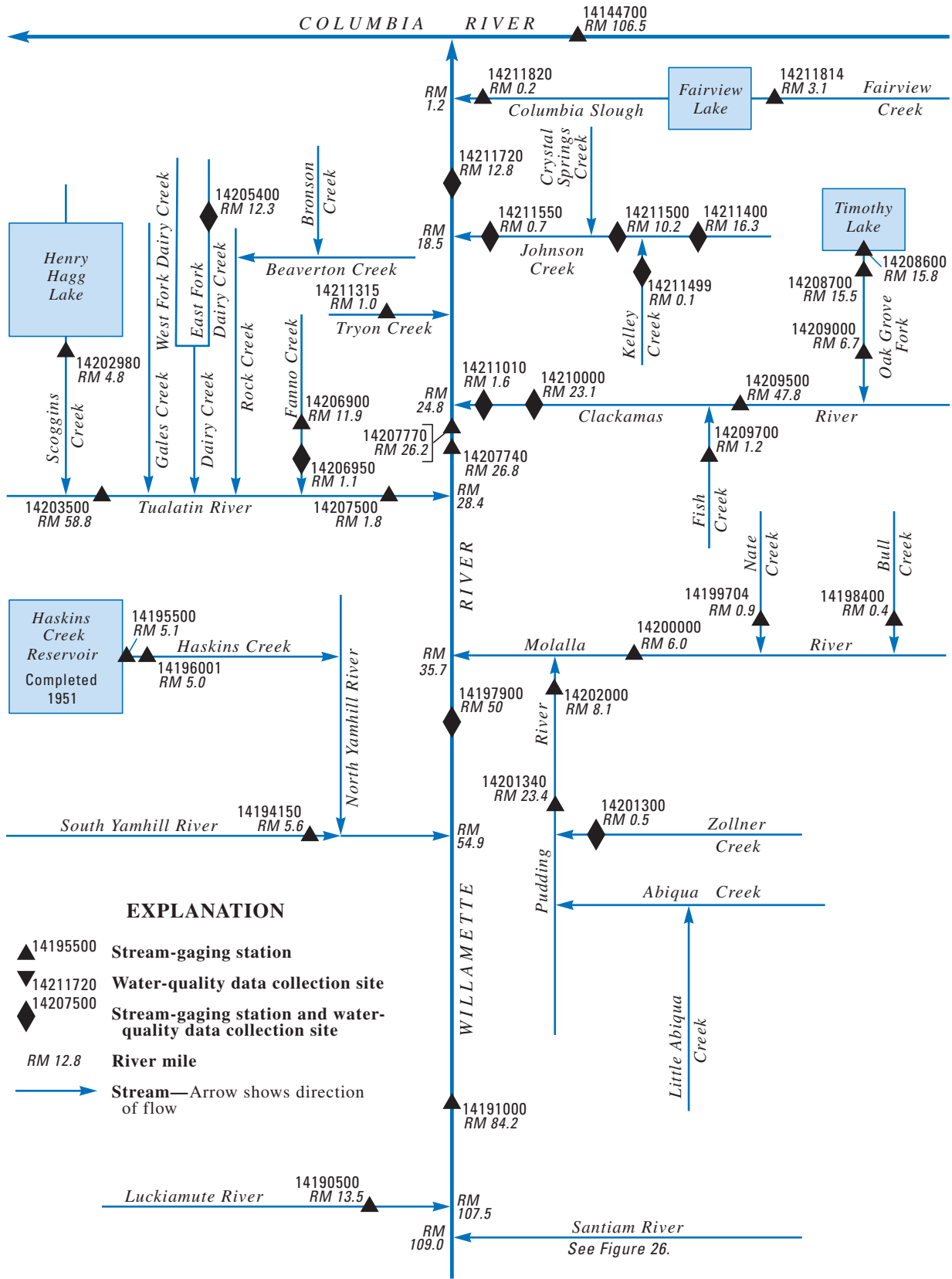


**Figure 25.** Location of surface-water and water-quality stations in the Willamette River Basin, downstream from the Luckiamute River.



**Figure 27.** Schematic diagram showing gaging stations in the Willamette River Basin, from the Luckiamute River downstream to the mouth.

WILLAMETTE RIVER BASIN

14198400 BULL CREEK NEAR WILHOIT, OR

LOCATION.--Lat 44°57'42", long 122°22'59", in NW ¼ SE ¼ sec.13, T.7 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on left bank 0.5 mi upstream from mouth, 11 mi southeast of Wilhoit, and at mile 0.43.

DRAINAGE AREA.--0.66 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1993 to current year.

REVISED RECORDS.--WDR OR-97-1. Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,680 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except those below 1 ft<sup>3</sup>/s, which are poor. No regulation or diversion.

AVERAGE DISCHARGE.--12 years (water years 1994-2005), 1.93 ft<sup>3</sup>/s, 39.75 in/yr, 1,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 250 ft<sup>3</sup>/s Feb. 7, 1996, gage height, 7.55 ft, from rating curve extended above 70 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum discharge, 0.02 ft<sup>3</sup>/s Sept. 25-28, 1994, Sept. 21-24, 1995, Sept. 28-30, Oct. 1-4, 7-12, 1996, Sept. 15-17, 1998, Oct. 4, 21-23, 1999, Oct. 4-6, 2001, Sept. 2-6, 27-29, 2003.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 18 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 8	1215	*30	*5.87	Mar 27	1115	26	5.77

Minimum discharge, 0.09 ft<sup>3</sup>/s, on many days in August and September, gage height, 3.86 ft.

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	0.18	0.84	1.6	1.4	0.35	0.18	3.0	0.82	0.62	0.66	0.14	0.10
2	0.15	1.9	1.7	1.2	0.32	0.18	3.0	0.83	0.61	0.57	0.14	0.10
3	0.14	3.2	1.6	1.1	0.30	0.17	2.6	0.76	0.58	0.46	0.14	0.10
4	0.13	2.6	1.5	0.97	0.30	0.17	2.0	0.75	0.55	0.38	0.13	0.09
5	0.12	1.7	1.3	0.88	0.29	0.16	1.6	0.71	0.62	0.35	0.13	0.09
6	0.27	1.2	1.4	0.86	0.29	0.16	1.4	1.1	0.75	0.33	0.13	0.09
7	0.18	0.86	2.2	0.88	0.28	0.16	1.3	1.3	0.84	0.30	0.13	0.09
8	0.63	0.66	19	0.83	0.27	0.16	1.2	1.3	0.86	0.29	0.13	0.09
9	1.0	0.51	10	0.71	0.26	0.15	1.1	1.6	0.82	0.31	0.13	0.09
10	0.73	0.42	6.0	0.66	0.25	0.15	1.0	4.3	0.73	0.29	0.12	0.10
11	0.57	0.37	7.1	0.57	0.24	0.14	1.2	5.5	0.71	0.27	0.12	0.09
12	0.44	0.33	6.5	0.51	0.26	0.14	1.2	3.6	0.66	0.25	0.12	0.09
13	0.36	0.30	4.3	0.54	0.28	0.14	1.3	2.7	0.62	0.24	0.12	0.09
14	0.28	0.28	3.4	0.51	0.26	0.14	1.5	1.9	0.59	0.23	0.11	0.09
15	0.24	0.31	2.8	0.64	0.25	0.13	1.6	1.5	0.53	0.22	0.11	0.09
16	0.20	0.26	2.4	0.91	0.24	0.16	2.4	1.3	0.71	0.22	0.11	0.10
17	0.26	0.25	2.0	1.3	0.24	0.17	3.7	1.2	1.0	0.21	0.11	0.10
18	0.30	0.57	1.8	2.3	0.24	0.15	3.1	2.0	1.1	0.20	0.11	0.09
19	0.35	0.45	1.6	2.4	0.23	0.18	2.4	4.5	1.1	0.19	0.10	0.09
20	0.31	0.38	1.4	2.0	0.23	0.21	1.9	4.1	1.1	0.19	0.10	0.09
21	0.46	0.34	1.3	1.5	0.22	0.21	1.5	3.3	0.92	0.18	0.10	0.09
22	0.49	0.33	1.4	1.2	0.21	0.19	1.2	2.8	0.79	0.20	0.10	0.09
23	0.47	0.32	1.4	0.99	0.20	0.21	1.4	2.1	0.67	0.18	0.10	0.09
24	0.40	0.50	1.3	0.83	0.19	0.22	1.7	1.6	0.57	0.17	0.10	0.09
25	0.43	0.92	1.3	0.70	0.19	0.21	1.8	1.3	0.47	0.17	0.10	0.09
26	0.54	1.2	1.9	0.60	0.19	0.78	1.6	1.1	0.40	0.17	0.10	0.09
27	0.57	1.2	1.9	0.49	0.18	16	1.3	0.91	0.60	0.16	0.10	0.09
28	0.49	1.1	1.7	0.46	0.19	9.4	1.1	0.79	0.85	0.16	0.11	0.09
29	0.43	0.98	1.6	0.73	---	6.3	0.95	0.67	0.83	0.15	0.11	0.09
30	0.56	0.99	1.5	0.52	---	4.7	0.84	0.57	0.77	0.14	0.11	0.33
31	0.76	---	1.4	0.41	---	3.2	---	0.51	---	0.14	0.10	---
TOTAL	12.44	25.27	96.3	29.60	6.95	44.62	51.89	57.42	21.97	7.98	3.56	3.00
MEAN	0.40	0.84	3.11	0.95	0.25	1.44	1.73	1.85	0.73	0.26	0.11	0.10
MAX	1.0	3.2	19	2.4	0.35	16	3.7	5.5	1.1	0.66	0.14	0.33
MIN	0.12	0.25	1.3	0.41	0.18	0.13	0.84	0.51	0.40	0.14	0.10	0.09
AC-FT	25	50	191	59	14	89	103	114	44	16	7.1	6.0
CFSM	0.61	1.28	4.71	1.45	0.38	2.18	2.62	2.81	1.11	0.39	0.17	0.15
IN.	0.70	1.42	5.43	1.67	0.39	2.51	2.92	3.24	1.24	0.45	0.20	0.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2005, BY WATER YEAR (WY)

MEAN	0.43	2.37	4.86	4.22	4.25	2.92	1.80	1.44	0.59	0.21	0.09	0.11
MAX	1.73	5.85	12.0	6.99	10.8	6.49	3.11	3.63	1.15	0.30	0.11	0.36
(WY)	(1998)	(1997)	(1997)	(2004)	(1996)	(1997)	(1996)	(1998)	(2004)	(1998)	(2005)	(2004)
MIN	0.06	0.13	0.91	0.48	0.25	0.87	0.78	0.32	0.25	0.11	0.05	0.04
(WY)	(2004)	(1994)	(1994)	(2001)	(2005)	(2001)	(2000)	(1994)	(2003)	(2003)	(1994)	(1999)

WILLAMETTE RIVER BASIN

14198400 BULL CREEK NEAR WILHOIT, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1994 - 2005	
ANNUAL TOTAL	610.33		361.00			
ANNUAL MEAN	1.67		0.99		1.93	
HIGHEST ANNUAL MEAN					3.10 1996	
LOWEST ANNUAL MEAN					0.53 2001	
HIGHEST DAILY MEAN	19	Jan 9	19	Dec 8	100	Feb 7, 1996
LOWEST DAILY MEAN	0.03	Aug 18	0.09	Sep 4	0.02	Sep 26, 1994
ANNUAL SEVEN-DAY MINIMUM	0.03	Aug 15	0.09	Sep 18	0.02	Sep 27, 1996
ANNUAL RUNOFF (AC-FT)	1,210		716		1,400	
ANNUAL RUNOFF (CFSM)	2.53		1.50		2.93	
ANNUAL RUNOFF (INCHES)	34.40		20.35		39.75	
10 PERCENT EXCEEDS	3.9		2.0		4.3	
50 PERCENT EXCEEDS	0.72		0.49		0.60	
90 PERCENT EXCEEDS	0.08		0.10		0.07	



2005 Water Year  
 WILLAMETTE RIVER BASIN

14198400 BULL CREEK NEAR WILHOIT, OR

Latitude: 44° 57' 42"

Longitude: 122° 22' 59"

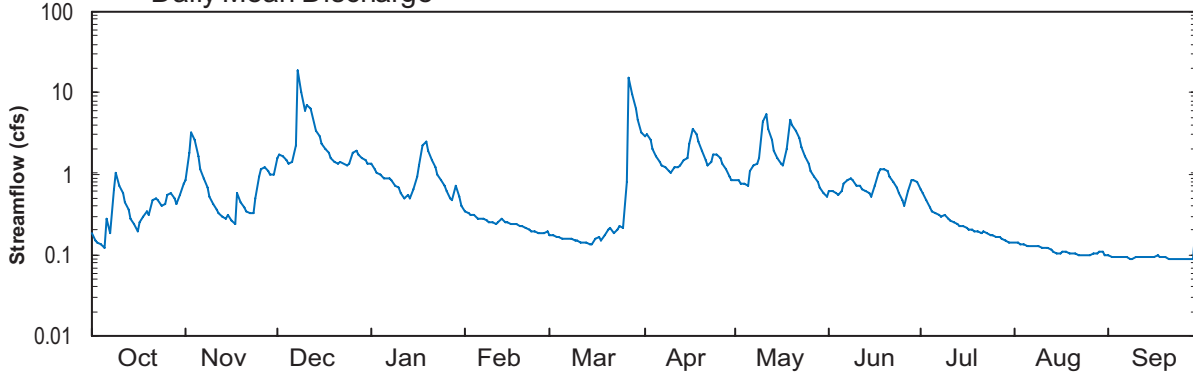
Hydrologic Unit Code: 17090009

Clackamas County

Datum: 1680 feet

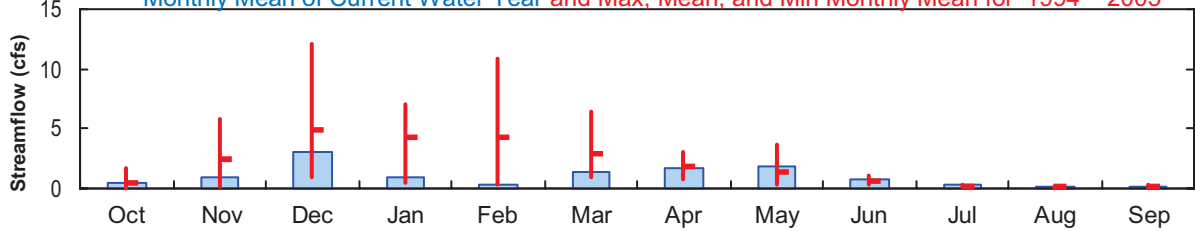
Drainage Area: 0.66 mi<sup>2</sup>

Daily Mean Discharge

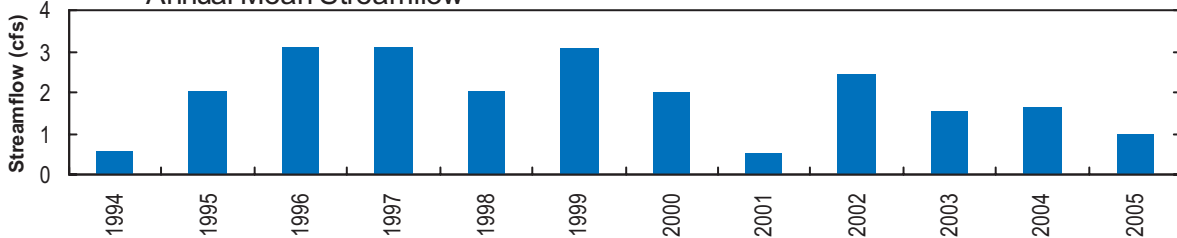


Monthly Statistics

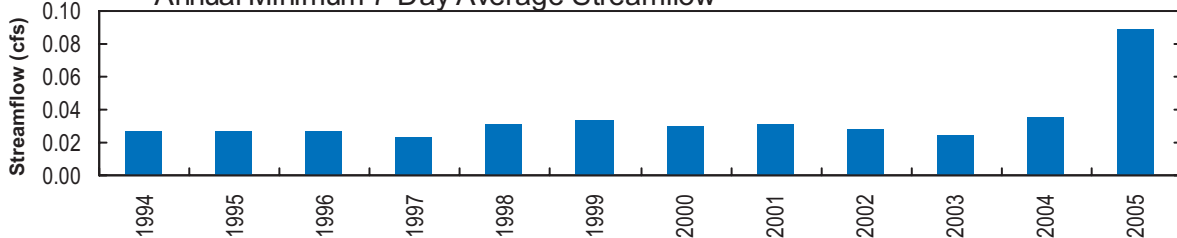
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1994–2005



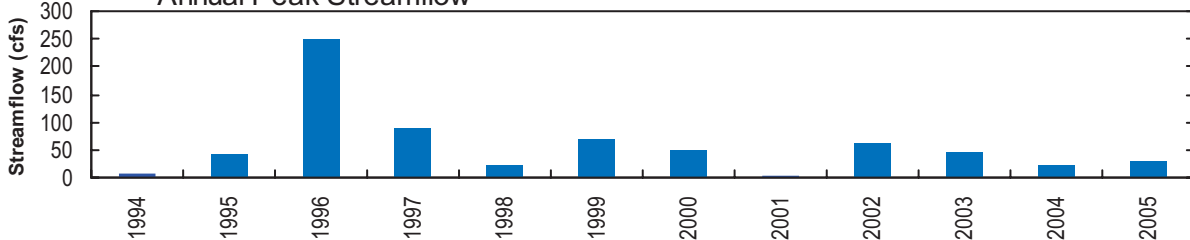
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



WILLAMETTE RIVER BASIN

14199704 NATE CREEK TRIBUTARY NEAR COLTON, OR

LOCATION.--Lat 45°12'19", long 122°24'38", in SW 1/4 SW 1/4, sec.23, T.4 S., R.3 E., Clackamas County, Hydrologic Unit 17090009, on left bank at South Unger Road, 0.9 upstream from mouth, and 2.5 mi northeast of Colton.

DRAINAGE AREA.--0.61 mi<sup>2</sup>.

PERIOD OF RECORD.--June 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is 950 ft above NGVD of 1929.

REMARKS.--Records poor. No known regulation or diversion.

AVERAGE DISCHARGE.--3 years (water years 2003-05), 1.19 ft<sup>3</sup>/s, 26.52 in/yr, 863 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33 ft<sup>3</sup>/s Feb. 1, 2003, gage height, 3.59 ft, but may have been higher Jan. 31, during period of backwater, when debris clogged culvert, maximum gage height, 5.41 ft Jan. 31, 2003 (backwater from debris clogged culvert); minimum discharge, 0.07 ft<sup>3</sup>/s Oct. 13-15, Dec. 1-5, 2002.

EXTREMES FOR CURRENT YEAR.---Maximum discharge, 3.5 ft<sup>3</sup>/s Dec. 11, gage height, 2.09 ft; minimum discharge, 0.21 ft<sup>3</sup>/s Sept. 23-28.

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	0.25	0.81	1.3	0.94	0.88	0.85	2.2	1.2	1.3	0.49	0.33	0.26
2	0.23	1.1	1.3	0.89	0.86	0.85	2.1	1.2	1.3	0.48	0.33	0.26
3	0.23	1.2	1.3	0.85	0.86	0.74	2.0	1.1	1.2	0.48	0.32	0.26
4	0.23	0.90	1.3	0.81	0.88	0.74	1.9	1.1	1.1	0.47	0.32	0.26
5	0.23	0.81	1.3	0.80	0.86	0.72	1.8	1.1	1.2	0.47	0.32	0.26
6	0.29	0.75	1.3	0.80	0.91	0.70	1.6	1.1	1.1	0.50	0.33	0.26
7	0.26	0.69	1.3	0.81	0.89	0.71	1.7	1.0	1.1	0.48	0.33	0.26
8	0.35	0.65	1.8	0.87	0.86	0.70	1.7	1.0	1.0	0.47	0.32	0.26
9	0.42	0.63	2.1	0.97	0.88	0.69	1.5	1.2	0.99	0.50	0.31	0.26
10	0.37	0.61	2.3	0.94	0.89	0.69	1.4	2.0	0.98	0.48	0.30	0.26
11	0.39	0.59	3.0	0.88	0.91	0.69	1.9	2.2	0.96	0.48	0.28	0.26
12	0.40	0.60	2.8	0.87	0.93	0.69	1.9	2.0	0.85	0.48	0.28	0.26
13	0.41	0.65	2.3	0.86	0.93	0.68	1.8	1.8	0.82	0.46	0.28	0.26
14	0.41	0.64	2.2	0.84	0.91	0.65	1.6	1.8	0.81	0.45	0.27	0.26
15	0.41	0.72	1.9	0.83	0.89	0.64	1.6	1.7	0.80	0.45	0.27	0.26
16	0.41	0.71	1.7	0.85	0.92	0.71	2.1	1.7	0.91	0.44	0.27	0.26
17	0.45	0.69	1.6	0.88	0.90	0.69	2.2	1.6	0.91	0.43	0.28	0.26
18	0.45	0.83	1.5	0.99	0.91	0.68	2.2	2.0	0.82	0.43	0.29	0.26
19	0.45	0.74	1.4	1.0	0.91	0.77	2.0	2.6	0.82	0.40	0.27	0.24
20	0.42	0.80	1.3	1.0	0.91	0.74	1.9	2.8	0.82	0.40	0.26	0.25
21	0.48	0.86	1.3	1.0	0.86	0.69	1.8	3.0	0.81	0.40	0.26	0.24
22	0.47	0.89	1.2	1.0	0.86	0.69	1.6	2.8	0.77	0.42	0.26	0.24
23	0.52	0.91	1.1	1.0	0.84	0.69	1.7	2.5	0.73	0.39	0.26	0.23
24	0.55	1.0	1.1	1.0	0.80	0.69	1.6	2.3	0.68	0.36	0.26	0.22
25	0.55	1.2	1.1	1.0	0.80	0.69	1.6	2.1	e0.60	0.36	0.26	0.23
26	0.60	1.2	1.2	1.0	0.83	0.85	1.5	2.0	e0.50	0.36	0.26	0.23
27	0.59	1.2	1.1	1.0	0.85	1.7	1.4	1.8	e0.60	0.36	0.26	0.23
28	0.61	1.2	1.0	0.97	0.86	3.2	1.4	1.7	e0.70	0.35	0.26	0.23
29	0.64	1.2	1.0	0.95	---	3.0	1.3	1.5	e0.50	0.33	0.31	0.24
30	0.78	1.3	1.0	0.92	---	2.6	1.2	1.4	0.48	0.33	0.27	0.51
31	0.78	---	0.98	0.92	---	2.2	---	1.4	---	0.33	0.26	---
TOTAL	13.63	26.08	47.08	28.44	24.59	31.33	52.2	54.7	26.16	13.23	8.88	7.77
MEAN	0.44	0.87	1.52	0.92	0.88	1.01	1.74	1.76	0.87	0.43	0.29	0.26
MAX	0.78	1.3	3.0	1.0	0.93	3.2	2.2	3.0	1.3	0.50	0.33	0.51
MIN	0.23	0.59	0.98	0.80	0.80	0.64	1.2	1.0	0.48	0.33	0.26	0.22
AC-FT	27	52	93	56	49	62	104	108	52	26	18	15
CFSM	0.72	1.43	2.49	1.50	1.44	1.66	2.85	2.89	1.43	0.70	0.47	0.42
IN.	0.83	1.59	2.87	1.73	1.50	1.91	3.18	3.34	1.60	0.81	0.54	0.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2005, BY WATER YEAR (WY)

MEAN	0.32	0.61	1.50	2.74	2.62	2.19	1.82	1.08	0.65	0.36	0.24	0.24
MAX	0.44	0.87	2.41	4.45	3.81	3.96	3.07	1.76	0.87	0.43	0.29	0.28
(WY)	(2005)	(2005)	(2004)	(2004)	(2003)	(2003)	(2003)	(2005)	(2005)	(2005)	(2005)	(2004)
MIN	0.15	0.43	0.57	0.92	0.88	1.01	0.65	0.44	0.36	0.25	0.17	0.17
(WY)	(2003)	(2003)	(2003)	(2005)	(2005)	(2005)	(2004)	(2004)	(2003)	(2003)	(2003)	(2003)

WILLAMETTE RIVER BASIN

14199704 NATE CREEK TRIBUTARY NEAR COLTON, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	449.40		334.09			
ANNUAL MEAN	1.23		0.92		1.19	
HIGHEST ANNUAL MEAN					1.39	2003
LOWEST ANNUAL MEAN					0.92	2005
HIGHEST DAILY MEAN	9.3	Jan 30	3.2	Mar 28	32	Feb 1, 2003
LOWEST DAILY MEAN	0.20	Aug 18	0.22	Sep 24	0.07	Oct 14, 2002
ANNUAL SEVEN-DAY MINIMUM	0.22	Sep 4	0.23	Sep 22	0.09	Oct 10, 2002
ANNUAL RUNOFF (AC-FT)	891		663		863	
ANNUAL RUNOFF (CFSM)	2.01		1.50		1.95	
ANNUAL RUNOFF (INCHES)	27.41		20.37		26.52	
10 PERCENT EXCEEDS	3.1		1.8		2.8	
50 PERCENT EXCEEDS	0.63		0.82		0.64	
90 PERCENT EXCEEDS	0.26		0.26		0.21	

e Estimated



2005 Water Year  
WILLAMETTE RIVER BASIN

14199704 NATE CREEK TRIBUTARY NEAR COLTON, OR

Latitude: 45° 12' 19"

Longitude: 122° 24' 38"

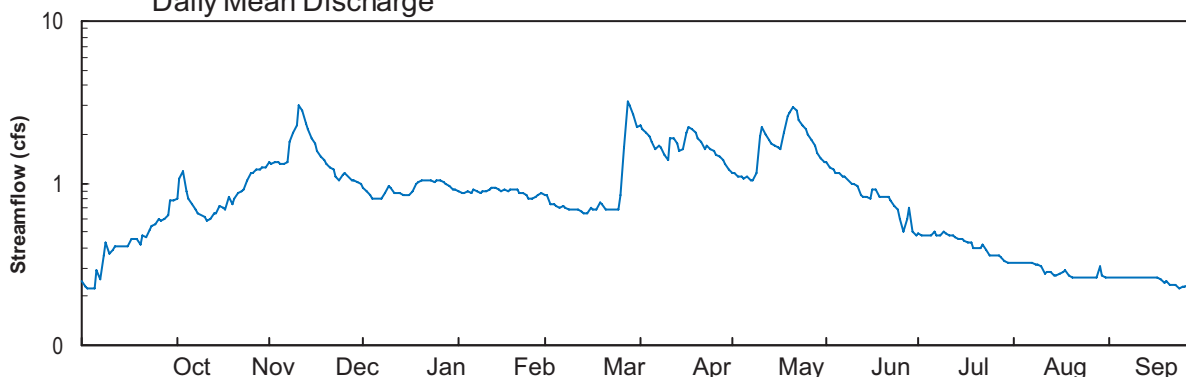
Hydrologic Unit Code: 17090009

Clackamas County

Datum: 950 feet

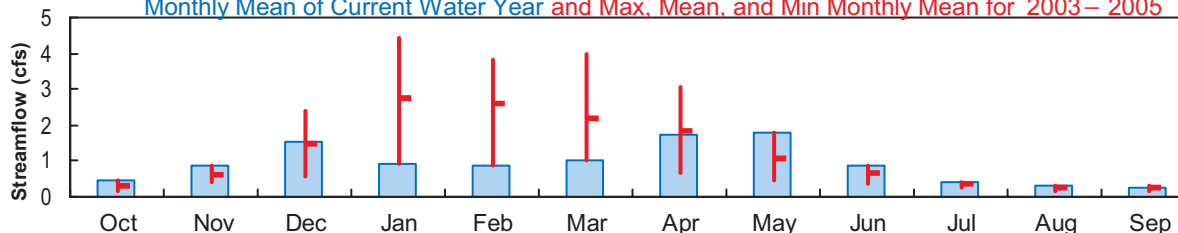
Drainage Area: 0.61 mi<sup>2</sup>

Daily Mean Discharge



Monthly Statistics

Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 2003–2005



WILLAMETTE RIVER BASIN

14200000 MOLALLA RIVER NEAR CANBY, OR

LOCATION.--Lat 45°14'40", long 122°41'10", in NW ¼ NE ¼ sec.9, T.4 S., R.1 E., Clackamas County, Hydrologic Unit 17090009, on left bank, at upstream side of Goods bridge, 1.5 mi south of Canby, and at mile 6.01.

DRAINAGE AREA.--323 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1928 to September 1959, October 1963 to September 1978, October 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 94 ft above NGVD of 1929. Prior to Oct. 24, 1933 nonrecording gage and Oct. 24, 1933 to Sept. 26, 1955, water-stage recorder at present site at datum 11.00 ft higher. Sept. 27, 1955 to June 3, 1956, water-stage recorder at site 145 ft downstream at datum 10 ft higher. June 4, 1956 to Sept. 30, 1959, water-stage recorder at site 0.3 mi downstream at datum 8.02 ft higher. Oct. 1, 1963 to Sept. 30, 1978, Oct. 1, 2000 to Oct. 31 2001 water-stage recorder at present site at datum 10 ft higher.

REMARKS.--No estimated daily discharges. Records good. No regulation. Numerous small diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--51 years (water years 1929-59, 1964-78, 2001-05), 1,136 ft<sup>3</sup>/s, 47.79 in/yr, 823,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,600 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 26.76 ft, at current datum; minimum discharge, 20 ft<sup>3</sup>/s Aug. 24, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec 11	1300	7,220	16.40	Mar 27	1930	*8,870	*17.29

Minimum discharge, 51 ft<sup>3</sup>/s Sept. 10, 24, 26-30 gage height, 10.05 ft.

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	200	707	815	677	517	282	2,100	721	637	499	112	67
2	186	1,160	885	630	482	269	2,180	713	802	441	112	61
3	176	2,650	795	571	457	266	1,870	650	701	411	112	61
4	169	1,780	736	528	442	257	1,700	629	616	372	106	61
5	161	1,320	718	490	480	248	1,460	636	613	338	98	60
6	173	1,030	702	467	453	239	1,290	731	774	326	94	58
7	297	846	781	470	468	232	1,320	828	930	348	93	55
8	239	717	3,580	477	432	226	1,730	794	902	311	90	54
9	1,020	626	4,680	439	413	220	1,620	968	769	325	88	53
10	839	559	5,130	414	395	215	1,420	2,000	662	340	85	55
11	585	508	6,070	390	382	209	1,610	2,700	684	326	84	70
12	453	465	4,860	373	380	205	1,680	2,070	702	294	81	65
13	375	436	3,110	380	475	199	1,520	1,600	669	276	82	61
14	318	412	2,580	375	474	193	1,430	1,350	630	254	77	58
15	283	396	2,160	366	444	188	1,350	1,150	581	240	71	56
16	263	445	1,740	440	424	189	1,990	1,110	537	228	68	56
17	277	400	1,440	522	403	248	3,090	1,220	922	215	71	62
18	499	455	1,210	2,960	386	233	2,570	1,490	984	201	76	69
19	946	567	1,060	2,300	374	234	2,150	2,890	951	190	78	65
20	713	525	959	1,550	371	342	1,790	2,830	907	178	74	59
21	608	487	854	1,200	353	384	1,520	2,550	778	171	71	56
22	644	458	877	977	334	357	1,310	2,260	689	172	69	55
23	683	441	820	833	317	358	1,300	1,840	617	182	68	53
24	739	523	755	733	303	374	1,450	1,510	542	165	66	53
25	672	1,060	715	654	292	363	1,310	1,260	482	156	63	53
26	664	1,230	942	594	284	383	1,200	1,060	445	147	59	52
27	629	985	921	576	276	5,710	1,070	905	460	139	58	52
28	554	837	834	526	272	6,180	982	794	696	130	57	52
29	513	719	784	604	---	4,310	873	717	641	126	60	51
30	528	681	752	616	---	3,130	800	645	559	119	81	71
31	703	---	698	555	---	2,250	---	592	---	117	78	---
TOTAL	15,109	23,425	52,963	22,687	11,083	28,493	47,685	41,213	20,882	7,737	2,482	1,754
MEAN	487	781	1,708	732	396	919	1,590	1,329	696	250	80.1	58.5
MAX	1,020	2,650	6,070	2,960	517	6,180	3,090	2,890	984	499	112	71
MIN	161	396	698	366	272	188	800	592	445	117	57	51
AC-FT	29,970	46,460	105,100	45,000	21,980	56,520	94,580	81,750	41,420	15,350	4,920	3,480
CFSM	1.51	2.42	5.29	2.27	1.23	2.85	4.92	4.12	2.16	0.77	0.25	0.18
IN.	1.74	2.70	6.10	2.61	1.28	3.28	5.49	4.75	2.40	0.89	0.29	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	423	1,424	2,244	2,373	1,868	1,699	1,471	1,088	612	202	103	141
MAX	2,201	3,864	5,835	5,124	4,265	3,559	2,954	2,376	1,687	491	378	555
(WY)	(1948)	(1974)	(1965)	(1953)	(1949)	(1972)	(1937)	(1945)	(1933)	(1952)	(1968)	(1978)
MIN	59.9	52.7	211	303	271	505	383	275	164	73.2	38.1	46.0
(WY)	(1953)	(1937)	(1977)	(1977)	(1977)	(1941)	(1941)	(1931)	(1940)	(2003)	(2003)	(2003)



WILLAMETTE RIVER BASIN

14200000 MOLALLA RIVER NEAR CANBY, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	374,576		275,513		1,136	
ANNUAL MEAN	1,023		755		1,822	
HIGHEST ANNUAL MEAN					1956	
LOWEST ANNUAL MEAN					2001	
HIGHEST DAILY MEAN	8,490	Jan 29	6,180	Mar 28	34,100	Dec 22, 1964
LOWEST DAILY MEAN	65	Aug 21	51	Sep 29	22	Aug 27, 1959
ANNUAL SEVEN-DAY MINIMUM	68	Aug 15	52	Sep 23	28	Aug 31, 2003
ANNUAL RUNOFF (AC-FT)	743,000		546,500		823,000	
ANNUAL RUNOFF (CFSM)	3.17		2.34		3.52	
ANNUAL RUNOFF (INCHES)	43.14		31.73		47.79	
10 PERCENT EXCEEDS	2,400		1,690		2,640	
50 PERCENT EXCEEDS	670		490		673	
90 PERCENT EXCEEDS	120		69		80	



2005 Water Year  
 WILLAMETTE RIVER BASIN

14200000 MOLALLA RIVER NEAR CANBY, OR

Latitude: 45° 14' 40"

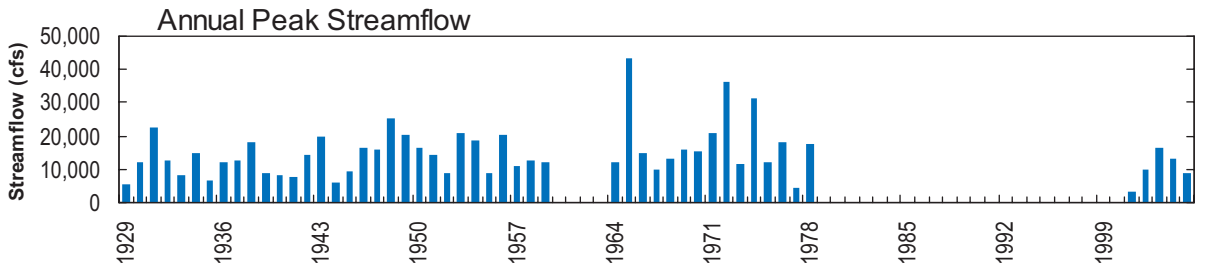
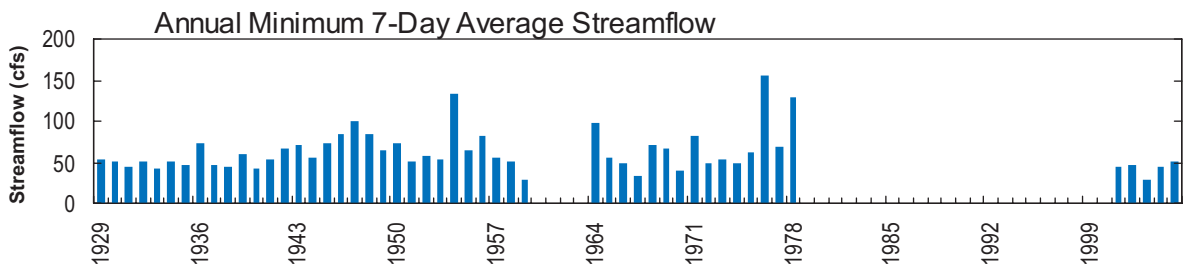
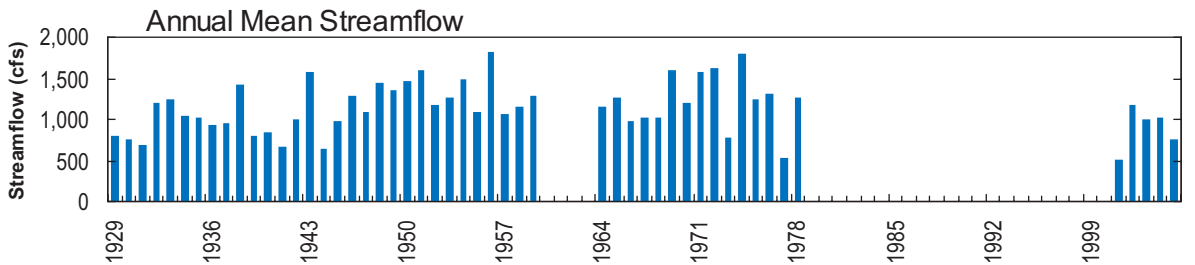
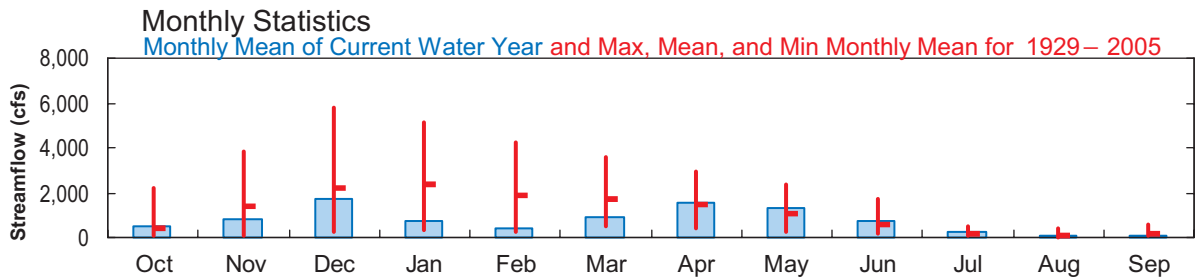
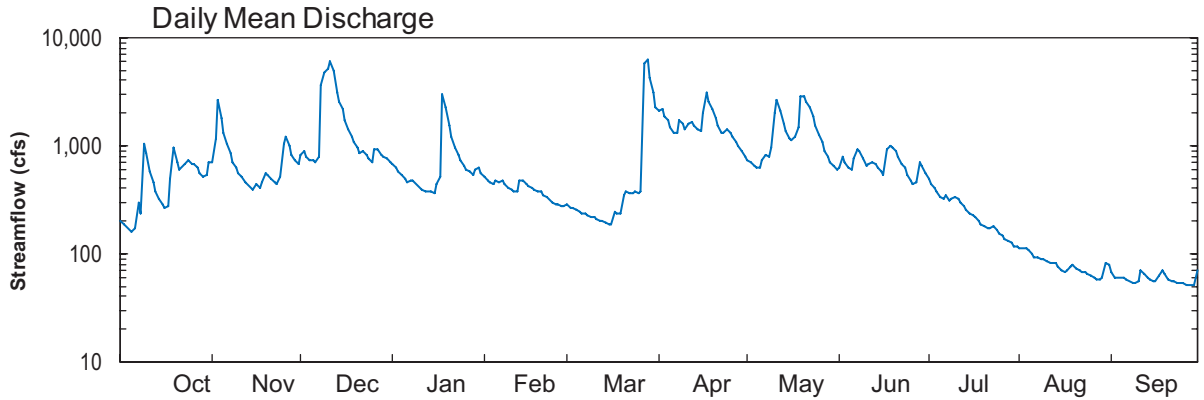
Longitude: 122° 41' 10"

Hydrologic Unit Code: 17090009

Clackamas County

Datum: 94.00 feet

Drainage Area: 323 mi<sup>2</sup>



WILLAMETTE RIVER BASIN

14201300 ZOLLNER CREEK NEAR MOUNT ANGEL, OR

LOCATION.--Lat 45°06'02", long 122°49'14", in SW ¼ SW ¼ sec. 28, T.5 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank downstream corner of Monitor-McKee Road bridge, 2.3 mi north-northwest of Mount Angel and at mile 0.4.

DRAINAGE AREA.--15.0 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1993 to current year.

REVISED RECORD.--WDR OR-96-1: 1994 (M).

GAGE.--Water-stage recorder and velocity meter. Elevation of gage is 120 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flows subject to backwater from the Pudding River. Many diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--12 years (water years 1994-2005), 22.2 ft<sup>3</sup>/s, 20.09 in/yr, 16,070 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft<sup>3</sup>/s Nov. 19, 1996, gage height 16.93 ft; maximum gage height, 21.33 ft, Feb. 8, 1996, from floodmark (backwater from Pudding River); minimum discharge, 0.02 ft<sup>3</sup>/s Sept. 22, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 28	0200	*193	9.21	Mar. 29	1930	(a)	*11.32

Minimum discharge, 0.02 ft<sup>3</sup>/s, Aug. 18, 31, Sept. 7, gage height, 3.45 ft.

(a) Backwater from Pudding River.

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	0.33	3.0	4.9	8.2	10	3.4	e34	6.5	6.5	0.70	0.38	0.03
2	0.33	9.5	4.5	7.2	11	3.2	28	6.0	5.8	0.65	0.47	0.04
3	0.28	46	4.2	5.6	9.7	3.1	26	6.0	4.9	0.83	1.7	0.04
4	0.33	13	4.0	4.9	9.1	3.1	21	6.9	4.1	1.1	0.85	0.04
5	0.37	7.6	4.9	e4.4	8.4	4.0	15	8.3	5.0	0.58	0.43	0.03
6	0.93	4.8	5.8	e4.3	8.2	3.0	14	7.3	5.9	0.72	0.49	0.03
7	0.84	3.5	11	e5.0	8.0	2.7	18	6.1	5.1	0.36	1.6	0.03
8	1.9	2.6	e48	e6.7	7.3	2.5	27	5.3	5.1	0.27	0.67	0.03
9	6.8	1.9	82	e7.0	6.9	1.6	21	8.4	3.6	0.29	0.43	0.03
10	4.5	1.7	57	e7.5	6.6	0.63	18	24	2.8	0.36	0.45	0.06
11	2.1	1.2	60	e7.8	6.7	0.66	32	26	3.2	0.46	0.32	0.26
12	3.0	1.2	70	7.7	7.2	0.56	30	19	2.2	0.31	0.17	0.87
13	6.9	0.93	49	7.2	7.3	0.60	23	16	2.0	0.30	0.19	0.44
14	6.7	0.90	40	7.0	7.3	0.54	19	15	2.2	0.31	0.12	4.4
15	2.1	1.2	e30	7.3	7.2	0.55	17	12	2.1	0.19	0.05	1.3
16	2.0	2.9	e20	8.4	7.2	0.64	28	15	1.2	0.10	0.05	0.55
17	e3.0	2.1	14	9.5	7.0	0.73	43	14	2.1	0.10	0.28	0.56
18	e4.0	3.9	11	19	6.9	0.70	35	23	2.3	0.10	0.04	0.26
19	e5.0	6.6	9.9	21	6.7	1.6	34	34	1.7	0.22	0.09	0.24
20	e5.0	5.2	8.5	16	6.8	1.3	24	26	1.9	0.23	0.08	0.35
21	e4.5	4.1	7.3	e12	6.0	0.94	19	25	1.8	0.15	0.13	0.19
22	e4.5	3.8	7.2	e10	5.5	0.80	16	25	1.7	0.09	0.09	0.26
23	e4.5	3.6	6.8	e7.5	5.4	1.8	15	22	0.91	0.08	0.08	0.24
24	e4.0	3.4	6.3	e8.0	5.0	2.6	15	18	0.31	0.06	0.05	0.27
25	e4.0	3.8	6.6	e8.5	5.1	1.4	12	16	0.26	0.07	0.07	0.18
26	e4.0	3.3	16	e8.5	4.9	5.1	11	15	0.22	0.12	0.05	0.12
27	2.9	2.9	16	e8.5	4.3	e100	10	12	0.67	0.30	0.05	0.09
28	2.1	2.5	12	8.6	4.1	140	9.2	11	1.9	0.36	0.04	0.07
29	2.2	2.3	11	9.3	---	126	7.6	8.6	1.4	0.35	0.04	0.08
30	2.5	4.4	9.5	10	---	86	6.9	6.7	1.2	0.51	0.03	2.4
31	2.8	---	8.4	11	---	e44	---	6.8	---	0.32	0.03	---
TOTAL	94.41	153.83	645.8	273.6	195.8	543.75	628.7	450.9	80.07	10.59	9.52	13.49
MEAN	3.05	5.13	20.8	8.83	6.99	17.5	21.0	14.5	2.67	0.34	0.31	0.45
MAX	6.9	46	82	21	11	140	43	34	6.5	1.1	1.7	4.4
MIN	0.28	0.90	4.0	4.3	4.1	0.54	6.9	5.3	0.22	0.06	0.03	0.03
AC-FT	187	305	1,280	543	388	1,080	1,250	894	159	21	19	27
CFSM	0.20	0.34	1.39	0.59	0.47	1.17	1.40	0.97	0.18	0.02	0.02	0.03
IN.	0.23	0.38	1.60	0.68	0.49	1.35	1.56	1.12	0.20	0.03	0.02	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2005, BY WATER YEAR (WY)

MEAN	6.35	36.4	61.4	54.7	49.1	33.4	14.0	7.15	2.95	0.79	0.44	0.81
MAX	23.1	121	187	103	114	91.5	38.5	21.8	6.60	1.66	0.93	2.54
(WY)	(1997)	(1997)	(1997)	(1996)	(1996)	(1997)	(2003)	(1996)	(1997)	(1997)	(1997)	(1997)
MIN	0.80	1.51	10.9	7.47	6.99	10.4	2.75	2.05	0.95	0.24	0.14	0.19
(WY)	(2003)	(2003)	(2001)	(2001)	(2005)	(2001)	(2004)	(1994)	(2002)	(1994)	(2001)	(2001)

WILLAMETTE RIVER BASIN

14201300 ZOLLNER CREEK NEAR MOUNT ANGEL, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1994 - 2005	
ANNUAL TOTAL	4,317.49		3,100.46		22.2	
ANNUAL MEAN	11.8		8.49		48.8	
HIGHEST ANNUAL MEAN					1997	
LOWEST ANNUAL MEAN					2001	
HIGHEST DAILY MEAN	120	Jan 30	140	Mar 28	1,510	Nov 19, 1996
LOWEST DAILY MEAN	0.04	Aug 21	0.03	Aug 30	0.03	Sep 11, 2001
ANNUAL SEVEN-DAY MINIMUM	0.04	Sep 5	0.03	Sep 3	0.03	Sep 3, 2005
ANNUAL RUNOFF (AC-FT)	8,560		6,150		16,070	
ANNUAL RUNOFF (CFSM)	0.786		0.566		1.48	
ANNUAL RUNOFF (INCHES)	10.71		7.69		20.09	
10 PERCENT EXCEEDS	40		21		60	
50 PERCENT EXCEEDS	2.7		4.1		4.9	
90 PERCENT EXCEEDS	0.16		0.12		0.33	

e Estimated

WILLAMETTE RIVER BASIN

14201300 ZOLLNER CREEK NEAR MOUNT ANGEL, OR—Continued



2005 Water Year  
WILLAMETTE RIVER BASIN

14201300 ZOLLNER CREEK NEAR MT ANGEL, OR

Latitude: 45° 06' 02"

Longitude: 122° 49' 14"

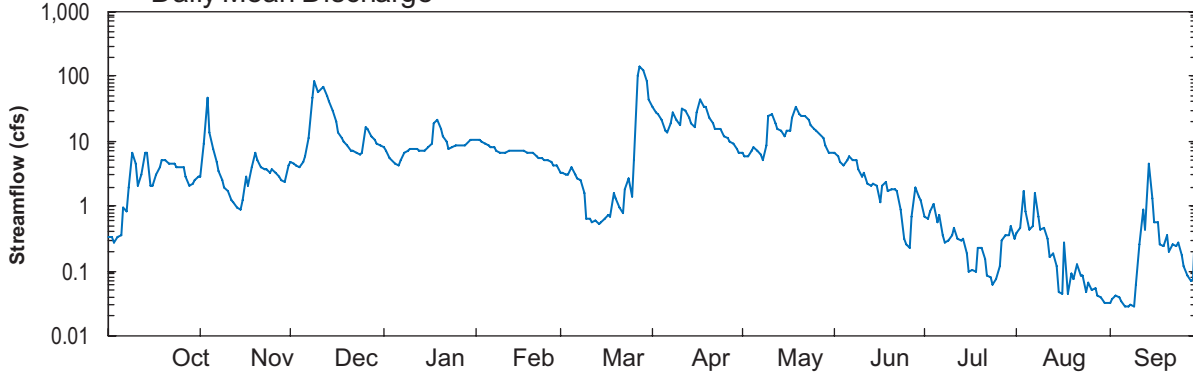
Hydrologic Unit Code: 17090009

Marion County

Datum: 120 feet

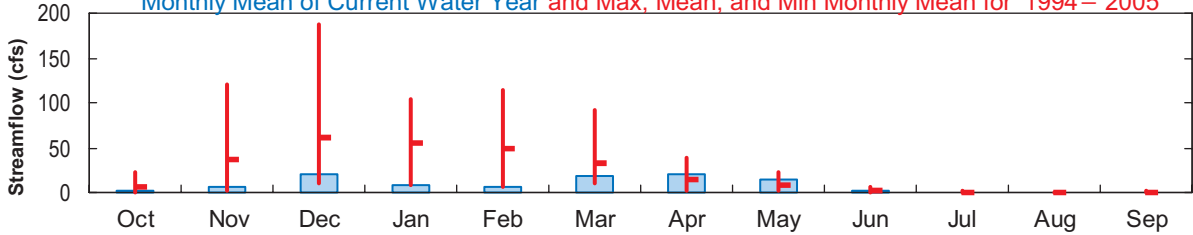
Drainage Area: 15 mi<sup>2</sup>

Daily Mean Discharge

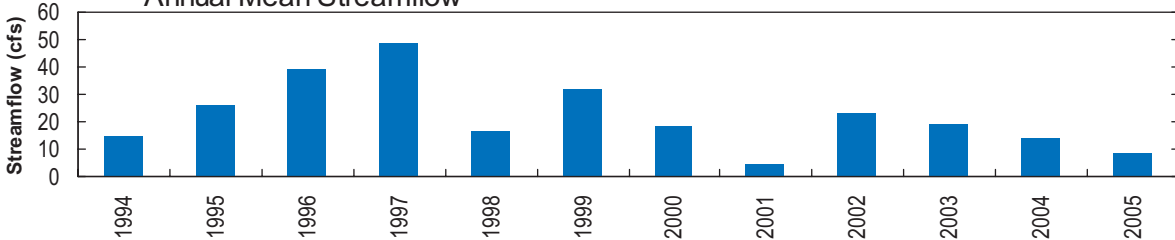


Monthly Statistics

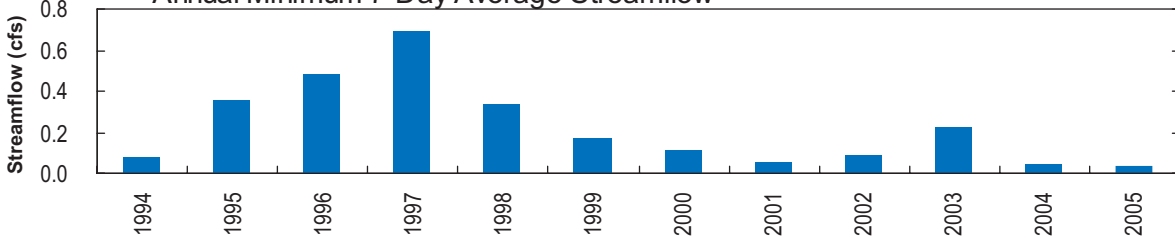
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1994–2005



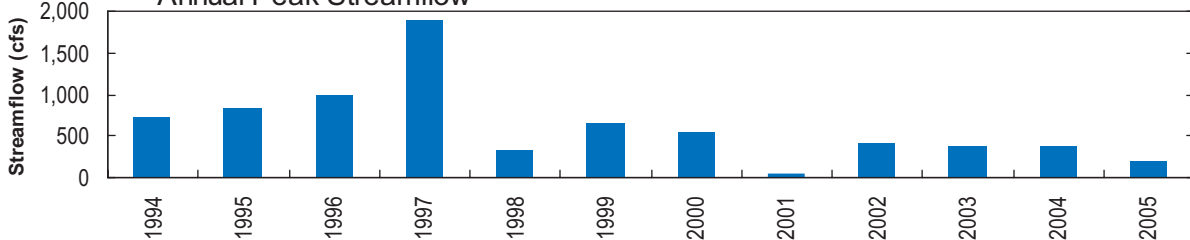
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



WILLAMETTE RIVER BASIN

14201340 PUDDING RIVER NEAR WOODBURN, OR

LOCATION.--Lat 45°09'05", long 122°48'11", in NW ¼ SW ¼ sec. 10, T.5 S., R.1 W., Marion County, Hydrologic Unit 17090009, on left bank 1.0 mile east of Woodburn, and at mile 23.4.

DRAINAGE AREA.--314 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 130 ft above NGVD of 1929, from topographic map.

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

AVERAGE DISCHARGE.--8 years (water years 1998-2005), 772 ft<sup>3</sup>/s, 33.38 in/yr, 558,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,500 ft<sup>3</sup>/s Dec. 29, 1998, gage height, 29.05 ft; minimum discharge, 5.5 ft<sup>3</sup>/s Aug. 24, 2003.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 8, 1996 reached a stage of 32.76 ft, from floodmark, discharge about 29,000 ft<sup>3</sup>/s, on basis of runoff comparison with nearby station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 29	2300	*3,010	*22.46				

Minimum discharge, 15 ft<sup>3</sup>/s, Sept. 9, gage height, 4.75 ft.

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	114	488	509	646	544	243	1,920	525	512	252	39	22
2	108	486	592	647	508	242	1,720	499	570	217	38	20
3	102	952	572	610	479	230	1,520	478	551	200	35	21
4	96	1,140	537	565	453	222	1,390	447	478	189	35	22
5	91	967	524	527	462	212	1,230	479	430	164	31	23
6	89	786	542	497	476	204	1,060	483	489	151	30	22
7	131	656	603	484	467	199	961	524	685	160	31	22
8	167	563	975	514	484	191	1,100	487	869	163	34	18
9	222	494	2,020	516	453	185	1,140	494	816	156	31	18
10	584	441	2,300	491	430	182	1,020	627	691	170	20	19
11	465	396	2,610	474	411	187	994	1,040	600	177	24	25
12	353	358	2,930	450	400	179	1,110	1,080	556	159	30	30
13	290	321	2,780	439	414	169	1,060	937	507	142	28	30
14	243	305	2,380	468	435	157	1,000	815	454	133	32	28
15	207	285	2,130	447	405	152	951	733	414	121	33	26
16	186	296	1,870	449	381	151	986	699	376	104	29	22
17	183	341	1,590	491	361	155	1,500	725	364	87	24	25
18	233	300	1,300	754	352	204	1,580	794	413	86	25	31
19	438	393	1,100	1,300	344	183	1,550	1,200	398	78	27	30
20	513	407	969	1,100	334	210	1,380	1,510	374	73	28	28
21	423	365	864	915	333	246	1,190	1,520	368	70	25	25
22	384	334	793	789	311	264	1,040	1,480	318	68	28	22
23	371	322	766	697	294	252	930	1,410	301	71	28	21
24	386	319	699	625	278	278	967	1,220	274	65	25	20
25	367	401	640	573	265	276	955	1,050	249	59	20	21
26	367	664	693	528	256	273	839	916	234	51	20	22
27	405	691	857	500	251	934	746	803	234	47	20	21
28	368	621	798	479	243	2,600	679	700	301	45	22	20
29	330	551	732	479	---	2,960	614	626	377	42	27	19
30	313	509	699	641	---	2,950	563	573	302	41	27	25
31	415	---	675	605	---	2,500	---	525	---	40	26	---
TOTAL	8,944	15,152	37,049	18,700	10,824	17,390	33,695	25,399	13,505	3,581	872	698
MEAN	289	505	1,195	603	387	561	1,123	819	450	116	28.1	23.3
MAX	584	1,140	2,930	1,300	544	2,960	1,920	1,520	869	252	39	31
MIN	89	285	509	439	243	151	563	447	234	40	20	18
AC-FT	17,740	30,050	73,490	37,090	21,470	34,490	66,830	50,380	26,790	7,100	1,730	1,380
CFSM	0.92	1.61	3.81	1.92	1.23	1.79	3.58	2.61	1.43	0.37	0.09	0.07
IN.	1.06	1.80	4.39	2.22	1.28	2.06	3.99	3.01	1.60	0.42	0.10	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2005, BY WATER YEAR (WY)

MEAN	172	667	1,667	1,803	1,644	1,363	896	614	310	80.8	32.9	48.4
MAX	600	1,394	2,845	2,842	2,835	2,117	1,670	846	459	116	56.8	183
(WY)	(1998)	(1999)	(1999)	(1999)	(1999)	(2003)	(2003)	(1998)	(1998)	(2005)	(2004)	(2004)
MIN	28.5	173	717	478	387	561	504	278	145	34.5	13.5	19.9
(WY)	(2003)	(2003)	(2001)	(2001)	(2005)	(2005)	(2004)	(2004)	(2003)	(2003)	(2003)	(2001)

WILLAMETTE RIVER BASIN

14201340 PUDDING RIVER NEAR WOODBURN, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1998 - 2005	
ANNUAL TOTAL	272,419.7		185,809		772	
ANNUAL MEAN	744		509		1,191	
HIGHEST ANNUAL MEAN					1999	
LOWEST ANNUAL MEAN					2001	
HIGHEST DAILY MEAN	4,880	Jan 31	2,960	Mar 29	7,210	Dec 30, 1998
LOWEST DAILY MEAN	9.1	Aug 16	18	Sep 8	6.0	Aug 24, 2003
ANNUAL SEVEN-DAY MINIMUM	14	Aug 15	21	Sep 4	9.6	Aug 19, 2003
ANNUAL RUNOFF (AC-FT)	540,300		368,600		558,900	
ANNUAL RUNOFF (CFSM)	2.37		1.62		2.46	
ANNUAL RUNOFF (INCHES)	32.27		22.01		33.38	
10 PERCENT EXCEEDS	2,150		1,100		2,160	
50 PERCENT EXCEEDS	403		400		405	
90 PERCENT EXCEEDS	51		27		28	



2005 Water Year  
 WILLAMETTE RIVER BASIN

14201340 PUDDING RIVER NEAR WOODBURN, OR

Latitude: 45° 09' 05"

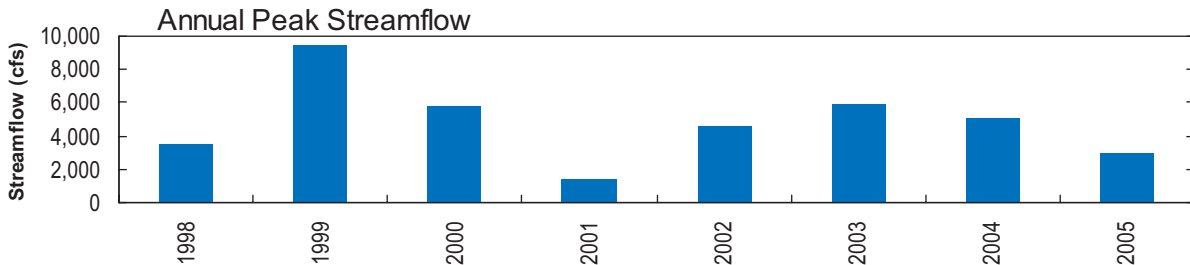
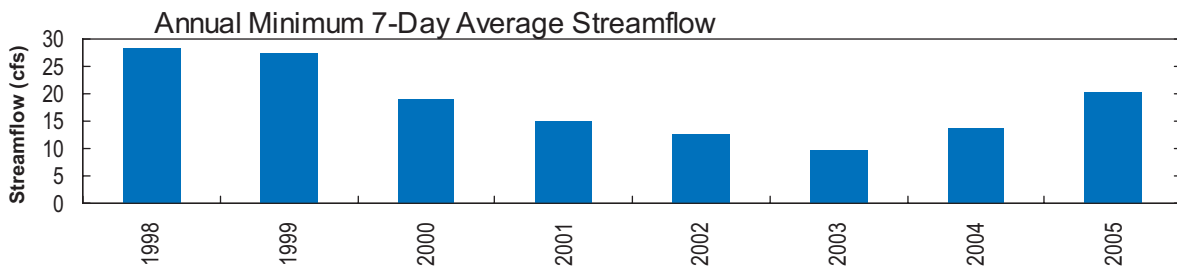
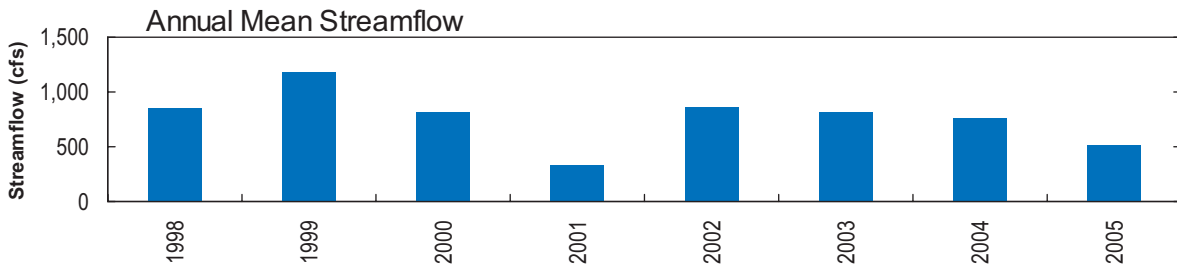
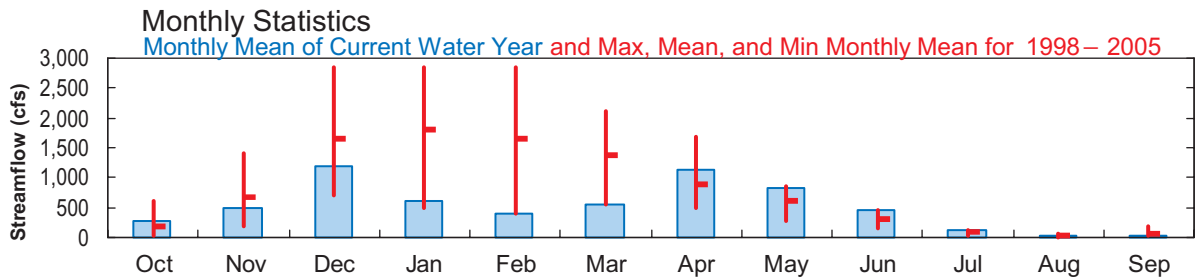
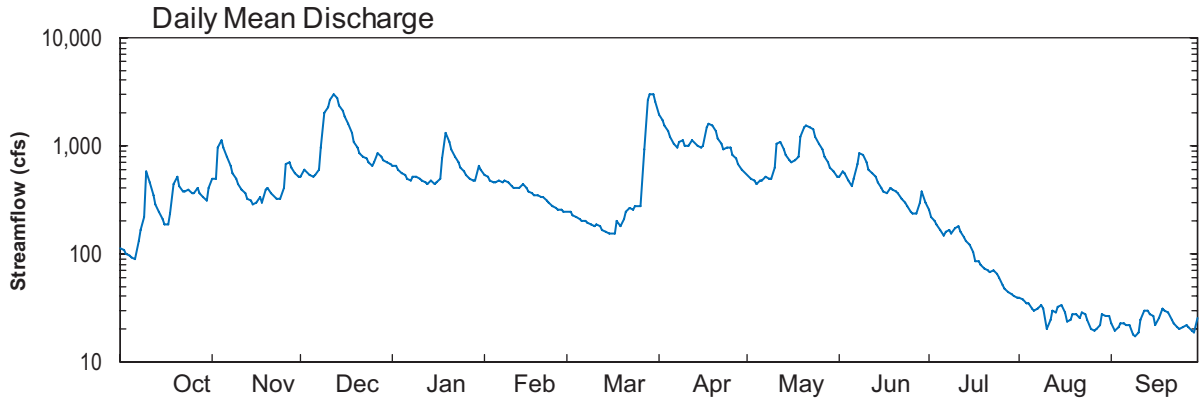
Longitude: 122° 48' 11"

Hydrologic Unit Code: 17090009

Marion County

Datum: 130 feet

Drainage Area: 314 mi<sup>2</sup>





WILLAMETTE RIVER BASIN

14202000 PUDDING RIVER AT AURORA, OR

LOCATION.--Lat 45°14'00", long 122°44'56", in SW ¼ SE ¼ sec.12, T.4 S., R.1 W., Clackamas County, Hydrologic Unit 17090009, upstream side of bridge on U.S. Highway 99E at Aurora, 0.9 mi upstream from Mill Creek and at mile 8.11.

DRAINAGE AREA.--479 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to September 1964, October 1993 to October 1997, October 2002 to current year.

REVISED RECORDS.--WDR OR-95-1: 1994(M). WDR OR-96-1: 1938(M), 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 72.23 ft above NGVD of 1929. Prior to Sept. 30, 1961, staff or wire-weight gage at same site at datum 5.00 ft higher.

REMARKS.--Records fair except for those below 50 ft<sup>3</sup>/s, which are poor. Many diversions for irrigation upstream from station.

AVERAGE DISCHARGE.--43 years (water years 1929-64, 1994-97, 2003-05), 1,230 ft<sup>3</sup>/s, 34.88 in/yr, 890,800 acre-ft/yr.

EXTREMES FOR PERIOD RECORD.--Maximum discharge, 43,700 ft<sup>3</sup>/s Feb. 8, 1996, gage height, 30.72 ft, from rating curve extended above 23,000 ft<sup>3</sup>/s; minimum daily discharge, 3.5 ft<sup>3</sup>/s Aug. 6, 20, 28, 1994, but may have been lower during period of missing record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 7, 1923 reached a stage of 30.0 ft, present datum, from floodmarks, discharge, 37,000 ft<sup>3</sup>/s (revised), from rating curve extended above 23,000 ft<sup>3</sup>/s. Flood of Dec. 23, 1964 reached a stage of 29.57 ft, discharge, 34,000 ft<sup>3</sup>/s, from rating curve extended above 23,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,640 ft<sup>3</sup>/s Mar. 30, gage height, 19.06 ft; minimum discharge, 14 ft<sup>3</sup>/s Aug. 26, 27.

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	260	604	591	813	693	337	3,000	710	641	376	62	36
2	251	600	637	795	642	340	2,490	664	676	336	60	29
3	240	928	661	762	606	327	2,220	639	696	303	54	22
4	230	1,330	629	707	577	319	1,960	602	620	290	50	29
5	219	1,180	612	659	568	306	1,770	603	560	263	47	36
6	215	973	622	617	587	296	1,540	626	571	233	42	39
7	228	812	668	597	571	289	1,400	669	728	230	39	37
8	326	704	940	614	584	283	1,490	662	988	246	41	35
9	347	628	2,430	634	564	274	1,640	639	1,040	235	46	29
10	626	568	3,130	604	537	264	1,500	804	886	242	38	30
11	664	521	3,560	582	517	267	1,420	1,390	751	262	19	39
12	542	482	4,160	559	502	261	1,640	1,560	683	252	25	51
13	466	450	4,220	540	507	250	1,580	1,380	631	229	37	59
14	413	425	3,620	553	545	236	1,470	1,190	573	214	34	58
15	370	409	3,090	551	524	223	1,400	1,060	529	198	41	55
16	340	402	2,610	543	496	222	1,380	980	493	179	42	52
17	331	437	2,130	577	477	224	2,040	1,010	472	154	31	48
18	369	424	1,710	771	461	269	2,290	1,070	502	139	23	55
19	500	455	1,400	1,610	454	282	2,240	1,530	512	131	24	62
20	655	524	1,220	1,540	441	287	2,020	2,070	492	119	30	57
21	598	495	1,090	1,280	438	346	1,740	2,180	482	114	32	52
22	542	461	985	1,080	421	372	1,500	2,100	445	106	28	47
23	520	439	944	936	400	368	1,340	2,010	418	105	33	45
24	524	433	877	823	382	396	1,330	1,760	397	108	31	43
25	515	458	802	743	368	425	1,350	1,510	364	104	25	41
26	503	636	822	683	356	420	1,210	1,310	342	92	19	44
27	534	761	1,050	640	348	981	1,070	1,130	337	79	15	50
28	523	716	1,040	616	342	3,580	953	970	372	72	18	50
29	488	652	948	603	---	4,470	850	837	467	66	24	48
30	465	604	889	721	---	4,590	765	752	437	63	39	57
31	492	---	854	761	---	4,060	---	683	---	62	37	---
TOTAL	13,296	18,511	48,941	23,514	13,908	25,564	48,598	35,100	17,105	5,602	1,086	1,335
MEAN	429	617	1,579	759	497	825	1,620	1,132	570	181	35.0	44.5
MAX	664	1,330	4,220	1,610	693	4,590	3,000	2,180	1,040	376	62	62
MIN	215	402	591	540	342	222	765	602	337	62	15	22
AC-FT	26,370	36,720	97,070	46,640	27,590	50,710	96,390	69,620	33,930	11,110	2,150	2,650
CFSM	0.90	1.29	3.30	1.58	1.04	1.72	3.38	2.36	1.19	0.38	0.07	0.09
IN.	1.03	1.44	3.80	1.83	1.08	1.99	3.77	2.73	1.33	0.44	0.08	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	335	1,383	2,440	2,727	2,704	2,086	1,549	880	425	149	69.0	95.3
MAX	1,774	4,643	6,090	5,722	6,948	4,235	3,355	2,192	1,101	364	120	329
(WY)	(1948)	(1951)	(1997)	(1956)	(1996)	(1961)	(1963)	(1963)	(1933)	(1952)	(1943)	(2004)
MIN	63.8	78.9	436	759	497	599	456	242	158	53.2	11.3	32.8
(WY)	(1953)	(1937)	(1945)	(2005)	(2005)	(1941)	(1941)	(1939)	(1940)	(2003)	(1994)	(1994)

WILLAMETTE RIVER BASIN

14202000 PUDDING RIVER AT AURORA, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	380,017.0		252,560		1,230	
ANNUAL MEAN	1,038		692		2,037	
HIGHEST ANNUAL MEAN					1997	
LOWEST ANNUAL MEAN					2005	
HIGHEST DAILY MEAN	7,000	Feb 1	4,590	Mar 30	36,100	Feb 8, 1996
LOWEST DAILY MEAN	6.6	Aug 18	15	Aug 27	3.5	Aug 6, 1994
ANNUAL SEVEN-DAY MINIMUM	13	Aug 13	24	Aug 23	6.4	Aug 17, 1994
ANNUAL RUNOFF (AC-FT)	753,800		501,000		890,800	
ANNUAL RUNOFF (CFSM)	2.17		1.44		2.57	
ANNUAL RUNOFF (INCHES)	29.51		19.61		34.88	
10 PERCENT EXCEEDS	2,960		1,530		3,430	
50 PERCENT EXCEEDS	588		517		624	
90 PERCENT EXCEEDS	86		42		65	

e Estimated



2005 Water Year  
 WILLAMETTE RIVER BASIN

14202000 PUDDING RIVER AT AURORA, OR

Latitude: 45° 14' 00"

Longitude: 122° 44' 56"

Hydrologic Unit Code: 17090009

Clackamas County

Datum: 72.23 feet

Drainage Area: 479 mi<sup>2</sup>

