

## OKANOGAN RIVER BASIN

12439500 OKANOGAN RIVER AT OROVILLE, WA  
(International gaging station)

LOCATION.--Lat 48°55'51", long 119°25'09", in SE 1/4 SW 1/4 sec.27, T.40 N., R.27 E., Okanogan County, Hydrologic Unit 17020006, on left bank in Oroville, 20 ft downstream from Burlington Northern trestle, 0.5 mi downstream from Tonasket Creek, 1.7 mi downstream from Osyoos Lake, 3.2 mi upstream from Similkameen River, and at mile 77.3.

DRAINAGE AREA.--3,195 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WDR WA-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Oct. 26, 1944, nonrecording gage at Zosel Mill dam 200 ft upstream, Oct. 26, 1944, to Mar. 6, 1948, water-stage recorder on railroad trestle 20 ft upstream, both at same datum. Auxiliary water-stage recorder 0.5 mi downstream used during high-water periods; May 15, 1946, to Apr. 9, 1948, nonrecording gage at same site, both at datum 900.00 ft above NGVD of 1929. To convert to 1947 joint adjustment of U.S. Coast and Geodetic Survey and Geodetic Survey of Canada, subtract 0.26 ft.

REMARKS.--Records good except for estimated daily discharges and backwater periods, May 18 to July 19 which are fair. Diversions made to irrigate approximately 44,000 acres in Canada and minor diversions in the United States upstream from station. Natural regulation in several large lakes and artificial regulation in Okanogan Lake 46.7 mi upstream for flood control and irrigation; also regulated by Zosel dam at Oroville, 500 ft upstream from gage. Water temperature April 1986 to September 1987. U.S. Geological Survey satellite telemeter at station.

COOPERATION.--This station is maintained by the United States under agreement with Canada.

AVERAGE DISCHARGE.--60 years (water years 1943-2002), 698 ft<sup>3</sup>/s, 505,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,770 ft<sup>3</sup>/s June 7, 1997; maximum elevation, 916.89 ft June 2, 1972, at datum then in use, backwater from Similkameen River; minimum daily discharge, -2,270 ft<sup>3</sup>/s reverse flow May 29, 1948; minimum elevation, 903.98 ft Mar. 1, 1948, at datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,570 ft<sup>3</sup>/s June 9; maximum elevation, 912.20 ft May 31, result of backwater from Similkameen River and result of regulation at Zosel Dam; minimum discharge, 186 ft<sup>3</sup>/s Sept. 15,16; minimum elevation, 905.95 ft, result of regulation at Zosel Dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	444	432	367	e353	311	423	385	1020	1480	939	205	787
2	461	430	365	e326	311	427	384	1050	2000	930	262	407
3	463	429	401	e311	311	432	386	1090	2060	940	364	496
4	468	427	423	e311	311	437	436	1090	2050	783	363	583
5	463	428	419	e311	309	505	573	1180	2050	653	365	648
6	459	424	414	e311	311	530	629	1270	1990	457	367	802
7	458	423	406	e311	311	518	627	1250	2110	380	364	877
8	458	419	402	e311	311	477	573	1230	2450	383	364	790
9	458	419	401	311	309	450	546	1220	2520	381	369	737
10	456	417	397	311	306	455	544	1200	2460	494	375	737
11	458	411	397	311	309	458	545	1190	2310	551	375	736
12	458	408	395	311	307	464	549	1180	1810	431	375	734
13	458	404	391	311	305	467	548	1170	1520	369	375	662
14	460	402	390	313	305	397	547	1120	1400	372	375	618
15	458	401	386	311	305	337	644	1100	1280	369	369	379
16	490	397	385	311	305	347	709	1090	1150	369	374	188
17	515	397	381	311	305	353	706	1100	1360	368	369	191
18	419	395	380	311	305	389	707	1120	1710	367	369	288
19	364	391	380	311	305	415	706	1120	1790	368	328	349
20	364	391	374	311	305	422	701	1160	1960	369	305	348
21	364	391	369	323	305	419	700	1260	2040	368	305	343
22	367	389	369	342	308	376	720	1420	1990	306	305	342
23	372	386	369	338	317	355	755	1560	1920	261	339	342
24	403	382	364	322	310	358	818	1670	1740	264	360	342
25	444	378	360	311	266	361	1160	1740	1770	264	363	341
26	441	374	358	311	244	365	1410	1710	1880	264	406	337
27	441	369	e358	313	308	369	1360	1600	1740	265	624	337
28	441	369	e358	314	399	372	1220	1480	1440	270	842	332
29	440	369	e358	311	---	375	1050	1140	922	363	835	332
30	435	365	e353	311	---	377	1010	855	930	375	825	332
31	435	---	e353	311	---	380	---	952	---	282	815	---
TOTAL	13615	12017	11823	9786	8614	12810	21648	38337	53832	13555	13031	14737
MEAN	439.2	400.6	381.4	315.7	307.6	413.2	721.6	1237	1794	437.3	420.4	491.2
MAX	515	432	423	353	399	530	1410	1740	2520	940	842	877
MIN	364	365	353	311	244	337	384	855	922	261	205	188
AC-FT	27010	23840	23450	19410	17090	25410	42940	76040	106800	26890	25850	29230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2002, BY WATER YEAR (WY)

	MEAN	510.2	479.3	467.9	487.2	579.1	655.3	778.8	1173	1170	827.8	666.2	572.3
MAX	1430	1551	1404	1190	1214	1918	2475	2870	3165	2598	2570	2279	
(WY)	1949	1949	1949	1949	1997	1983	1983	1997	1997	1997	1997	1997	
MIN	179	148	149	162	140	74.1	115	180	111	126	150	81.7	
(WY)	1989	1971	1971	1968	1971	1977	1968	1992	1992	1947	1963	1944	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1943 - 2002
ANNUAL TOTAL	97300	223805	
ANNUAL MEAN	266.6	613.2	697.6
HIGHEST ANNUAL MEAN			1691
LOWEST ANNUAL MEAN			213
HIGHEST DAILY MEAN	724	May 15	2520
LOWEST DAILY MEAN	91	May 2	188
ANNUAL SEVEN-DAY MINIMUM	93	Apr 27	271
ANNUAL RUNOFF (AC-FT)	193000	443900	505400
10 PERCENT EXCEEDS	427	1270	1510
50 PERCENT EXCEEDS	244	397	506
90 PERCENT EXCEEDS	139	311	205

e Estimated