

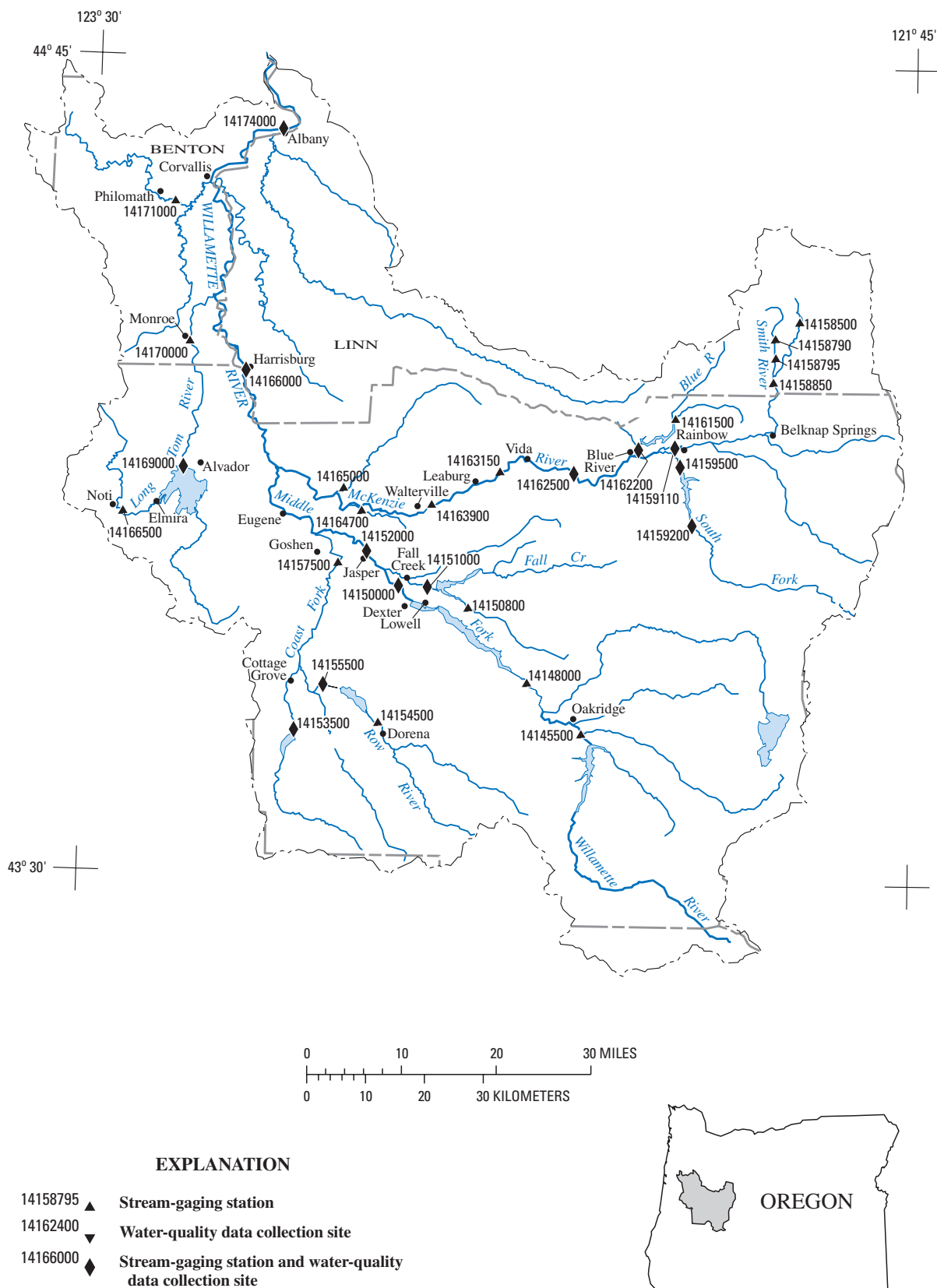


Figure 21. Location of surface-water and water-quality stations in the Willamette River Basin upstream from the Luckiamute River.

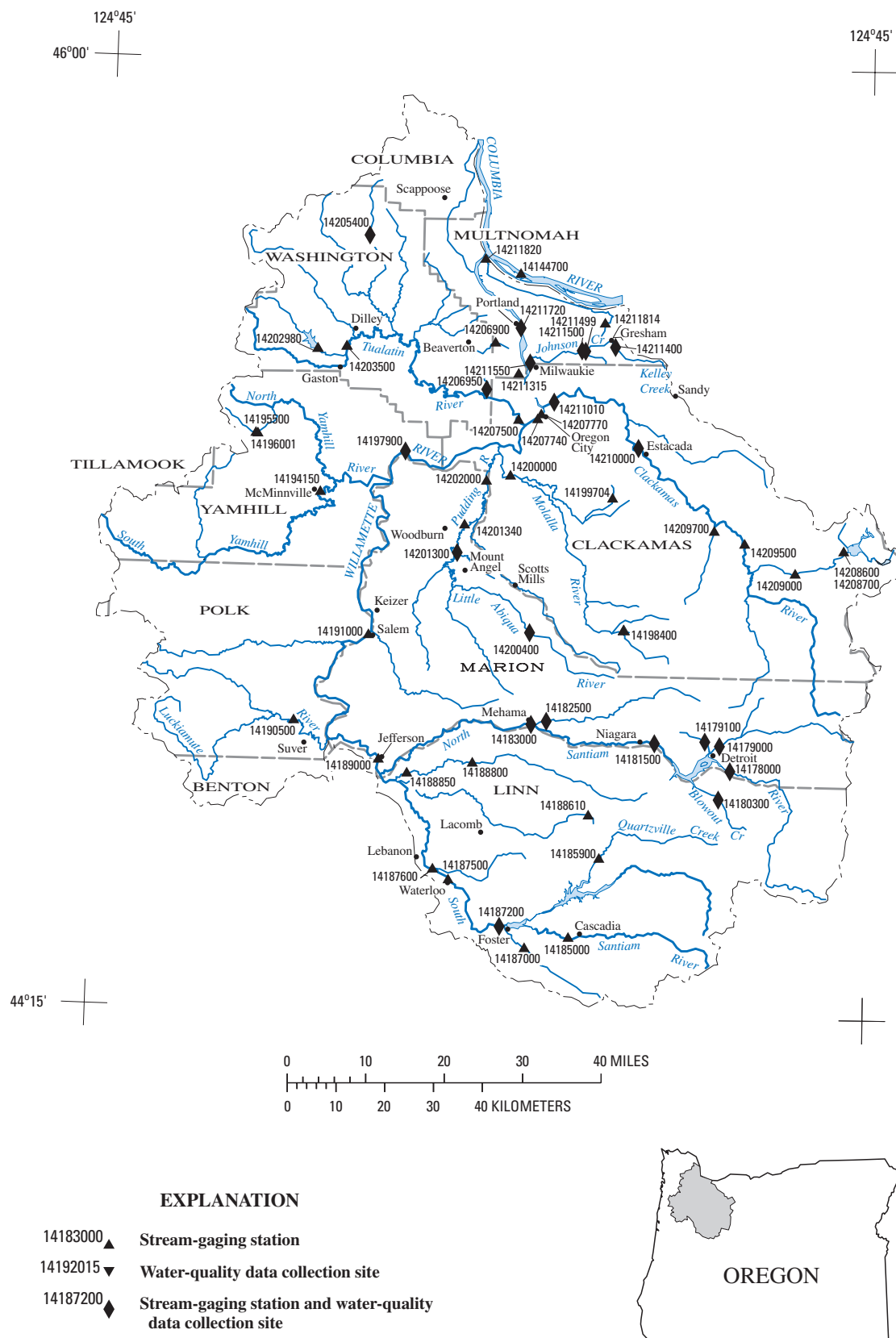


Figure 25. Location of surface-water and water-quality stations in the Willamette River Basin, downstream from the Luckiamute River.

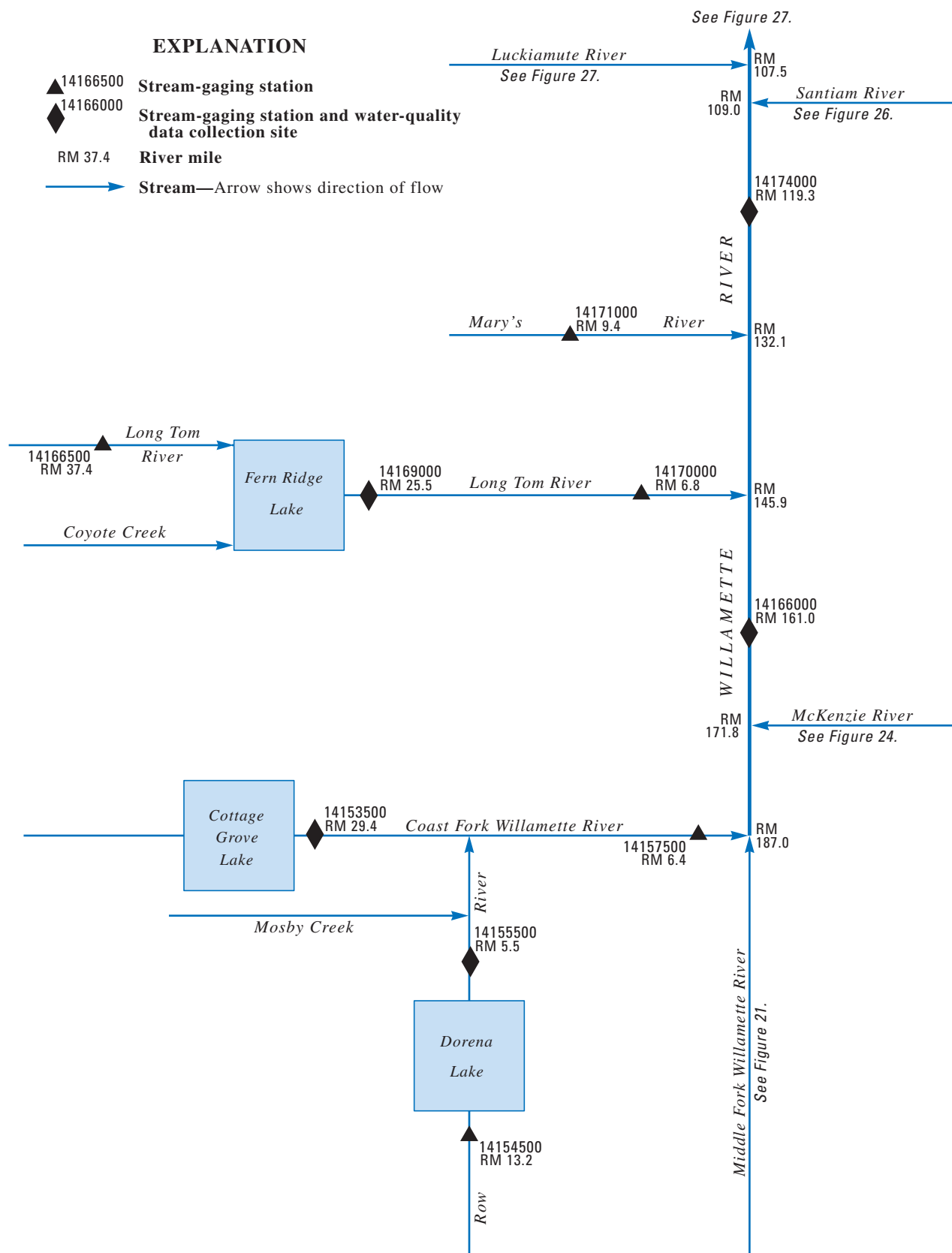


Figure 23. Schematic diagram showing gaging stations in the Long Tom, Coast Fork Willamette and upper Willamette River Basins.

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR

LOCATION.--Lat 44°16'14", long 123°10'21", in NW ¼ NE ¼ sec.16, T.15 S., R.4 W., Linn County, Hydrologic Unit 17090003, on right bank 75 ft north of intersection of First Street and Kesling Street in Harrisburg and at mile 161.0.

DRAINAGE AREA.--3,420 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year. Gage-height records collected at same site in 1927-28, 1931, 1934, are contained in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 288.39 ft above NGVD of 1929. Oct. 1 to Nov. 14, 1944, nonrecording gage at bridge 1,110 ft upstream at different datum. Nov. 15, 1944 to Aug. 15, 1973, at site 1,100 ft upstream at datum 2.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by 8 reservoirs upstream from station. Many small diversions upstream from station for irrigation. Continuous water-quality records for the period June 1961 to September 1987 have been collected at this location. Periodic suspended sediment data are available for the period October 1991 to September 1993.

AVERAGE DISCHARGE.--24 years (water years 1945-68), 12,320 ft³/s, 8,927,000 acre-ft/yr. 37 years (water years 1969-2005), 11,180 ft³/s, 8,097,000 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft³/s Dec. 29, 1945, gage height, 19.69 ft, from rating curve extended above 115,000 ft³/s; minimum discharge, 1,990 ft³/s Oct. 30, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood stage of 20.5 ft was reached in December 1861 and 20.1 ft in February 1890 (information from U.S. Army Corps of Engineers). Flood of Jan. 1, 1943, reached a stage of 19.1 ft from National Weather Service.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,600 ft³/s Dec. 10, gage height, 9.80 ft; minimum discharge, 4,280 ft³/s Mar. 16.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,280	9,360	5,030	7,830	4,690	4,610	9,210	8,140	7,410	4,990	5,150	5,250
2	5,300	8,980	5,120	7,930	4,690	4,600	8,760	8,150	7,760	4,890	5,150	5,270
3	5,300	10,700	5,000	7,670	4,680	4,570	8,050	7,770	7,680	4,860	5,130	5,300
4	5,290	10,200	4,940	6,400	4,640	4,540	8,420	7,490	7,280	4,850	5,120	5,320
5	5,270	9,590	4,930	5,990	4,640	e4,500	8,340	8,080	6,900	4,850	5,090	5,320
6	5,380	9,700	5,000	5,530	4,630	e4,400	8,240	8,650	7,060	4,850	5,090	5,320
7	5,450	9,450	7,790	5,100	4,680	e4,300	8,590	8,970	8,200	4,850	5,080	5,370
8	5,620	9,090	13,100	5,100	4,630	e4,200	10,700	8,430	9,830	4,840	5,080	5,380
9	6,080	8,940	29,700	5,120	4,600	e4,100	11,200	9,130	8,720	4,920	5,060	5,400
10	5,990	8,780	32,500	5,060	4,580	e4,100	10,500	14,800	7,380	4,930	5,110	5,490
11	5,720	8,120	29,600	4,990	4,570	e4,000	10,300	21,900	6,870	4,890	5,120	5,600
12	5,650	7,950	30,700	5,000	4,570	e3,900	10,400	18,800	6,750	4,860	5,110	5,550
13	5,420	7,520	29,000	4,990	4,980	e3,800	9,520	15,100	6,340	4,870	5,120	5,520
14	5,680	7,010	28,000	4,860	4,960	e3,800	8,470	12,100	5,920	4,880	5,110	5,540
15	5,860	6,660	27,500	4,830	4,790	e3,700	8,030	10,600	5,560	4,950	5,110	5,510
16	5,880	6,640	23,400	4,930	4,720	e3,700	7,590	10,400	5,420	5,020	5,120	5,530
17	6,120	6,440	18,400	5,080	4,670	e3,800	7,890	13,300	5,660	5,020	5,160	5,580
18	6,710	6,030	15,000	5,940	4,630	e3,900	8,510	14,500	5,920	4,990	5,190	5,580
19	7,440	5,730	12,800	8,130	4,610	e3,900	7,980	15,500	5,920	4,960	5,180	5,570
20	7,500	5,580	11,400	7,610	4,960	e4,200	7,340	15,600	5,840	4,950	5,190	5,600
21	7,330	5,530	10,600	6,060	5,270	e4,600	6,970	14,100	5,670	4,950	5,230	5,630
22	7,660	5,480	10,600	5,350	4,950	e4,700	6,630	13,000	5,520	5,020	5,230	5,630
23	8,300	5,460	9,690	5,160	4,800	e4,900	6,800	11,400	5,390	5,050	5,260	5,650
24	8,480	5,490	9,170	5,070	4,740	e5,100	7,890	9,600	5,280	5,030	5,270	5,700
25	8,110	5,830	8,980	4,930	4,690	e6,600	7,860	8,430	5,130	5,010	5,280	5,670
26	8,060	6,810	8,980	4,800	4,650	e6,800	7,450	7,920	5,090	5,020	5,270	5,720
27	8,140	6,560	8,830	4,790	4,630	8,340	7,730	7,470	5,100	5,070	5,290	5,740
28	8,740	6,130	8,640	4,750	4,630	19,300	7,870	7,210	5,130	5,200	5,300	5,750
29	9,120	5,840	8,690	4,770	---	18,400	7,550	7,690	5,100	5,160	5,330	5,750
30	9,350	5,370	8,340	4,740	---	16,600	7,720	7,930	5,050	5,180	5,370	5,830
31	9,570	---	7,660	4,700	---	11,300	---	7,610	---	5,150	5,330	---
TOTAL	209,800	220,970	439,090	173,210	132,280	189,260	252,510	339,770	190,880	154,060	160,630	166,070
MEAN	6,768	7,366	14,160	5,587	4,724	6,105	8,417	10,960	6,363	4,970	5,182	5,536
MAX	9,570	10,700	32,500	8,130	5,270	19,300	11,200	21,900	9,830	5,200	5,370	5,830
MIN	5,270	5,370	4,930	4,700	4,570	3,700	6,630	7,210	5,050	4,840	5,060	5,250
AC-FT	416,100	438,300	870,900	343,600	262,400	375,400	500,900	673,900	378,600	305,600	318,600	329,400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2005, BY WATER YEAR (WY)

MEAN	7,447	13,660	20,960	20,290	14,230	12,490	10,930	10,110	7,475	4,856	5,236	6,511
MAX	10,970	30,850	48,480	36,750	33,520	36,070	21,680	17,120	16,150	6,283	7,117	8,986
(WY)	(1985)	(1985)	(1997)	(1971)	(1996)	(1972)	(1993)	(1996)	(1984)	(1969)	(1971)	(1972)
MIN	4,092	4,924	3,848	3,695	2,859	5,156	4,823	4,009	3,658	3,267	3,795	4,305
(WY)	(2004)	(1988)	(1977)	(1977)	(1977)	(2001)	(1977)	(1987)	(1987)	(2001)	(2001)	(1992)

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1969 - 2005	
ANNUAL TOTAL	3,598,230		2,628,530		11,180	
ANNUAL MEAN	9,831		7,201		17,800	1972
HIGHEST ANNUAL MEAN					5,233	1977
LOWEST ANNUAL MEAN					72,400	Nov 20, 1996
HIGHEST DAILY MEAN	34,500	Feb 1	32,500	Dec 10	2,340	Feb 19, 1977
LOWEST DAILY MEAN	4,500	Jul 23	3,700	Mar 15	2,410	Feb 15, 1977
ANNUAL SEVEN-DAY MINIMUM	4,570	Jul 9	3,800	Mar 12	8,097,000	
ANNUAL RUNOFF (AC-FT)	7,137,000		5,214,000		23,600	
10 PERCENT EXCEEDS	20,200		10,400		7,760	
50 PERCENT EXCEEDS	8,110		5,580		4,550	
90 PERCENT EXCEEDS	4,860		4,680			

e Estimated



2005 Water Year
WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR

Latitude: 44° 16' 14"

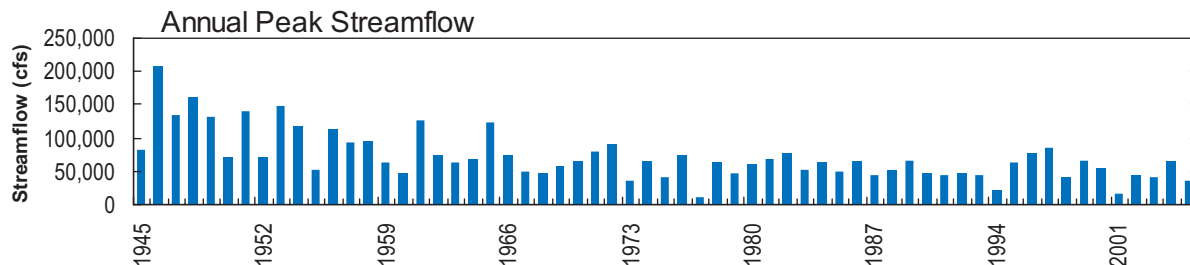
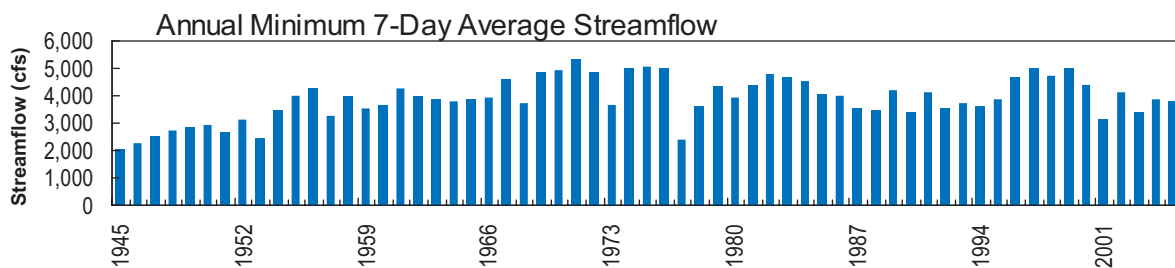
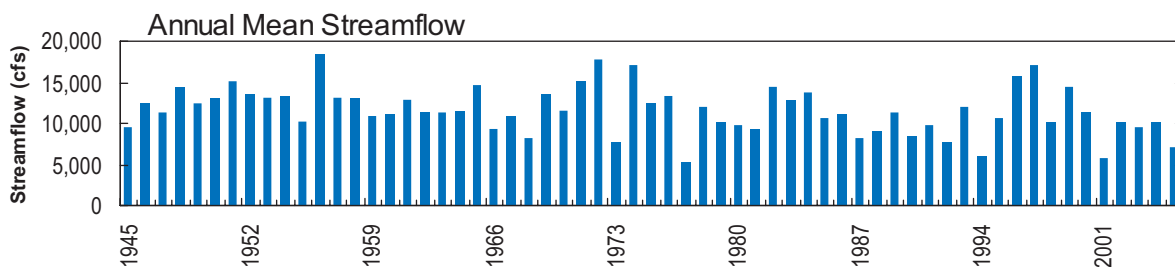
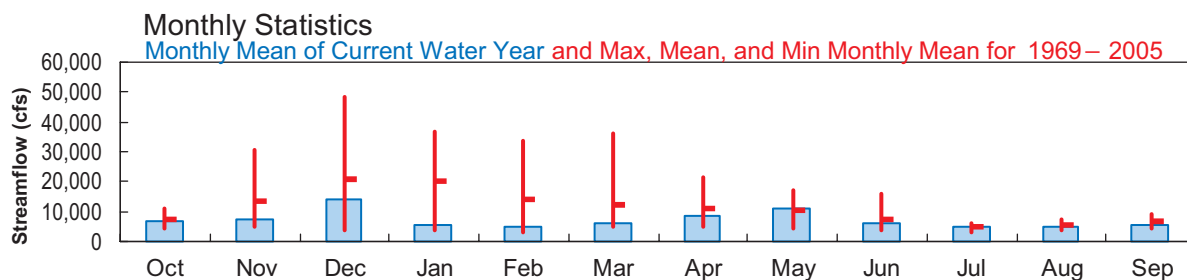
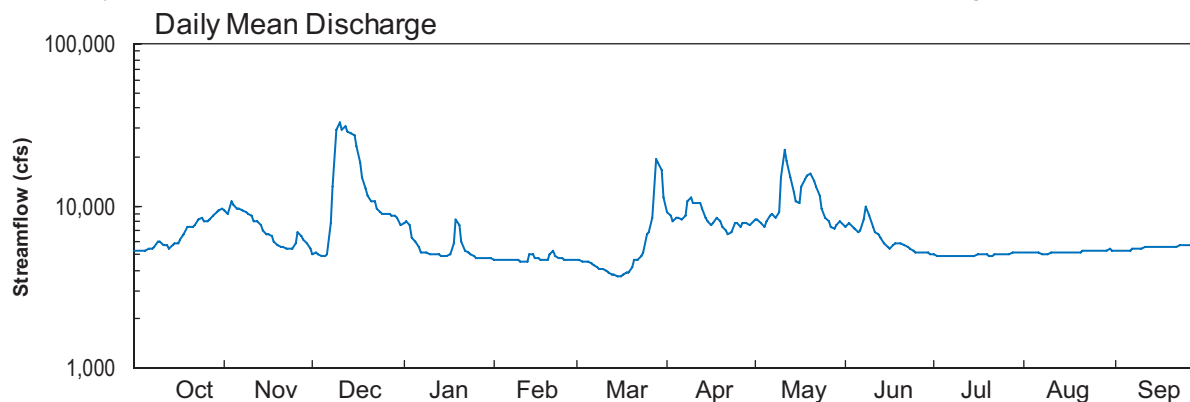
Longitude: 123° 10' 21"

Hydrologic Unit Code: 17090003

Linn County

Datum: 288.39 feet

Drainage Area: 3420 mi²



WILLAMETTE RIVER BASIN
14166000 WILLAMETTE RIVER AT HARRISBURG, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1961 to September 1987, October 2000 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--Water-Temperature records good. Included in this report is the daily values table from the 2004 water year that was inadvertently omitted from the 2004 Annual Data Report.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 24.°C Aug. 12, 1973; minimum, 0.0°C Jan. 8, 9, 1973.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 20.8°C July 18; minimum, 3.9°C Jan. 5.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.8	16.3	17.0	9.5	8.7	9.2	8.8	8.2	8.5	6.4	5.3	5.8
2	16.9	16.2	16.7	9.2	8.7	9.1	9.1	8.6	8.8	5.9	5.3	5.6
3	17.3	16.0	16.6	9.7	8.3	9.0	9.1	8.8	9.0	6.2	5.8	6.0
4	17.2	16.5	16.9	9.1	8.6	8.8	8.8	8.3	8.5	6.3	5.9	6.1
5	16.6	16.1	16.3	9.3	8.8	9.1	9.3	8.7	9.0	6.0	5.0	5.5
6	17.6	16.0	16.8	9.9	8.7	9.4	9.2	8.8	8.9	5.0	4.4	4.6
7	18.0	17.0	17.4	10.1	9.3	9.7	8.8	8.3	8.5	6.1	4.8	5.4
8	17.0	15.3	16.2	10.2	9.6	9.9	8.5	8.2	8.4	6.6	6.1	6.3
9	15.7	14.8	15.2	10.4	9.7	10.0	8.4	8.0	8.1	6.8	6.6	6.7
10	15.7	14.4	15.0	10.8	10.1	10.5	8.4	8.0	8.2	7.3	6.8	7.1
11	15.0	13.6	14.3	11.4	10.6	10.9	8.5	8.2	8.4	7.3	6.9	7.0
12	14.2	13.4	13.7	10.8	10.0	10.3	8.6	8.3	8.5	7.0	6.6	6.8
13	13.8	13.5	13.7	10.8	9.8	10.2	8.7	8.4	8.6	7.2	6.7	6.9
14	15.0	13.7	14.3	10.8	10.2	10.4	8.7	7.3	7.8	7.5	7.1	7.3
15	14.4	13.6	14.0	10.6	10.2	10.4	7.6	7.4	7.5	7.9	7.5	7.7
16	14.7	13.3	14.0	10.3	10.2	10.2	7.7	7.4	7.6	7.8	7.6	7.7
17	15.9	14.5	15.1	10.2	9.7	9.9	7.9	7.7	7.8	7.6	7.3	7.4
18	15.7	14.9	15.2	10.6	9.8	10.2	7.8	7.5	7.7	7.8	7.2	7.5
19	15.5	14.8	15.1	10.7	9.2	10.1	7.5	7.3	7.3	8.1	7.7	7.9
20	16.6	15.1	15.7	9.2	8.2	8.5	8.0	7.4	7.7	8.0	7.6	7.7
21	17.0	15.8	16.4	8.5	8.0	8.2	8.2	7.7	7.9	7.6	7.0	7.2
22	16.8	15.9	16.4	8.2	7.4	7.6	8.0	7.4	7.5	7.1	6.6	6.9
23	15.9	14.5	15.3	7.7	7.1	7.5	7.5	7.3	7.4	7.4	6.9	7.1
24	14.5	13.6	14.0	8.2	7.6	7.9	7.8	7.4	7.6	7.7	7.3	7.5
25	13.9	13.0	13.4	7.9	7.6	7.7	7.7	7.1	7.5	7.3	6.8	7.0
26	14.2	12.9	13.5	8.0	7.5	7.6	7.1	6.6	6.8	7.2	6.9	7.1
27	14.4	13.2	13.8	7.5	7.0	7.2	6.9	6.7	6.8	7.5	7.1	7.3
28	14.8	14.0	14.4	8.2	7.2	7.7	6.9	6.7	6.8	7.8	7.5	7.6
29	14.4	12.8	13.8	8.7	8.2	8.5	6.9	6.1	6.5	8.3	7.8	8.1
30	12.8	11.5	12.3	8.4	8.3	8.3	6.2	5.9	6.1	8.3	7.5	8.0
31	11.5	9.3	10.3	---	---	---	6.4	6.2	6.3	7.5	7.0	7.2
MONTH	18.0	9.3	14.9	11.4	7.0	9.1	9.3	5.9	7.8	8.3	4.4	6.9

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	7.4	7.2	7.3	8.9	7.8	8.3	10.5	8.8	9.8	14.6	12.9	13.8
2	7.8	7.3	7.5	9.2	7.9	8.5	11.1	8.7	10	15.0	12.6	13.8
3	7.9	7.5	7.7	8.7	7.5	8.0	12.1	9.7	11.0	15.4	12.9	14.3
4	8.0	7.6	7.8	8.4	7.4	7.8	12.2	10.3	11.4	15.0	13.0	13.8
5	7.7	7.1	7.3	8.2	7.8	8.0	12.0	10.3	11.0	13.8	12.0	12.9
6	7.6	7.3	7.5	8.8	7.8	8.3	11.1	9.8	10.5	13.5	11.8	12.8
7	7.8	7.3	7.5	10.2	8.6	9.4	11.5	9.8	10.7	13.3	12.0	12.7
8	7.7	7.0	7.4	10.4	9.4	9.9	11.7	9.9	10.9	12.9	11.4	12.2
9	7.4	6.8	6.9	10.6	9.7	10.1	12.6	10.2	11.4	13.6	11.3	12.6
10	6.9	6.6	6.7	10.0	8.8	9.4	13.0	10.6	12.0	13.4	11.7	12.3
11	7.2	6.3	6.7	10.1	8.7	9.4	13.3	11.2	12.4	12.5	10.9	11.8
12	7.3	6.2	6.8	10.4	8.9	9.6	13.1	11.4	12.1	13.2	11.0	12.1
13	7.0	6.2	6.4	9.8	8.8	9.3	12.2	10.8	11.6	13.8	11.1	12.6
14	7.3	6.0	6.6	11.0	9.3	10.1	12.1	10.7	11.3	14.2	11.9	13.1
15	8.3	7.3	7.8	11.0	9.6	10.3	11.4	10.0	10.6	14.1	12.0	12.8
16	8.2	7.9	8.1	10.8	9.2	10.0	11.3	9.6	10.4	13.6	11.5	12.6
17	7.9	7.7	7.8	10.8	9.3	10.0	11.4	10.1	10.8	14.1	11.9	13.1
18	8.5	7.9	8.2	10.3	9.7	10.0	11.0	10.1	10.6	14.0	12.1	12.8
19	8.7	7.9	8.2	10.2	9.0	9.6	10.9	10.0	10.3	13.6	11.3	12.3
20	8.2	7.3	7.6	10.3	8.7	9.5	10.3	9.6	9.8	14.6	12.2	13.5
21	7.7	7.1	7.4	11.0	9.2	10.1	10.3	9.1	9.7	14.4	12.9	13.6
22	8.3	7.5	7.9	12.0	9.9	11.0	11.6	9.3	10.4	13.2	12.1	12.7
23	9.2	8.1	8.6	12.3	10.6	11.5	11.4	10.5	11.0	13.8	11.8	12.8
24	8.9	8.3	8.6	11.7	10.6	11.2	12.0	9.5	10.7	14.7	11.9	13.2
25	8.4	7.8	8.1	10.6	9.2	9.9	13.4	10.6	11.9	15.7	12.9	14.3
26	8.4	7.9	8.1	9.3	8.5	9.0	14.7	12.0	13.3	15.5	13.6	14.3
27	8.5	7.8	8.2	10.5	8.8	9.6	14.9	13.1	14.0	14.0	12.7	13.1
28	8.9	8.0	8.4	10.7	9.0	9.8	14.0	12.2	13.1	13.2	12.1	12.6
29	8.5	8.0	8.2	12.1	9.7	10.9	14.0	11.7	12.9	12.6	11.5	11.9
30	---	---	---	11.6	10.1	11.1	14.6	12.3	13.4	13.0	11.7	12.2
31	---	---	---	10.6	9.0	9.9	---	---	---	13.9	12.3	13.1
MONTH	9.2	6.0	7.6	12.3	7.4	9.7	14.9	8.7	11.3	15.7	10.9	13.0
JUNE			JULY			AUGUST			SEPTEMBER			
1	15.0	12.8	13.9	19.9	17.8	18.9	20.5	19.1	19.8	19.5	17.8	18.8
2	15.1	13.4	14.3	19.7	18.0	18.9	20.0	18.8	19.4	17.8	16.9	17.3
3	16.8	13.9	15.2	19.4	18.4	18.9	20.4	18.6	19.3	18.1	16.6	17.3
4	17.0	14.7	15.9	19.2	17.0	18.1	19.9	18.1	19.0	18.2	17.0	17.6
5	16.6	15.0	15.7	19.9	17.9	18.9	19.2	17.9	18.4	18.4	17.1	17.7
6	15.0	13.3	13.8	20.5	18.6	19.5	18.5	17.5	18.0	18.4	17.1	17.8
7	14.4	12.7	13.4	19.7	18.3	19.0	18.8	16.6	17.7	18.1	17.2	17.7
8	13.5	12.7	13.0	19.4	17.0	18.2	19.6	17.7	18.6	18.3	16.9	17.6
9	12.8	12.0	12.3	18.8	17.8	18.3	20.4	18.8	19.5	17.8	17.0	17.5
10	12.7	11.7	12.1	18.8	17.3	18.0	20.5	19.0	19.7	18.1	16.4	17.2
11	13.4	11.9	12.6	18.9	16.9	17.9	20.7	19.2	19.9	18.2	17.4	17.9
12	13.5	12.0	12.8	19.9	17.8	18.8	20.6	19.2	20.0	17.4	16.6	17.0
13	13.5	13.0	13.3	19.9	18.5	19.2	20.4	19.2	19.8	17.4	16.5	16.9
14	15.2	12.7	13.8	20.5	18.3	19.3	20.7	19.2	19.9	17.2	16.3	16.8
15	16.4	13.8	15.0	20.3	18.8	19.5	20.4	19.1	19.7	17.4	16.6	17.0
16	17.4	14.4	15.8	20.5	18.5	19.5	20.2	18.6	19.4	17.1	16.3	16.6
17	18.2	15.1	16.6	19.8	18.3	19.2	20.3	18.6	19.5	16.4	15.5	16.0
18	18.8	16.0	17.4	19.7	17.8	18.7	20.3	18.9	19.6	15.5	14.5	14.8
19	19.0	16.3	17.7	19.9	18.7	19.2	20.7	19.1	19.9	15.0	14.1	14.5
20	19.2	16.7	17.9	19.9	18.7	19.2	20.6	19.2	19.9	15.8	14.1	14.9
21	19.4	17.0	18.2	20.4	18.4	19.4	20.0	19.1	19.5	15.6	14.4	15.1
22	18.8	16.0	17.1	21.0	19.1	20.0	19.1	18.1	18.7	15.9	14.6	15.3
23	16.0	15.2	15.5	21.6	19.7	20.6	18.1	17.2	17.5	16.4	15.0	15.7
24	16.8	15.2	15.9	21.7	20.2	20.9	17.3	16.8	17.0	16.7	15.7	16.2
25	18.1	15.7	16.8	21.1	19.9	20.5	17.7	16.6	17.1	16.6	15.6	16.1
26	18.4	16.8	17.6	20.4	19.0	19.8	17.7	16.8	17.2	16.1	15.5	15.7
27	18.8	17.0	17.8	20.8	19.1	19.9	18.4	16.6	17.5	16.2	15.3	15.6
28	19.2	17.1	18.2	21.1	19.4	20.2	19.0	17.7	18.3	17.3	16.1	16.6
29	19.5	17.5	18.5	21.1	19.7	20.3	19.0	18.0	18.6	16.9	15.6	16.3
30	20.1	17.8	18.9	21.1	19.5	20.3	19.6	18.2	18.9	16.0	15.1	15.6
31	---	---	---	20.5	19.3	19.9	20.1	18.7	19.3	---	---	---
MONTH	20.1	11.7	15.6	21.7	16.9	19.3	20.7	16.6	18.9	19.5	14.1	16.6
YEAR	21.7	4.4	12.6									

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	16.1	15.1	15.6	11.8	11.2	11.5	7.9	7.3	7.6	6.5	6.1	6.3
2	16.3	15.3	15.9	11.7	11.4	11.6	7.3	6.8	7.0	6.1	5.5	5.8
3	16.1	15.3	15.7	11.4	10.4	11.0	6.8	6.6	6.7	5.7	5.1	5.4
4	16.2	15.3	15.8	10.4	9.6	10.1	6.9	6.6	6.8	5.2	4.4	4.7
5	16.3	15.4	15.9	10.1	9.2	9.6	7.2	6.8	7.0	4.5	3.9	4.1
6	16.5	16.1	16.3	10.1	9.2	9.6	7.0	6.8	6.9	4.8	4.0	4.4
7	16.8	15.8	16.3	10.3	9.6	9.9	6.9	6.8	6.8	5.2	4.8	5.0
8	16.4	15.4	15.9	10.5	9.9	10.2	7.8	6.8	7.4	5.1	4.8	5.0
9	15.4	14.7	15.0	10.7	10.1	10.4	8.7	7.8	8.2	5.2	4.7	5.0
10	14.9	14.3	14.6	10.9	10.5	10.7	9.0	8.7	8.8	5.2	4.6	4.9
11	14.8	14.2	14.5	11.1	10.7	10.9	8.9	8.7	8.9	5.3	4.4	4.8
12	15.1	14.2	14.7	11.2	10.7	10.9	8.7	8.4	8.6	5.5	5.0	5.2
13	15.8	14.5	15.1	11.2	10.8	11.0	8.7	8.2	8.4	6.0	5.4	5.7
14	15.6	14.9	15.3	11.2	10.9	11.0	9.0	8.6	8.7	5.8	5.2	5.6
15	15.3	14.4	14.7	11.0	10.6	10.7	8.8	8.2	8.4	5.2	4.8	4.9
16	14.9	14.5	14.7	11.1	10.5	10.7	8.2	7.8	8.0	5.9	4.8	5.2
17	14.6	13.7	14.2	10.7	10.2	10.4	7.8	7.6	7.7	7.2	5.9	6.5
18	13.7	13.0	13.2	10.3	10.0	10.2	7.8	7.6	7.7	8.2	7.2	7.7
19	13.4	12.7	13.1	10.0	9.2	9.6	7.7	7.4	7.6	8.1	7.7	7.9
20	13.6	12.9	13.3	9.2	8.3	8.7	7.5	7.2	7.4	7.9	7.3	7.7
21	13.4	13.1	13.2	8.5	8.0	8.4	7.2	6.6	6.8	7.7	7.0	7.4
22	13.1	12.7	12.9	8.4	7.6	8.0	7.4	6.7	7.0	7.4	7.0	7.1
23	13.0	12.7	12.9	9.1	8.4	8.7	7.2	7.0	7.1	7.2	6.8	7.0
24	12.7	12.0	12.4	9.8	9.1	9.6	7.0	6.4	6.6	7.4	6.8	7.1
25	12.1	11.0	11.4	10.1	9.7	9.9	6.4	5.8	6.1	7.3	6.8	7.0
26	11.8	11.0	11.4	9.7	9.0	9.2	6.6	6.3	6.4	7.4	6.8	7.1
27	11.8	11.4	11.6	9.1	8.6	8.9	6.7	6.2	6.5	8.0	7.3	7.7
28	12.0	11.5	11.7	8.6	7.8	8.0	6.6	6.2	6.5	7.9	7.6	7.7
29	12.6	11.8	12.2	7.9	7.4	7.6	6.8	6.5	6.7	7.7	7.2	7.5
30	12.5	12.1	12.3	7.6	7.3	7.5	6.7	6.2	6.5	7.5	6.8	7.2
31	12.2	11.4	11.9	---	---	---	6.6	6.0	6.3	7.5	6.9	7.1
MONTH	16.8	11.0	14.0	11.8	7.3	9.8	9.0	5.8	7.3	8.2	3.9	6.2
FEBRUARY			MARCH			APRIL			MAY			
1	7.0	6.5	6.7	9.6	8.9	9.3	10.3	9.4	9.8	13.4	12.0	12.7
2	6.7	6.2	6.4	10.0	8.7	9.3	9.7	8.5	9.2	13.7	11.6	12.7
3	6.2	6.0	6.1	9.5	8.6	9.1	9.4	8.8	9.1	14.0	11.8	12.9
4	6.3	5.9	6.1	9.7	8.8	9.3	9.8	8.1	8.9	13.9	12.9	13.5
5	6.6	5.7	6.1	10.2	8.8	9.4	9.8	8.8	9.3	13.7	12.1	12.7
6	6.5	6.1	6.4	10.3	8.7	9.5	10.8	9.0	9.8	12.5	11.5	11.8
7	6.2	5.6	5.9	11.2	9.3	10.2	10.7	9.7	10.3	12.6	11.0	11.8
8	6.0	5.7	5.8	11.7	9.8	10.8	9.7	8.7	9.3	12.9	11.8	12.4
9	5.8	5.5	5.7	11.8	10.3	11.0	10.5	9.0	9.7	12.6	10.7	11.5
10	5.8	5.4	5.5	11.9	10.2	11.1	10.0	9.0	9.5	10.9	10.2	10.5
11	6.1	5.2	5.6	12.5	10.5	11.5	11.0	9.4	10.1	11.1	10.3	10.7
12	6.3	5.8	6.0	12.7	10.9	11.8	10.5	9.5	10	12.4	10.3	11.3
13	6.7	6.0	6.3	12.0	10.4	11.2	9.7	8.4	9.1	12.7	11.5	12.1
14	6.4	5.9	6.1	11.3	9.6	10.5	10.3	8.4	9.4	13.8	11.7	12.7
15	6.0	5.2	5.6	10.9	9.1	10.1	10.0	9.2	9.6	13.7	12.4	12.9
16	6.0	4.7	5.4	10.3	9.5	9.9	10.6	9.4	9.9	12.4	11.5	12.0
17	6.0	4.9	5.5	10.3	9.1	9.6	10.1	9.1	9.6	11.8	10.8	11.2
18	6.4	5.2	5.8	9.9	9.1	9.5	10.3	8.8	9.5	12.4	10.5	11.3
19	7.2	6.1	6.7	10.8	9.7	10.2	10.9	8.9	9.9	12.2	11.4	11.7
20	7.9	7.0	7.4	10.3	9.3	9.8	12.4	9.8	11.0	12.4	11.0	11.6
21	8.3	7.1	7.7	9.9	8.9	9.4	13.5	11.2	12.3	11.7	10.8	11.1
22	8.2	7.0	7.6	9.5	9.0	9.2	13.3	11.7	12.6	12.8	10.7	11.6
23	8.2	6.9	7.6	10.2	9.0	9.5	12.8	11.3	11.9	13.6	11.5	12.5
24	8.4	7.1	7.8	9.5	8.4	9.0	12.4	10.3	11.2	14.3	11.8	13.0
25	8.2	7.9	8.0	9.0	8.1	8.6	12.8	11.3	12.1	15.6	12.6	14.0
26	9.7	7.9	8.8	9.2	8.8	9.0	12.7	11.2	11.9	16.9	13.9	15.3
27	9.8	8.6	9.2	9.2	8.7	9.0	14.0	11.9	12.8	17.7	15.2	16.4
28	9.5	9.0	9.3	8.7	8.3	8.6	13.7	12.3	13.1	17.1	14.4	15.6
29	---	---	---	8.7	7.8	8.2	13.2	12.1	12.4	14.4	13.2	13.5
30	---	---	---	9.0	7.9	8.5	13.1	11.3	12.1	14.8	12.8	13.7
31	---	---	---	9.9	8.2	9.1	---	---	---	14.3	13.2	13.5
MONTH	9.8	4.7	6.7	12.7	7.8	9.7	14.0	8.1	10.5	17.7	10.2	12.6

WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.4	12.7	13.5	19.6	17.9	18.7	19.3	18.1	18.6	17.9	16.6	17.2
2	14.4	13.0	13.7	18.8	17.3	18.0	18.7	17.1	17.9	17.7	16.9	17.3
3	15.2	12.8	13.9	18.9	16.6	17.8	18.7	17.2	18.0	17.5	16.6	17.1
4	15.2	13.4	14.4	19.6	17.3	18.4	19.5	18.0	18.7	16.8	15.7	16.3
5	14.7	13.4	13.8	19.8	17.6	18.7	19.7	18.4	19.0	16.8	15.5	16.2
6	13.6	12.2	12.7	19.1	17.8	18.7	19.8	18.4	19.1	16.6	15.6	16.2
7	13.2	11.8	12.4	18.7	16.9	17.7	19.6	18.2	19.0	17.2	15.8	16.5
8	14.1	11.5	12.7	17.8	16.6	17.3	19.5	18.1	18.9	17.4	16.2	16.9
9	15.3	12.6	14.0	17.7	16.2	16.9	19.5	18.2	18.9	17.1	16.2	16.6
10	15.0	13.7	14.3	17.1	16.2	16.7	18.9	17.6	18.4	16.2	15.6	15.9
11	14.2	13.4	13.7	18.1	16.6	17.3	18.6	17.5	18.1	16.1	14.7	15.5
12	15.2	12.5	13.8	19.2	17.3	18.1	18.6	17.2	17.9	16.3	15.0	15.7
13	15.3	13.9	14.6	19.6	17.5	18.5	19.1	17.6	18.3	16.4	15.3	15.9
14	14.8	13.6	14.1	19.8	17.8	18.8	19.3	18.0	18.7	16.6	15.4	16.0
15	15.6	13.0	14.3	20.3	18.4	19.3	19.2	18.0	18.6	16.6	15.8	16.2
16	15.4	14.5	14.9	19.9	18.5	19.3	19.0	17.8	18.5	16.0	15.1	15.4
17	14.8	13.2	13.8	20.3	18.1	19.2	18.7	17.5	18.2	16.3	15.0	15.5
18	15.1	13.1	14.0	20.8	19.0	19.9	18.1	17.0	17.7	15.9	14.7	15.4
19	15.5	13.8	14.6	20.3	19.0	19.7	18.9	17.3	18.1	16.0	14.8	15.5
20	17.2	14.5	15.7	19.9	18.4	19.2	18.8	17.6	18.3	15.9	15.1	15.5
21	17.1	15.6	16.3	19.6	18.3	18.9	18.6	17.4	18.1	15.5	14.6	15.1
22	16.9	15.6	16.2	19.4	18.2	18.8	18.3	17.5	17.9	15.2	14.4	14.9
23	16.9	14.7	15.9	19.6	17.8	18.7	17.8	16.6	17.3	15.6	14.5	15.1
24	17.5	15.7	16.7	19.5	18.0	18.8	17.7	16.2	17.0	15.2	14.1	14.7
25	18.7	16.4	17.5	19.4	17.8	18.6	18.1	16.5	17.3	15.0	13.8	14.5
26	18.3	16.0	17.0	19.8	18.0	18.9	18.2	16.9	17.6	15.4	14.1	14.8
27	16.0	15.3	15.6	20.1	18.7	19.3	18.1	16.7	17.5	15.7	14.4	15.1
28	16.4	15.0	15.6	19.9	18.6	19.3	18.2	16.7	17.4	15.9	14.7	15.4
29	18.4	15.4	16.8	19.8	18.5	19.2	17.7	16.3	17.0	16.0	14.8	15.4
30	19.6	17.0	18.3	19.8	18.3	19.0	17.4	15.6	16.4	16.2	15.9	16.1
31	---	---	---	19.8	18.4	19.1	17.6	16.1	16.9	---	---	---
MONTH	19.6	11.5	14.8	20.8	16.2	18.6	19.8	15.6	18.0	17.9	13.8	15.8
YEAR	20.8	3.9	12.0									

WILLAMETTE RIVER BASIN

14174000 WILLAMETTE RIVER AT ALBANY, OR

LOCATION.--Lat 44°38'20", long 123°06'20", in SW ¼ sec.6, T.11 S., R.3 W., Linn County, Hydrologic Unit 17090003, on right bank 5 ft upstream from bridge on U.S. Highway 20 (Ellsworth Street) in Albany, 0.2 mi downstream from Calapooia River and at mile 119.31.

DRAINAGE AREA.--4,840 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1878 to April 1888 (fragmentary), January to June 1892, November 1892 to September 1894, December 1894 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 694: Drainage area. WSP 904: 1939. WSP 964: 1881, 1890, 1894, 1897, 1901, 1903, 1908, 1910, 1916, 1923, 1927, 1932(M). WSP 984: 1916. WSP 1248: 1895, 1902, 1907, 1915(M), 1917(M), 1918-19, 1934(M). WSP 1318 (monthly and annual figures only): 1894, 1897, 1901-3, 1907-8, 1910, 1916, 1918-19, 1923, 1927.

GAGE.--Water-stage recorder. Datum of gage is 167.18 ft above NGVD of 1929. Prior to Sept. 27, 1906, nonrecording gage at site 0.2 mi upstream at datum 5.00 ft higher. Sept. 27, 1906 to Nov. 12, 1934, nonrecording gage at site 300 ft upstream at datum 5.00 ft higher. Nov. 14, 1934 to Sept. 30, 1962, at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by nine reservoirs upstream from station. Albany power canal diverts water from South Santiam River at Lebanon and discharges into Calapooia River near mouth; small diversions for irrigation and municipal water supply.

AVERAGE DISCHARGE.--47 years (water years 1894, 1896-1941), 13,760 ft³/s, 38.63 in/yr, 9,969,000 acre-ft/yr. 64 years (water years 1942-2005), 14,570 ft³/s, 40.89 in/yr, 10,550,000 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 266,000 ft³/s Jan. 14, 1881, gage height, 37.8 ft, present datum; minimum discharge, 1,840 ft³/s Sept. 1, 2, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 4, 1861, reached a stage of 41.0 ft, discharge, 340,000 ft³/s, from rating curve extended above 220,000 ft³/s. Flood of Feb. 4, 1890, reached a stage of 38.9 ft, discharge, 291,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,800 ft³/s Dec. 10, 11, gage height, 14.41 ft; minimum discharge, 3,880 ft³/s Mar. 16.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,840	10,500	6,110	9,540	6,330	5,150	15,900	8,980	8,420	5,610	5,240	5,180
2	6,000	10,400	5,660	9,820	6,040	5,080	13,800	9,070	8,470	5,400	5,210	5,040
3	6,200	11,100	5,680	9,980	5,890	5,000	12,400	8,940	8,650	5,180	5,190	5,110
4	6,300	12,500	5,590	9,150	5,710	4,850	11,800	8,410	8,330	5,050	5,160	5,130
5	6,330	11,500	5,500	8,230	5,560	4,780	11,600	8,560	7,970	5,020	5,100	5,140
6	6,390	11,100	5,470	7,570	5,550	4,670	11,100	9,200	7,780	5,000	5,050	5,110
7	6,490	11,000	6,110	7,060	5,570	4,560	10,800	10,100	8,770	4,960	5,050	5,110
8	6,590	10,600	12,500	6,850	5,640	4,480	12,900	9,680	11,900	4,920	5,040	5,200
9	6,800	10,300	24,300	7,290	5,420	4,370	16,100	9,920	11,800	4,930	5,000	5,220
10	7,070	10,100	35,100	7,950	5,290	4,290	15,400	13,600	9,910	5,060	5,040	5,320
11	7,200	9,710	35,300	7,900	5,180	4,210	14,100	23,100	8,740	5,130	5,140	5,520
12	7,150	9,160	34,400	7,420	5,110	4,140	14,500	24,600	8,440	5,090	5,170	5,580
13	7,080	8,960	33,300	7,240	5,380	4,040	13,900	20,300	8,180	4,990	5,170	5,450
14	6,930	8,260	30,900	6,890	7,020	3,980	12,500	15,600	7,850	4,930	5,180	5,400
15	6,910	8,090	29,200	6,660	6,540	3,930	11,500	13,300	7,290	4,920	5,160	5,400
16	6,960	7,790	27,500	6,700	6,060	3,890	10,700	12,000	6,780	5,010	5,140	5,370
17	7,030	7,590	22,700	7,020	5,760	3,950	10,900	13,500	6,600	5,130	5,190	5,430
18	7,210	7,440	19,000	7,540	5,520	4,160	11,800	16,000	6,940	5,150	5,260	5,450
19	7,970	7,100	16,100	10,100	5,390	4,100	12,100	18,100	7,340	5,100	5,250	5,410
20	8,720	6,740	14,300	11,100	5,530	4,500	10,800	19,500	7,440	4,990	5,230	5,400
21	8,570	6,450	13,200	9,430	6,960	4,850	9,820	18,400	7,360	4,910	5,310	5,420
22	8,500	6,230	12,500	8,090	6,880	4,940	9,040	16,700	7,140	4,880	5,310	5,440
23	8,990	6,130	12,100	7,440	6,380	5,070	8,650	15,200	6,950	4,990	5,300	5,390
24	9,600	6,030	11,200	7,120	5,960	5,500	9,590	12,900	6,670	5,050	5,300	5,510
25	9,450	6,020	10,900	6,830	5,720	6,960	9,980	10,900	6,300	5,050	5,330	5,530
26	9,310	6,290	10,600	6,470	5,440	7,150	9,470	9,730	5,980	4,980	5,300	5,530
27	9,290	6,840	10,800	6,230	5,260	9,340	9,200	8,990	5,820	4,990	5,280	5,590
28	9,530	7,030	10,400	6,130	5,180	21,600	9,300	8,400	5,780	5,200	5,290	5,580
29	9,950	6,860	10,400	6,430	---	26,500	8,990	8,510	5,770	5,300	5,340	5,590
30	10,300	6,660	10,300	6,710	---	27,400	8,680	8,900	5,730	5,280	5,360	5,700
31	10,400	---	9,650	6,450	---	21,300	---	8,830	---	5,290	5,380	---
TOTAL	241,060	254,480	496,770	239,340	162,270	228,740	347,320	399,920	231,100	157,490	161,470	161,250
MEAN	7,776	8,483	16,020	7,721	5,795	7,379	11,580	12,900	7,703	5,080	5,209	5,375
MAX	10,400	12,500	35,300	11,100	7,020	27,400	16,100	24,600	11,900	5,610	5,380	5,700
MIN	5,840	6,020	5,470	6,130	5,110	3,890	8,650	8,400	5,730	4,880	5,000	5,040
AC-FT	478,100	504,800	985,300	474,700	321,900	453,700	688,900	793,200	458,400	312,400	320,300	319,800
CFSM	1.61	1.75	3.31	1.60	1.20	1.52	2.39	2.67	1.59	1.05	1.08	1.11
IN.	1.85	1.96	3.82	1.84	1.25	1.76	2.67	3.07	1.78	1.21	1.24	1.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2005, BY WATER YEAR (WY)

MEAN	8,051	16,520	27,600	28,490	23,480	18,470	15,070	12,570	8,853	5,259	5,002	5,848
MAX	17,070	46,180	69,630	61,230	51,960	43,890	29,610	24,830	18,460	7,333	7,313	8,985
(WY)	(1948)	(1951)	(1956)	(1956)	(1961)	(1957)	(1955)	(1963)	(1993)	(1969)	(1971)	(1972)
MIN	2,629	3,196	4,150	3,901	3,208	6,571	5,630	4,733	4,091	3,281	2,485	2,623
(WY)	(1943)	(1953)	(1977)	(1977)	(1977)	(2001)	(1977)	(1973)	(1987)	(1944)	(1944)	(1944)

WILLAMETTE RIVER BASIN

14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1942 - 2005	
ANNUAL TOTAL	4,264,210		3,081,210		14,570	
ANNUAL MEAN	11,650		8,442		24,080	
HIGHEST ANNUAL MEAN					5,831	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	45,000	Feb 1	35,300	Dec 11	210,000	Jan 2, 1943
LOWEST DAILY MEAN	4,480	Jul 24	3,890	Mar 16	2,130	Sep 12, 1944
ANNUAL SEVEN-DAY MINIMUM	4,650	Jul 10	4,010	Mar 13	2,180	Sep 8, 1944
ANNUAL RUNOFF (AC-FT)	8,458,000		6,112,000		10,550,000	
ANNUAL RUNOFF (CFSM)	2.41		1.74		3.01	
ANNUAL RUNOFF (INCHES)	32.77		23.68		40.89	
10 PERCENT EXCEEDS	26,200		13,200		32,700	
50 PERCENT EXCEEDS	9,040		6,830		9,280	
90 PERCENT EXCEEDS	5,100		5,030		4,560	



2005 Water Year
WILLAMETTE RIVER BASIN

14174000 WILLAMETTE RIVER AT ALBANY, OR

Latitude: 44° 38' 20"

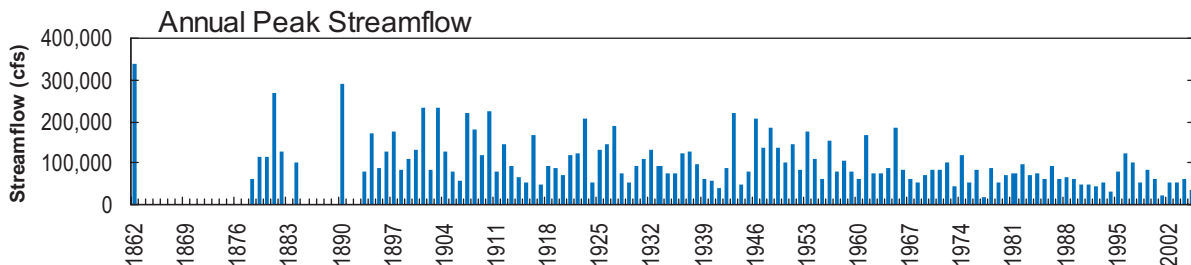
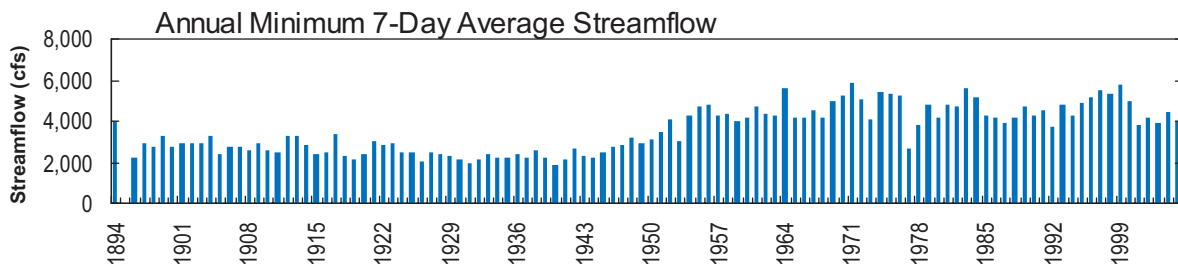
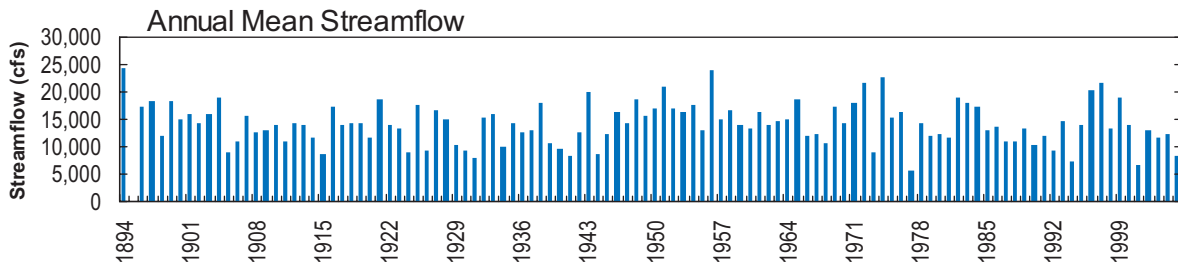
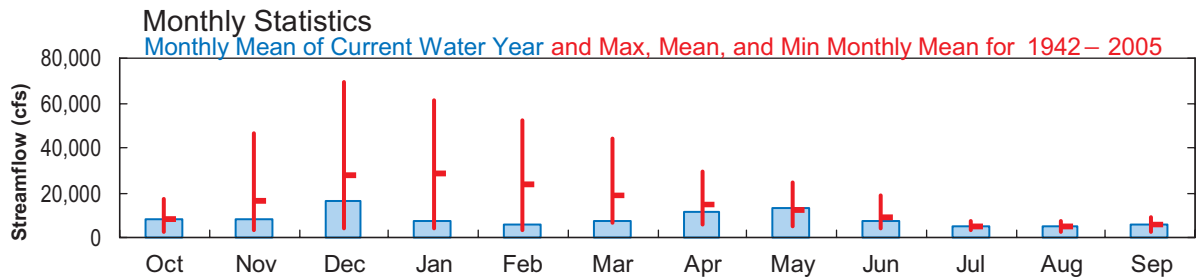
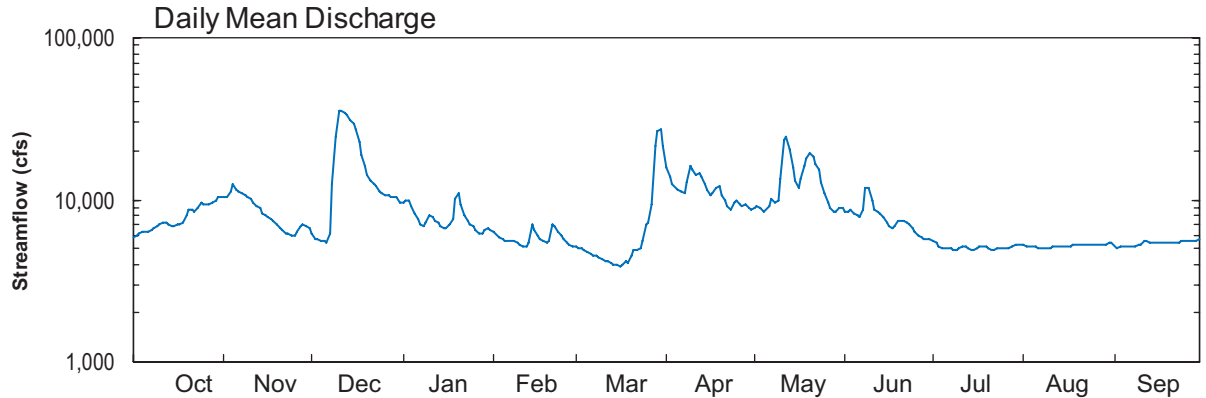
Longitude: 123° 06' 20"

Hydrologic Unit Code: 17090003

Linn County

Datum: 167.18 feet

Drainage Area: 4840 mi²



WILLAMETTE RIVER BASIN
14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 2001 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 24.2°C July 24, 2004; minimum, 3.0°C Jan. 5, 2005.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 22.8°C July 18; minimum, 3.0°C Jan. 5.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.2	14.6	15.4	11.8	10.7	11.2	8.1	6.9	7.6	6.7	5.8	6.2
2	16.8	15.2	15.8	11.7	10.6	11.2	7.7	6.5	7.2	6.2	5.4	5.8
3	17.0	15.4	16.2	11.5	9.8	10.9	7.1	6.2	6.7	5.8	4.6	5.0
4	16.9	15.3	16.0	10.6	8.8	9.5	7.0	6.0	6.5	5.0	3.5	4.3
5	17.2	15.4	16.1	9.8	8.4	9.0	7.3	6.2	6.7	4.1	3.0	3.5
6	17.6	16.2	16.9	9.2	8.2	8.6	7.3	6.2	6.9	4.5	3.2	3.8
7	17.5	16.2	16.8	9.8	8.3	8.9	7.3	6.4	6.8	5.0	3.9	4.4
8	17.2	16.0	16.5	9.9	8.4	9.2	7.9	6.4	7.0	5.1	4.0	4.6
9	16.5	15.1	15.6	10.4	8.8	9.6	9.0	7.4	8.2	5.1	4.1	4.6
10	15.7	14.4	14.9	10.5	9.1	9.9	9.7	8.6	9.2	5.1	4.3	4.7
11	15.4	13.9	14.6	10.9	9.4	10.1	10.0	9.0	9.6	4.8	3.8	4.2
12	15.8	14.1	14.9	10.9	9.7	10.3	9.6	8.4	9.0	5.4	3.9	4.6
13	16.2	14.6	15.4	11.1	9.9	10.5	9.0	8.2	8.6	5.8	4.7	5.3
14	16.5	14.9	15.7	11.2	9.9	10.6	9.3	8.2	8.8	5.8	5.0	5.4
15	16.4	14.9	15.5	11.1	10.0	10.5	9.3	8.2	8.8	5.5	4.4	4.9
16	15.5	14.4	14.9	11.0	10.1	10.5	8.7	7.8	8.2	5.4	4.2	4.8
17	15.3	13.8	14.7	10.9	9.8	10.2	8.3	7.2	7.7	6.5	4.6	5.5
18	14.1	13.1	13.5	10.5	9.5	10	8.0	7.2	7.5	8.7	6.5	7.6
19	13.7	12.7	13.2	10.3	8.9	9.5	8.0	7.1	7.6	9.3	8.1	8.8
20	13.6	12.2	13.0	9.5	7.9	8.5	7.7	6.9	7.3	9.0	8.0	8.6
21	13.5	12.4	13.0	8.3	7.2	7.7	7.2	6.3	6.7	8.8	7.8	8.3
22	13.2	12.2	12.6	8.2	7.2	7.6	7.3	6.3	6.8	8.6	7.4	8.0
23	13.0	11.9	12.5	8.9	7.4	8.0	7.4	6.6	7.0	8.2	7.2	7.7
24	12.7	11.5	12.2	10.2	8.5	9.2	7.2	6.3	6.8	8.0	6.8	7.5
25	12.5	10.6	11.4	10.5	9.5	9.9	6.8	6.0	6.4	8.1	7.0	7.5
26	11.7	10.2	10.9	10.0	8.8	9.3	6.7	5.9	6.3	8.1	6.9	7.5
27	11.7	10.4	11.1	9.1	8.2	8.7	6.8	5.8	6.3	8.4	7.2	7.9
28	11.8	10.3	11.1	8.4	7.2	7.8	6.6	5.9	6.3	8.6	7.7	8.1
29	12.4	10.7	11.5	7.8	6.8	7.2	7.1	5.8	6.4	8.4	7.6	8.0
30	12.7	11.4	12.0	7.8	6.6	7.2	7.0	6.1	6.6	8.2	7.3	7.7
31	12.4	11.2	11.7	---	---	---	6.8	5.8	6.3	8.1	7.0	7.6
MONTH	17.6	10.2	14.1	11.8	6.6	9.4	10.0	5.8	7.3	9.3	3.0	6.2

WILLAMETTE RIVER BASIN

14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.0	7.0	7.4	10.4	9.2	9.8	11.1	9.6	10.4	15.0	12.9	14.0
2	7.5	6.5	7.0	10.7	9.5	10.1	10.8	9.6	10.2	15.4	13.7	14.6
3	7.2	6.3	6.7	10.4	9.0	9.6	10.3	9.4	9.8	16.1	13.6	14.9
4	6.8	6.0	6.4	10.5	9.0	9.8	10.2	8.9	9.5	16.7	14.6	15.6
5	6.7	5.9	6.3	10.4	9.3	9.8	10.8	9.0	10	16.3	14.6	15.3
6	6.8	6.0	6.3	10.9	9.4	10.1	11.2	9.6	10.4	15.2	13.6	14.2
7	6.8	5.9	6.4	11.5	9.7	10.6	11.7	10.4	11.0	14.0	12.6	13.4
8	6.5	5.4	5.9	12.3	10.3	11.4	11.2	10.1	10.6	14.6	13.0	13.8
9	6.4	5.4	5.9	12.7	10.9	11.9	10.8	9.7	10.3	14.1	12.6	13.4
10	6.4	5.4	5.9	13.0	11.3	12.2	10.9	9.9	10.5	12.8	11.3	12.0
11	6.1	5.2	5.5	13.3	11.6	12.5	11.1	9.6	10.4	12.1	11.2	11.7
12	6.4	5.2	5.7	13.6	12.0	12.7	11.4	10.1	10.8	12.8	11.3	12.1
13	6.9	5.8	6.4	13.1	11.7	12.5	10.6	9.4	10.0	14.4	12.0	13.2
14	6.6	5.2	5.9	12.5	11.0	11.8	10.8	9.1	9.9	15.4	13.4	14.3
15	6.2	4.9	5.6	12.0	10.4	11.4	10.8	9.5	10.2	15.3	14.2	14.8
16	5.9	4.7	5.4	11.8	10.1	10.8	11.1	9.8	10.4	14.8	13.6	14.2
17	6.1	4.7	5.4	11.4	9.7	10.6	11.3	10.0	10.6	14.0	12.4	13.2
18	6.2	5.0	5.6	11.1	9.9	10.6	11.0	9.5	10.3	13.1	11.7	12.4
19	6.8	5.4	6.1	11.5	10.1	10.7	11.5	9.6	10.6	14.0	12.2	13.2
20	7.7	6.4	7.1	11.0	9.9	10.6	12.5	10.1	11.2	13.8	12.7	13.3
21	8.1	6.5	7.4	10.4	9.4	9.9	14.1	11.2	12.5	13.3	12.1	12.9
22	8.4	6.8	7.7	10.2	9.2	9.7	14.9	12.3	13.6	13.1	11.6	12.3
23	8.4	7.0	7.7	10.1	9.1	9.6	14.4	12.7	13.4	14.6	12.3	13.5
24	8.8	7.1	7.9	10.4	9.1	9.8	13.3	11.9	12.6	15.2	12.9	14.0
25	8.6	7.6	8.1	9.9	8.8	9.5	14.1	12.1	13.0	16.6	13.5	14.9
26	9.1	8.0	8.4	10.1	8.8	9.4	14.7	12.3	13.5	18.3	14.6	16.4
27	10.1	8.3	9.1	10.2	9.5	9.9	15.3	12.6	14.0	19.6	16.3	17.8
28	10.3	9.3	9.8	9.8	8.8	9.4	16.1	13.8	14.9	18.8	17.2	17.9
29	---	---	---	9.4	8.5	9.0	15.1	14.0	14.5	17.4	15.4	16.4
30	---	---	---	9.5	8.6	9.1	15.0	13.2	14.1	16.6	14.4	15.5
31	---	---	---	10.1	8.7	9.5	---	---	---	16.1	14.9	15.4
MONTH	10.3	4.7	6.8	13.6	8.5	10.5	16.1	8.9	11.4	19.6	11.2	14.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.8	14.0	15.0	21.4	19.2	20.3	21.6	20.0	20.6	19.1	17.5	18.3
2	15.7	14.3	15.1	20.9	19.3	19.9	20.4	18.9	19.7	19.4	17.9	18.6
3	16.1	14.1	15.1	20.6	18.4	19.5	20.7	18.5	19.6	19.2	17.9	18.5
4	16.1	14.5	15.3	21.2	18.8	20.0	21.3	19.2	20.2	18.5	17.4	18.0
5	15.7	14.5	15.1	21.4	19.4	20.4	21.8	19.9	20.8	18.4	16.7	17.4
6	14.8	13.6	14.2	21.9	20.3	21.0	21.7	20.1	20.9	18.2	16.5	17.4
7	14.3	13.0	13.7	21.0	19.6	20.2	21.5	20.0	20.8	18.1	16.8	17.5
8	14.2	12.4	13.3	20.0	18.1	18.9	21.4	19.8	20.7	18.6	17.0	17.8
9	15.9	12.8	14.3	18.9	17.4	18.3	21.4	19.7	20.5	18.3	17.0	17.4
10	16.0	14.3	15.2	18.7	17.7	18.2	20.8	19.1	20.0	17.3	16.3	16.9
11	16.3	14.6	15.3	19.6	17.3	18.5	20.6	18.9	19.7	17.1	15.6	16.3
12	16.3	14.2	15.2	19.8	18.6	19.2	20.5	18.7	19.6	17.4	15.5	16.5
13	17.1	14.7	15.8	20.8	18.6	19.6	20.7	19.0	19.8	17.5	15.9	16.8
14	16.8	15.2	16.1	21.3	18.9	20.1	21.4	19.4	20.3	17.8	16.1	17.0
15	16.6	14.4	15.6	22.0	19.8	20.9	21.2	19.5	20.4	17.7	16.5	17.1
16	16.4	15.0	15.7	21.9	20.3	21.1	20.8	19.2	20.1	17.5	15.8	16.5
17	16.3	14.9	15.5	22.2	20.0	21.0	20.6	18.9	19.7	16.5	15.2	15.9
18	16.5	14.5	15.5	22.8	20.6	21.6	20.0	18.4	19.4	16.6	15.3	16.1
19	17.8	14.8	16.3	22.7	21.0	21.8	20.2	18.3	19.3	16.7	15.2	16.0
20	18.5	15.9	17.2	22.0	20.4	21.2	20.5	18.8	19.6	16.6	15.5	16.1
21	18.8	17.0	17.9	21.5	20.1	20.8	20.6	18.8	19.7	16.3	15.1	15.8
22	18.5	17.2	17.8	21.5	20.0	20.9	20.4	18.6	19.5	16.2	14.7	15.5
23	18.9	16.6	17.8	21.2	19.8	20.5	19.7	18.0	18.8	15.8	14.7	15.3
24	19.4	17.1	18.3	21.4	19.4	20.4	19.0	17.5	18.3	15.8	14.3	15.1
25	20.0	17.9	18.9	21.2	19.4	20.4	19.4	17.4	18.4	15.6	14.1	14.9
26	19.5	18.0	18.5	21.6	19.8	20.7	19.6	17.8	18.7	15.9	14.2	15.0
27	18.4	16.8	17.5	22.1	20.1	21.1	19.7	18.1	18.9	16.3	14.8	15.5
28	17.5	16.1	16.8	22.2	20.5	21.4	19.7	17.9	18.8	16.4	14.8	15.6
29	19.3	16.0	17.5	21.9	20.2	21.1	19.2	17.9	18.4	16.5	14.9	15.8
30	21.0	18.1	19.4	21.8	20.0	21.0	18.3	17.1	17.8	16.8	15.9	16.4
31	---	---	---	21.9	20.0	21.0	18.9	16.9	17.9	---	---	---
MONTH	21.0	12.4	16.2	22.8	17.3	20.4	21.8	16.9	19.6	19.4	14.1	16.6
YEAR	22.8	3.0	12.8									

WILLAMETTE RIVER BASIN

14190500 LUCKIAMUTE RIVER NEAR SUVER, OR

LOCATION.--Lat 44°47'00", long 123°14'00", in SW ¼ SW ¼ sec.18, T.9 S., R.4 W., Polk County, Hydrologic Unit 17090003, on right bank 10 ft upstream from highway bridge at Helmick State Park, 3.0 mi northwest of Suver, 4.7 mi downstream from Little Luckiamute River and at mile 13.5.

DRAINAGE AREA.--240 mi².

PERIOD OF RECORD.--August 1905 to October 1911, July 1940 to current year.

REVISED RECORDS.--WSP 1044: Drainage area. WSP 1094: 1945-46. WSP 1248: 1905-11.

GAGE.--Water-stage recorder. Datum of gage is 171.92 ft above NGVD of 1929. Aug. 18, 1905 to Oct. 31, 1911, nonrecording gage at present site at different datum, Aug. 20 to Oct. 15, 1940, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Records fair. Some diurnal fluctuation during periods of low flow caused by millpond upstream from station. A few small diversions for irrigation upstream from station. Continuous water-quality records for the period October 1963 to September 1987 have been collected at this location.

AVERAGE DISCHARGE.--71 years (water years 1906-11, 1941-2005), 877 ft³/s, 49.63 in/yr, 635,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s Dec. 22, 1964, gage height, 34.52 ft; minimum discharge, 0.65 ft³/s Aug. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 28	0430	*4,450	*22.30				

Minimum discharge, 18 ft³/s, Aug. 27, Sept. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	294	253	533	694	291	1,630	404	332	154	53	27
2	85	339	239	540	639	267	1,370	385	326	143	47	23
3	83	673	224	501	595	255	1,180	363	306	143	49	22
4	80	572	217	477	562	245	1,080	358	286	140	43	25
5	77	462	228	446	546	236	941	357	284	131	40	25
6	77	396	252	422	522	229	843	357	401	125	40	24
7	111	351	351	461	608	222	791	343	599	127	41	23
8	96	317	1,440	610	541	216	843	325	584	119	44	21
9	151	291	2,540	686	509	211	889	355	471	126	38	21
10	223	269	2,510	714	481	206	788	524	403	131	37	22
11	170	249	2,940	700	463	201	819	649	374	132	34	29
12	143	233	2,610	662	444	196	817	546	344	131	34	35
13	127	221	1,730	735	433	189	906	475	320	121	32	32
14	116	212	1,470	708	408	182	875	439	302	111	34	28
15	109	199	1,310	680	390	180	837	415	283	103	32	26
16	104	203	1,090	694	375	175	888	428	265	96	27	25
17	109	192	943	710	360	197	1,030	438	272	96	28	28
18	230	185	826	2,440	349	189	1,020	647	300	92	29	34
19	535	201	736	3,000	338	195	942	881	266	85	30	33
20	509	185	661	1,950	327	337	852	878	244	78	29	29
21	376	174	600	1,480	314	412	771	778	230	77	28	27
22	321	168	552	1,200	302	373	702	716	220	73	29	25
23	313	164	512	1,020	292	335	657	641	211	73	28	22
24	295	164	474	896	282	330	666	574	196	72	28	22
25	275	218	447	798	274	308	589	521	186	68	26	24
26	327	382	539	725	268	350	541	470	180	63	22	25
27	329	311	511	665	261	2,850	506	427	183	61	20	21
28	295	276	457	616	259	3,990	471	394	189	54	23	21
29	278	250	434	747	---	3,350	443	379	179	50	26	22
30	269	243	426	917	---	3,060	428	363	165	50	26	24
31	308	---	404	769	---	2,100	---	339	---	51	27	---
TOTAL	6,608	8,394	27,926	27,502	11,836	21,877	25,115	15,169	8,901	3,076	1,024	765
MEAN	213	280	901	887	423	706	837	489	297	99.2	33.0	25.5
MAX	535	673	2,940	3,000	694	3,990	1,630	881	599	154	53	35
MIN	77	164	217	422	259	175	428	325	165	50	20	21
AC-FT	13,110	16,650	55,390	54,550	23,480	43,390	49,820	30,090	17,660	6,100	2,030	1,520
CFSM	0.89	1.17	3.75	3.70	1.76	2.94	3.49	2.04	1.24	0.41	0.14	0.11
IN.	1.02	1.30	4.33	4.26	1.83	3.39	3.89	2.35	1.38	0.48	0.16	0.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 2005, BY WATER YEAR (WY)

MEAN	176	1,043	2,068	2,217	2,015	1,409	846	423	204	80.9	42.8	52.9
MAX	1,241	4,574	5,112	4,727	4,769	3,002	1,847	1,026	512	184	85.0	190
(WY)	(1948)	(1910)	(1965)	(1956)	(1949)	(1961)	(1955)	(1963)	(1984)	(1906)	(1906)	(1959)
MIN	20.2	49.4	106	151	253	391	312	190	74.3	30.0	9.45	17.0
(WY)	(1953)	(1994)	(1977)	(1977)	(1977)	(1941)	(1977)	(1966)	(1992)	(1967)	(1967)	(1967)

WILLAMETTE RIVER BASIN

14190500 LUCKIAMUTE RIVER NEAR SUVER, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1906 - 2005	
ANNUAL TOTAL	222,949		158,193			
ANNUAL MEAN	609		433		877	
HIGHEST ANNUAL MEAN					1,464	1974
LOWEST ANNUAL MEAN					230	1977
HIGHEST DAILY MEAN	8,820	Jan 30	3,990	Mar 28	25,200	Dec 23, 1964
LOWEST DAILY MEAN	24	Aug 21	20	Aug 27	2.6	Aug 20, 1967
ANNUAL SEVEN-DAY MINIMUM	27	Aug 16	22	Sep 23	4.3	Aug 17, 1967
ANNUAL RUNOFF (AC-FT)	442,200		313,800		635,100	
ANNUAL RUNOFF (CFSM)	2.54		1.81		3.65	
ANNUAL RUNOFF (INCHES)	34.56		24.52		49.63	
10 PERCENT EXCEEDS	1,720		876		2,310	
50 PERCENT EXCEEDS	288		295		345	
90 PERCENT EXCEEDS	56		29		36	



2005 Water Year
WILLAMETTE RIVER BASIN

14190500 LUCKIAMUTE RIVER NEAR SUVER, OR

Latitude: 44° 47' 00"

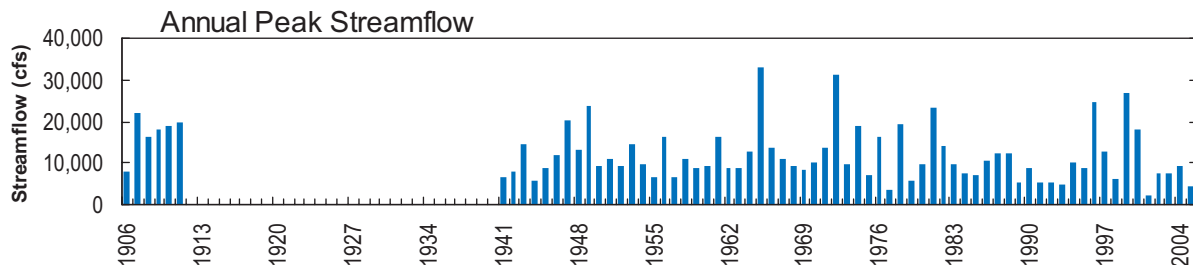
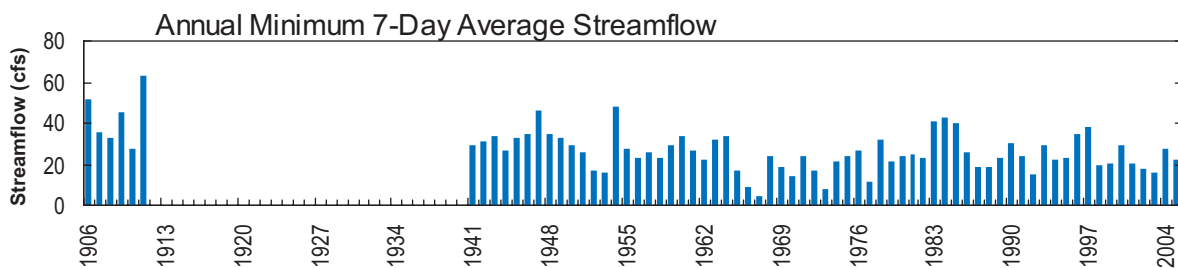
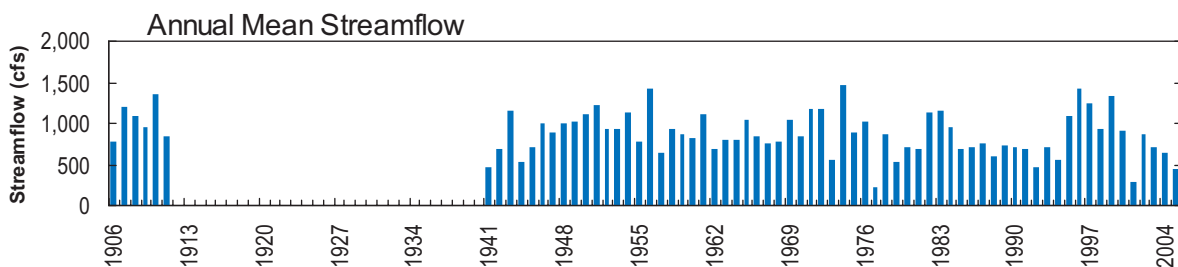
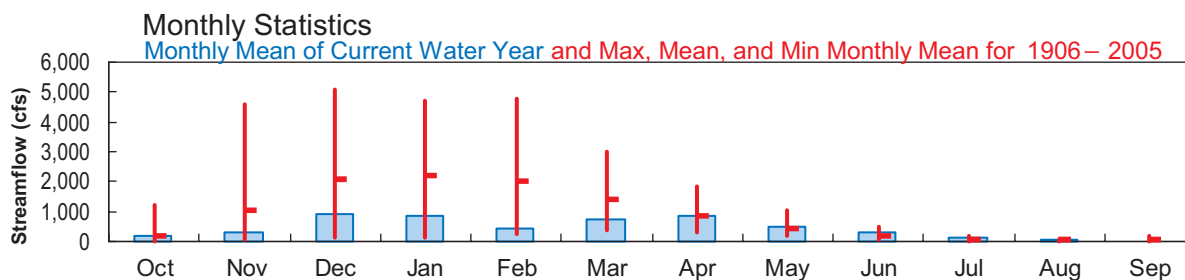
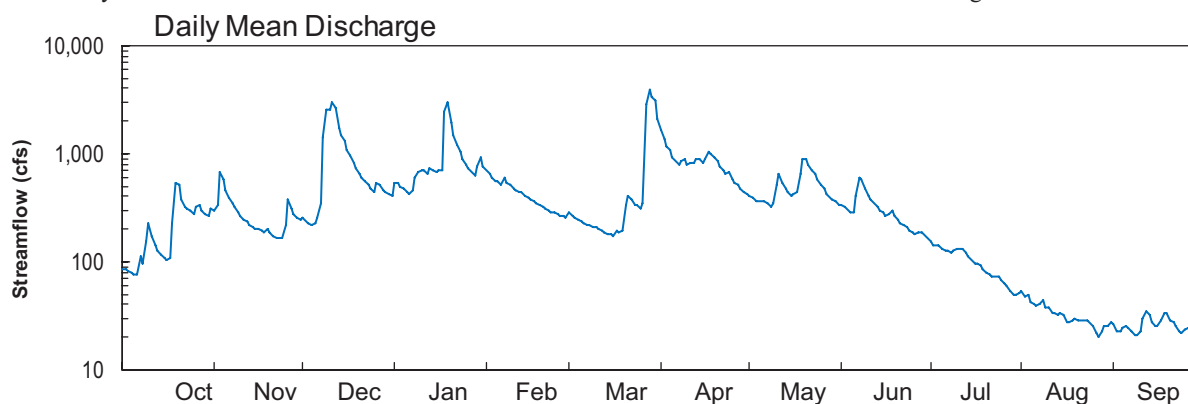
Longitude: 123° 14' 00"

Hydrologic Unit Code: 17090003

Polk County

Datum: 171.92 feet

Drainage Area: 240 mi²



WILLAMETTE RIVER BASIN

14191000 WILLAMETTE RIVER AT SALEM, OR

LOCATION.--Lat 44°56'40", long 123°02'30", in SE ¼ SW ¼ sec.22, T.7 S., R.3 W., Marion County, Hydrologic Unit 17090007, on right bank 300 ft upstream from Center Street Bridge in Salem and at mile 84.16.

DRAINAGE AREA.--7,280 mi², approximately.

PERIOD OF RECORD.--October 1909 to December 1916, January 1923 to current year. Monthly discharge only January 1923 to September 1927, published in WSP 1318. Gage-height records collected at about the same site since 1892 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1318: 1915(M).

GAGE.--Water-stage recorder. Datum of gage is 106.14 ft above NGVD of 1929. Oct. 1, 1909 to Dec. 31, 1916, nonrecording gage at site 0.5 mi upstream at datum 8.00 ft higher. Jan. 1, 1923 to Nov. 26, 1934, nonrecording gage at Center Street Bridge at datum 8.00 ft higher. Nov. 27, 1934 to Sept. 30, 1962, water-stage recorder at present site at datum 8.00 ft higher.

REMARKS.--Records good. Flow regulated by 12 reservoirs upstream from station (see elsewhere in this report). Many small diversions for irrigation upstream from station; part of flow of Salem Canal, which diverts water from North Santiam River, returns to Willamette River downstream from station, through Mill Creek at Salem. Periodic suspended sediment data are available for the period October 1991 to September 1993.

AVERAGE DISCHARGE.--36 years (water years 1910-16, 1924-1952), 22,590 ft³/s, 42.14 in/yr, 16,370,000 acre-ft/yr. 53 years (water years 1953-2005), 23,690 ft³/s, 44.21 in/yr, 17,160,000 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 348,000 ft³/s Jan. 8, 1923, gage height, 38.3 ft, present datum; minimum discharge, 2,470 ft³/s Aug. 27, 1940, gage height, 3.55 ft, present datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 500,000 ft³/s Dec. 4, 1861, gage height, about 47 ft present datum, from rating curve extended above 250,000 ft³/s in 1916. Floods of Jan. 16, 1881 and Feb. 5, 1890, reached stages of 44.3 ft, discharge, 428,000 ft³/s, and 45.1 ft, discharge, 448,000 ft³/s, respectively, from floodmarks and information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 65,700 ft³/s Dec. 12, gage height, 17.79 ft; minimum discharge, 6,280 ft³/s Mar. 16.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9,870	20,000	13,200	15,700	10,700	8,250	28,300	15,200	13,600	8,820	7,270	7,210
2	10,200	20,100	13,100	16,000	10,300	8,180	25,200	15,400	13,700	8,500	7,230	7,140
3	10,300	22,500	12,500	15,700	9,900	8,040	22,800	15,200	14,100	8,240	7,190	7,320
4	10,300	23,900	11,400	14,800	9,620	7,900	21,400	14,800	13,200	8,140	7,160	7,460
5	10,300	21,700	11,200	12,900	9,410	7,720	20,400	14,900	12,700	8,050	7,110	7,510
6	10,500	20,100	11,400	12,100	9,340	7,470	19,000	15,700	13,900	8,020	7,050	7,500
7	11,300	19,600	12,700	11,600	9,410	7,220	18,200	16,700	17,100	7,980	7,050	7,790
8	11,700	18,900	21,300	11,400	9,500	7,120	21,000	16,500	20,700	7,920	7,060	8,220
9	12,900	18,300	38,800	11,700	9,200	6,990	24,800	16,600	20,000	7,920	7,020	8,300
10	14,200	17,800	55,600	12,200	8,960	6,880	24,400	20,400	17,500	8,010	6,970	8,480
11	14,000	17,400	62,800	12,300	8,770	6,820	22,600	31,900	15,300	7,970	7,050	8,780
12	13,700	16,700	63,200	11,800	8,620	6,740	23,000	34,900	14,700	7,820	7,100	8,890
13	13,000	16,100	56,300	11,600	8,820	6,610	22,600	29,400	14,200	7,750	7,110	8,810
14	12,100	15,100	50,600	11,200	10,500	6,510	21,000	23,600	12,900	7,560	7,110	8,730
15	12,100	14,400	47,700	10,800	10,500	6,420	19,200	20,100	11,900	7,480	7,080	8,750
16	12,200	14,400	44,200	10,700	9,810	6,350	18,500	18,300	11,100	7,500	7,050	8,910
17	12,000	13,600	38,000	11,100	9,350	6,440	21,200	20,100	10,900	7,610	7,060	8,970
18	12,600	13,400	32,600	15,900	9,010	6,740	23,100	23,600	12,600	7,580	7,140	9,030
19	14,700	13,000	28,100	23,000	8,780	6,730	22,600	27,900	13,300	7,410	7,160	9,040
20	15,700	12,500	25,500	22,300	8,870	7,150	20,100	30,200	12,900	7,290	7,130	8,990
21	15,300	12,200	23,800	18,900	10,100	7,850	18,300	29,900	12,100	7,210	7,130	8,930
22	15,600	11,800	22,800	16,100	10,400	8,000	16,600	28,700	11,600	7,210	7,200	8,950
23	16,800	11,700	22,400	14,700	9,920	8,020	15,900	27,100	11,300	7,350	7,170	8,940
24	18,000	11,800	20,900	13,800	9,350	8,480	17,600	23,600	10,700	7,280	7,170	8,940
25	17,900	13,200	19,700	13,100	9,040	9,750	17,900	20,600	9,800	7,190	7,180	9,100
26	17,700	16,600	19,300	11,900	8,700	10,700	17,000	17,800	9,380	7,100	7,140	9,060
27	18,000	16,600	e19,000	11,100	8,430	18,800	16,100	15,900	9,240	7,050	7,130	9,090
28	17,800	15,500	e18,000	10,600	8,280	41,100	15,900	14,700	9,390	7,100	7,160	9,100
29	18,000	14,600	17,400	10,500	---	47,200	15,500	13,900	9,500	7,300	7,230	9,090
30	18,500	14,000	17,300	11,700	---	45,900	15,100	14,100	9,170	7,250	7,300	9,250
31	19,700	---	16,800	11,100	---	37,100	---	14,200	---	7,300	7,310	---
TOTAL	436,970	487,500	867,600	418,300	263,590	385,180	605,300	641,900	388,480	236,910	221,220	256,280
MEAN	14,100	16,250	27,990	13,490	9,414	12,430	20,180	20,710	12,950	7,642	7,136	8,543
MAX	19,700	23,900	63,200	23,000	10,700	47,200	28,300	34,900	20,700	8,820	7,310	9,250
MIN	9,870	11,700	11,200	10,500	8,280	6,350	15,100	13,900	9,170	7,050	6,970	7,140
AC-FT	866,700	967,000	1,721,000	829,700	522,800	764,000	1,201,000	1,273,000	770,600	469,900	438,800	508,300
CFSM	1.94	2.23	3.84	1.85	1.29	1.71	2.77	2.84	1.78	1.05	0.98	1.17
IN.	2.23	2.49	4.43	2.14	1.35	1.97	3.09	3.28	1.99	1.21	1.13	1.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2005, BY WATER YEAR (WY)

MEAN	12,890	28,140	47,090	47,770	37,550	29,980	24,520	19,940	13,560	7,435	6,926	9,062
MAX	24,390	70,400	116,700	95,930	91,350	73,670	46,440	38,610	30,910	12,410	9,540	13,340
(WY)	(1969)	(1974)	(1965)	(1965)	(1961)	(1972)	(1993)	(1963)	(1984)	(1983)	(1971)	(1978)
MIN	4,422	3,993	6,780	6,377	5,313	11,180	10,260	7,701	5,657	5,415	5,342	5,958
(WY)	(1953)	(1953)	(1977)	(1977)	(1977)	(2001)	(1977)	(1973)	(1992)	(1966)	(1966)	(1953)

WILLAMETTE RIVER BASIN

14191000 WILLAMETTE RIVER AT SALEM, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1953 - 2005	
ANNUAL TOTAL	7,180,330		5,209,230		23,690	
ANNUAL MEAN	19,620		14,270		37,960	
HIGHEST ANNUAL MEAN					9,792	
LOWEST ANNUAL MEAN					304,000	
HIGHEST DAILY MEAN	86,500	Jan 30	63,200	Dec 12	Dec 24, 1964	
LOWEST DAILY MEAN	6,610	Jul 24	6,350	Mar 16	Nov 29, 1952	
ANNUAL SEVEN-DAY MINIMUM	6,800	Jul 22	6,540	Mar 13	Nov 25, 1952	
ANNUAL RUNOFF (AC-FT)	14,240,000		10,330,000		17,160,000	
ANNUAL RUNOFF (CFSM)	2.69		1.96		3.25	
ANNUAL RUNOFF (INCHES)	36.69		26.62		44.21	
10 PERCENT EXCEEDS	44,400		22,900		54,400	
50 PERCENT EXCEEDS	14,900		11,800		14,900	
90 PERCENT EXCEEDS	7,110		7,160		6,600	

e Estimated



2005 Water Year
WILLAMETTE RIVER BASIN

14191000 WILLAMETTE RIVER AT SALEM, OR

Latitude: 44° 56' 40"

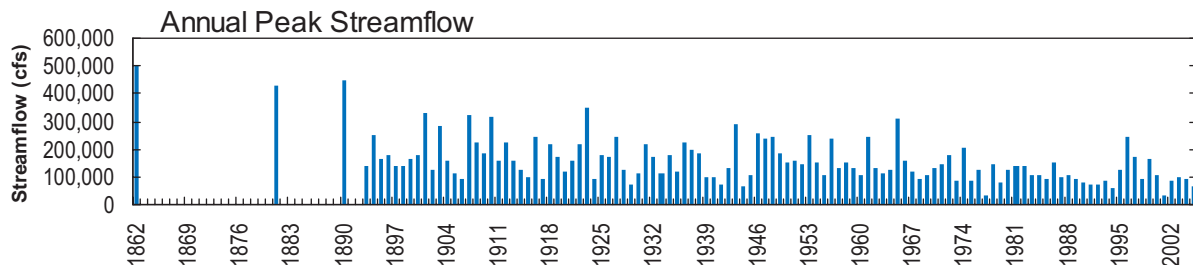
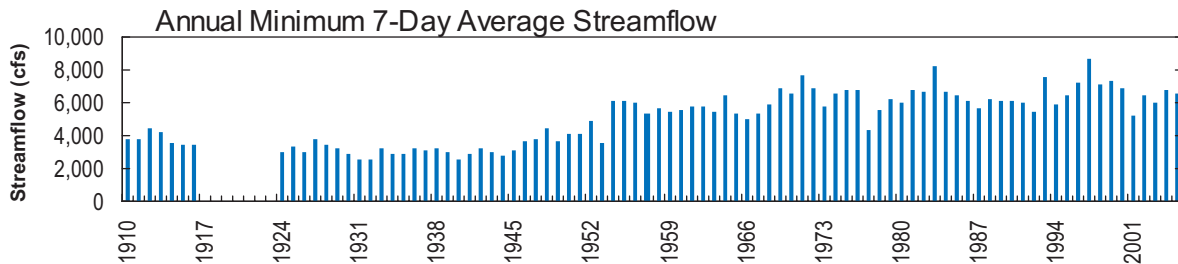
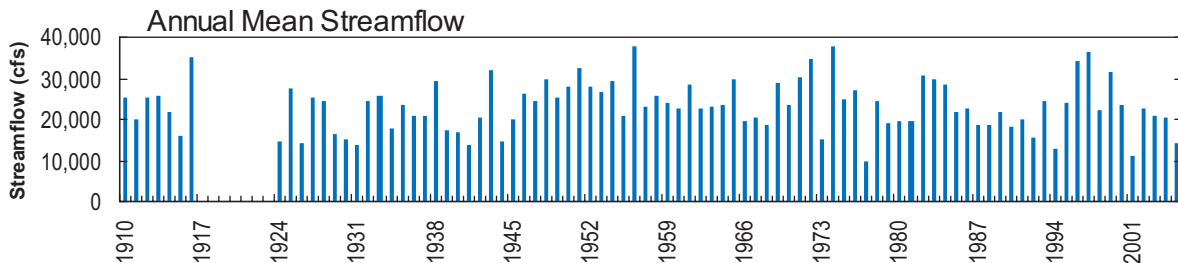
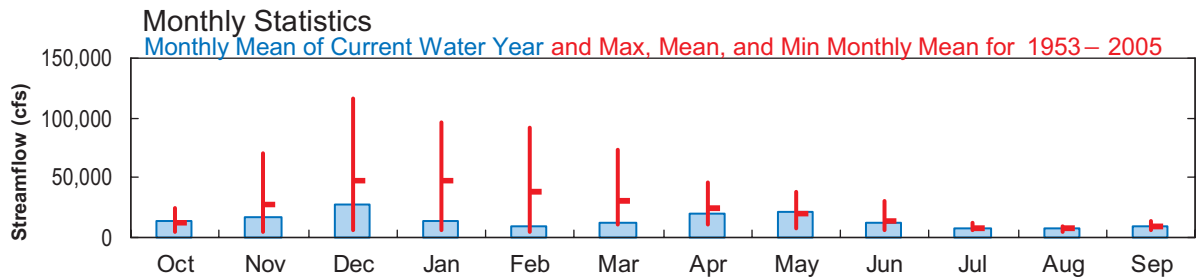
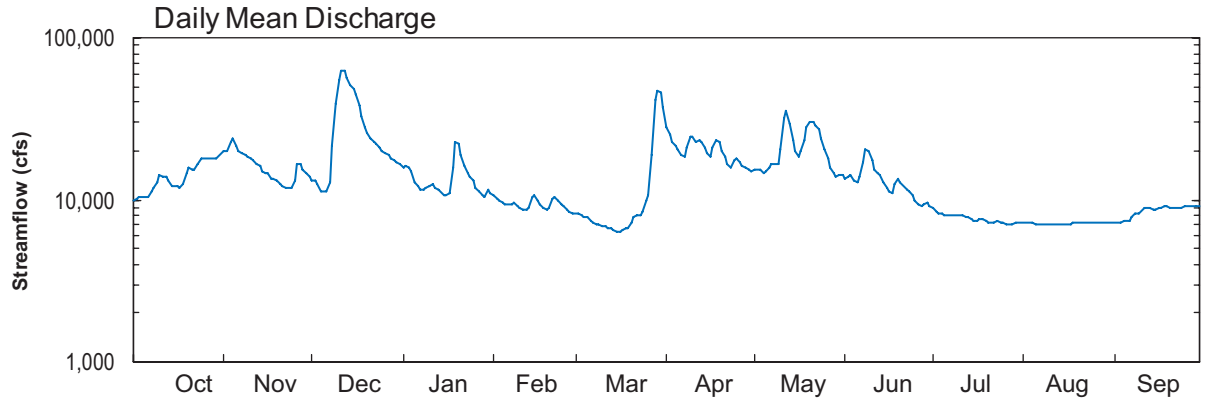
Longitude: 123° 02' 30"

Hydrologic Unit Code: 17090007

Marion County

Datum: 106.14 feet

Drainage Area: 7280 mi²



WILLAMETTE RIVER BASIN
14192015 WILLAMETTE RIVER AT KEIZER, OR

WATER-QUALITY RECORDS

LOCATION.--Lat 44°58'26", long 123°02'10", Marion County, Hydrologic Unit 17090007, downstream from Mill Creek and approximately at mile 82.2.

DRAINAGE AREA.--7,390 mi², approximately

PERIOD OF DAILY RECORD.--October 2000 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 24.9°C July 24, 2004; minimum, 3.7°C Jan. 6, 7, 2004.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.2°C July 18, 28, but may have been higher during periods of missing record; minimum, 3.8°C Jan. 5, 6.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.4	15.2	15.9	---	---	---	---	---	---	6.9	6.5	6.7
2	16.3	15.1	15.8	---	---	---	---	---	---	6.6	6.1	6.4
3	16.7	15.5	16.1	---	---	---	7.8	7.3	7.5	6.1	5.2	5.6
4	16.9	15.7	16.4	---	---	---	7.4	7.0	7.2	5.3	4.3	4.7
5	16.9	15.7	16.4	---	---	---	7.6	7.2	7.3	4.5	3.8	4.1
6	17.3	16.3	16.9	---	---	---	7.8	7.3	7.6	4.5	3.8	4.1
7	17.4	16.7	17.1	---	---	---	7.8	7.3	7.6	5.1	4.3	4.7
8	17.1	16.2	16.7	---	---	---	8.1	7.6	7.9	5.2	4.7	5.0
9	16.4	15.4	15.9	---	---	---	8.8	8.0	8.3	5.3	4.9	5.1
10	15.5	14.6	14.9	---	---	---	9.4	8.7	9.1	5.4	4.9	5.1
11	15.0	14.2	14.6	---	---	---	9.7	9.3	9.6	5.1	4.4	4.7
12	15.4	14.4	14.9	---	---	---	9.5	8.8	9.1	5.0	4.2	4.6
13	16.0	14.9	15.4	---	---	---	9.0	8.7	8.8	5.9	4.9	5.5
14	16.3	15.3	15.8	---	---	---	9.3	8.7	9.0	5.8	5.2	5.5
15	16.1	15.6	15.8	---	---	---	9.3	8.4	8.9	5.4	4.8	5.1
16	15.7	14.9	15.2	---	---	---	8.8	8.3	8.5	5.1	4.5	4.8
17	15.4	14.6	14.9	---	---	---	8.4	8.0	8.2	6.3	4.9	5.5
18	14.7	13.6	14.1	---	---	---	8.2	7.8	8.0	8.1	6.3	7.3
19	13.7	13.2	13.5	---	---	---	8.2	7.9	8.1	8.5	8.0	8.3
20	13.9	13.2	13.5	---	---	---	8.0	7.6	7.8	8.6	8.3	8.4
21	14.0	13.4	13.7	---	---	---	7.7	7.0	7.3	8.5	8.1	8.3
22	13.6	12.9	13.3	---	---	---	7.6	7.0	7.3	8.3	7.9	8.1
23	---	---	---	---	---	---	7.7	7.3	7.5	8.1	7.8	7.9
24	---	---	---	---	---	---	7.5	7.0	7.3	7.9	7.6	7.8
25	---	---	---	---	---	---	7.1	6.7	6.9	7.8	7.3	7.6
26	---	---	---	---	---	---	7.1	6.7	6.9	7.9	7.4	7.7
27	---	---	---	---	---	---	7.0	6.6	6.8	8.4	7.6	8.0
28	---	---	---	---	---	---	7.0	6.6	6.8	8.5	8.0	8.3
29	---	---	---	---	---	---	7.1	6.6	6.9	8.5	8.0	8.3
30	---	---	---	---	---	---	7.3	6.8	7.1	8.3	8.0	8.2
31	---	---	---	---	---	---	7.1	6.6	6.8	8.4	7.8	8.1
MONTH	17.4	12.9	15.3	---	---	---	9.7	6.6	7.8	8.6	3.8	6.4

WILLAMETTE RIVER BASIN

14192015 WILLAMETTE RIVER AT KEIZER, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.2	7.6	7.9	10.7	9.8	10.3	10.7	9.7	10.1	14.3	13.2	13.7
2	7.7	7.0	7.3	11.0	10.1	10.5	10.3	9.8	10.1	14.7	13.4	14.0
3	7.1	6.7	6.9	10.8	10.1	10.4	10.1	9.4	9.8	15.0	13.5	14.2
4	7.2	6.4	6.8	10.5	9.8	10.1	9.8	9.0	9.4	15.8	14.3	15.0
5	7.2	6.3	6.7	10.8	9.8	10.2	10.2	9.4	9.8	15.2	13.9	14.7
6	7.3	6.5	6.9	11.0	9.8	10.4	10.7	9.9	10.3	14.1	13.4	13.7
7	7.2	6.2	6.7	11.8	10.4	11.1	11.2	10.5	10.8	13.6	12.6	13.0
8	6.9	5.9	6.5	12.6	11.2	11.9	10.9	10.1	10.4	13.6	12.7	13.1
9	6.6	5.6	6.1	13.0	11.8	12.5	10.4	9.9	10.1	13.5	12.7	13.2
10	6.6	5.6	6.1	13.5	12.3	12.9	10.4	9.9	10.2	12.7	11.6	12.1
11	6.4	5.8	6.1	13.8	12.6	13.2	10.8	9.9	10.4	11.8	11.3	11.5
12	6.3	5.7	6.0	14.1	13.0	13.5	10.8	10.1	10.5	12.5	11.4	11.9
13	7.1	6.1	6.5	13.8	12.8	13.3	10.4	9.8	10.2	13.9	12.4	13.1
14	7.0	6.4	6.7	13.4	12.3	12.8	10.3	9.6	10	14.9	13.8	14.2
15	6.6	5.8	6.2	12.7	11.7	12.3	10.3	9.9	10.1	14.8	14.5	14.6
16	6.4	5.4	6.0	12.2	11.2	11.7	10.8	10.0	10.4	14.7	13.9	14.3
17	6.4	5.4	5.9	11.9	10.5	11.2	10.6	10.0	10.2	14.0	12.6	13.3
18	6.4	5.4	5.9	11.4	10.6	11.0	10.5	9.8	10.1	13.2	12.3	12.7
19	6.8	5.8	6.3	11.6	11.0	11.3	11.3	10.1	10.6	13.4	12.5	12.9
20	7.7	6.6	7.1	11.2	10.4	10.8	12.1	10.8	11.4	13.3	12.7	13.0
21	8.3	7.4	7.9	10.6	10.0	10.3	13.2	11.9	12.4	12.9	12.2	12.6
22	8.5	7.6	8.1	10.0	9.5	9.8	14.2	12.7	13.4	12.6	11.7	12.1
23	8.7	7.6	8.2	10.0	9.2	9.6	14.0	12.5	13.5	13.5	12.3	12.8
24	8.8	7.7	8.3	9.8	9.2	9.6	12.8	11.8	12.3	14.4	13.3	13.8
25	8.6	8.1	8.3	10.3	9.3	9.8	13.1	12.2	12.6	15.2	13.8	14.5
26	8.9	8.1	8.5	9.9	9.4	9.7	13.9	12.5	13.2	16.8	14.9	15.8
27	9.4	8.3	8.8	9.8	9.3	9.6	14.6	13.0	13.7	18.3	16.4	17.3
28	10.2	9.3	9.8	9.4	8.9	9.1	15.4	13.8	14.5	18.0	16.9	17.6
29	---	---	---	9.1	8.6	8.8	14.8	13.5	14.2	16.9	15.5	16.1
30	---	---	---	9.0	8.4	8.8	13.9	12.9	13.4	16.1	14.8	15.4
31	---	---	---	9.8	8.7	9.2	---	---	---	15.6	14.8	15.2
MONTH	10.2	5.4	7.1	14.1	8.4	10.8	15.4	9.0	11.3	18.3	11.3	13.9
JUNE			JULY			AUGUST			SEPTEMBER			
1	15.0	14.4	14.7	20.9	19.0	19.9	---	---	---	---	---	---
2	15.4	14.1	14.7	20.4	19.5	19.9	---	---	---	---	---	---
3	15.4	14.2	14.8	20.3	18.8	19.5	---	---	---	---	---	---
4	15.6	14.7	15.1	21.0	18.9	19.9	---	---	---	---	---	---
5	15.3	14.8	15.0	21.4	19.7	20.5	---	---	---	---	---	---
6	14.8	13.3	14.1	21.7	20.4	21.0	22.7	21.1	21.9	---	---	---
7	13.4	12.6	13.0	---	---	---	22.4	21.1	21.7	---	---	---
8	13.9	12.4	13.1	---	---	---	22.4	20.8	21.6	---	---	---
9	15.3	13.7	14.4	18.7	17.8	18.2	22.3	20.8	21.5	---	---	---
10	15.6	15.0	15.2	18.4	17.5	18.0	21.8	20.6	21.1	17.4	16.3	16.9
11	15.4	14.6	14.9	19.3	17.4	18.3	21.2	20.1	20.7	16.8	15.8	16.3
12	15.7	14.4	15.0	19.8	18.5	19.1	---	---	---	17.3	15.9	16.6
13	16.3	14.7	15.4	19.9	18.9	19.3	21.5	20.1	20.9	17.5	16.2	16.9
14	16.1	15.3	15.7	21.1	18.8	19.9	22.1	20.6	21.3	17.9	16.6	17.2
15	16.2	14.8	15.6	22.2	20.0	21.1	22.4	20.8	21.6	17.9	16.9	17.4
16	16.0	15.2	15.7	22.1	20.7	21.4	22.3	20.9	21.5	17.5	16.4	16.9
17	15.8	15.1	15.4	22.5	20.5	21.5	21.4	20.6	21.0	16.5	15.6	16.1
18	16.1	14.6	15.3	23.2	21.3	22.2	20.9	19.9	20.5	16.7	15.4	16.0
19	16.7	15.0	15.9	22.9	21.4	22.2	21.5	19.9	20.7	16.7	15.5	16.1
20	17.7	15.9	16.7	22.6	21.2	21.9	21.5	20.1	20.8	16.8	15.7	16.2
21	18.2	16.8	17.5	22.3	20.9	21.6	21.6	20.3	20.9	16.6	15.5	16.1
22	18.0	17.2	17.6	22.3	20.7	21.5	21.4	20.2	20.8	16.2	15.2	15.7
23	18.0	16.5	17.3	22.0	20.5	21.2	20.7	19.6	20.2	15.9	15.0	15.5
24	18.8	17.1	17.9	21.8	20.2	21.0	20.1	19.1	19.6	15.6	14.6	15.2
25	19.4	17.8	18.5	---	---	---	20.3	18.7	19.6	15.5	14.3	15.0
26	19.0	18.1	18.4	---	---	---	20.8	19.2	19.9	15.6	14.5	15.1
27	18.1	16.9	17.4	---	---	---	20.8	19.4	20.1	15.9	14.9	15.4
28	16.9	16.3	16.6	---	---	---	20.7	19.6	20.1	16.3	15.1	15.7
29	18.1	16.2	17.1	22.9	21.6	22.3	---	---	---	16.1	15.2	15.7
30	20.2	17.8	18.8	23.0	21.4	22.2	---	---	---	16.4	15.8	16.1
31	---	---	---	22.9	21.4	22.1	---	---	---	---	---	---
MONTH	20.2	12.4	15.9	23.2	17.4	20.6	22.7	18.7	20.8	17.9	14.3	16.1
YEAR	23.2	3.8	12.8									

WILLAMETTE RIVER BASIN

14194150 SOUTH YAMHILL RIVER AT MCMINNVILLE, OR

LOCATION.--Lat 45°12'21", long 123°10'53", in SE ¼ sec. 21, T.4 S., R.4 W., Yamhill County, Hydrologic Unit 17090008, on left bank 0.3 mi downstream from Cozine Creek, at Highway 18 McMinnville Spur bridge, in McMinnville, and at mile 5.6.

DRAINAGE AREA.--528 mi².

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 50 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Many small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--11 years (water years 1995-2005), 1,803 ft³/s, 46.41 in/yr, 1,306,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,100 ft³/s Feb. 9, 1996, gage height, 59.33; minimum discharge, 0.58 ft³/s Sept. 4, 2003.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 13,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 28	1615	*8,550	*36.01				

Minimum discharge, 22 ft³/s, Aug. 17, Sept. 7-9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	560	483	1,010	1,260	446	4,010	802	634	253	67	34
2	118	592	486	1,230	1,150	493	3,230	750	655	238	62	33
3	112	1,250	442	1,110	1,070	434	2,640	690	599	229	61	32
4	109	1,320	420	1,020	1,000	429	2,370	655	538	225	59	30
5	109	1,040	418	942	993	391	2,080	643	505	206	52	33
6	118	865	475	866	995	361	1,820	606	693	192	47	27
7	156	741	691	873	1,100	344	1,650	590	1,270	187	50	23
8	187	649	2,520	1,140	1,130	331	1,740	557	1,310	193	48	23
9	190	570	5,460	1,470	1,030	327	1,770	617	1,100	197	44	24
10	365	507	4,490	1,500	958	319	1,610	894	924	233	39	26
11	278	463	5,160	1,500	903	304	1,590	1,340	822	212	38	32
12	224	421	5,390	1,370	856	295	1,710	1,100	751	215	39	45
13	193	391	3,850	1,480	825	286	1,820	953	680	205	42	57
14	174	372	3,070	1,470	783	275	1,780	851	615	181	44	60
15	169	343	2,750	1,380	734	264	1,710	781	576	166	49	59
16	166	340	2,250	1,380	692	261	1,730	772	519	155	34	48
17	161	356	1,880	1,390	654	259	2,610	789	507	144	26	45
18	272	337	1,600	3,530	623	275	2,670	921	551	142	25	42
19	704	403	1,390	5,500	595	266	2,510	1,990	517	123	28	45
20	1,360	408	1,230	4,010	569	339	2,200	2,290	458	112	35	42
21	947	361	1,100	3,010	537	831	1,920	2,150	409	103	39	37
22	685	335	1,000	2,420	502	947	1,700	1,850	379	104	42	33
23	570	320	930	2,020	474	777	1,530	1,650	360	101	31	32
24	509	305	847	1,740	452	746	1,500	1,410	335	111	29	29
25	449	325	791	1,520	434	676	1,340	1,240	315	105	30	30
26	475	591	880	1,370	416	700	1,190	1,090	301	92	31	32
27	662	603	1,050	1,240	399	4,090	1,070	949	298	86	28	27
28	548	529	914	1,140	386	8,260	991	838	306	78	28	25
29	477	469	836	1,140	---	7,970	909	780	297	69	34	26
30	444	442	789	1,600	---	7,260	836	735	276	68	29	47
31	510	---	747	1,400	---	5,550	---	680	---	66	29	---
TOTAL	11,562	16,208	54,339	52,771	21,520	44,506	56,236	31,963	17,500	4,791	1,239	1,078
MEAN	373	540	1,753	1,702	769	1,436	1,875	1,031	583	155	40.0	35.9
MAX	1,360	1,320	5,460	5,500	1,260	8,260	4,010	2,290	1,310	253	67	60
MIN	109	305	418	866	386	259	836	557	276	66	25	23
AC-FT	22,930	32,150	107,800	104,700	42,680	88,280	111,500	63,400	34,710	9,500	2,460	2,140
CFSM	0.71	1.02	3.32	3.22	1.46	2.72	3.55	1.95	1.10	0.29	0.08	0.07
IN.	0.81	1.14	3.83	3.72	1.52	3.14	3.96	2.25	1.23	0.34	0.09	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2005, BY WATER YEAR (WY)

MEAN	328	2,078	4,827	4,575	4,171	2,747	1,631	808	358	105	45.4	75.8
MAX	1,491	3,683	9,904	6,162	9,541	4,573	3,832	1,669	583	163	76.6	281
(WY)	(1998)	(1997)	(1997)	(1997)	(1996)	(2003)	(1996)	(1996)	(2005)	(1997)	(2004)	(1997)
MIN	47.4	222	1,250	784	769	854	660	406	135	50.4	26.4	24.9
(WY)	(2003)	(2001)	(2001)	(2001)	(2005)	(2001)	(2000)	(2004)	(2003)	(2003)	(1996)	(2003)

WILLAMETTE RIVER BASIN

14194150 SOUTH YAMHILL RIVER AT MCMINNVILLE, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1995 - 2005	
ANNUAL TOTAL	453,079		313,713		1,803	
ANNUAL MEAN	1,238		859		2,796	1996
HIGHEST ANNUAL MEAN					515	2001
LOWEST ANNUAL MEAN					40,300	Feb 9, 1996
HIGHEST DAILY MEAN	14,100	Jan 31	8,260	Mar 28		
LOWEST DAILY MEAN	26	Aug 20	23	Sep 7	1.4	Sep 4, 2003
ANNUAL SEVEN-DAY MINIMUM	31	Aug 15	27	Sep 4	3.9	Sep 1, 2003
ANNUAL RUNOFF (AC-FT)	898,700		622,200		1,306,000	
ANNUAL RUNOFF (CFSM)	2.34		1.63		3.42	
ANNUAL RUNOFF (INCHES)	31.92		22.10		46.41	
10 PERCENT EXCEEDS	3,760		1,820		5,150	
50 PERCENT EXCEEDS	475		529		620	
90 PERCENT EXCEEDS	61		39		38	

WILLAMETTE RIVER BASIN
14194150 SOUTH YAMHILL RIVER AT MCMINNVILLE, OR—Continued



2005 Water Year
WILLAMETTE RIVER BASIN

14194150 SOUTH YAMHILL RIVER AT MCMINNVILLE, OR

Latitude: 45° 12' 21"

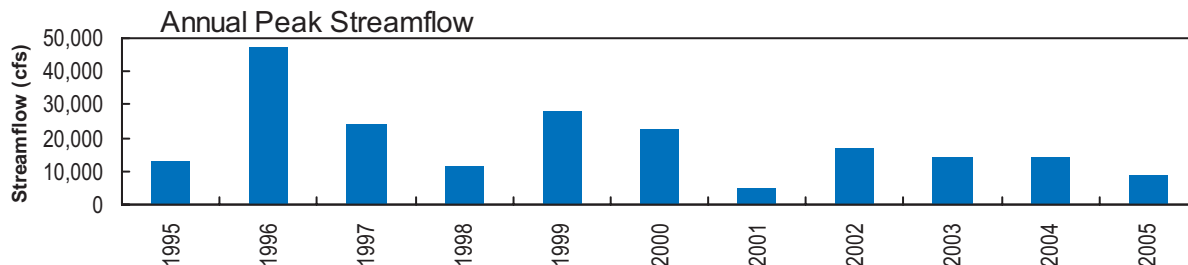
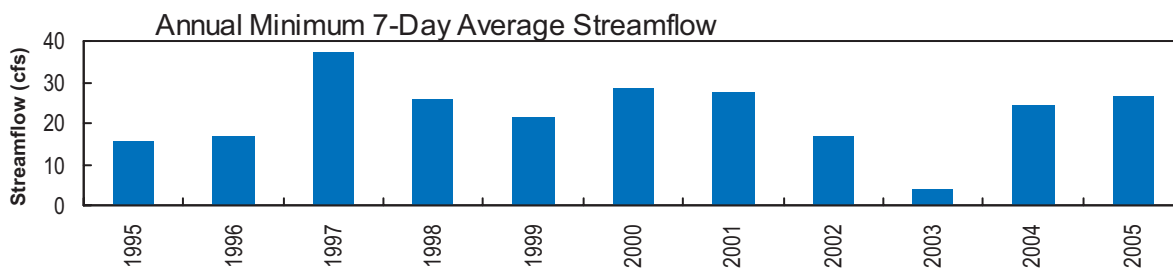
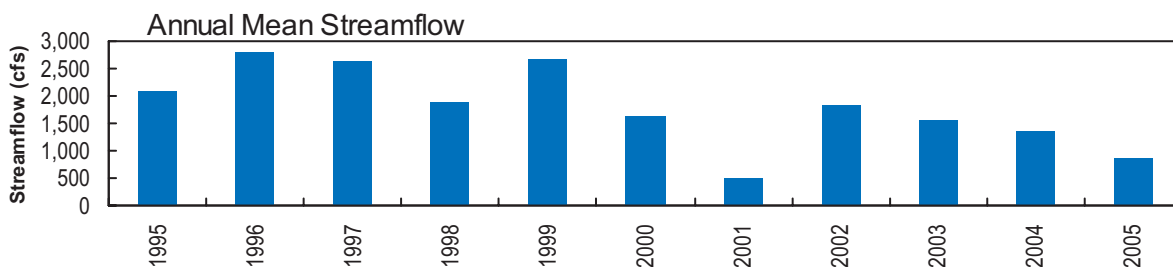
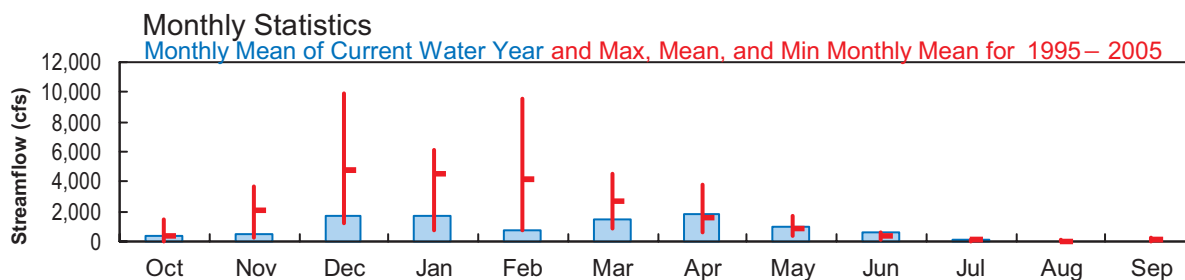
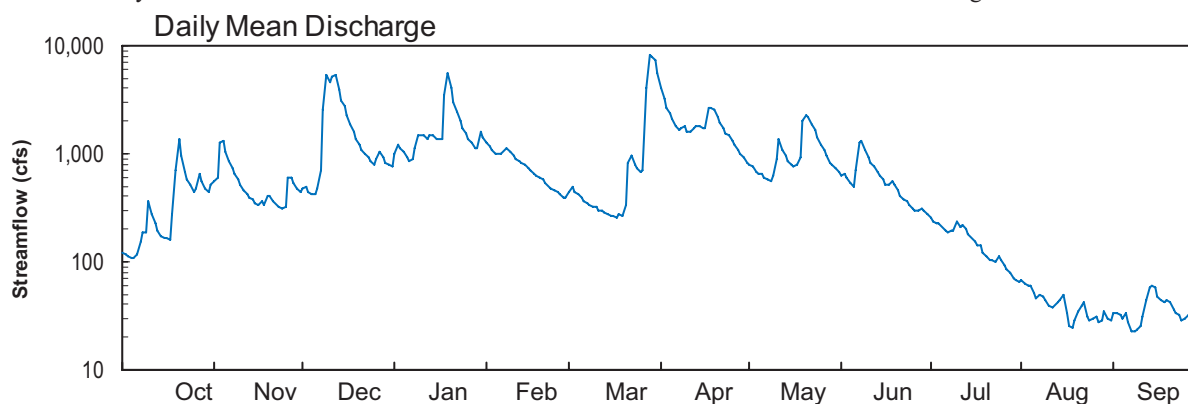
Longitude: 123° 10' 53"

Hydrologic Unit Code: 17090008

Yamhill County

Datum: 50 feet

Drainage Area: 528 mi²



WILLAMETTE RIVER BASIN

14195500 HASKINS CREEK RESERVOIR NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'43", long 123°21'23", in SW 1/4 NW 1/4 sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on control tower 250 ft upstream from dam on Haskins Creek, 11 mi northwest of McMinnville and at mile 5.1.

DRAINAGE AREA.--6.88 mi².

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1738: Drainage area. WDR OR-79-1: 1978 (maximum contents).

GAGE.--Nonrecording gage. Datum of gage is NGVD of 1929 (levels by city of McMinnville). Prior to February 1981, at datum 20.0 ft lower.

REMARKS.--Reservoir is formed by earthfill dam equipped with five siphon spillways which act as overflow weirs until priming occurs, approximately 815.0 ft elevation. Capacity of reservoir (based on May 1992 resurvey, new capacity table put into use Oct. 1, 1991), 721 acre-ft between elevations 741.5 ft, invert of outlet tunnel, and 815.0 ft, crest of siphon spillways. Dead storage negligible. Rated capacity of three siphons is 700 ft³/s each and remaining two siphons 350 ft³/s each. Water is used for municipal supply of city of McMinnville.

COOPERATION.--Elevation and capacity table furnished by city of McMinnville Water and Light Department. Elevations based on once-daily staff gage readings.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed contents, 748 acre-ft Nov. 17, 1954, elevation, 815.65 ft, present datum; no contents at times during winter months.

EXTREMES FOR CURRENT YEAR.--Maximum observed contents, 721 acre-ft May 18, 20, 26, 28, June 1, elevation, 815.0 ft; no contents Mar. 13, 15, elevation, 745.0 ft.

MONTHEND ELEVATION AND CONTENTS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	812.1	651	-
Oct. 31	811.7	643	-8
Nov. 30	812.2	654	+11
Dec. 31	809.8	603	-51
CAL YR 2004	-	-	-29
Jan. 31	809.9	605	+2
Feb. 28	780.8	178	-427
Mar. 31	810.9	625	+447
Apr. 30	814.7	711	+86
May 31	814.9	717	+6
June 30	814.0	695	-22
July 31	808.0	566	-129
Aug. 31	805.9	526	-40
Sept. 30	811.0	628	+102
WTR YR 2005	-	-	-23

WILLAMETTE RIVER BASIN

14196001 HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE, OR

LOCATION.--Lat 45°18'40", long 123°20'55", in SE ¼ NW ¼ sec.18, T.3 S., R.5 W., Yamhill County, Hydrologic Unit 17090008, on right bank 800 ft downstream from Haskins Creek Reservoir, 11 mi northwest of McMinnville, and at mile 5.0.

DRAINAGE AREA.--6.90 mi².

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1738: Drainage area. Maximum discharge for water year 1957, published in WSP 1518, has been found to be unreliable and should not be used.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 707 ft above NGVD of 1929, topographic survey of 1955. Prior to Aug. 5, 1952, water-stage recorder at site 600 ft upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. All records given herein include flow in pipeline which diverts 600 ft upstream from station for municipal supply of McMinnville. Flow regulated by Haskins Creek Reservoir (station 14195500). Water from McGuire Lake (station 14302800) on the Nestucca River is diverted through a tunnel to Haskins Creek Reservoir to augment summer flows.

COOPERATION.--Meter readings for diversion and elevations of Haskins Creek Reservoir furnished by city of McMinnville.

AVERAGE DISCHARGE.--54 years (water years 1952-2005), 30.6 ft³/s, 61.22 in/yr, 22,170 acre-ft/yr, adjusted for storage and diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,050 ft³/s Feb. 8, 1996, gage height, 6.01 ft, from floodmark, from rating curve extended above 140 ft³/s on basis of slope-area measurement of peak flow; maximum daily discharge, 615 ft³/s Feb. 8, 1996; minimum daily, 0.10 ft³/s Oct. 27, 28, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 152 ft³/s Jan. 18; minimum daily discharge, 0.10 ft³/s Oct. 27, 28.

REVISIONS.--The 2004 water year adjustments for change in contents due to Haskins Creek Reservoir and diversion from McGuire Lake have been corrected as shown below.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN†	3.35	13.6	45.7	71.3	57.1	33.7	20.6	11.3	8.37	3.43	2.83	4.54
CFSM†	0.49	1.97	6.62	10.3	8.28	4.89	2.99	1.64	1.21	0.50	0.41	0.66
IN.†	0.56	2.20	7.64	11.9	8.93	5.64	3.34	1.89	1.35	0.57	0.47	0.73
AC-FT†	206	810	2,809	4,387	3,286	2,075	1,299	695	498	211	174	270
CAL YR2003 MEAN†	27.8	CFSM†	4.02	IN.†	54.61	AC-FT†	20,090					
WTR YR2004 MEAN†	22.9	CFSM†	3.32	IN.†	45.25	AC-FT†	16,650					

† Adjusted for change in contents, in Haskins Creek Reservoir and diversion from McGuire Lake.

WILLAMETTE RIVER BASIN

14196001 HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE, OR—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	13	15	8.8	27	18	60	23	16	9.9	16	14
2	8.0	13	13	10	29	17	60	18	15	9.7	16	14
3	8.4	13	9.5	14	29	16	54	16	13	9.3	16	13
4	8.6	13	7.2	14	25	16	42	16	13	10	16	11
5	8.2	20	7.1	11	27	16	40	16	14	12	16	12
6	6.8	26	11	9.0	30	16	42	16	21	12	16	13
7	5.7	16	e24	16	27	15	42	16	18	12	16	14
8	5.6	8.2	e33	28	24	16	34	17	15	10	16	14
9	6.3	8.6	e43	22	26	17	28	17	14	9.7	16	12
10	6.9	9.1	e52	14	26	16	28	12	13	8.8	16	9.8
11	6.5	9.0	e65	14	26	12	32	11	13	8.7	16	9.8
12	5.6	8.8	e100	14	24	19	40	14	13	9.5	16	11
13	4.0	8.2	e85	14	18	8.7	42	15	11	10	14	12
14	6.7	7.9	52	14	16	8.6	39	14	11	12	14	12
15	8.2	9.0	28	14	19	7.7	34	14	11	12	16	10
16	7.4	9.6	31	14	22	6.0	38	14	11	12	16	9.4
17	6.4	9.4	25	28	21	5.6	51	18	11	14	14	9.4
18	6.1	9.4	17	152	20	5.4	53	44	12	14	14	8.8
19	6.1	8.4	17	135	20	5.3	48	39	11	16	16	8.6
20	5.4	8.0	17	87	16	5.5	44	44	10	16	14	9.6
21	9.9	7.9	17	63	18	5.5	39	35	9.6	14	16	10
22	13	7.9	17	48	19	5.6	36	32	8.4	12	14	10
23	13	8.2	11	41	18	5.3	30	33	8.9	12	14	10
24	13	8.4	7.4	29	15	5.0	25	24	9.2	14	14	9.9
25	13	8.8	21	27	16	4.9	25	23	9.1	14	12	9.9
26	14	8.6	25	36	15	5.5	18	22	8.7	14	14	9.9
27	13	8.6	12	29	15	48	14	20	7.7	16	14	9.9
28	13	8.4	8.3	15	15	82	14	17	7.7	16	14	8.9
29	13	12	11	18	---	91	19	18	8.4	16	14	8.8
30	12	18	9.6	25	---	78	24	17	9.3	14	12	8.2
31	12	---	8.1	24	---	58	---	16	---	14	12	---
TOTAL	273.7	324.4	799.2	987.8	603	635.6	1,095	651	353.0	383.6	460	322.9
MEAN	8.83	10.8	25.8	31.9	21.5	20.5	36.5	21.0	11.8	12.4	14.8	10.8
MAX	14	26	100	152	30	91	60	44	21	16	16	14
MIN	4.0	7.9	7.1	8.8	15	4.9	14	11	7.7	8.7	12	8.2
AC-FT	543	643	1,590	1,960	1,200	1,260	2,170	1,290	700	761	912	640
MEAN†	7.92	11.0	25.0	31.9	13.9	27.8	37.9	21.1	11.4	4.99	2.34	1.93
CFSM†	1.15	1.59	3.63	4.62	2.02	4.02	5.50	3.06	1.65	0.72	0.34	0.28
IN.†	1.32	1.78	4.18	5.33	2.10	4.64	6.13	3.52	1.84	0.83	0.39	0.31
AC-FT†	487	654	1,539	1,962	773	1,707	2,256	1,296	678	307	144	115

CAL YR2004 TOTAL 8,609.6 MEAN 23.5 MAX 228 MIN 4.0 AC-FT 17,080 MEAN† 21.4 CFSM† 3.10 IN.† 42.13 AC-FT† 15,501
WTR YR2005 TOTAL 6,889.2 MEAN 18.9 MAX 152 MIN 4.0 AC-FT 13,660 MEAN† 16.4 CFSM† 2.38 IN.† 32.26 AC-FT† 11,907

e Estimated

† Adjusted for change in contents, in Haskins Creek Reservoir and diversion from McGuire Lake.

WILLAMETTE RIVER BASIN

14196001 HASKINS CREEK BELOW RESERVOIR, NEAR MCMINNVILLE, OR—Continued



2005 Water Year
WILLAMETTE RIVER BASIN

14196001 HASKINS CK BLW RESERVOIR & DIV TO MCMINNVILLE, OR

Latitude: 45° 18' 40"

Longitude: 123° 20' 55"

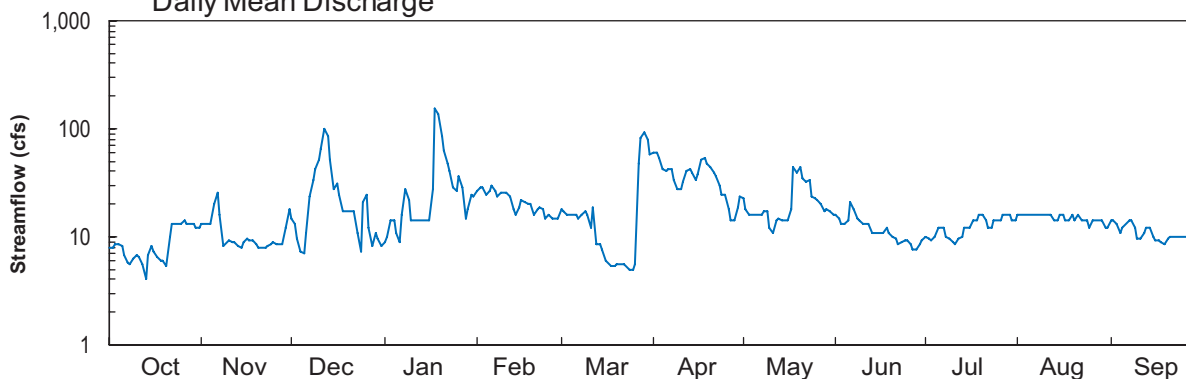
Hydrologic Unit Code: 17090008

Yamhill County

Datum: 707 feet

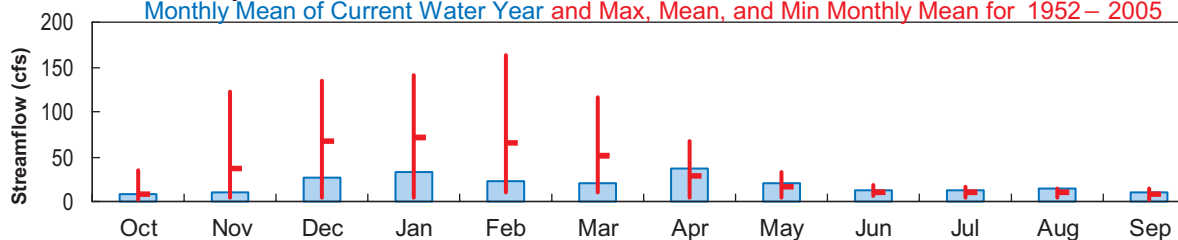
Drainage Area: 6.09 mi²

Daily Mean Discharge

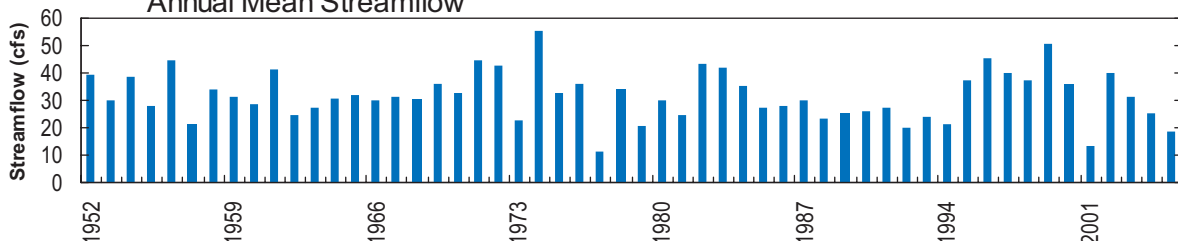


Monthly Statistics

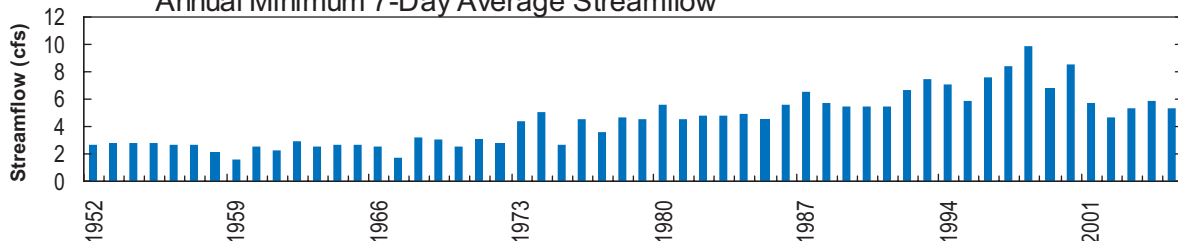
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1952–2005



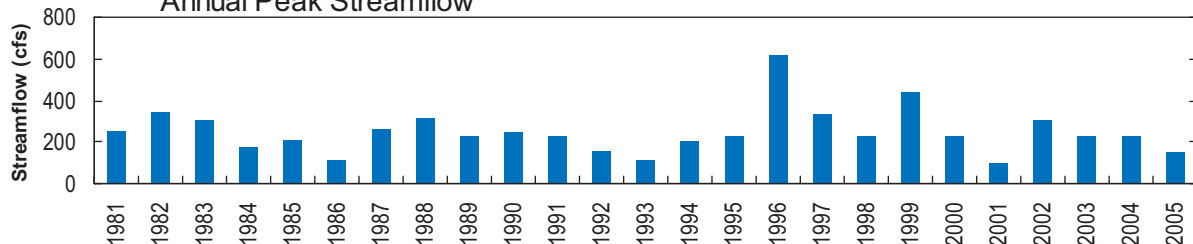
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



WILLAMETTE RIVER BASIN

14197900 WILLAMETTE RIVER AT NEWBERG, OR

LOCATION.--45°17'05", long 122°57'37", in sec.68, T.3 S., R.2 W., Yamhill County, Hydrologic Unit 17090007, on left bank at Newberg, and at mile 50.

DRAINAGE AREA.--Approximately 8,350 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Acoustic velocity meter with water-stage and velocity-index recorder. Datum of gage is NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by many reservoirs upstream. Gage pool elevations possibly affected by Portland General Electric Co powerplant operations and paper mill operations at Willamette Falls and during summer months by U.S. Army Corps of Engineers locks operations.

AVERAGE DISCHARGE.--4 years (2002-05), 22,040 ft³/s, 35.87 in./yr, 15,970,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 109,000 ft³/s Feb. 2, 2003, gage height, 76.31 ft; minimum discharge, 5,400 ft³/s Mar. 16, 2005.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 75,000 ft³/s Dec. 12, gage height, 69.18 ft; minimum discharge, 5,400 ft³/s Mar. 16.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10,000	21,700	14,500	18,800	13,500	9,340	39,000	18,100	16,400	9,840	7,120	7,160
2	10,200	21,900	14,000	18,900	12,800	9,110	33,100	18,400	16,100	9,470	7,070	7,030
3	10,600	23,700	13,700	18,600	12,100	9,060	30,000	18,000	16,500	8,960	7,100	7,160
4	10,900	27,000	12,300	17,600	11,600	8,940	27,400	17,700	15,800	8,780	7,210	7,300
5	10,800	25,000	11,800	15,800	11,300	8,660	26,000	17,500	15,200	8,660	7,050	7,410
6	10,900	22,700	11,900	14,500	11,400	8,430	24,100	18,000	15,500	8,720	6,830	7,500
7	11,400	21,700	13,200	14,000	11,200	7,910	23,100	19,000	19,200	8,300	6,980	7,590
8	12,300	20,800	20,000	14,000	11,500	7,820	24,300	19,300	23,300	8,280	6,860	7,990
9	13,000	20,000	40,000	14,500	11,000	7,610	28,300	19,200	24,300	8,160	6,920	8,010
10	15,100	19,700	56,800	14,900	10,800	7,550	29,700	21,400	21,700	8,270	6,830	8,350
11	15,200	19,200	67,900	15,300	10,400	7,410	27,700	31,600	18,600	8,310	6,810	8,820
12	14,900	18,600	72,100	15,000	10,100	7,030	27,700	38,800	17,500	8,400	6,860	9,080
13	14,200	17,800	65,500	14,200	10,100	6,870	28,000	35,300	17,100	8,380	6,950	9,010
14	13,300	16,800	58,700	14,000	11,300	6,790	26,300	29,200	15,600	8,000	7,020	8,880
15	12,800	15,900	55,000	13,400	12,400	6,670	24,500	24,800	14,400	7,930	6,970	8,750
16	12,900	15,700	51,300	13,500	11,500	6,490	23,000	22,400	13,200	7,600	6,890	8,850
17	12,800	15,000	45,200	13,600	10,800	6,460	25,400	22,300	12,700	7,780	6,840	8,870
18	13,200	14,500	38,900	18,000	10,400	6,920	28,100	26,600	13,800	8,010	6,920	9,050
19	15,100	14,200	33,500	31,100	10,100	7,210	28,600	30,900	15,300	7,730	7,180	9,120
20	17,700	13,700	29,900	30,800	9,780	7,600	26,300	35,500	15,100	7,400	7,010	9,030
21	17,300	13,100	27,800	26,300	11,000	8,810	23,800	35,200	14,300	7,110	7,060	8,960
22	16,800	12,700	26,000	22,100	11,900	9,110	21,700	34,200	13,600	7,000	6,850	8,870
23	17,800	12,300	25,600	19,600	11,600	9,170	20,100	32,900	13,000	7,180	6,910	8,910
24	19,100	12,500	24,300	17,900	10,900	9,590	21,000	29,300	12,500	7,240	6,890	8,830
25	19,900	13,400	22,900	16,800	10,500	10,600	22,100	26,100	11,400	7,120	7,130	9,030
26	19,400	17,000	22,200	15,300	9,990	12,400	21,000	22,900	10,600	7,130	7,130	9,000
27	19,800	18,200	22,200	14,200	9,500	20,700	19,600	20,100	10,400	7,010	7,070	9,100
28	19,500	17,400	21,500	13,600	9,440	48,300	19,300	18,200	10,100	7,030	7,050	9,160
29	19,500	15,900	20,100	13,100	---	59,200	18,900	17,100	10,600	7,170	7,120	9,170
30	19,800	15,200	19,700	14,400	---	59,500	18,400	16,800	10,400	7,160	7,190	9,390
31	21,000	---	19,800	14,300	---	51,400	---	17,000	---	7,210	7,110	---
TOTAL	467,200	533,300	978,300	528,100	308,910	452,660	756,500	753,800	454,200	245,340	216,930	255,380
MEAN	15,070	17,780	31,560	17,040	11,030	14,600	25,220	24,320	15,140	7,914	6,998	8,513
MAX	21,000	27,000	72,100	31,100	13,500	59,500	39,000	38,800	24,300	9,840	7,210	9,390
MIN	10,000	12,300	11,800	13,100	9,440	6,460	18,400	16,800	10,100	7,000	6,810	7,030
AC-FT	926,700	1,058,000	1,940,000	1,047,000	612,700	897,900	1,501,000	1,495,000	900,900	486,600	430,300	506,500
CFSM	1.80	2.13	3.78	2.04	1.32	1.75	3.02	2.91	1.81	0.95	0.84	1.02
IN.	2.08	2.38	4.36	2.35	1.38	2.02	3.37	3.36	2.02	1.09	0.97	1.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2005, BY WATER YEAR (WY)

MEAN	10,050	15,760	45,450	45,940	33,520	30,040	28,980	19,420	13,240	7,221	6,891	8,306
MAX	15,070	22,320	68,450	60,160	47,000	48,770	38,950	24,320	15,140	7,914	7,376	9,841
(WY)	(2005)	(2002)	(2002)	(2004)	(2004)	(2003)	(2003)	(2005)	(2005)	(2005)	(2004)	(2004)
MIN	7,610	11,470	27,590	17,040	11,030	14,600	20,180	16,570	11,210	6,571	6,054	7,104
(WY)	(2002)	(2004)	(2003)	(2005)	(2005)	(2005)	(2004)	(2002)	(2003)	(2003)	(2003)	(2003)

WILLAMETTE RIVER BASIN

14197900 WILLAMETTE RIVER AT NEWBERG, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2002 - 2005	
ANNUAL TOTAL	8,252,330		5,950,620		22,040	
ANNUAL MEAN	22,550		16,300		25,330	
HIGHEST ANNUAL MEAN					16,300	
LOWEST ANNUAL MEAN					107,000	
HIGHEST DAILY MEAN	103,000	Jan 31	72,100	Dec 12	107,000	Feb 2, 2003
LOWEST DAILY MEAN	6,280	Jul 25	6,460	Mar 17	5,700	Aug 23, 2003
ANNUAL SEVEN-DAY MINIMUM	6,560	Jul 24	6,750	Mar 12	5,980	Aug 10, 2003
ANNUAL RUNOFF (AC-FT)	16,370,000		11,800,000		15,970,000	
ANNUAL RUNOFF (CFSM)	2.70		1.95		2.64	
ANNUAL RUNOFF (INCHES)	36.76		26.51		35.87	
10 PERCENT EXCEEDS	52,300		27,900		50,400	
50 PERCENT EXCEEDS	17,300		13,600		15,200	
90 PERCENT EXCEEDS	6,990		7,120		6,920	



2005 Water Year
WILLAMETTE RIVER BASIN

14197900 WILLAMETTE RIVER AT NEWBERG, OR

Latitude: 45° 17' 05"

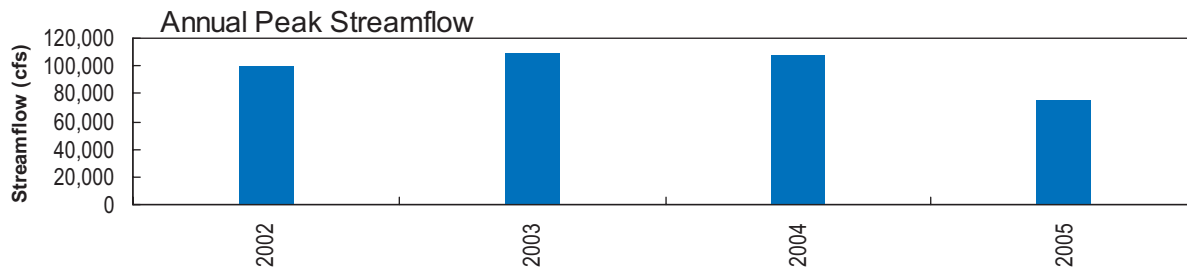
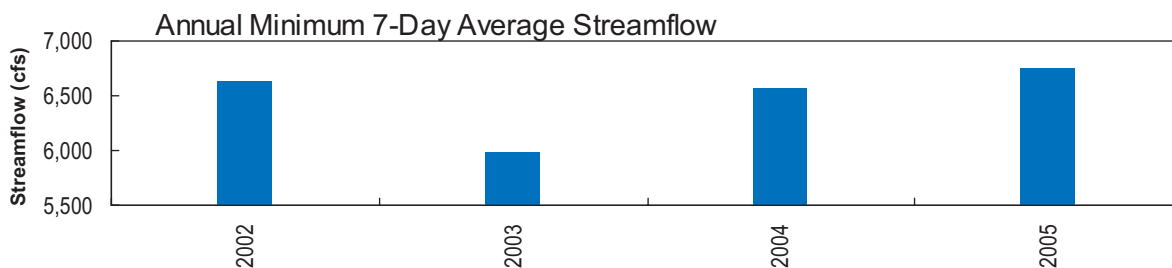
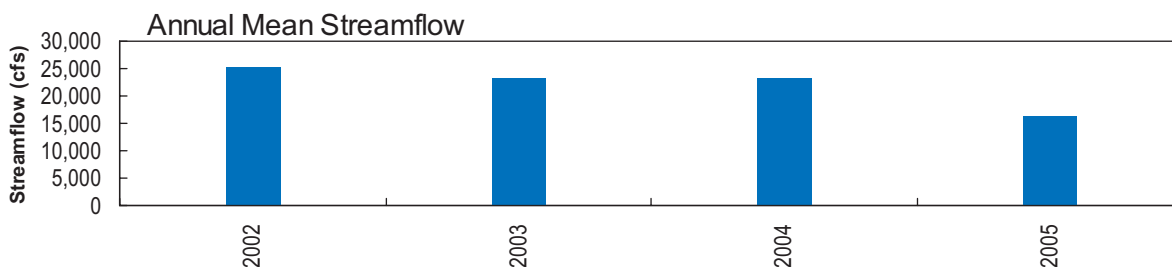
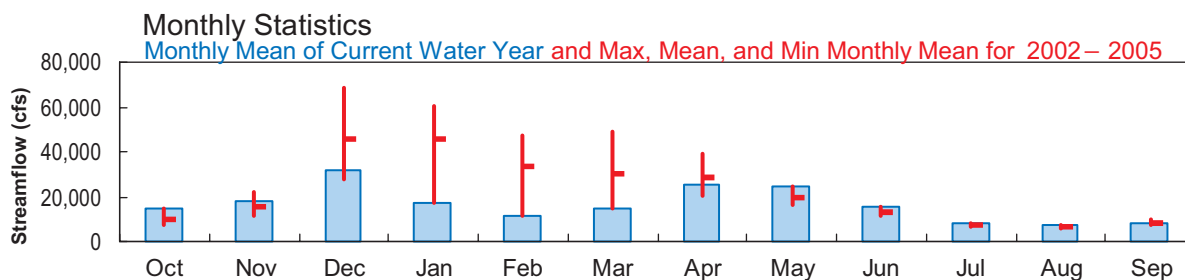
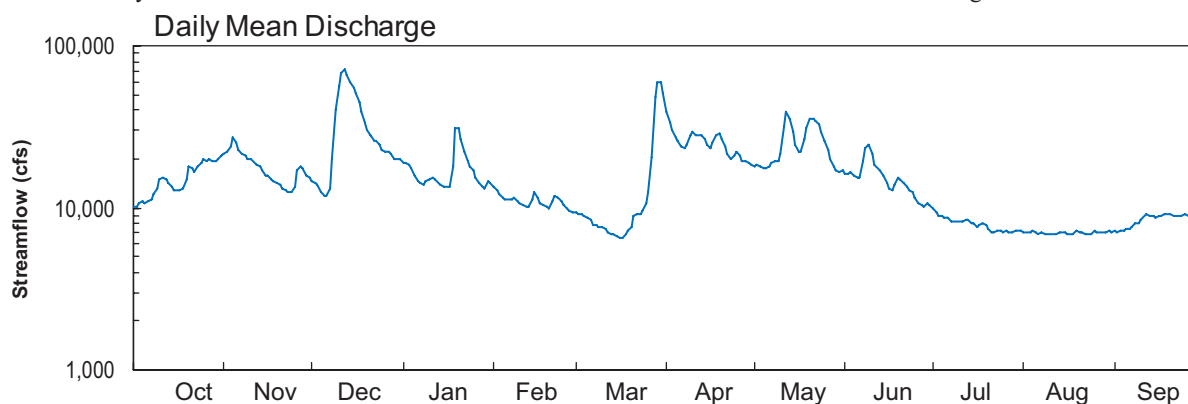
Longitude: 122° 57' 37"

Hydrologic Unit Code: 17090007

Yamhill County

Datum: 0.0 feet

Drainage Area: 8350 mi²



WILLAMETTE RIVER BASIN
14197900 WILLAMETTE RIVER AT NEWBERG, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--October 2001 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 25.3°C July 22, 2003; minimum, 3.1°C Jan. 7, 2004.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.7°C July 31; minimum, 3.9°C Jan. 6.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.7	16.0	16.3	12.0	11.3	11.6	8.2	7.6	7.9	6.9	6.5	6.7
2	16.3	15.8	16.0	11.6	11.1	11.3	8.0	7.6	7.8	6.7	6.2	6.4
3	16.2	15.8	16.0	11.6	11.0	11.2	7.8	7.3	7.5	6.4	5.6	5.9
4	16.5	15.8	16.1	11.1	10.2	10.5	7.4	7.0	7.2	5.6	4.6	5.1
5	16.8	16.1	16.4	10.3	9.5	9.8	7.2	7.0	7.2	4.7	4.1	4.4
6	17.2	16.5	16.8	9.7	9.0	9.3	7.5	7.1	7.3	4.4	3.9	4.2
7	17.3	16.6	16.9	9.4	8.9	9.1	7.6	7.3	7.4	4.7	4.2	4.4
8	17.3	16.4	16.8	9.5	9.0	9.2	7.8	7.3	7.6	5.1	4.5	4.8
9	16.5	15.8	16.1	9.9	9.4	9.6	8.5	7.5	8.0	5.2	4.8	5.0
10	15.9	15.0	15.4	10.3	9.7	9.9	9.4	8.4	8.9	5.4	5.1	5.2
11	15.0	14.3	14.7	10.4	10.0	10.2	9.7	9.1	9.5	5.3	4.8	5.0
12	15.2	14.4	14.8	10.6	10.1	10.3	9.7	8.9	9.3	5.2	4.7	4.9
13	15.7	14.8	15.2	10.7	10.4	10.5	9.1	8.6	8.8	5.3	4.8	5.1
14	16.0	15.3	15.6	10.8	10.4	10.7	9.1	8.5	8.8	5.5	5.2	5.3
15	16.0	15.5	15.8	10.8	10.6	10.7	9.2	8.7	9.0	5.4	4.8	5.1
16	15.7	15.3	15.5	10.9	10.6	10.7	8.9	8.3	8.5	5.2	4.8	4.9
17	15.4	14.6	14.9	11.1	10.6	10.9	8.4	7.9	8.2	5.6	4.9	5.2
18	14.7	13.9	14.2	10.8	10.3	10.5	8.1	7.7	7.9	7.4	5.5	6.5
19	14.0	13.4	13.7	10.3	9.8	10.0	8.0	7.6	7.8	8.6	7.4	8.1
20	13.6	13.0	13.3	9.8	9.2	9.5	8.0	7.6	7.8	8.8	8.4	8.6
21	13.6	13.2	13.4	9.2	8.1	8.6	7.6	7.1	7.4	8.9	8.4	8.6
22	13.5	13.0	13.2	8.2	7.8	8.1	7.3	6.8	7.1	8.7	8.3	8.5
23	13.1	12.6	12.8	8.5	7.9	8.1	7.5	6.9	7.2	8.5	8.0	8.2
24	12.8	12.3	12.6	9.5	8.3	9.0	7.4	7.0	7.2	8.2	7.8	8.0
25	12.7	11.9	12.2	10.4	9.3	9.9	7.2	6.8	7.0	8.2	7.7	7.9
26	12.2	11.4	11.7	10.3	9.6	9.9	7.1	6.7	6.9	8.0	7.6	7.9
27	11.7	11.1	11.5	9.7	9.0	9.3	7.0	6.5	6.8	8.4	7.7	8.0
28	11.7	11.2	11.4	9.1	8.3	8.6	7.0	6.5	6.7	8.6	8.0	8.2
29	11.8	11.2	11.5	8.5	7.6	8.0	6.9	6.5	6.7	8.6	8.2	8.4
30	12.2	11.5	11.8	7.8	7.4	7.6	7.2	6.7	6.9	8.5	8.2	8.3
31	12.2	11.8	12.0	---	---	---	7.1	6.6	6.8	8.4	8.0	8.2
MONTH	17.3	11.1	14.3	12.0	7.4	9.8	9.7	6.5	7.7	8.9	3.9	6.5

WILLAMETTE RIVER BASIN

14197900 WILLAMETTE RIVER AT NEWBERG, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.3	7.7	8.0	10.5	9.4	9.8	10.6	9.5	10.0	14.5	13.4	13.9
2	7.9	7.4	7.7	10.5	10.2	10.4	11.0	10.4	10.6	14.6	14.0	14.3
3	7.5	7.0	7.2	10.6	10.2	10.4	10.7	10.0	10.3	15.2	14.1	14.6
4	7.2	6.7	7.0	10.7	10.4	10.5	10.3	9.6	9.9	15.7	14.5	15.1
5	7.1	6.6	6.8	10.5	9.9	10.1	10.4	9.6	9.9	15.8	15.0	15.4
6	7.0	6.6	6.8	10.8	10.0	10.3	10.9	9.9	10.3	15.2	14.5	14.8
7	7.0	6.6	6.8	11.2	10.6	10.8	11.1	10.3	10.7	14.8	13.7	14.1
8	6.9	6.4	6.6	11.8	11.1	11.4	11.2	10.5	10.9	13.9	12.9	13.4
9	6.5	6.0	6.2	12.3	11.8	12.0	10.9	10.3	10.6	13.9	12.9	13.4
10	6.3	5.7	6.0	13.0	12.3	12.5	10.6	9.9	10.3	13.2	12.7	12.9
11	6.3	5.8	6.0	13.4	12.8	13.1	10.8	10.1	10.4	12.9	11.6	12.0
12	6.2	5.8	6.0	13.6	13.2	13.4	11.0	10.2	10.6	12.5	11.5	11.9
13	6.3	5.8	6.1	13.6	13.2	13.5	10.8	10.1	10.5	13.4	12.0	12.7
14	6.8	6.1	6.3	13.4	13.0	13.2	10.6	9.9	10.3	14.9	13.3	14.0
15	6.7	6.1	6.4	13.2	12.7	12.9	10.5	9.8	10.1	15.2	14.4	14.8
16	6.3	5.7	6.0	12.8	11.8	12.4	10.8	10.0	10.4	15.2	14.4	14.7
17	6.2	5.6	5.9	11.8	11.4	11.6	10.9	10.1	10.5	14.8	13.5	14.0
18	6.2	5.7	6.0	11.6	11.2	11.4	10.8	10.0	10.4	13.6	12.9	13.2
19	6.4	5.7	6.0	11.4	11.0	11.2	11.4	9.9	10.6	13.5	12.6	13.0
20	7.0	6.2	6.5	11.3	10.7	11.1	12.3	10.6	11.3	13.7	12.8	13.2
21	7.9	6.9	7.2	10.8	10.2	10.4	13.2	11.6	12.2	13.4	12.4	12.8
22	8.2	7.6	7.8	10.5	9.8	10.1	14.2	12.7	13.3	12.8	12.1	12.4
23	8.5	7.8	8.1	9.9	9.4	9.7	14.2	13.4	13.7	13.5	11.9	12.6
24	8.5	8.0	8.2	9.9	9.3	9.6	13.6	12.9	13.1	14.6	12.7	13.5
25	8.5	8.2	8.3	10.2	9.4	9.7	13.1	12.3	12.7	15.5	13.8	14.5
26	8.4	7.9	8.2	10.2	9.8	10.0	13.9	12.4	12.9	16.9	14.8	15.5
27	8.9	8.1	8.4	10.0	9.5	9.8	14.5	13.3	13.8	18.3	16.2	17.0
28	9.5	8.8	9.1	9.7	9.1	9.4	14.8	14.1	14.4	18.3	17.6	17.8
29	---	---	---	9.5	8.8	9.1	15.1	14.5	14.8	17.8	16.5	17.1
30	---	---	---	9.4	8.8	9.1	14.5	13.8	14.1	16.8	16.0	16.4
31	---	---	---	9.8	8.7	9.3	---	---	---	16.7	15.5	15.9
MONTH	9.5	5.6	7.0	13.6	8.7	10.9	15.1	9.5	11.5	18.3	11.5	14.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.9	15.0	15.4	20.8	19.7	20.0	23.6	22.4	23.0	20.0	19.6	19.8
2	15.8	14.8	15.2	20.8	20.3	20.6	22.4	21.8	22.1	20.1	19.7	19.9
3	15.8	15.0	15.3	20.9	19.9	20.4	22.1	21.6	21.8	20.4	19.8	20.2
4	15.8	15.0	15.4	21.2	20.5	20.8	22.1	21.7	21.9	20.4	19.6	20.0
5	15.9	15.1	15.4	21.6	21.0	21.2	22.5	22.1	22.3	19.9	19.1	19.4
6	15.4	14.6	15.0	22.2	21.5	21.7	22.9	22.5	22.8	19.4	18.9	19.1
7	14.7	13.7	14.1	22.2	21.4	21.7	23.1	22.6	22.9	19.3	18.8	19.1
8	14.2	12.9	13.5	21.8	19.9	21.0	23.1	22.6	22.9	19.2	18.7	19.0
9	15.6	13.6	14.3	19.9	19.3	19.6	23.0	22.4	22.8	19.2	18.0	18.6
10	15.8	14.6	15.2	19.7	18.9	19.2	22.8	21.8	22.4	18.0	17.1	17.6
11	15.9	15.1	15.5	19.5	18.6	18.9	22.2	21.7	22.0	17.5	16.8	17.0
12	15.9	14.9	15.4	19.8	19.4	19.6	21.9	21.3	21.6	17.3	16.7	16.9
13	16.3	15.3	15.8	20.2	19.6	19.8	21.8	21.4	21.7	17.6	17.1	17.3
14	16.5	15.8	16.1	20.9	20.0	20.3	22.2	21.8	22.0	17.9	17.3	17.5
15	16.8	15.7	16.1	22.1	20.9	21.3	22.5	22.1	22.3	18.1	17.7	17.9
16	16.8	15.9	16.3	22.4	22.0	22.2	22.8	22.1	22.4	17.9	17.1	17.5
17	16.1	15.5	15.9	22.8	21.9	22.2	22.3	21.6	22.1	17.3	16.7	17.0
18	16.5	15.6	16.0	23.4	22.6	22.9	21.9	21.1	21.5	17.0	16.2	16.5
19	17.2	15.7	16.3	23.6	23.0	23.3	21.5	21.2	21.3	16.9	16.3	16.5
20	17.8	16.5	17.0	23.5	22.8	23.1	21.8	21.3	21.5	17.0	16.5	16.7
21	18.3	17.5	17.8	23.3	22.7	23.0	21.8	21.3	21.6	16.9	16.3	16.5
22	18.5	17.5	18.0	23.1	22.6	22.9	21.8	21.1	21.5	16.8	16.0	16.4
23	18.7	17.7	18.1	22.8	22.3	22.5	21.5	20.4	21.0	16.4	15.7	16.0
24	19.0	17.9	18.4	22.6	22.1	22.3	20.7	20.0	20.4	16.1	15.3	15.7
25	19.6	18.6	18.9	22.4	21.9	22.2	20.5	20.1	20.3	15.8	15.2	15.5
26	19.6	18.9	19.2	22.6	22.1	22.3	20.7	20.2	20.5	15.8	15.3	15.5
27	19.0	18.2	18.5	23.0	22.5	22.8	20.8	20.4	20.6	15.9	15.4	15.6
28	18.3	17.4	17.7	23.3	23.0	23.1	21.1	20.5	20.8	16.1	15.3	15.7
29	18.6	17.2	17.7	23.5	23.0	23.3	21.0	20.0	20.6	16.2	15.9	16.0
30	19.9	18.2	18.8	23.6	23.1	23.4	20.2	19.4	19.8	16.4	15.9	16.2
31	---	---	---	23.7	23.1	23.3	20.0	19.6	19.8	---	---	---
MONTH	19.9	12.9	16.4	23.7	18.6	21.6	23.6	19.4	21.6	20.4	15.2	17.4
YEAR	23.7	3.9	13.3									

WILLAMETTE RIVER BASIN

14207740 WILLAMETTE RIVER ABOVE FALLS, AT OREGON CITY, OR

LOCATION.--Lat 45°20'55", long 122°37'08", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.2 S., R.2 E., Clackamas County, Hydrologic Unit 17090007, on right bank 0.2 mi upstream from Willamette Falls, 1.6 mi downstream from Tualatin River, and at mile 26.8.

DRAINAGE AREA.--10,000 mi², approximately.

PERIOD OF RECORD.--October 1976 to current year (gage heights only).

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929.

REMARKS.--Flow regulated by many reservoirs upstream. Gage pool elevations possibly affected by Portland General Electric Co. powerplant operations and paper mill operations at Willamette Falls and during summer months by U.S. Army Corps of Engineers locks operations.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 69.47 ft Feb. 9, 1996; minimum, 52.51 ft July 12, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 59.47 ft Dec. 12; minimum, 53.25 ft Mar. 16.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54.53	55.53	54.55	55.05	54.42	53.76	57.58	54.97	54.76	53.89	54.91	55.10
2	54.53	55.50	54.51	55.05	54.33	54.11	57.02	55.03	54.73	53.81	54.96	55.05
3	54.57	55.81	54.45	55.04	54.19	54.16	56.71	55.05	54.77	53.77	54.98	55.05
4	54.58	56.11	54.29	54.99	54.15	53.74	56.44	55.01	54.69	53.72	54.98	55.09
5	54.57	55.97	54.18	54.73	54.08	53.68	56.27	54.98	54.58	53.68	54.95	55.11
6	54.60	55.69	54.20	54.51	54.09	53.63	56.02	55.01	54.59	53.66	54.90	55.12
7	54.67	55.51	54.32	54.41	54.10	53.57	55.79	55.10	55.00	53.63	54.90	55.13
8	54.82	55.40	55.15	54.40	54.14	53.53	55.83	55.18	55.47	53.64	54.92	55.20
9	54.97	55.28	57.13	54.48	54.09	53.48	56.19	55.19	55.68	53.65	54.96	55.25
10	55.24	55.19	58.35	54.55	54.02	53.45	56.32	55.53	55.44	53.67	54.95	55.26
11	55.27	55.10	59.16	54.62	53.98	53.42	56.19	56.44	55.10	54.02	54.94	55.32
12	55.19	54.99	59.43	54.56	53.96	53.38	56.19	57.11	54.88	54.30	54.95	55.36
13	55.09	54.89	59.14	54.47	53.94	53.35	56.22	56.88	54.82	54.10	54.97	55.37
14	54.93	54.77	58.67	54.44	54.06	53.32	56.10	56.39	54.65	53.60	54.97	55.35
15	54.84	54.66	58.31	54.36	54.24	53.28	55.90	55.91	54.48	53.51	54.97	55.34
16	54.85	54.62	58.01	54.30	54.14	53.28	55.76	55.64	54.34	53.48	54.96	55.35
17	54.85	54.58	57.59	54.38	54.02	53.33	56.09	55.59	54.28	53.49	54.96	55.38
18	54.91	54.48	57.07	54.96	53.95	53.39	56.40	55.97	54.39	53.48	54.97	55.39
19	55.18	54.47	56.61	56.41	53.90	53.47	56.46	56.46	54.64	53.44	54.98	55.40
20	55.50	54.41	56.26	56.57	53.87	53.53	56.22	56.93	54.64	53.40	54.98	55.39
21	55.48	54.34	56.01	56.20	53.95	53.69	55.91	56.98	54.50	53.72	54.97	55.38
22	55.42	54.27	55.92	55.77	54.12	53.79	55.62	56.88	54.37	54.78	55.34	55.36
23	55.47	54.22	55.78	55.44	54.08	53.79	55.39	56.72	54.30	54.94	55.63	55.26
24	55.61	54.20	55.67	55.39	53.98	53.81	55.43	56.42	54.21	54.97	55.63	55.10
25	55.68	54.27	55.48	55.22	53.89	53.92	55.59	56.05	54.08	54.95	55.52	55.11
26	55.66	54.74	55.43	55.01	53.85	54.17	55.52	55.70	53.97	54.92	55.08	55.11
27	55.69	55.01	55.46	54.62	53.79	55.38	55.36	55.38	53.94	54.91	55.04	55.07
28	55.67	54.93	55.41	54.45	53.76	57.99	55.23	55.12	53.96	54.90	55.05	55.11
29	55.57	54.75	55.24	54.35	---	58.88	55.13	54.90	54.02	54.89	55.05	55.14
30	55.35	54.64	55.16	54.48	---	58.89	55.02	54.81	53.98	54.89	55.09	55.19
31	55.40	---	55.13	54.57	---	58.43	---	54.80	---	54.88	55.20	---
MEAN	55.12	54.94	56.20	54.90	54.04	54.31	56.00	55.75	54.58	54.09	55.05	55.23
MAX	55.69	56.11	59.43	56.57	54.42	58.89	57.58	57.11	55.68	54.97	55.63	55.40
MIN	54.53	54.20	54.18	54.30	53.76	53.28	55.02	54.80	53.94	53.40	54.90	55.05
CAL YR2004	MEAN 55.53	MAX 61.49	MIN 53.98									
WTR YR2005	MEAN 55.02	MAX 59.43	MIN 53.28									