

14189000 SANTIAM RIVER AT JEFFERSON, OR

Willamette Basin
North Santiam Subbasin

LOCATION.--Lat 44°42'55", long 123°00'40" referenced to North American Datum of 1927, in SE ¼ sec.11, T.10 S., R.3 W., Marion County, OR, Hydrologic Unit 17090005, on right bank 350 ft upstream from Southern Pacific railroad bridge at Jefferson, 2.1 mi downstream from confluence of North and South Santiam Rivers and at mile 9.62.

DRAINAGE AREA.--1,790 mi², approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1905 to June 1906 (gage heights and discharge measurements only), October 1907 to September 1916, October 1939 to current year. Gage-height records collected at same site since 1907 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 904: Drainage area. WSP 1094: 1908, 1910, 1912, 1943. WSP 1248: 1911, 1915-16(M). WSP 1935: 1909, WDR OR-93-1: 1974.

GAGE.--Water-stage recorder. Datum of gage is 199.63 ft above NGVD of 1929. Prior to Sept. 22, 1940, nonrecording gages at sites within 350 ft downstream at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1953 by Detroit Lake, since 1966 by Green Peter Lake and by Foster Lake. Salem Canal diverts from North Santiam River at Stayton for irrigation and power; most of this water reaches Willamette River by way of Mill Creek at Salem. Stayton Canal diverts from North Santiam River at Stayton for irrigation of lands near town of West Stayton; some return flow reaches North Santiam River upstream from station. Albany power canal diverts from South Santiam River at Lebanon; return flow reaches Willamette River at Albany. Continuous water-quality records for the period October 1963 to September 1987 have been collected at this location. Water temperature data for the period October 2000 to June 2001 available in the files of the Portland Field Office. Periodic suspended sediment data are available for the period October 1991 to September 1993.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--22 years (water years 1908-16, 1940-1952), 7,587 ft³/s, 5,497,000 acre-ft/yr. 54 years (water years 1953-2006), 7,756 ft³/s, 5,619,000 acre-ft/yr (regulated period).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 197,000 ft³/s Dec. 22, 1964, gage height, 24.22 ft; minimum discharge observed, 260 ft³/s Aug. 15-22, Aug. 24 to Sept. 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 25.0 ft was reached in December 1861 and 23.4 ft in February 1890 (information from U.S. Army Corps of Engineers). On Nov. 21, 1921, the stage reached 19.5 ft at gage on railroad bridge 350 ft downstream, corresponding gage height at present site and datum, 24.4 ft, from curve of relation, discharge, 202,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55,300 ft³/s Dec. 31, gage height, 15.90 ft; minimum discharge, 1,470 ft³/s Aug. 26.

14189000 SANTIAM RIVER AT JEFFERSON, OR—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3,600	10,700	10,300	36,800	30,100	7,280	7,010	6,380	5,050	2,250	1,590	1,530
2	4,000	11,200	13,300	26,600	24,600	5,990	6,930	6,480	7,320	2,140	1,590	1,510
3	4,070	9,570	15,200	25,800	25,900	5,300	6,790	6,690	8,820	2,060	1,590	1,520
4	4,120	11,300	12,900	26,900	31,000	4,920	7,270	6,000	8,690	2,050	1,570	1,540
5	4,100	12,000	10,500	27,300	30,100	4,580	8,030	5,950	9,840	2,050	1,570	1,560
6	3,970	15,900	8,760	27,600	21,800	4,310	8,440	6,450	7,840	2,070	1,560	1,660
7	3,890	15,000	7,390	30,500	15,000	4,470	8,180	6,410	5,910	2,100	1,560	1,860
8	3,840	13,200	6,670	33,300	11,100	5,070	8,370	6,720	4,960	2,010	1,550	1,990
9	3,810	12,100	6,370	32,400	10,300	7,610	9,030	6,560	4,500	1,970	1,570	2,010
10	3,800	11,500	6,020	36,200	9,630	7,560	9,390	6,340	4,260	1,960	1,560	2,120
11	3,800	11,900	5,830	45,100	8,170	6,280	8,640	6,350	4,050	1,960	1,550	2,300
12	3,800	13,200	6,160	32,900	6,010	5,410	8,250	6,190	3,810	1,980	1,540	2,270
13	3,780	14,500	6,280	30,700	5,080	4,920	7,940	5,990	3,860	2,010	1,540	2,290
14	3,760	17,200	6,080	36,000	4,750	4,630	7,900	5,880	3,890	1,970	1,540	2,320
15	3,690	14,100	5,950	33,800	4,500	4,440	11,200	5,810	3,970	1,930	1,530	2,370
16	3,510	12,500	5,560	32,500	4,250	4,630	11,400	5,780	4,010	1,900	1,550	2,560
17	3,440	12,100	4,930	41,500	4,050	5,120	9,870	5,290	4,120	1,880	1,540	2,730
18	3,330	11,300	4,690	44,500	3,830	5,350	9,260	5,520	3,990	1,860	1,540	2,940
19	3,250	10,300	4,840	35,200	3,720	5,120	8,800	5,530	3,690	1,840	1,520	3,220
20	3,310	9,050	6,860	37,000	3,590	4,790	8,540	5,520	3,410	1,830	1,520	3,240
21	3,560	7,870	8,830	39,400	3,520	4,770	8,310	5,890	3,210	1,810	1,520	3,320
22	3,560	7,070	15,900	39,600	3,450	4,830	8,290	5,720	3,120	1,800	1,530	3,420
23	3,480	6,930	23,700	37,200	3,400	4,620	7,800	5,230	2,860	1,800	1,530	3,320
24	3,370	6,860	19,900	35,400	3,340	5,100	7,690	5,050	2,740	1,790	1,510	3,280
25	3,330	7,660	20,400	34,400	3,240	5,330	7,360	5,060	3,070	1,760	1,510	3,260
26	3,360	10,300	19,800	31,800	3,180	5,680	7,000	5,170	2,800	1,780	1,500	3,210
27	3,560	9,250	21,200	28,700	3,320	5,240	7,430	5,670	2,530	1,760	1,490	3,190
28	3,770	8,320	25,000	28,700	6,520	4,960	7,190	7,150	2,470	1,610	1,510	3,200
29	4,470	8,720	23,600	28,500	---	4,990	7,080	8,830	2,450	1,580	1,510	3,190
30	4,640	9,710	28,000	30,200	---	5,190	6,960	6,840	2,380	1,600	1,520	3,180
31	4,670	---	51,700	28,400	---	6,120	---	5,680	---	1,610	1,540	---
Total	116,640	331,310	412,620	1,034,900	287,450	164,610	246,350	188,130	133,620	58,720	47,750	76,110
Mean	3,763	11,040	13,310	33,380	10,270	5,310	8,212	6,069	4,454	1,894	1,540	2,537
Max	4,670	17,200	51,700	45,100	31,000	7,610	11,400	8,830	9,840	2,250	1,590	3,420
Min	3,250	6,860	4,690	25,800	3,180	4,310	6,790	5,050	2,380	1,580	1,490	1,510
Ac-ft	231,400	657,200	818,400	2,053,000	570,200	326,500	488,600	373,200	265,000	116,500	94,710	151,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4,723	11,180	15,850	15,120	11,280	9,177	8,357	7,076	4,492	1,866	1,442	2,686
Max	11,890	26,850	37,880	33,380	32,350	25,700	16,150	14,180	11,150	4,825	2,883	5,325
(WY)	(1969)	(1974)	(1965)	(2006)	(1996)	(1972)	(1993)	(1960)	(1984)	(1983)	(1968)	(1968)
Min	432	622	2,420	2,178	1,897	3,245	3,874	2,115	1,287	944	747	887
(WY)	(1953)	(1953)	(1977)	(1977)	(1977)	(1992)	(1968)	(1973)	(1992)	(1965)	(1966)	(1953)

14189000 SANTIAM RIVER AT JEFFERSON, OR—Continued

SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1953 - 2006	
Annual total	2,096,670		3,098,210			
Annual mean	5,744		8,488		7,756	
Highest annual mean					12,310	1974
Lowest annual mean					3,512	1977
Highest daily mean	51,700	Dec 31	51,700	Dec 31	143,000	Dec 23, 1964
Lowest daily mean	1,540	Aug 27	1,490	Aug 27	396	Oct 7, 1952
Annual seven-day minimum	1,550	Aug 23	1,510	Aug 24	406	Oct 15, 1952
Annual runoff (ac-ft)	4,159,000		6,145,000		5,619,000	
10 percent exceeds	11,100		25,800		17,400	
50 percent exceeds	3,780		5,100		5,100	
90 percent exceeds	1,730		1,590		1,450	

