62	413,000
February.....	-	-	*2,640	2.26	2.35	147,000
March.....	6,110	-	4,395	3.76	4.34	270,200
April.....	11,300	4,040	5,762	4.92	5.49	342,800
May.....	15,400	5,150	8,271	7.07	8.15	508,600
June.....	22,700	9,560	14,140	12.1	13.50	841,100
July.....	10,500	4,580	7,690	6.57	7.57	472,800
August.....	4,750	2,190	3,244	2.77	3.19	199,500
September.....	4,580	1,670	2,352	2.01	2.24	139,900
The year.....	-	-	6,108	5.22	70.89	4,423,000
1933-34						
October.....	18,500	1,800	5,644	4.99	5.75	359,300
November.....	22,700	3,140	6,590	5.46	6.09	380,300
December.....	71,500	3,000	24,520	21.0	24.21	1,506,000
January.....	40,800	8,140	15,800	13.5	15.56	971,000
February.....	12,100	3,660	6,255	5.35	5.57	347,400
March.....	14,600	4,250	8,147	6.96	8.02	500,900
April.....	11,400	5,300	7,106	6.07	6.77	422,900
May.....	8,140	3,520	4,660	4.15	4.78	296,800
June.....	3,660	1,750	2,808	2.40	2.68	167,100
July.....	2,530	1,310	1,809	1.55	1.79	111,300
August.....	1,730	1,190	1,560	1.16	1.34	83,640
September.....	1,430	857	1,090	.932	1.04	64,840
The year.....	71,300	857	7,204	6.16	83.60	5,216,000
1934-35						
October.....	24,200	804	3,712	3.17	3.66	228,200
November.....	30,000	5,300	9,647	8.25	9.20	574,000
December.....	19,300	4,700	7,772	6.64	7.66	477,900
January.....	16,600	3,130	6,661	5.66	6.76	421,800
February.....	11,200	4,400	6,597	5.47	5.70	355,300
March.....	6,780	2,870	4,263	3.64	4.20	265,100
April.....	6,440	3,000	4,716	4.03	4.50	280,600
May.....	10,800	6,440	8,100	6.92	7.98	493,100
June.....	11,700	5,300	7,797	6.66	7.43	464,000
July.....	5,780	2,390	3,962	3.39	3.91	243,600
August.....	2,390	1,320	1,793	1.53	1.76	110,300
September.....	1,620	920	1,262	1.08	1.20	75,070
The year.....	50,000	804	5,513	4.71	63.96	3,991,000

*Computed on basis of records for Cowlitz River at Packwood and near Castle Rock, Cispus River near Randle, and Toutle River near Castle Rock.

Yearly discharge of Cowlitz River at Mossy Rock

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1913.....	*6,050	5.17	70.18	4,380,000	*5,690	4.86	65.97	4,120,000
1914.....	4,480	3.83	51.96	3,240,000	4,710	4.03	54.69	3,410,000
1915.....	3,050	2.61	35.40	2,210,000	3,070	2.62	35.67	2,220,000
1916.....	6,730	5.75	78.33	4,690,000	6,190	5.29	71.92	4,490,000
1917.....	5,170	4.42	59.94	3,740,000	-	-	-	-
1927.....	5,450	4.66	63.21	3,940,000	6,060	5.18	70.31	4,390,000
1928.....	5,940	5.08	69.11	4,310,000	4,650	3.97	54.03	3,370,000
1929.....	3,980	3.40	46.20	2,880,000	3,730	3.19	43.30	2,700,000
1930.....	3,550	3.03	41.13	2,570,000	3,540	3.03	41.06	2,560,000
1931.....	3,460	2.96	40.17	2,510,000	3,790	3.24	43.93	2,740,000
1932.....	5,310	4.54	61.78	3,860,000	6,110	5.22	71.07	4,440,000
1933.....	6,108	5.22	70.89	4,423,000	7,711	6.59	89.50	5,582,000
1934.....	7,204	6.16	83.60	5,216,000	5,868	5.02	68.07	4,248,000
1935.....	5,513	4.71	63.96	3,991,000	-	-	-	-
Highest.....	7,204	6.16	83.60	5,216,000	7,711	6.59	89.50	5,582,000
Average.....	5,140	4.40	59.70	3,730,000	5,090	4.35	59.13	3,690,000
Lowest.....	3,050	2.61	35.40	2,210,000	3,070	2.62	35.67	2,220,000

*Computed on basis of records for station at Packwood.

Cowlitz River near Mayfield, Wash.

(Formerly called Cowlitz River at Mayfield)

Location.- Water-stage recorder, lat. 46°30'40", long. 122°36'50", in NE $\frac{1}{4}$ sec. 24, T. 12 N., R. 1 E., 1 mile above Mill Creek and 2 $\frac{1}{2}$ miles west of Mayfield. Prior to Dec. 1, 1911, staff gage at site 2 $\frac{1}{2}$ miles upstream.

Drainage area.- 1,400 square miles (1,320 square miles at former site).

Records available.- August 1910 to November 1911, April 1934 to September 1935.

Extremes.- Maximum discharge, 36,900 second-feet 8-11 a.m. Nov. 6, 1934; minimum, 930 second-feet Oct. 19, 1934.

Remarks.- No diversion or regulation.

Monthly discharge of Cowlitz River near Mayfield

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934						
April.....	12,000	5,660	*7,412	5.29	5.90	441,000
May.....	9,500	4,010	5,563	3.97	4.58	342,000
June.....	4,010	2,480	3,169	2.26	2.52	189,600
July.....	2,600	1,600	2,001	1.43	1.65	123,100
August.....	1,770	1,380	1,496	1.07	1.23	91,990
September.....	1,840	960	1,226	.876	.98	72,930
The period.....	-	-	-	-	-	1,260,000
1934-35						
October.....	28,600	940	4,852	3.47	4.00	298,400
November.....	35,700	6,090	12,190	8.71	9.72	725,500
December.....	24,600	5,690	10,080	7.20	8.30	620,000
January.....	20,900	3,700	9,276	6.63	7.64	570,400
February.....	13,500	5,120	7,651	5.46	5.69	424,900
March.....	9,530	3,300	5,327	3.80	4.38	327,600
April.....	7,150	3,620	5,540	3.96	4.42	329,600
May.....	11,400	6,950	8,675	6.20	7.15	533,400
June.....	12,500	5,310	8,061	5.76	6.43	479,700
July.....	6,290	2,400	4,047	2.89	3.33	248,800
August.....	2,470	1,610	1,931	1.38	1.59	118,700
September.....	1,950	1,210	1,511	1.08	1.20	89,910
The year.....	35,700	940	6,584	4.70	63.85	4,767,000

*Estimated.

Cowlitz River at Castle Rock, Wash.

(Formerly called Cowlitz River near Castle Rock)

Location.- Water-stage recorder, lat. 46°16'30", long. 122°55'00", in SE $\frac{1}{4}$ sec. 10, T. 9 N., R. 2 W., at highway bridge in Castle Rock, 2 $\frac{1}{2}$ miles below mouth of Toutle River and 14 miles above mouth. Prior to Dec. 10, 1933, staff gage at site 2 miles upstream.

Drainage area.- 2,210 square miles.

Records available.- December 1926 to September 1935.

Extremes.- Maximum discharge observed, 139,000 second-feet at 1 p.m. Dec. 23, 1933; minimum observed, 1,230 second-feet Nov. 23, 1929.

Remarks.- No diversion or regulation.

Monthly discharge of Cowlitz River at Castle Rock

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1926-27						
December 10-31.....	15,700	8,550	11,200	5.07	4.15	489,000
January.....	40,800	6,550	14,400	6.52	7.52	885,000
February.....	30,200	6,150	14,100	6.38	6.64	783,000
March.....	12,200	6,150	8,450	3.82	4.40	520,000
April.....	18,600	5,450	8,370	3.79	4.23	493,000
May.....	23,200	9,450	12,800	5.79	6.68	787,000
June.....	25,300	7,750	13,600	6.15	6.86	809,000
July.....	7,750	3,480	5,290	2.39	2.76	325,000
August.....	3,480	2,140	2,660	1.20	1.38	164,000
September.....	11,200	2,450	3,770	1.71	1.91	224,000
The year.....	-	-	-	-	-	5,480,000

Monthly discharge of Cowlitz River at Castle Rock--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1927-28						
October.....	32,300	4,590	9,550	4.32	4.98	587,000
November.....	71,300	4,860	20,400	9.23	10.30	1,210,000
December.....	33,000	5,800	12,300	5.57	6.42	756,000
January.....	42,400	5,600	17,600	7.96	9.18	1,080,000
February.....	7,750	3,880	5,680	2.57	2.77	327,000
March.....	31,600	3,680	13,300	6.02	6.94	818,000
April.....	25,300	8,550	12,900	5.84	6.52	768,000
May.....	22,500	8,550	14,000	6.33	7.30	861,000
June.....	7,750	4,860	6,310	2.86	3.19	375,000
July.....	6,950	2,940	4,280	1.94	2.24	263,000
August.....	2,940	1,990	2,370	1.07	1.23	146,000
September.....	2,140	1,620	1,820	.824	.92	108,000
The year.....	71,300	1,620	10,100	4.57	61.99	7,300,000
1928-29						
October.....	5,800	1,690	3,300	1.49	1.72	203,000
November.....	8,550	1,990	3,920	1.77	1.98	233,000
December.....	15,200	2,770	6,060	2.75	3.17	374,000
January.....	12,700	3,480	5,650	2.56	2.95	347,000
February.....	7,350	2,770	4,280	1.94	2.02	258,000
March.....	18,000	5,000	9,050	4.10	4.73	556,000
April.....	14,200	6,150	10,000	4.52	5.04	595,000
May.....	21,100	10,400	14,200	6.43	7.41	873,000
June.....	17,400	9,450	12,500	5.66	6.32	744,000
July.....	8,550	3,020	4,760	2.15	2.48	293,000
August.....	3,020	1,950	2,320	1.05	1.21	145,000
September.....	2,010	1,390	1,600	.724	.81	95,200
The year.....	21,100	1,390	6,480	2.93	39.84	4,690,000
1929-30						
October.....	1,860	1,390	1,580	.715	.82	97,200
November.....	1,580	1,230	1,400	.633	.71	83,300
December.....	18,600	1,340	7,090	3.21	3.70	456,000
January.....	10,800	3,020	5,070	2.29	2.64	312,000
February.....	29,500	9,000	18,400	8.33	8.67	1,020,000
March.....	16,200	3,870	8,450	3.82	4.40	520,000
April.....	11,700	7,750	9,780	4.43	4.94	582,000
May.....	18,000	5,600	8,580	3.88	4.47	528,000
June.....	8,550	4,110	6,110	2.76	3.08	364,000
July.....	4,110	2,260	3,100	1.40	1.61	191,000
August.....	2,260	1,610	1,870	.846	.98	115,000
September.....	1,580	1,280	1,460	.661	.74	86,900
The year.....	29,500	1,230	5,980	2.71	36.76	4,340,000
1930-31						
October.....	3,430	1,280	1,990	.900	1.04	122,000
November.....	5,600	1,580	3,240	1.47	1.64	193,000
December.....	5,600	3,020	3,910	1.77	2.04	240,000
January.....	23,900	3,020	10,600	4.80	5.53	652,000
February.....	23,900	4,110	8,600	3.89	4.05	478,000
March.....	40,800	5,600	10,600	4.80	5.53	652,000
April.....	63,200	7,270	16,000	7.24	8.08	952,000
May.....	14,000	5,490	8,920	4.04	4.66	548,000
June.....	11,500	4,000	5,660	2.56	2.86	337,000
July.....	5,160	2,200	3,070	1.39	1.60	189,000
August.....	2,200	1,610	1,830	.828	.95	113,000
September.....	2,200	1,340	1,590	.719	.80	94,600
The year.....	63,200	1,280	6,300	2.85	36.78	4,570,000
1931-32						
October.....	15,400	1,270	3,550	1.61	1.86	218,000
November.....	16,400	4,390	9,040	4.09	4.56	538,000
December.....	26,500	3,870	9,920	4.49	5.18	610,000
January.....	28,600	6,020	11,700	5.29	6.10	719,000
February.....	49,200	3,870	11,200	5.07	5.47	644,000
March.....	47,000	10,100	20,600	9.32	10.74	1,270,000
April.....	21,300	10,100	14,800	6.70	7.48	881,000
May.....	16,400	8,800	13,400	6.06	6.99	824,000
June.....	18,200	8,800	12,100	5.48	6.11	720,000
July.....	11,000	3,210	6,090	2.76	3.18	374,000
August.....	3,210	1,980	2,610	1.14	1.31	154,000
September.....	1,900	1,340	1,570	.710	.79	93,400
The year.....	49,200	1,270	9,710	4.39	59.77	7,050,000

Monthly discharge of Cowlitz River at Castle Rock--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1932-33						
October.....	4,990	1,430	2,730	1.24	1.43	168,000
November.....	52,200	5,660	22,400	10.1	11.27	1,330,000
December.....	44,100	6,640	16,700	7.56	8.72	1,030,000
January.....	47,800	7,770	17,100	7.74	8.92	1,050,000
February.....	13,400	4,530	7,010	3.17	3.30	389,000
March.....	18,500	8,160	12,000	5.43	6.26	738,000
April.....	15,200	7,000	9,810	4.44	4.95	584,000
May.....	21,100	8,940	12,700	5.75	6.63	781,000
June.....	35,000	12,500	19,200	8.69	9.70	1,140,000
July.....	12,500	5,970	9,760	4.42	5.10	600,000
August.....	7,380	3,070	4,160	1.88	2.17	256,000
September.....	7,380	2,640	3,890	1.76	1.96	231,000
The year.....	52,200	1,430	11,500	5.20	70.41	8,300,000
1933-34						
October.....	29,500	3,070	9,101	4.12	4.75	559,600
November.....	41,300	4,530	10,390	4.70	5.24	618,500
December.....	134,000	4,780	52,650	23.8	27.44	3,238,000
January.....	71,700	16,100	28,070	12.7	14.64	1,726,000
February.....	17,600	6,050	9,720	4.40	4.58	539,800
March.....	26,900	6,740	13,610	6.16	7.10	836,800
April.....	21,400	7,430	10,320	4.67	5.21	613,800
May.....	14,200	5,380	7,143	3.23	3.72	439,200
June.....	5,600	2,870	3,989	1.80	2.01	237,300
July.....	2,970	2,120	2,553	1.16	1.34	157,000
August.....	2,410	1,760	1,919	.868	1.00	118,000
September.....	2,500	1,290	1,641	.743	.83	97,670
The year.....	134,000	1,290	12,680	5.74	77.86	9,182,000
1934-35						
October.....	45,200	1,260	7,275	3.29	3.79	447,300
November.....	58,100	8,900	20,290	9.18	10.24	1,208,000
December.....	40,400	8,320	17,350	7.86	9.06	1,069,000
January.....	42,900	5,320	17,030	7.71	8.89	1,047,000
February.....	18,900	7,760	11,660	5.28	5.50	647,400
March.....	17,300	5,270	9,009	4.08	4.70	554,000
April.....	10,400	5,600	8,068	3.65	4.07	480,100
May.....	14,200	8,610	10,640	4.81	5.54	654,000
June.....	14,200	6,280	9,515	4.31	4.81	566,200
July.....	8,040	4,080	5,419	2.45	2.82	333,200
August.....	3,980	2,500	3,184	1.44	1.66	195,800
September.....	3,770	1,660	2,295	1.04	1.16	136,600
The year.....	58,100	1,260	10,140	4.59	62.24	7,339,000

Yearly discharge of Cowlitz River at Castle Rock

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1927.....	-	-	-	-	10,400	4.71	64.08	7,550,000
1928.....	10,100	4.57	61.99	7,300,000	7,650	3.46	47.16	5,560,000
1929.....	6,480	2.93	39.84	4,690,000	6,220	2.81	38.20	4,500,000
1930.....	5,980	2.71	36.76	4,340,000	5,900	2.67	36.25	4,270,000
1931.....	6,300	2.85	38.73	4,570,000	7,430	3.36	45.66	5,380,000
1932.....	9,710	4.39	59.77	7,050,000	11,300	5.11	69.59	8,210,000
1933.....	11,500	5.20	70.41	8,300,000	14,100	6.38	86.42	10,200,000
1934.....	12,680	5.74	77.86	7,182,000	10,350	4.68	63.52	7,490,000
1935.....	10,140	4.59	62.24	7,339,000	-	-	-	-

Clear Fork of Cowlitz River near Packwood, Wash.
(Formerly called Clear Fork near Lewis)

Location.- Water-stage recorder, lat. 46°40'50", long. 121°34'30", in NE¼ sec. 29, T. 14 N., R. 10 E., three-quarters of a mile above mouth and 7 miles northeast of Packwood. Prior to Oct. 1, 1917, staff gage at same site.

Drainage area.- 56 square miles (revised).

Records available.- August 1907 to September 1913 (gage heights only), October 1913 to September 1917, August 1930 to September 1935.

Extremes.- Maximum discharge, 8,030 second-feet at 2:30 a.m. Dec. 22, 1933; minimum, 34 second-feet probably Oct. 19, 1934 (from recorded range of stage).

Remarks.- No regulation. Small diversion a few hundred feet above gage to supply fish hatchery.

Monthly discharge of Clear Fork of Cowlitz River near Packwood

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1930						
August.....	-	56	72.8	1.30	1.50	4,480
September.....	68	46	53.9	.962	1.07	3,210
The period.....	-	-	-	-	-	7,690
1930-31						
October.....	155	42	65.5	1.17	1.35	4,030
November.....	247	42	81.5	1.46	1.63	4,850
December.....	109	52	75.3	1.34	1.54	4,630
January.....	740	54	180	3.21	3.70	11,100
February.....	450	94	183	3.27	3.40	10,200
March.....	803	128	216	3.86	4.45	13,300
April.....	702	170	308	5.50	6.14	18,300
May.....	765	238	493	8.62	9.94	29,700
June.....	416	159	248	4.43	4.94	14,800
July.....	147	70	100	1.79	2.06	6,150
August.....	69	48	57.7	1.03	1.19	3,550
September.....	68	45	51.3	.916	1.02	3,050
The year.....	803	42	171	3.05	41.36	124,000
1931-32						
October.....	564	-	89.2	1.59	1.83	5,480
November.....	580	82	175	3.12	3.48	10,400
December.....	442	64	146	2.61	3.01	8,980
January.....	-	-	*165	2.95	3.40	10,100
February.....	-	-	*177	3.16	3.41	10,200
March.....	844	-	331	5.91	6.81	20,400
April.....	521	215	344	6.14	6.85	20,500
May.....	755	338	544	9.71	11.20	33,400
June.....	940	363	616	11.0	12.27	36,700
July.....	605	153	299	5.34	6.16	18,400
August.....	160	90	118	2.11	2.43	7,260
September.....	92	64	74.8	1.34	1.50	4,450
The year.....	-	-	257	4.59	62.35	186,000
1932-33						
October.....	254	59	106	1.89	2.18	6,520
November.....	1,970	168	549	9.80	10.93	32,700
December.....	1,510	140	301	5.38	6.20	18,500
January.....	1,070	112	242	4.32	4.98	14,900
February.....	115	76	88.7	1.58	1.64	4,930
March.....	163	91	128	2.29	2.64	7,870
April.....	570	129	218	3.89	4.34	13,000
May.....	940	224	414	7.39	8.52	25,500
June.....	1,500	570	862	15.4	17.18	51,300
July.....	771	290	534	9.54	11.00	32,800
August.....	360	129	209	3.73	4.30	12,900
September.....	400	102	158	2.82	3.15	9,400
The year.....	1,970	59	318	5.68	77.06	230,000
1933-34						
October.....	1,140	91	387	6.91	7.97	23,770
November.....	1,180	217	380	6.79	7.58	22,610
December.....	5,700	190	1,230	22.0	25.36	75,650
January.....	2,280	342	646	11.5	13.26	36,730
February.....	492	183	271	4.84	5.04	15,040
March.....	1,080	253	496	8.86	10.22	30,520
April.....	576	314	441	7.88	8.79	26,240
May.....	630	234	334	5.96	6.87	20,520
June.....	290	145	212	3.79	4.23	12,620
July.....	155	84	115	2.05	2.36	7,070
August.....	88	49	66.4	1.19	1.37	4,080
September.....	130	41	54.7	.977	1.09	3,250
The year.....	5,700	41	388	6.93	94.14	281,100

*Estimated.

Monthly discharge of Clear Fork of Cowlitz River near Packwood--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
October.....	2,110	34	246	4.39	5.06	15,140
November.....	1,640	234	500	8.93	9.96	29,780
December.....	827	169	280	5.00	5.76	17,240
January.....	712	87	258	4.61	5.32	15,850
February.....	500	182	276	4.93	5.13	15,320
March.....	258	106	166	2.96	3.41	10,230
April.....	291	93	168	3.00	3.35	10,000
May.....	712	294	455	8.12	9.36	27,980
June.....	890	389	582	10.4	11.60	34,630
July.....	397	153	274	4.89	5.64	16,840
August.....	146	81	108	1.93	2.22	6,650
September.....	98	51	68.6	1.22	1.36	4,080
The year.....	2,110	34	281	5.02	68.17	203,700

Yearly discharge of Clear Fork of Cowlitz River near Packwood

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1908.....	218	3.89	52.95	158,000	206	3.68	50.09	149,000
1909.....	165	2.95	40.04	120,000	221	3.95	53.62	160,000
1910.....	307	5.48	74.39	222,000	295	5.27	71.54	213,000
1911.....	228	4.07	55.24	165,000	208	3.71	50.36	150,000
1912.....	257	4.59	62.47	187,000	267	4.59	62.48	187,000
1931.....	171	3.05	41.36	124,000	186	3.32	45.16	135,000
1932.....	257	4.59	62.35	186,000	302	5.39	73.34	219,000
1933.....	318	5.68	77.06	230,000	407	7.27	98.66	295,000
1934.....	388	6.93	94.14	281,100	306	5.46	74.01	221,200
1935.....	281	5.02	68.17	203,700	-	-	-	-
Highest.....	388	6.93	94.14	281,100	407	7.27	98.66	295,000
Average.....	259	4.62	62.82	188,000	265	4.74	64.36	192,000
Lowest.....	165	2.95	40.04	120,000	186	3.32	45.16	135,000

Lake Creek near Packwood, Wash.

(Formerly called Lake Creek at outlet of Packwood Lake, near Lewis)

Location.- Water-stage recorder, lat. 46°35'55", long. 121°34'15", in sec. 21, T. 13 N., R. 10 E., 500 feet below outlet of Packwood Lake and 6 miles east of Packwood.

Prior to Aug. 3, 1918, staff gage at same site.

Drainage area.- 18.8 square miles (revised).

Records available.- September 1911 to September 1924, September 1930 to September 1935.

Extremes.- Maximum discharge, 1,400 second-feet 3-4 p.m. Dec. 22, 1933; minimum, 25 second-feet Oct. 15, 1934.

Remarks.- No diversion. Natural regulation in Packwood Lake.

Monthly discharge of Lake Creek near Packwood

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	35	30	31.9	1.70	1.96	1,960
November.....	104	35	66.4	3.53	3.94	3,950
December.....	164	38	70.5	3.75	4.32	4,330
January.....	212	44	107	5.69	6.56	6,580
February.....	148	40	69.7	3.71	4.00	4,010
March.....	57	38	45.0	2.39	2.76	2,770
April.....	53	40	45.5	2.42	2.70	2,710
May.....	170	46	103	5.48	6.32	6,330
June.....	248	91	182	9.68	10.80	10,800
July.....	244	101	164	8.72	10.06	10,100
August.....	106	51	85.8	4.56	5.26	5,280
September.....	146	40	84.7	4.51	5.03	5,040
The year.....	248	30	88.0	4.68	63.70	63,900

Monthly discharge of Lake Creek near Packwood--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acro-feet
1920-21						
October.....	190	51	108	5.74	6.62	6,640
November.....	302	38	102	5.43	6.06	6,070
December.....	272	45	77.0	4.10	4.73	4,730
January.....	252	61	135	7.18	8.28	8,500
February.....	220	49	113	6.01	6.26	6,280
March.....	208	74	118	6.28	7.24	7,260
April.....	191	57	94.1	5.01	5.59	5,600
May.....	302	104	182	9.68	11.16	11,200
June.....	430	218	305	16.2	18.07	18,100
July.....	325	166	208	11.1	12.80	12,800
August.....	169	60	120	6.38	7.36	7,380
September.....	87	43	63.7	3.39	3.78	3,790
The year.....	430	38	136	7.23	97.95	98,200
1921-22						
October.....	92	34	57.6	3.06	3.53	3,540
November.....	350	41	127	6.76	7.54	7,560
December.....	609	61	217	11.5	13.26	13,300
January.....	65	42	53.1	2.82	3.25	3,260
February.....	41	35	36.6	1.95	2.03	2,030
March.....	35	33	34.2	1.82	2.10	2,100
April.....	45	35	38.1	2.03	2.26	2,270
May.....	256	52	136	7.23	8.34	8,360
June.....	368	189	245	13.0	14.50	14,600
July.....	202	78	116	6.17	7.11	7,130
August.....	95	57	74.0	3.94	4.54	4,550
September.....	108	41	67.4	3.59	4.00	4,010
The year.....	609	33	101	5.37	72.46	72,700
1922-23						
October.....	73	34	43.5	2.31	2.66	2,670
November.....	68	35	43.8	2.33	2.60	2,610
December.....	181	32	64.9	3.45	3.98	3,990
January.....	521	76	223	11.9	13.72	13,700
February.....	73	52	57.5	3.06	3.19	3,190
March.....	68	42	46.9	2.49	2.87	2,880
April.....	148	81	112	5.96	6.65	6,660
May.....	288	97	169	8.99	10.36	10,400
June.....	298	127	199	10.6	11.83	11,800
July.....	288	118	195	10.4	11.99	12,000
August.....	127	48	79.0	4.20	4.84	4,860
September.....	73	39	50.5	2.69	3.00	3,000
The year.....	521	32	107	5.69	77.69	77,800
1923-24						
October.....	129	36	55.5	2.95	3.40	3,410
November.....	108	33	49.8	2.65	2.96	2,960
December.....	153	54	79.0	4.20	4.84	4,860
January.....	-	-	69.8	3.71	4.28	4,290
February.....	-	92	154	8.19	8.83	8,860
March.....	89	46	58.9	3.13	3.61	3,620
April.....	58	43	50.7	2.70	3.01	3,020
May.....	278	52	169	8.99	10.36	10,400
June.....	173	107	139	7.39	8.24	8,270
July.....	128	76	97.5	5.19	5.98	6,000
August.....	-	-	*58.3	3.10	3.57	3,580
September.....	-	34	39.4	2.10	2.34	2,340
The year.....	-	33	84.8	4.51	61.42	61,600
1930						
September.....	-	-	40.4	2.15	2.40	2,400
1930-31						
October.....	66	33	39.3	2.09	2.41	2,420
November.....	41	30	35.2	1.87	2.09	2,090
December.....	40	33	36.0	1.91	2.20	2,210
January.....	108	33	49.4	2.63	3.03	3,040
February.....	-	-	*50.0	2.66	2.77	2,780
March.....	120	-	60.9	3.24	3.74	3,740
April.....	180	39	90.7	4.82	5.38	5,400
May.....	238	105	175	9.31	10.73	10,800
June.....	182	98	140	7.45	8.31	8,330
July.....	89	54	70.3	3.74	4.31	4,320
August.....	55	40	45.0	2.39	2.76	2,770
September.....	44	39	41.8	2.22	2.48	2,490
The year.....	238	30	69.5	3.70	50.21	50,400

*Estimated.

Monthly discharge of Lake Creek near Packwood--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1931-32						
October.....	78	35	41.4	2.20	2.54	2,550
November.....	-	-	*45.5	2.42	2.70	2,710
December.....	-	-	*40.6	2.16	2.49	2,500
January.....	94	46	56.9	3.03	3.49	3,500
February.....	169	38	53.0	2.82	3.04	3,050
March.....	156	66	107	5.69	6.56	6,580
April.....	135	75	101	5.37	5.99	6,010
May.....	221	116	176	9.36	10.79	10,800
June.....	354	150	236	12.6	14.06	14,000
July.....	278	104	174	9.26	10.68	10,700
August.....	-	65	*83.5	4.44	5.12	5,130
September.....	64	47	54.8	2.91	3.25	3,260
The year.....	354	-	97.5	5.19	70.71	70,800
1932-33						
October.....	87	44	58.6	3.12	3.60	3,600
November.....	770	75	230	12.2	13.61	13,700
December.....	334	69	118	6.28	7.24	7,260
January.....	155	-	85.0	4.52	5.21	5,230
February.....	55	-	50.2	2.67	2.79	2,790
March.....	55	50	51.5	2.74	3.16	3,170
April.....	111	51	60.5	3.22	3.59	3,600
May.....	267	82	128	6.81	7.85	7,870
June.....	522	226	301	16.0	17.85	17,900
July.....	320	159	229	12.2	14.07	14,100
August.....	165	-	114	6.06	6.99	7,010
September.....	118	55	75.1	3.99	4.45	4,470
The year.....	770	44	125	6.65	90.40	90,700
1933-34						
October.....	314	51	147	7.82	9.02	9,060
November.....	303	68	134	7.13	7.96	8,000
December.....	1,300	70	365	19.4	22.37	22,410
January.....	590	104	201	10.7	12.34	12,370
February.....	147	54	85.5	4.55	4.74	4,750
March.....	238	73	128	6.81	7.95	7,990
April.....	218	104	154	9.19	9.14	9,150
May.....	187	91	134	7.13	8.22	8,210
June.....	143	64	98.5	5.24	5.85	5,860
July.....	82	53	66.2	3.52	4.06	4,070
August.....	61	43	47.7	2.84	2.93	2,930
September.....	52	33	39.2	2.09	2.33	2,330
The year.....	1,300	33	134	7.13	96.81	97,030
1934-35						
October.....	450	26	68.5	3.64	4.20	4,210
November.....	350	82	138	7.34	8.19	8,190
December.....	285	59	106	5.64	6.50	6,550
January.....	200	47	89.1	4.74	5.46	5,480
February.....	156	54	87.8	4.67	4.86	4,880
March.....	71	42	53.7	2.86	3.30	3,300
April.....	67	40	52.7	2.80	3.12	3,130
May.....	195	72	133	7.07	8.15	8,150
June.....	317	148	213	11.3	12.61	12,660
July.....	215	87	135	7.18	8.28	8,290
August.....	90	51	65.1	3.46	3.99	4,000
September.....	64	30	45.3	2.41	2.69	2,690
The year.....	450	26	98.8	5.26	71.35	71,530

*Estimated.

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Yearly discharge of Lake Creek near Packwood

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1912.....	107	5.69	77.45	77,600	103	5.48	74.59	74,500
1913.....	112	5.96	80.91	81,200	113	6.01	81.58	82,200
1914.....	93.0	4.95	67.19	67,300	97.4	5.18	70.32	70,500
1915.....	70.7	3.76	51.04	51,200	69.1	3.68	49.95	50,000
1916.....	124	6.60	89.84	89,700	116	6.17	83.98	84,400
1917.....	106	5.64	76.56	77,000	129	6.86	93.12	93,400
1918.....	124	6.60	89.59	89,600	109	5.80	78.73	78,800
1919.....	96.4	5.13	69.64	69,800	90.4	4.81	65.29	65,500
1920.....	88.0	4.68	63.70	63,900	97.9	5.21	70.89	71,100
1921.....	136	7.23	97.95	98,200	145	7.71	104.87	105,000
1922.....	101	5.37	72.46	72,700	79.5	4.23	57.37	57,600
1923.....	107	5.69	77.69	77,800	110	5.85	79.65	79,700
1924.....	84.8	4.51	61.42	61,600	-	-	-	-
1931.....	69.5	3.70	50.21	50,400	71.0	3.78	51.24	51,400
1932.....	97.5	5.19	70.71	70,800	121	6.44	87.43	87,600
1933.....	125	6.65	90.40	90,700	146	7.77	105.30	106,000
1934.....	134	7.13	96.81	97,030	106	5.66	76.35	76,510
1935.....	98.8	5.26	71.35	71,530	-	-	-	-
Highest.....	136	7.23	97.95	98,200	146	7.77	105.30	106,000
Average.....	104	5.75	75.27	75,400	106	5.66	76.92	77,100
Lowest.....	69.5	3.70	50.21	50,400	69.1	3.68	49.95	50,000

Johnson Creek at mouth, near Lewis, Wash.

(Formerly called Johnson Creek at mouth, near Packwood)

Location.- Water-stage recorder, lat. 46°34'00", long. 121°41'10", in sec. 33, T. 13 N., R. 9 E., 1 mile above mouth and 3 miles southwest of Lewis (Packwood). Prior to Sept. 24, 1914, staff gage at same site.

Drainage area.- 30 square miles (approximate).

Records available.- August 1907 to September 1914, October 1918 to September 1924.

Extremes.- Maximum daily discharge, 2,800 second-feet (estimated) Dec. 12, 1921; minimum daily, 23 second-feet Sept. 22, 1924.

Remarks.- No diversion or regulation.

Monthly discharge of Johnson Creek at mouth, near Lewis

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1919-20				
October.....	56	32	37.6	2,310
November.....	167	51	106	6,310
December.....	597	65	169	10,400
January.....	-	68	196	12,100
February.....	-	88	*144	8,280
March.....	178	66	102	6,270
April.....	203	81	125	7,440
May.....	428	154	249	15,300
June.....	385	185	282	16,800
July.....	287	75	150	9,220
August.....	88	46	58.1	3,570
September.....	-	44	141	8,390
The year.....	597	32	147	106,000
1920-21				
October.....	423	114	230	14,100
November.....	596	81	168	10,000
December.....	1,560	101	244	15,000
January.....	1,490	110	328	20,200
February.....	640	99	318	17,700
March.....	692	156	276	17,000
April.....	-	132	230	13,700
May.....	576	202	366	22,500
June.....	715	283	462	27,500
July.....	335	128	204	12,500
August.....	126	58	79.8	4,910
September.....	-	45	64.1	3,810
The year.....	1,560	45	247	179,000

*Estimated.

Monthly discharge of Johnson Creek at mouth, near Lewis--Continued

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
1921-22				
October.....	-	32	55.9	3,440
November.....	1,470	58	165	9,820
December.....	2,800	119	692	42,500
January.....	107	64	83.7	5,150
February.....	61	46	53.2	2,950
March.....	50	38	40.7	2,500
April.....	181	-	119	7,080
May.....	812	184	402	24,700
June.....	-	257	513	30,500
July.....	244	74	126	7,750
August.....	71	41	58.6	3,600
September.....	54	36	44.5	2,650
The year.....	2,800	32	197	143,000
1922-23				
October.....	82	27	39.1	2,400
November.....	119	41	58.8	3,500
December.....	687	33	128	7,870
January.....	2,540	150	651	40,000
February.....	159	107	136	7,550
March.....	385	103	146	8,980
April.....	469	268	326	19,400
May.....	694	247	409	25,100
June.....	594	276	392	23,300
July.....	423	126	255	15,700
August.....	271	61	105	6,460
September.....	58	35	45.5	2,710
The year.....	2,540	27	225	163,000
1923-24				
October.....	178	31	59.4	3,650
November.....	231	38	77.3	4,600
December.....	560	110	199	12,200
January.....	-	110	179	11,000
February.....	740	196	357	20,500
March.....	199	88	123	7,560
April.....	251	88	139	8,270
May.....	719	218	379	23,300
June.....	283	119	181	10,800
July.....	121	48	69.9	4,300
August.....	-	-	40.1	2,470
September.....	-	24	28.6	1,700
The year.....	740	24	152	110,000

Yearly discharge of Johnson Creek at mouth, near Lewis

Year	Year ending Sept. 30		Calendar year	
	Mean discharge in second-feet	Run-off in acre-feet	Mean discharge in second-feet	Run-off in acre-feet
1908.....	198	144,000	188	136,000
1909.....	151	110,000	200	145,000
1910.....	243	176,000	228	165,000
1911.....	183	133,000	163	118,000
1912.....	210	153,000	208	151,000
1913.....	243	176,000	241	175,000
1919.....	183	132,000	178	129,000
1920.....	147	106,000	174	126,000
1921.....	247	179,000	270	196,000
1922.....	197	143,000	139	101,000
1923.....	225	163,000	234	170,000
1924.....	152	110,000	-	-
Highest.....	247	179,000	270	196,000
Average.....	198	144,000	202	147,000
Lowest.....	147	106,000	139	101,000

Cispus River near Randle, Wash.

Location.-- Water-stage recorder, lat. 46°26'50", long. 121°51'35", in NW¼ sec. 18, T. 11 N., R. 8 E. (unsurveyed), 500 feet above suspension bridge to Tower Rock ranger station and 8 miles southeast of Randle. Prior to Mar. 1, 1912, staff gage at same site.

Drainage area.-- 323 square miles (revised).

Records available.-- October 1910 to February 1912, September 1929 to September 1935.

Extremes.-- Maximum discharge, 20,000 second-feet at 5 p.m. Dec. 22, 1933; minimum, 220 second-feet Oct. 18, 19, 1934.

Remarks.-- No diversion or regulation.

Monthly discharge of Cispus River near Randle

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1929-30						
October.....	370	-	308	0.954	1.10	18,900
November.....	279	248	265	.820	.91	15,800
December.....	3,770	242	942	2.92	3.37	57,900
January.....	928	373	551	1.71	1.97	33,900
February.....	4,620	770	2,140	6.63	6.90	119,000
March.....	2,680	675	1,180	3.65	4.21	72,600
April.....	2,370	1,560	1,920	5.94	6.63	114,000
May.....	2,300	1,090	1,540	4.77	5.50	94,700
June.....	1,500	753	1,100	3.41	3.80	65,500
July.....	785	459	609	1.89	2.18	37,400
August.....	459	333	394	1.22	1.41	24,200
September.....	361	261	311	.963	1.07	18,500
The year.....	4,620	242	930	2.88	39.05	672,000
1930-31						
October.....	632	261	327	1.01	1.16	20,100
November.....	602	272	398	1.23	1.37	23,700
December.....	502	337	416	1.29	1.49	25,600
January.....	3,030	349	1,050	3.25	3.75	64,600
February.....	2,690	645	1,160	3.59	3.74	64,400
March.....	4,610	769	1,290	3.99	4.60	79,300
April.....	5,560	1,230	2,100	6.50	7.25	125,000
May.....	3,360	1,190	1,960	6.07	7.00	121,000
June.....	1,310	761	967	2.99	3.34	57,500
July.....	809	495	620	1.92	2.21	38,100
August.....	502	367	413	1.28	1.48	25,400
September.....	430	298	340	1.05	1.17	20,200
The year.....	5,560	261	919	2.85	38.56	665,000
1931-32						
October.....	1,560	261	471	1.46	1.68	29,000
November.....	1,560	574	908	2.81	3.14	54,000
December.....	2,440	435	939	2.91	3.36	57,700
January.....	1,960	645	1,020	3.16	3.64	62,700
February.....	4,940	401	995	3.08	3.32	57,200
March.....	4,530	1,070	1,940	6.01	6.93	119,000
April.....	2,880	1,470	2,140	6.63	7.40	127,000
May.....	4,430	1,840	3,140	9.72	11.21	193,000
June.....	4,140	1,960	2,680	8.30	9.26	159,000
July.....	2,030	668	1,160	3.59	4.14	71,300
August.....	705	423	554	1.72	1.98	34,100
September.....	428	323	371	1.15	1.28	22,100
The year.....	4,940	261	1,360	4.21	57.34	986,000
1932-33						
October.....	792	296	453	1.40	1.61	27,900
November.....	6,440	941	2,940	9.10	10.15	175,000
December.....	3,960	956	1,560	4.89	5.64	97,200
January.....	3,290	745	1,320	4.09	4.72	81,200
February.....	722	526	601	1.86	1.94	33,400
March.....	1,340	632	1,010	3.13	3.61	62,100
April.....	3,540	910	1,610	4.98	5.56	95,800
May.....	4,880	1,660	2,700	8.36	9.64	165,000
June.....	7,450	2,740	4,320	13.4	14.95	257,000
July.....	2,740	1,100	2,010	6.22	7.17	124,000
August.....	1,230	600	843	2.61	3.01	51,800
September.....	-	498	611	1.89	2.11	36,400
The year.....	7,450	296	1,670	5.17	70.11	1,210,000
1933-34						
October.....	4,600	450	1,248	3.86	4.45	76,720
November.....	4,880	775	1,497	4.63	5.17	89,110
December.....	19,000	752	5,667	17.2	19.53	342,300
January.....	10,400	1,560	3,759	11.6	13.57	231,200
February.....	2,270	1,070	1,517	4.70	4.89	84,240
March.....	4,200	1,290	2,273	7.04	8.12	139,700
April.....	3,470	1,390	2,004	6.20	6.92	119,300
May.....	5,520	1,100	1,590	4.30	4.96	85,470
June.....	1,030	760	880	2.72	3.04	52,590
July.....	850	417	600	1.87	2.16	37,190
August.....	520	362	406	1.25	1.45	25,090
September.....	430	250	300	.947	1.06	18,190

Monthly discharge of Cispus River near Randle--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1934-35						
October.....	5,390	226	861	2.67	3.08	52,940
November.....	9,130	1,180	2,567	7.95	8.87	152,800
December.....	4,520	1,020	1,734	5.37	6.19	106,600
January.....	3,070	686	1,357	4.20	4.84	83,450
February.....	2,520	973	1,444	4.47	4.66	80,190
March.....	1,460	686	913	2.83	3.26	56,170
April.....	2,110	686	1,263	3.91	4.36	75,160
May.....	3,780	2,040	2,665	8.25	9.51	163,900
June.....	3,780	1,420	2,229	6.90	7.70	132,700
July.....	1,360	677	960	2.97	3.42	59,040
August.....	668	396	532	1.65	1.90	32,740
September.....	431	292	344	1.07	1.19	20,460
The year.....	9,130	226	1,403	4.34	58.98	1,016,000

Yearly discharge of Cispus River near Randle

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1911.....	1,330	3.90	52.95	963,000	1,130	3.50	47.51	818,000
1930.....	930	2.88	39.05	672,000	897	2.78	37.69	649,000
1931.....	919	2.85	38.56	666,000	1,020	3.16	42.72	736,000
1932.....	1,360	4.21	57.34	986,000	1,580	4.89	66.56	1,150,000
1933.....	1,670	5.17	70.11	1,210,000	1,860	6.07	82.16	1,420,000
1934.....	1,797	5.56	75.42	1,301,000	1,526	4.72	64.11	1,105,000
1935.....	1,403	4.34	58.98	1,016,000	-	-	-	-

North Fork of Toutle River at St. Helen, Wash.

(Formerly called Toutle River at St. Helen)

Location.-- Water-stage recorder, lat. 46°21', long. 122°32', in SE¼ sec. 15, T. 10 N., R. 2 E., at highway crossing three-quarters of a mile west of St. Helen. Prior to Oct. 5, 1909, staff gage at same site.

Drainage area.-- 120 square miles.

Records available.-- September to October 1909, September 1929 to September 1933.

Extremes.-- Maximum discharge recorded, 6,450 second-feet at 10:30 p.m. Mar. 31, 1931; minimum recorded, 153 second-feet Oct. 19, 1931.

Remarks.-- No diversion or regulation.

Monthly discharge of North Fork of Toutle River at St. Helen

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
September 26-30, 1929.....	195	185	191	1.59	0.30	1,890
October 1929.....	225	170	183	1.52	1.75	11,300
November.....	195	170	176	1.47	1.64	10,500
December.....	3,850	170	733	6.11	7.04	45,100
January 1930.....	990	262	433	3.61	4.16	26,600
February.....	2,120	647	1,170	9.75	10.15	65,000
March.....	1,130	334	590	4.92	5.67	36,300
April.....	717	500	575	4.79	5.34	34,200
May.....	1,480	420	653	5.44	6.27	40,200
June.....	804	344	489	4.08	4.55	29,100
July.....	334	212	254	2.12	2.44	15,600
August.....	208	174	190	1.68	1.82	11,700
September.....	188	166	172	1.43	1.60	10,200
Water year 1929-30.....	3,850	166	463	3.86	52.43	336,000

Monthly discharge of North Fork of Toutle River at St. Helen--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
October 1930.....	-	-	*219	1.82	2.10	13,500
November.....	412	208	308	2.57	2.87	18,300
December.....	506	270	350	2.92	3.37	21,500
Calendar year 1930.....	2,120	166	445	3.71	50.34	322,000
January 1931.....	1,470	304	742	6.18	7.12	45,600
February.....	1,210	407	622	5.18	5.39	34,500
March.....	3,890	500	854	7.12	8.21	52,500
April.....	4,350	494	1,040	8.67	9.67	61,900
May.....	716	385	539	4.49	5.18	33,100
June.....	776	286	378	3.15	3.51	22,500
July.....	396	208	251	2.09	2.41	15,400
August.....	208	172	185	1.54	1.78	11,400
September.....	229	170	182	1.52	1.70	10,800
Water year 1930-31.....	4,350	-	471	3.92	53.31	341,000
October 1931.....	1,390	155	324	2.70	3.11	19,900
November.....	1,110	374	654	5.45	6.08	38,900
December.....	1,630	320	700	5.83	6.72	43,000
Calendar year 1931.....	4,350	155	538	4.48	60.88	390,000
January 1932.....	1,980	470	826	6.88	7.93	50,800
February.....	2,990	330	672	5.60	6.04	38,700
March.....	2,780	714	1,330	11.1	12.80	81,800
April.....	1,580	882	1,080	9.00	10.04	64,300
May.....	1,080	756	934	7.78	8.97	57,400
June.....	1,270	763	907	7.56	8.44	54,000
July.....	805	364	554	4.62	5.33	34,100
August.....	369	257	303	2.52	2.90	18,600
September.....	280	210	235	1.96	2.19	14,000
Water year 1931-32.....	2,990	155	710	5.92	80.55	516,000
October 1932.....	500	202	311	2.59	2.99	19,100
November.....	3,310	722	1,590	13.2	14.73	94,600
December.....	3,400	-	1,160	9.67	11.15	71,300
Calendar year 1932.....	3,400	202	825	6.88	93.51	599,000
January 1933.....	3,260	536	1,130	9.42	10.86	69,500
February.....	720	398	505	4.21	4.38	28,000
March.....	1,640	578	837	6.98	8.05	51,500
April.....	984	564	718	5.98	6.67	42,700
May.....	1,370	750	930	7.75	8.94	57,200
June.....	3,520	1,010	1,500	12.5	13.95	89,300
July.....	1,000	508	790	6.58	7.59	48,600
August.....	735	306	416	3.47	4.00	25,600
September.....	-	279	443	3.69	4.12	26,400
Water year 1932-33.....	3,520	202	861	7.18	97.43	624,000

*Estimated.

Toutle River near Silver Lake, Wash.

(Formerly called Toutle River near Castle Rock)

Location.-- Water-stage recorder, lat. 46°20', long. 122°44', in SE $\frac{1}{4}$ sec. 19, T. 10 N., R. 1 E., under highway bridge half a mile below confluence of North and South Forks and 5 miles northeast of Silver Lake. Prior to Aug. 4, 1912, staff gage 2 miles downstream.

Drainage area.-- 472 square miles (474 square miles at former site).

Records available.-- September 1909 to August 1912, October 1919 to December 1923, September 1929 to September 1935.

Extremes.-- Maximum discharge observed, 35,600 second-feet Mar. 2, 1910; minimum discharge, 240 second-feet (revised) Nov. 21, 1929.

Remarks.-- No diversion or regulation.

Monthly discharge of Toutle River near Silver Lake

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acre-feet
1919-20						
October.....	-	399	574	1.22	1.41	35,300
November.....	3,740	1,220	1,990	4.22	4.71	118,000
December.....	-	-	*2,430	5.15	5.94	149,000
January.....	8,810	1,100	2,430	5.15	5.94	149,000
February.....	3,220	996	1,650	3.28	3.54	89,200
March.....	-	996	2,060	4.36	5.03	127,000
April.....	-	2,100	2,910	6.17	6.88	175,000
May.....	2,730	1,530	1,940	4.11	4.74	119,000
June.....	2,800	1,320	1,840	3.90	4.55	109,000
July.....	1,520	457	869	1.84	2.12	55,400
August.....	829	299	410	*.869	1.00	25,200
September.....	4,190	347	1,530	3.24	3.62	91,000
The year.....	-	299	1,710	3.62	49.28	1,240,000
1920-21						
October.....	6,200	1,680	3,300	6.99	8.06	203,000
November.....	5,750	996	2,530	5.36	5.98	151,000
December.....	13,700	2,030	3,830	8.11	9.35	236,000
January.....	11,900	1,960	4,630	9.81	11.31	285,000
February.....	9,300	2,170	4,130	8.75	9.11	229,000
March.....	12,100	1,820	3,890	8.24	9.50	239,000
April.....	5,640	1,620	2,720	5.76	6.43	162,000
May.....	3,360	2,170	2,620	5.55	6.40	161,000
June.....	2,940	1,620	2,210	4.68	5.22	132,000
July.....	1,960	948	1,270	2.69	3.10	78,100
August.....	948	666	760	1.61	1.86	46,700
September.....	1,120	601	775	1.64	1.83	46,100
The year.....	13,700	601	2,720	5.76	78.15	1,970,000
1921-22						
October.....	-	-	1,300	2.75	3.17	79,900
May.....	5,390	2,520	3,350	7.10	8.19	206,000
June.....	4,750	1,680	2,750	5.83	6.50	164,000
July.....	1,620	480	987	2.09	2.41	60,700
August.....	802	371	482	1.02	1.18	29,600
September.....	898	327	516	1.09	1.22	30,700
1922-23						
October.....	2,380	337	699	1.48	1.71	43,000
November.....	1,560	644	961	2.04	2.28	57,200
December.....	-	-	*3,150	6.67	7.69	194,000
January.....	-	1,960	6,740	14.3	16.49	414,000
February.....	2,730	1,410	1,830	3.88	4.04	102,000
March.....	3,080	1,720	2,200	4.66	5.37	135,000
April.....	2,800	1,960	2,280	4.83	5.39	136,000
May.....	3,010	1,720	2,150	4.56	5.26	132,000
June.....	2,520	1,440	1,860	3.94	4.40	111,000
July.....	-	-	*1,040	2.20	2.54	64,000
August.....	923	431	537	1.14	1.31	33,000
September.....	539	334	388	.822	.92	23,100
The year.....	-	334	1,990	4.22	57.40	1,440,000
1923						
October.....	2,890	334	690	1.46	1.68	42,400
November.....	3,010	420	838	1.78	1.99	49,900
December.....	5,230	1,200	*2,300	4.87	5.62	141,000
The year.....	-	-	-	-	-	233,000
1929						
September 25-30.....	404	370	387	.820	.92	5,470
1929-30						
October.....	551	280	368	.780	.90	22,600
November.....	400	255	301	.638	.71	17,900
December.....	8,360	255	2,060	4.36	5.03	127,000
January.....	2,850	743	1,520	2.80	3.23	81,200
February.....	6,790	2,290	4,530	9.17	9.55	240,000
March.....	4,060	1,020	2,010	4.26	4.91	124,000
April.....	2,450	1,450	1,860	3.94	4.40	111,000
May.....	4,320	1,120	1,890	4.00	4.61	116,000
June.....	2,450	804	1,280	2.71	3.02	76,200
July.....	779	410	558	1.18	1.36	34,500
August.....	405	300	348	.737	.85	21,400
September.....	415	270	308	.653	.73	18,300
The year.....	8,360	255	1,370	2.90	39.30	990,000

*Estimated.

Monthly discharge of Toutle River near Silver Lake--Continued

Month	Discharge in second-feet				Run-off	
	Maximum	Minimum	Mean	Per square mile	Inches	Acres-feet
1930-31						
October.....	1,260	275	492	1.04	1.20	30,300
November.....	1,450	365	864	1.83	2.04	51,400
December.....	1,650	761	1,070	2.27	2.62	65,800
January.....	4,650	885	2,380	5.04	5.81	146,000
February.....	4,480	995	1,890	4.00	4.16	106,000
March.....	14,200	1,320	2,590	5.49	6.33	159,000
April.....	15,000	1,530	3,570	7.56	8.44	212,000
May.....	2,060	1,000	1,420	3.01	3.47	87,300
June.....	2,640	782	1,150	2.44	2.72	68,400
July.....	1,240	468	738	1.57	1.81	45,400
August.....	463	325	372	.788	.91	22,900
September.....	632	320	395	.837	.93	23,500
The year.....	15,000	275	1,410	2.99	40.44	1,020,000
1931-32						
October.....	4,590	295	1,050	2.22	2.56	64,600
November.....	4,700	1,100	2,380	5.04	5.62	142,000
December.....	6,970	1,110	2,640	5.59	6.44	162,000
January.....	8,250	1,510	3,150	6.67	7.69	194,000
February.....	9,870	1,080	2,410	5.11	5.51	139,000
March.....	11,400	2,690	4,950	10.5	12.11	304,000
April.....	5,530	2,770	3,670	7.78	8.68	218,000
May.....	3,250	1,770	2,430	5.15	5.94	149,000
June.....	3,090	1,530	2,060	4.36	4.86	123,000
July.....	1,740	677	1,070	2.27	2.62	65,800
August.....	671	452	553	1.17	1.35	34,000
September.....	599	355	426	.903	1.01	25,300
The year.....	11,400	295	2,230	4.72	64.39	1,620,000
1932-33						
October.....	1,320	325	703	1.49	1.72	43,200
November.....	9,460	1,880	4,890	10.4	11.60	291,000
December.....	9,700	1,570	3,900	8.43	9.72	245,000
January.....	10,800	1,980	4,050	8.58	9.89	249,000
February.....	3,810	1,200	1,850	3.92	4.08	103,000
March.....	6,200	2,210	3,450	7.31	8.43	212,000
April.....	3,570	1,710	2,280	4.83	5.39	136,000
May.....	4,140	2,130	2,740	5.81	6.70	168,000
June.....	9,440	2,610	3,740	7.92	8.84	223,000
July.....	2,450	1,010	1,810	3.83	4.42	111,000
August.....	2,130	581	864	1.83	2.11	53,100
September.....	2,540	539	1,040	2.20	2.46	61,900
The year.....	10,800	325	2,620	5.55	75.36	1,900,000
1933-34						
October.....	6,680	689	1,891	4.01	4.62	116,300
November.....	10,700	1,170	2,411	5.11	5.70	143,500
December.....	31,000	1,130	12,560	26.6	30.67	772,000
January.....	18,000	3,810	6,581	13.9	16.03	404,600
February.....	3,650	1,210	2,150	4.56	4.75	119,400
March.....	4,790	1,170	2,504	5.31	6.12	154,000
April.....	4,060	1,150	1,796	3.81	4.25	106,800
May.....	2,930	824	1,297	2.75	3.17	79,730
June.....	899	617	731	1.55	1.73	43,510
July.....	605	400	473	1.00	1.15	29,070
August.....	485	320	377	.799	.92	23,190
September.....	704	305	382	.809	.90	22,710
The year.....	31,000	305	2,783	5.90	80.01	2,015,000
1934-35						
October.....	12,300	315	1,840	3.90	4.50	113,100
November.....	15,200	2,050	4,683	9.92	11.07	278,600
December.....	8,740	2,050	3,892	8.25	9.51	239,300
January.....	10,400	1,580	3,988	8.45	9.74	245,200
February.....	4,040	2,000	2,669	5.65	5.88	148,200
March.....	4,210	1,430	2,240	4.75	5.48	137,800
April.....	2,290	1,530	1,967	4.17	4.65	117,000
May.....	2,110	1,680	1,872	3.97	4.58	115,100
June.....	2,000	1,040	1,467	3.11	3.47	87,310
July.....	1,630	555	863	1.83	2.11	53,070
August.....	588	460	514	1.09	1.26	31,610
September.....	891	368	457	.968	1.08	27,210
The year.....	15,200	315	2,201	4.66	63.33	1,594,000

Yearly discharge of Toutle River near Silver Lake

Year	Year ending Sept. 30				Calendar year			
	Discharge in second-feet		Run-off		Discharge in second-feet		Run-off	
	Mean	Per square mile	Inches	Acre-feet	Mean	Per square mile	Inches	Acre-feet
1910.....	2,600	5.49	74.47	1,880,000	2,320	4.89	66.47	1,680,000
1911.....	1,690	3.57	48.37	1,220,000	1,490	3.14	42.63	1,080,000
1920.....	1,710	3.62	49.28	1,240,000	2,100	4.45	60.61	1,530,000
1921.....	2,720	5.76	78.15	1,970,000	-	-	-	-
1923.....	1,990	4.22	57.40	1,440,000	1,910	4.05	55.01	1,380,000
1930.....	1,370	2.90	39.30	990,000	1,340	2.84	38.52	970,000
1931.....	1,410	2.99	40.44	1,020,000	1,710	3.62	49.20	1,240,000
1932.....	2,230	4.72	64.39	1,620,000	2,520	5.34	72.81	1,830,000
1933.....	2,620	5.55	75.36	1,900,000	3,240	6.86	93.31	2,350,000
1934.....	2,783	5.90	80.01	2,015,000	2,230	4.72	64.10	1,614,000
1935.....	2,201	4.66	63.33	1,594,000	-	-	-	-
Highest.....	2,783	5.90	80.01	2,015,000	3,240	6.86	93.31	2,350,000
Average.....	2,120	4.49	60.95	1,540,000	2,100	4.43	60.30	1,520,000
Lowest.....	1,370	2.90	39.30	990,000	1,340	2.84	38.52	970,000

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