

YAKIMA RIVER BASIN

12510500 YAKIMA RIVER AT KIONA, WA

LOCATION.--Lat 46°15'13", long 119°28'37", in SE 1/4 NE 1/4 sec.19, T.9 N., R.27 E., Benton County, Hydrologic Unit 17030003, on left bank just upstream from abandoned highway bridge pier at Kiona, 0.1 mi upstream from highway bridge, 3.6 mi downstream from Corral Canyon Creek, 5.0 mi downstream from intake of Kiona Canal, and at mile 29.9.

DRAINAGE AREA.--5,615 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to December 1895 (gage heights only, fragmentary), August 1896 to March 1915, February 1933 to current year. Monthly discharge only 1887 to 1933, published in WSP 1316 and are available at the Pasco, Washington, field office.

REVISED RECORDS.--WSP 214: 1905. WSP 1122: 1934(M). WSP 1216: 1949-50. WSP 1286: 1907(M), 1909, 1936. WSP 1933: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 454.41 ft above NGVD of 1929. Prior to Mar. 31, 1915, nonrecording gages at approximately same site and datum. Feb. 6, 1933, to July 26, 1934, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Diversion upstream from station for irrigation of about 424,000 acres. Flow affected by diversions and by Keechelus, Kachess, Cle Elum, Bumping, and Rimrock Lakes. The Kiona Canal bypasses station with a mean flow of approximately 23 ft³/s for irrigation of about 1,100 acres downstream from station. Diversion by the Kennewick Canal, which bypasses station, began in August 1956, and diverts about 96,000 acre-ft per year. Bureau of Reclamation satellite telemeter at station.

AVERAGE DISCHARGE.--69 years (water years 1934-2002), 3,537 ft³/s, 2,563,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67,000 ft³/s Dec. 23, 1933, gage height, 21.57 ft, from high-water marks; minimum discharge observed, 105 ft³/s Sept. 11, 1906.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,800 ft³/s Apr. 16, gage height, 11.09 ft; minimum discharge, 724 ft³/s Oct. 11.

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	1120	1800	2410	2170	2940	4550	3230	3150	9340	6220	1210	1410
2	1080	1990	2400	2210	2880	4200	3460	3660	9460	5960	1320	1600
3	950	2120	2570	2170	2790	3910	3690	4860	9380	4100	1370	1710
4	866	2090	2510	2160	2690	3690	3720	5570	9080	2680	1380	1830
5	804	2060	2420	2150	2640	3550	3610	5250	8900	2070	1460	1840
6	839	2000	2330	2120	2560	3480	3830	4640	8850	2050	1490	1790
7	868	1940	2270	2460	2550	3490	4140	4020	8960	2050	1430	1810
8	847	1910	2270	5350	2630	3410	4510	3390	8850	1870	1360	1820
9	927	1830	2270	8890	2640	3250	4630	2920	8350	1790	1290	1830
10	938	1790	2230	9180	2580	3160	4460	2610	7790	1800	1170	1720
11	871	1770	2200	7930	2510	3090	4620	2430	7010	1630	1400	1510
12	872	1690	2150	7190	2450	3370	4920	2250	6340	1360	1600	1360
13	880	1680	2120	6680	2400	4410	5350	2160	5790	1360	1400	1170
14	971	1640	2290	6330	2310	4470	6140	2360	5670	1290	1150	1260
15	989	1680	3150	5890	2330	4240	9740	2980	6540	1270	893	1370
16	1330	3750	3340	5420	2320	4020	13300	3220	8150	1280	950	1510
17	1670	4410	3300	5020	2290	3840	10400	3200	9270	1240	999	1690
18	1860	3750	4100	4660	2280	3690	7810	3120	9240	1110	1100	1800
19	1850	3250	4190	4230	2290	3210	6270	3280	7580	1260	1320	1770
20	1840	2990	3810	3930	2280	2710	5450	3900	6490	1330	1370	1720
21	1820	2930	3450	3740	2420	2770	4870	4710	5670	1360	1400	1770
22	1680	3020	3140	3630	2510	2950	4650	5970	4890	1390	1390	1800
23	1770	2980	2900	3480	3610	2910	4130	5780	4700	1370	1370	1830
24	1700	2950	2740	3330	5860	2840	3660	5290	4940	1320	1400	1880
25	1860	2980	2610	3230	6250	2800	3260	4930	5310	1290	1350	1810
26	2060	2840	2540	3340	5800	2740	2950	5020	5420	1370	1320	1760
27	2020	2680	2440	3580	5300	2810	2810	5490	5010	1200	1350	1820
28	1920	2590	2380	3430	4900	3030	3020	6100	5070	1170	1290	1880
29	1830	2560	2310	3240	---	2990	3300	6730	5530	1250	1260	1910
30	1860	2480	2260	3080	---	3000	3150	8000	5780	1290	1270	1900
31	1850	---	2220	3000	---	3120	---	9040	---	1240	1260	---
TOTAL	42742	74150	83320	133220	87010	105700	149080	136030	213360	57970	40322	50880
MEAN	1379	2472	2688	4297	3108	3410	4969	4388	7112	1870	1301	1696
MAX	2060	4410	4190	9180	6250	4550	13300	9040	9460	6220	1600	1910
MIN	804	1640	2120	2120	2280	2710	2810	2160	4700	1110	893	1170
AC-FT	84780	147100	165300	264200	172600	209700	295700	269800	423200	115000	79980	100900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2002, BY WATER YEAR (WY)

	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	2256	2870	4012	3995	4521	4649	4710	5287	4886	1950	1575	1828																																																									
MAX	4252	6293	17330	14100	17570	16750	13190	13930	16470	5398	2333	2549																																																									
(WY)	1950	1960	1934	1934	1996	1972	1956	1997	1948	1954	1976	1978																																																									
MIN	1021	1462	1546	1335	1163	486	493	902	869	598	751	784																																																									
(WY)	1980	1988	1936	1937	1977	1977	1977	1977	1994	1994	1979	1979																																																									

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1934 - 2002
ANNUAL TOTAL	561651	1173784	
ANNUAL MEAN	1539	3216	3537
HIGHEST ANNUAL MEAN			7055
LOWEST ANNUAL MEAN			1293
HIGHEST DAILY MEAN	4410	Nov 17	13300
LOWEST DAILY MEAN	572	Jul 26	804
ANNUAL SEVEN-DAY MINIMUM	678	Aug 9	870
ANNUAL RUNOFF (AC-FT)	1114000	2328000	2563000
10 PERCENT EXCEEDS	2410	6020	7230
50 PERCENT EXCEEDS	1650	2590	2420
90 PERCENT EXCEEDS	739	1290	1360