

Water-Data Report 2011

12422500 SPOKANE RIVER AT SPOKANE, WA

Spokane Basin
Upper Spokane Subbasin

LOCATION.--Lat 47°39'34", long 117°26'53" referenced to North American Datum of 1927, in SW ¼ SW ¼ sec.13, T.25 N., R.42 E., Spokane County, WA, Hydrologic Unit 17010305, on right bank at Cochran Street in Spokane, 0.5 mi upstream from Hangman Creek, and at mile 72.9.

DRAINAGE AREA.--4,290 mi², of which about 122 mi² in the vicinity of Hayden Lake is noncontributing to this station.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1891 to current year.

Chemical analyses October 1972 to September 1973.

REVISED RECORDS.--WSP 532: 1891-1904. WSP 1246: Drainage area. WSP 1286: 1907-09.

GAGE.--Water-stage recorder. Elevation of gage is 1,697 ft above NGVD of 1929 (river-profile survey). Prior to July 1, 1921, water-stage recorders and nonrecording gages at several sites within 4 mi of present site at various datums.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by powerplants of Avista Corp. at Post Falls, Idaho, 28.8 mi upstream and at Spokane, 1.3 mi upstream, and by Coeur d'Alene Lake, Idaho. Rathdrum Prairie Canal diverts water upstream from station for irrigation. In 1946, approximately 22,600 acres, of which about 15,000 acres utilized surface water, were under irrigation upstream from Spokane. Since 1966 irrigation has been from many wells in the valley near the river with only about 3,000 acres irrigated from the river. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--120 years (water years 1892-2011), 6,692 ft³/s, 4,848,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,000 ft³/s, estimated, May 31, 1894 (see WSP 532); minimum, 49.7 ft³/s Aug. 26, 1991, due to regulation for construction at Post Street Dam, but may have been lower during periods of missing record in 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,700 ft³/s, May 28, gage height, 27.21 ft; minimum discharge, 750 ft³/s, Aug. 20, gage height, 17.22 ft, result of regulation.

12422500 SPOKANE RIVER AT SPOKANE, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,940	2,280	4,690	7,880	16,200	6,070	14,200	15,800	30,200	13,900	2,960	1,320
2	1,950	2,290	4,670	7,590	15,400	5,910	17,000	15,600	29,200	12,600	2,880	1,240
3	1,950	2,280	4,740	7,280	14,400	5,740	19,600	15,500	28,600	10,600	2,750	1,240
4	1,960	2,320	4,750	6,970	13,700	5,690	21,900	15,400	28,200	10,400	2,710	1,240
5	1,960	2,430	4,730	6,780	13,000	5,630	23,400	15,300	27,700	10,800	2,590	1,250
6	1,960	2,430	4,740	6,560	12,400	5,590	24,300	15,400	27,400	11,400	2,470	1,290
7	1,980	2,460	4,750	6,430	11,900	5,590	24,400	15,600	27,300	11,500	2,450	1,480
8	2,010	2,450	4,750	6,220	11,300	5,580	24,000	16,100	27,500	11,000	2,370	1,490
9	2,020	2,460	4,750	6,060	10,800	5,720	23,400	16,700	27,600	10,400	2,210	1,480
10	2,010	2,450	4,790	5,880	10,000	5,540	22,400	17,600	27,500	9,250	2,090	1,490
11	2,040	2,480	4,760	5,780	9,630	5,880	21,400	18,500	27,100	8,300	2,070	1,480
12	2,030	2,480	4,810	5,570	9,200	6,560	20,500	19,500	26,400	8,210	1,940	1,470
13	2,080	2,520	4,790	5,580	8,790	7,080	19,600	20,700	25,800	7,900	1,770	1,470
14	2,070	2,520	4,870	5,750	8,530	7,610	19,000	22,000	25,300	7,850	1,740	1,470
15	2,070	2,660	5,140	6,650	8,380	8,260	18,300	23,400	24,900	7,700	1,720	1,470
16	2,080	3,230	5,610	8,470	8,080	9,260	17,700	25,800	24,400	6,800	1,710	1,460
17	2,090	3,400	6,660	12,100	8,010	10,400	17,200	28,900	23,900	6,230	1,680	1,480
18	2,090	3,470	7,300	16,800	7,840	11,200	16,900	31,400	23,100	5,520	1,680	1,490
19	2,080	3,650	7,360	21,800	7,610	11,500	16,800	32,400	22,400	5,390	1,650	1,510
20	2,090	4,400	8,290	24,600	7,410	11,800	16,500	32,400	21,700	5,360	1,590	1,510
21	2,100	4,460	9,530	25,000	7,400	11,900	16,100	32,000	21,100	5,300	1,490	1,630
22	2,080	4,500	9,520	24,700	7,290	12,000	15,700	31,900	20,600	5,090	1,450	1,640
23	2,070	4,540	9,400	24,000	7,190	12,100	15,200	32,300	20,300	4,950	1,380	1,640
24	2,080	4,580	9,270	22,900	6,870	12,000	14,700	32,800	20,200	4,720	1,400	1,620
25	2,110	4,570	9,110	21,900	6,500	12,000	14,300	33,000	20,000	4,300	1,360	1,640
26	2,130	4,600	8,930	21,200	6,350	11,900	14,400	33,300	19,600	4,020	1,360	1,660
27	2,240	4,610	8,740	20,300	6,170	11,900	14,700	33,200	19,000	3,830	1,340	1,670
28	2,250	4,600	8,580	19,300	6,170	11,700	15,200	33,300	18,100	3,340	1,330	1,680
29	2,260	4,640	8,470	18,400	---	11,700	15,500	32,900	16,600	3,300	1,330	1,670
30	2,260	4,660	8,260	17,600	---	11,800	15,800	32,300	15,500	3,240	1,300	1,690
31	2,260	---	8,090	16,900	---	12,400	---	31,300	---	3,020	1,300	---
Total	64,300	100,420	204,850	412,950	266,520	278,010	550,100	772,300	717,200	226,220	58,070	44,870
Mean	2,074	3,347	6,608	13,320	9,519	8,968	18,340	24,910	23,910	7,297	1,873	1,496
Max	2,260	4,660	9,530	25,000	16,200	12,400	24,400	33,300	30,200	13,900	2,960	1,690
Min	1,940	2,280	4,670	5,570	6,170	5,540	14,200	15,300	15,500	3,020	1,300	1,240
Ac-ft	127,500	199,200	406,300	819,100	528,600	551,400	1,091,000	1,532,000	1,423,000	448,700	115,200	89,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1891 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,155	3,278	5,127	5,585	6,266	8,271	14,060	17,650	11,030	3,375	1,704	1,710
Max	5,643	13,050	22,910	25,430	22,060	25,380	25,030	34,390	29,850	11,910	4,744	3,302
(WY)	(1928)	(1928)	(1934)	(1934)	(1996)	(1972)	(1943)	(1997)	(1894)	(1899)	(1899)	(1912)
Min	1,300	1,151	1,233	1,339	1,489	2,047	3,865	5,214	2,141	1,050	531	932
(WY)	(1893)	(1940)	(1932)	(1931)	(1929)	(1929)	(1977)	(1992)	(1926)	(1994)	(1994)	(1966)

12422500 SPOKANE RIVER AT SPOKANE, WA—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1891 - 2011	
Annual total	1,710,371		3,695,810			
Annual mean	4,686		10,130		6,692	
Highest annual mean					12,310	1974
Lowest annual mean					2,508	1977
Highest daily mean	16,600	Jun 23	33,300	May 26	49,000	May 31, 1894
Lowest daily mean	867	Sep 3	1,240	Sep 2	466	Aug 11, 1973
Annual seven-day minimum	894	Sep 1	1,270	Aug 31	502	Aug 21, 1994
Annual runoff (ac-ft)	3,393,000		7,331,000		4,848,000	
10 percent exceeds	9,650		24,300		17,000	
50 percent exceeds	3,450		6,870		3,710	
90 percent exceeds	1,380		1,640		1,490	

