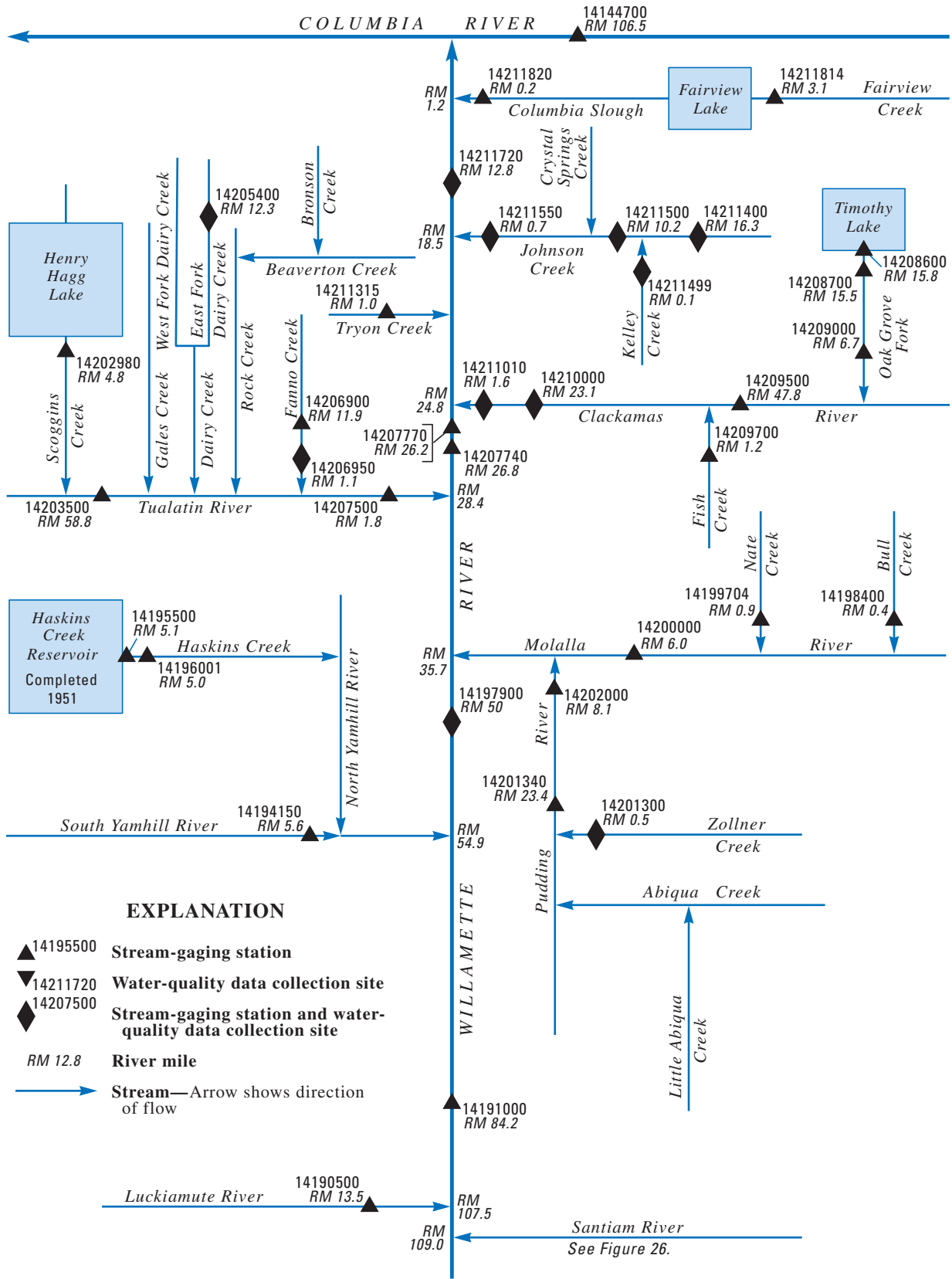


**Figure 25.** Location of surface-water and water-quality stations in the Willamette River Basin, downstream from the Luckiamute River.



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



WILLAMETTE RIVER BASIN

14202980 SCOGGINS CREEK BELOW HENRY HAGG LAKE, NEAR GASTON, OR—Continued



2005 Water Year  
WILLAMETTE RIVER BASIN

14202980 SCOGGINS CK BLW HENRY HAGG LAKE, NR GASTON, OR

Latitude: 45° 28 ' 10"

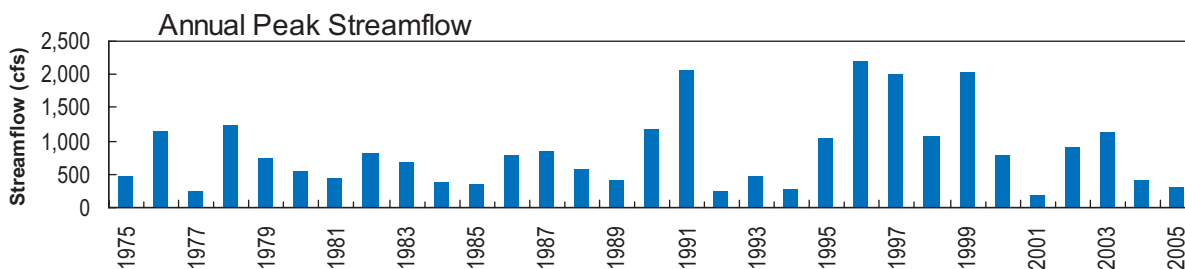
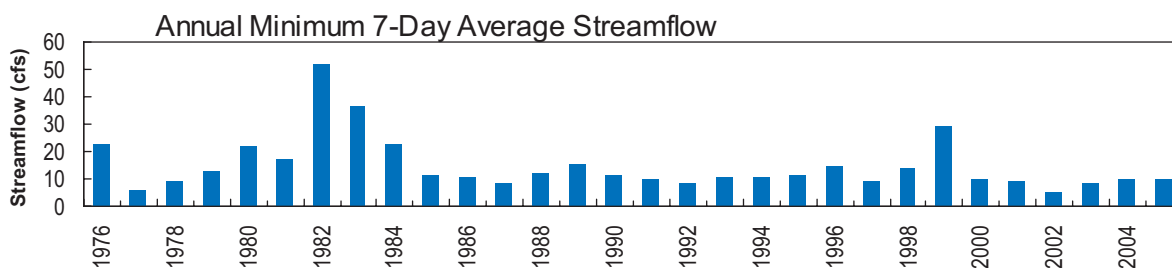
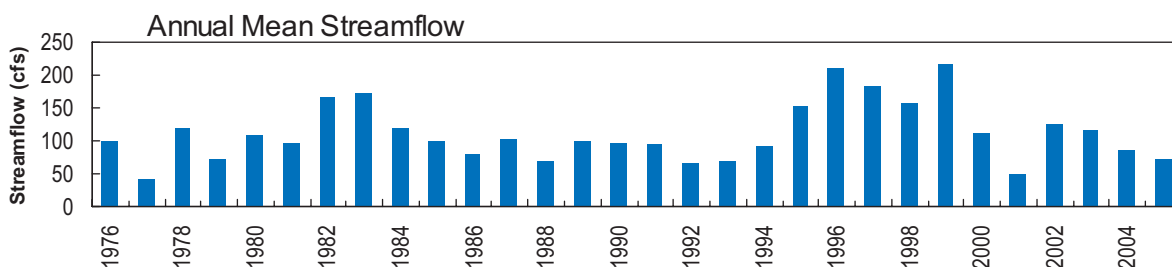
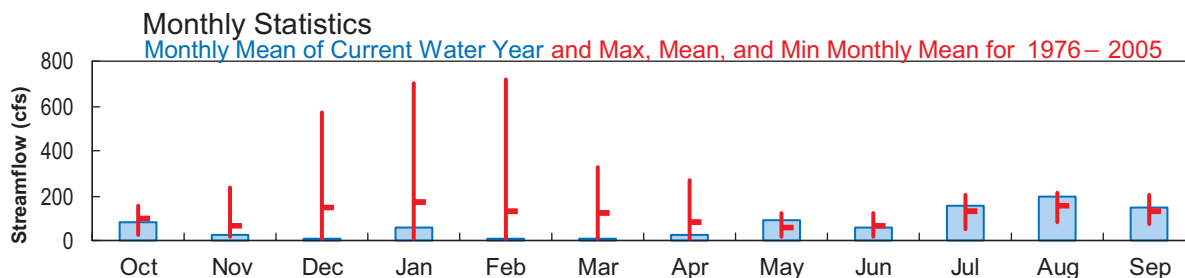
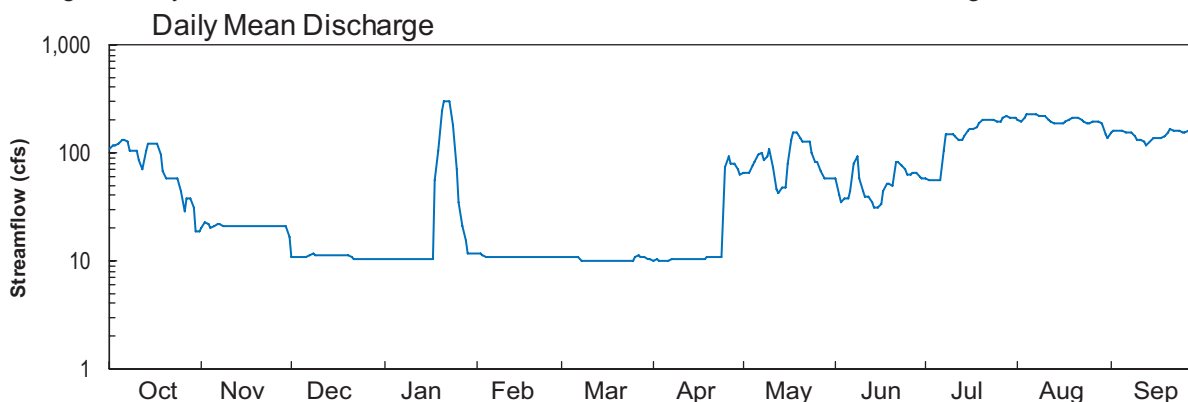
Longitude: 123° 11 ' 56"

Hydrologic Unit Code: 17090010

Washington County

Datum: 187.48 feet

Drainage Area: 38.8 mi<sup>2</sup>



WILLAMETTE RIVER BASIN

14203500 TUALATIN RIVER NEAR DILLEY, OR

LOCATION.--Lat 45°28'30", long 123°07'23", in NE ¼ NW ¼ sec.24, T.1 S., R.4 W., Washington County, Hydrologic Unit 17090010, on right bank 5 ft upstream from highway bridge, 1.0 mi south of Dilley, 1.2 mi downstream from Scoggins Creek and at mile 58.8.

DRAINAGE AREA.--125 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1935: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 147.57 ft above NGVD of 1929. Prior to June 16, 1950, nonrecording gage at several sites within 200 ft of present site at datum 4.00 ft higher. June 16, 1950 to Aug. 10, 1966, water-stage recorder at present site at datum 4.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Diurnal fluctuation caused by operation of millpond on Scoggins Creek upstream from station and regulation by Henry Hagg Lake since January 1975. Diversions upstream from station of approximately 3,000 acre-ft from J.W. Barney Reservoir on the Middle Fork of North Fork Trask River for municipal water supply and irrigation in Wapato Lake area. Continuous water-quality records for the period November 1963 to September 1968 have been collected at this location. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--35 years (water years 1940-1974), 415 ft<sup>3</sup>/s, 300,800 acre-ft/yr. 31 years (water years 1975-2005), 357 ft<sup>3</sup>/s, 258,400 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,100 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 19.34 ft, from rating curve extended above 6,000 ft<sup>3</sup>/s; minimum discharge, 0.08 ft<sup>3</sup>/s Sept. 3, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,780 ft<sup>3</sup>/s Mar. 27, gage height, 17.09 ft; minimum discharge, 50 ft<sup>3</sup>/s Dec. 4.

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	129	109	60	170	166	104	647	187	158	115	225	187
2	133	173	55	163	162	90	536	192	145	116	216	215
3	132	273	52	146	155	85	455	192	121	117	217	213
4	135	174	50	149	151	81	390	203	121	114	233	214
5	146	130	54	136	156	82	335	206	124	112	243	214
6	163	107	62	124	152	79	292	200	149	111	239	205
7	155	92	105	144	164	74	283	203	167	133	240	198
8	129	81	449	208	154	71	279	185	192	189	239	197
9	146	76	569	195	145	66	253	198	147	196	232	194
10	136	72	560	193	140	68	228	252	127	192	232	189
11	123	65	645	179	134	69	238	231	120	190	245	194
12	98	59	657	169	131	67	255	187	112	176	233	186
13	115	58	507	180	128	63	286	166	109	169	227	170
14	145	57	395	170	124	62	268	174	96	175	224	173
15	139	57	319	164	120	57	263	172	94	184	221	183
16	138	60	268	180	115	59	326	192	93	199	222	188
17	147	57	241	208	108	64	401	235	105	199	230	191
18	160	61	206	716	105	59	355	361	118	196	237	190
19	185	64	182	1,410	103	64	310	450	110	209	242	188
20	162	58	170	1,110	100	115	274	452	98	221	245	168
21	132	54	150	982	96	143	244	408	128	239	246	170
22	117	56	139	813	91	124	224	379	128	227	245	184
23	119	53	129	708	89	111	201	351	133	224	232	181
24	118	52	122	597	87	104	197	310	131	225	223	180
25	113	92	119	408	84	101	214	257	120	222	218	181
26	136	106	158	308	79	149	255	233	120	219	221	179
27	137	86	136	247	76	931	228	210	127	226	230	180
28	117	75	134	213	78	1,520	228	183	132	236	232	189
29	105	67	124	211	---	1,240	211	174	126	238	231	184
30	94	67	119	195	---	1,150	191	169	117	229	201	186
31	108	---	124	180	---	841	---	160	---	228	170	---
TOTAL	4,112	2,591	7,060	10,976	3,393	7,893	8,867	7,472	3,768	5,826	7,091	5,671
MEAN	133	86.4	228	354	121	255	296	241	126	188	229	189
MAX	185	273	657	1,410	166	1,520	647	452	192	239	246	215
MIN	94	52	50	124	76	57	191	160	93	111	170	168
AC-FT	8,160	5,140	14,000	21,770	6,730	15,660	17,590	14,820	7,470	11,560	14,060	11,250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2005, BY WATER YEAR (WY)

MEAN	145	302	712	776	704	537	327	171	120	153	179	167
MAX	320	882	2,062	1,615	2,250	1,086	974	424	189	214	269	370
(WY)	(1998)	(1985)	(1996)	(1999)	(1999)	(1983)	(1991)	(1996)	(2000)	(2004)	(1975)	(1975)
MIN	6.03	47.2	41.1	31.8	62.0	125	99.8	80.8	65.9	91.0	93.0	82.6
(WY)	(1975)	(1988)	(1977)	(1977)	(1977)	(2001)	(1977)	(1977)	(1979)	(1977)	(1977)	(1985)

WILLAMETTE RIVER BASIN

14203500 TUALATIN RIVER NEAR DILLEY, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1975 - 2005	
ANNUAL TOTAL	100,120		74,720			
ANNUAL MEAN	274		205		357	
HIGHEST ANNUAL MEAN					695	1999
LOWEST ANNUAL MEAN					104	1977
HIGHEST DAILY MEAN	3,010	Jan 30	1,520	Mar 28	8,620	Feb 8, 1996
LOWEST DAILY MEAN	50	Dec 4	50	Dec 4	3.3	Oct 20, 1974
ANNUAL SEVEN-DAY MINIMUM	57	Nov 18	57	Nov 18	3.9	Oct 17, 1974
ANNUAL RUNOFF (AC-FT)	198,600		148,200		258,400	
10 PERCENT EXCEEDS	570		310		877	
50 PERCENT EXCEEDS	178		170		186	
90 PERCENT EXCEEDS	87		75		87	



2005 Water Year  
 WILLAMETTE RIVER BASIN

14203500 TUALATIN RIVER NEAR DILLEY, OR

Latitude: 45° 28' 30"

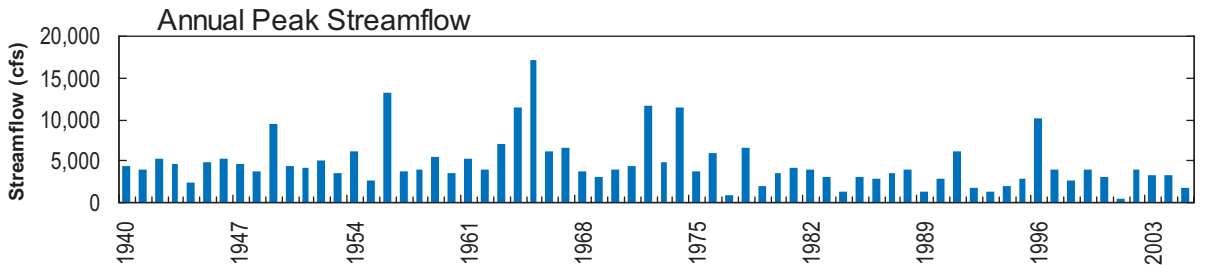
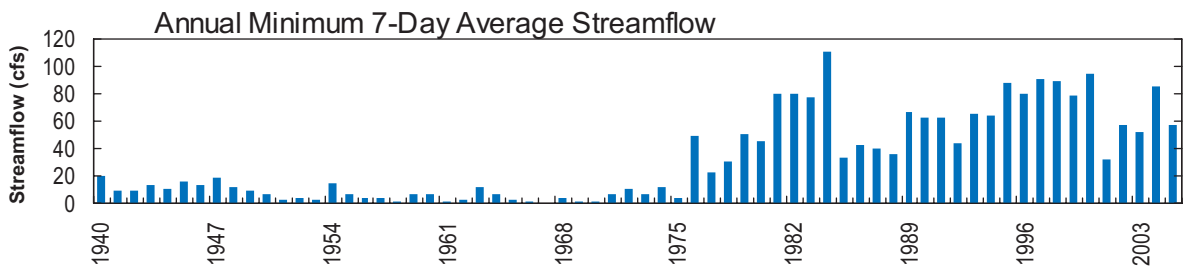
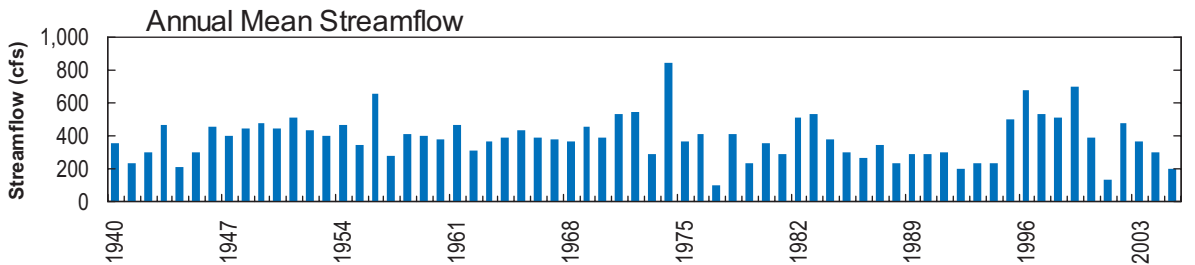
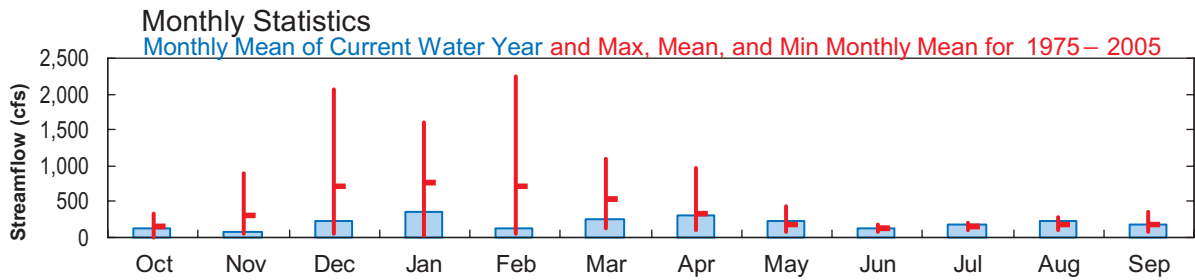
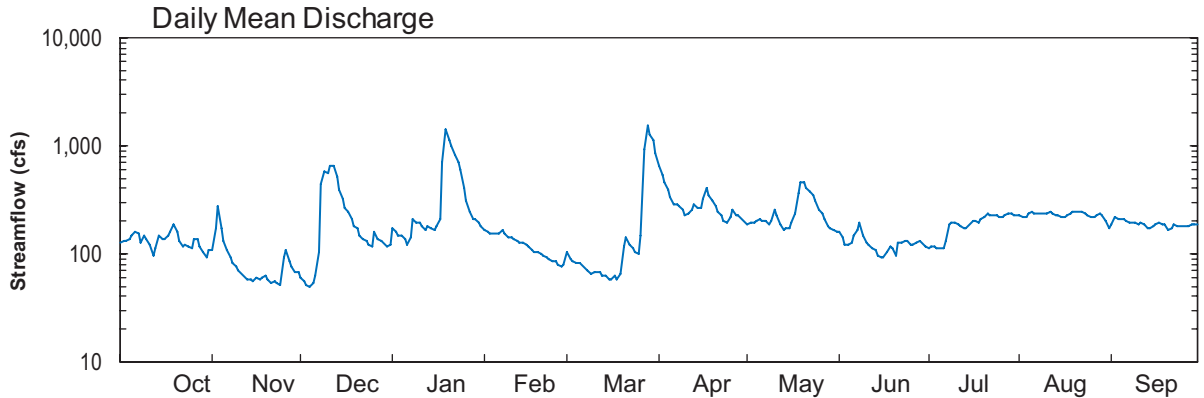
Longitude: 123° 07' 23"

Hydrologic Unit Code: 17090010

Washington County

Datum: 147.57 feet

Drainage Area: 125 mi<sup>2</sup>



WILLAMETTE RIVER BASIN

14205400 EAST FORK DAIRY CREEK NEAR MEACHAM CORNER, OR

LOCATION.--Lat 45°40'51", long 123°04'12", in SW 1/4 SW 1/4 sec.4, T.2 N., R.3 W., Washington County, Hydrologic Unit 17090010, on right bank of private drive, 0.9 mi downstream from Murtaugh Creek and at mile 12.3.

DRAINAGE AREA.-- 33.8 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 290 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair.

AVERAGE DISCHARGE.--3 years (2003-05), 64.3 ft<sup>3</sup>/s, 25.86 in/yr, 46,600 ac-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft<sup>3</sup>/s Jan. 31, 2003, gage height, 7.88 ft; minimum discharge, 7.3 ft<sup>3</sup>/s Oct. 16, 2002.

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 27	0900	*652	*7.25	No other peak greater than base discharge.			

Minimum discharge, 7.8 ft<sup>3</sup>/s, Aug. 26, 27, gage height, 4.76 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	11	28	23	64	59	34	199	64	64	28	16	10
2	11	57	22	60	57	32	163	74	60	28	15	10
3	11	54	21	57	56	30	148	65	57	27	15	11
4	11	40	22	56	56	29	126	68	55	26	14	10
5	11	33	23	53	54	29	109	64	56	25	14	10
6	14	30	28	52	61	28	99	60	58	25	13	10
7	12	27	58	63	61	28	102	58	53	25	13	10
8	22	24	210	69	56	27	93	57	51	27	13	10
9	24	23	141	66	55	27	84	69	48	27	12	11
10	17	22	139	66	52	26	80	108	46	26	12	15
11	15	21	165	63	52	26	93	105	45	25	12	19
12	13	20	138	61	52	25	94	100	43	24	13	13
13	13	20	111	59	49	25	95	93	42	24	12	12
14	12	19	95	57	47	24	92	97	40	23	11	11
15	12	22	80	56	44	24	93	100	39	21	11	12
16	12	22	71	55	43	25	131	99	39	20	11	13
17	17	20	65	71	42	25	135	97	41	20	11	14
18	17	23	60	216	41	24	129	133	39	20	11	12
19	27	22	57	229	40	28	120	142	37	22	10	11
20	21	21	53	179	39	43	109	153	35	22	9.9	11
21	18	20	52	143	37	39	99	148	34	21	9.7	11
22	17	20	50	119	35	33	91	144	34	22	9.4	9.8
23	17	20	47	102	34	33	89	125	32	21	9.3	9.9
24	17	20	45	89	33	32	84	114	31	20	9.2	10
25	19	29	47	80	33	30	88	102	30	19	8.7	10
26	33	25	52	74	32	76	79	93	31	19	8.3	9.9
27	25	23	47	68	31	531	74	86	37	18	8.4	9.6
28	22	22	45	67	34	382	71	80	34	17	8.9	9.6
29	20	22	44	78	---	369	68	74	31	17	10	9.6
30	25	23	44	65	---	310	68	69	29	16	11	15
31	28	---	52	61	---	246	---	66	---	16	11	---
TOTAL	544	772	2,107	2,598	1,285	2,640	3,105	2,907	1,271	691	352.8	339.4
MEAN	17.5	25.7	68.0	83.8	45.9	85.2	104	93.8	42.4	22.3	11.4	11.3
MAX	33	57	210	229	61	531	199	153	64	28	16	19
MIN	11	19	21	52	31	24	68	57	29	16	8.3	9.6
AC-FT	1,080	1,530	4,180	5,150	2,550	5,240	6,160	5,770	2,520	1,370	700	673
CFSM	0.52	0.76	2.01	2.48	1.36	2.52	3.06	2.77	1.25	0.66	0.34	0.33
IN.	0.60	0.85	2.32	2.86	1.41	2.91	3.42	3.20	1.40	0.76	0.39	0.37

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

	2003	2004	2005	2003	2004	2005	2003	2004	2005	2003	2004	2005
MEAN	12.6	20.0	68.0	152	151	137	98.3	64.1	32.4	18.1	12.1	11.4
MAX	17.5	25.7	70.6	194	212	216	125	93.8	42.4	22.3	12.7	12.9
(WY)	(2005)	(2005)	(2004)	(2004)	(2003)	(2003)	(2003)	(2005)	(2005)	(2005)	(2003)	(2004)
MIN	8.92	13.5	65.4	83.8	45.9	85.2	66.6	37.5	25.6	13.9	11.4	10.1
(WY)	(2003)	(2003)	(2003)	(2005)	(2005)	(2005)	(2004)	(2004)	(2004)	(2004)	(2005)	(2003)



WILLAMETTE RIVER BASIN

14205400 EAST FORK DAIRY CREEK NEAR MEACHAM CORNER, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 2003 - 2005	
ANNUAL TOTAL	23,535.4		18,612.2			
ANNUAL MEAN	64.3		51.0		64.3	
HIGHEST ANNUAL MEAN					78.4	2003
LOWEST ANNUAL MEAN					51.0	2005
HIGHEST DAILY MEAN	742	Jan 30	531	Mar 27	1,140	Jan 31, 2003
LOWEST DAILY MEAN	9.5	Aug 20	8.3	Aug 26	7.7	Oct 16, 2002
ANNUAL SEVEN-DAY MINIMUM	9.9	Aug 14	8.9	Aug 22	8.1	Oct 14, 2002
ANNUAL RUNOFF (AC-FT)	46,680		36,920		46,600	
ANNUAL RUNOFF (CFSM)	1.90		1.51		1.90	
ANNUAL RUNOFF (INCHES)	25.90		20.48		25.86	
10 PERCENT EXCEEDS	160		102		151	
50 PERCENT EXCEEDS	31		33		32	
90 PERCENT EXCEEDS	11		11		10	



2005 Water Year

WILLAMETTE RIVER BASIN

14205400 EAST FORK DAIRY CREEK NEAR MEACHAM CORNER, OR

Latitude: 45° 40' 51"

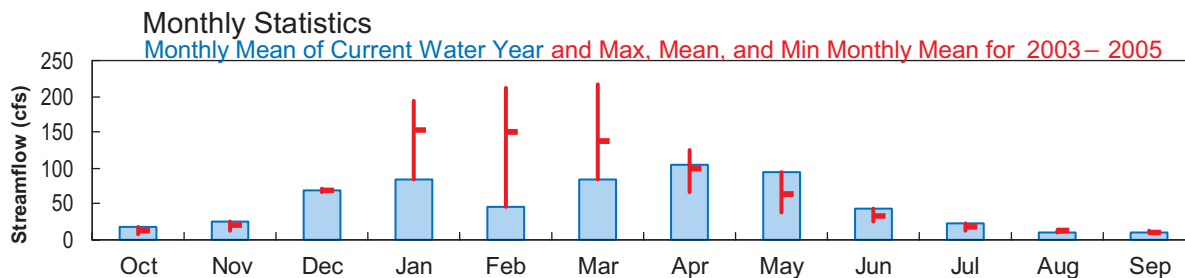
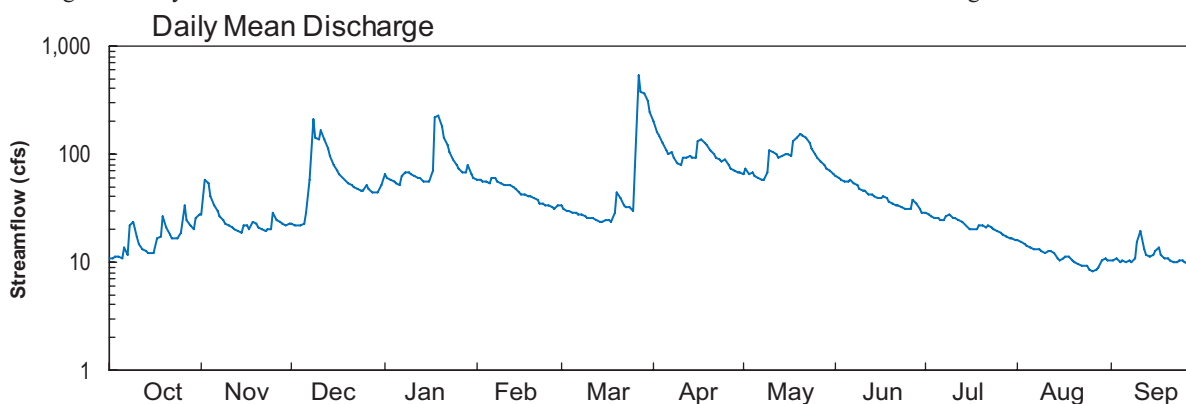
Longitude: 123° 04' 12"

Hydrologic Unit Code: 17090010

Washington County

Datum: 290 feet

Drainage Area: 33.8 mi<sup>2</sup>



WILLAMETTE RIVER BASIN

14206900 FANNO CREEK AT 56TH AVENUE, AT PORTLAND, OR

LOCATION.--Lat 45°29'17", long 122°44'01", in NE ¼ NW ¼ sec.18, T.1 S., R.1 E., Multnomah County, Hydrologic Unit 17090010, on bridge at SW 56th Ave., in Portland and at mile 11.9.

DRAINAGE AREA.--2.37 mi<sup>2</sup>.

PERIOD OF RECORD.--Annual maximums, 1975-77. October 1990 to current year.

REVISED RECORDS.--WDR OR-92-1: 1991, 1991(m).

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and those for the period Feb. 11 to Mar. 28, which are poor. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--15 years (water years 1991-2005), 3.20 ft<sup>3</sup>/s, 18.34 in/yr, 2,320 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 733 ft<sup>3</sup>/s Feb. 8, 1996, gage height, 13.2 ft, from floodmark, from rating curve extended above 200 ft<sup>3</sup>/s; minimum discharge, 0.01 ft<sup>3</sup>/s Sept. 4, 2001.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 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)
Sept. 30	1745	*137	*10.88				

Minimum discharge, 0.06 ft<sup>3</sup>/s, Aug. 9, 15, 21, 26-28, gage height, 8.61 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	0.16	0.89	1.0	4.4	1.7	0.36	4.7	1.6	2.1	0.99	0.16	0.19
2	0.17	14	0.50	2.4	1.5	0.21	2.5	2.5	1.00	0.83	0.16	0.14
3	0.19	1.2	0.48	2.0	1.6	0.19	3.3	1.2	0.74	0.64	0.14	0.14
4	0.20	0.70	0.63	2.0	1.5	0.18	2.4	2.9	0.71	0.70	0.13	0.13
5	0.19	0.51	1.7	1.7	1.1	0.17	1.9	1.2	3.2	0.72	0.13	0.13
6	5.0	0.44	2.4	1.8	5.2	0.16	1.7	1.1	1.5	0.75	0.13	0.13
7	0.18	0.43	6.3	5.9	e2.0	0.17	3.8	1.0	1.3	0.48	0.12	0.16
8	7.1	0.40	13	2.8	e1.5	0.16	1.7	2.3	0.98	1.9	0.10	0.09
9	1.5	0.48	4.3	2.3	e1.2	0.18	1.4	11	0.79	0.59	0.13	0.10
10	0.41	0.47	2.8	2.8	e1.0	0.14	2.5	20	2.1	0.41	0.11	0.11
11	0.24	0.53	4.2	1.7	e0.90	0.10	5.6	5.6	0.98	0.45	0.10	0.12
12	0.22	0.63	1.4	1.5	1.5	0.09	3.1	4.1	0.52	0.38	0.11	0.16
13	0.21	0.57	7.4	1.5	1.1	0.09	1.9	3.5	0.57	0.35	0.10	0.12
14	0.20	1.1	4.2	1.4	0.75	0.09	1.8	6.8	0.93	0.31	0.09	0.12
15	0.18	5.3	2.4	1.5	0.71	0.10	2.4	6.9	0.53	0.33	0.09	0.12
16	0.19	1.0	2.0	2.7	0.60	0.38	7.6	8.4	0.85	0.30	0.13	0.16
17	3.4	1.1	2.1	6.9	0.54	0.25	8.3	5.1	3.3	0.25	0.17	0.18
18	2.3	4.3	2.3	7.2	0.51	0.22	4.5	13	1.4	0.25	0.17	0.12
19	2.5	0.86	1.8	2.9	0.48	2.4	2.6	7.3	1.1	0.24	0.18	0.11
20	0.85	0.68	1.7	2.9	0.42	1.5	2.2	7.6	1.5	0.22	0.17	0.13
21	0.44	0.52	2.1	2.2	0.36	0.41	2.1	5.5	1.0	0.21	0.19	0.07
22	0.46	0.46	1.7	2.0	0.34	0.34	1.9	5.8	3.7	0.27	0.22	0.08
23	1.5	0.90	1.3	1.7	0.30	1.1	3.0	3.2	1.4	0.18	0.22	0.08
24	0.46	1.2	1.2	1.6	0.29	0.66	2.1	2.5	1.2	0.19	0.22	0.08
25	3.1	1.8	4.4	1.5	0.27	0.40	6.5	2.2	1.2	0.19	0.21	0.07
26	2.8	0.95	5.9	1.4	0.26	11	2.7	1.7	1.1	0.18	0.24	0.08
27	0.75	1.7	2.3	1.3	0.24	26	3.1	1.4	5.4	0.18	0.22	0.07
28	0.34	0.92	2.5	5.8	0.41	7.7	2.6	1.7	1.7	0.17	0.23	0.08
29	0.32	1.6	3.5	5.5	---	10	1.7	1.3	1.2	0.17	0.94	0.08
30	2.1	2.2	2.7	1.9	---	4.2	1.3	1.3	1.2	0.17	0.27	25
31	0.65	---	15	1.6	---	3.1	---	1.4	---	0.15	0.17	---
TOTAL	38.31	47.84	105.21	84.8	28.28	72.05	92.9	141.1	45.20	13.15	5.75	28.35
MEAN	1.24	1.59	3.39	2.74	1.01	2.32	3.10	4.55	1.51	0.42	0.19	0.94
MAX	7.1	14	15	7.2	5.2	26	8.3	20	5.4	1.9	0.94	25
MIN	0.16	0.40	0.48	1.3	0.24	0.09	1.3	1.0	0.52	0.15	0.09	0.07
AC-FT	76	95	209	168	56	143	184	280	90	26	11	56
CFSM	0.52	0.67	1.43	1.15	0.43	0.98	1.31	1.92	0.64	0.18	0.08	0.40
IN.	0.60	0.75	1.65	1.33	0.44	1.13	1.46	2.21	0.71	0.21	0.09	0.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	1.61	4.74	6.74	6.97	6.42	4.22	3.01	2.21	1.10	0.49	0.48	0.56	0.49	0.48	0.56
MAX	4.11	14.3	20.1	11.8	16.6	9.47	6.17	4.79	1.94	0.89	2.14	1.18	0.89	2.14	1.18
(WY)	(1995)	(1997)	(1997)	(1999)	(1996)	(1997)	(2003)	(1998)	(1997)	(1997)	(2004)	(1996)	(1997)	(2004)	(1996)
MIN	0.28	0.86	2.67	1.06	1.01	1.73	1.31	0.56	0.31	0.13	0.13	0.12	0.31	0.13	0.12
(WY)	(2003)	(2003)	(2001)	(2001)	(2005)	(1994)	(1998)	(2004)	(1992)	(2004)	(1992)	(1999)	(2004)	(1992)	(1999)

WILLAMETTE RIVER BASIN

14206900 FANNO CREEK AT 56TH AVENUE, PORTLAND, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1991 - 2005	
ANNUAL TOTAL	842.87		702.94			
ANNUAL MEAN	2.30		1.93		3.20	
HIGHEST ANNUAL MEAN					5.95 1997	
LOWEST ANNUAL MEAN					1.21 2001	
HIGHEST DAILY MEAN	26	Jan 29	26	Mar 27	202	Nov 19, 1996
LOWEST DAILY MEAN	0.10	Aug 2	0.07	Sep 21	0.06	Sep 12, 1999
ANNUAL SEVEN-DAY MINIMUM	0.11	Aug 12	0.08	Sep 21	0.07	Oct 1, 1991
ANNUAL RUNOFF (AC-FT)	1,670		1,390		2,320	
ANNUAL RUNOFF (CFSM)	0.972		0.813		1.35	
ANNUAL RUNOFF (INCHES)	13.23		11.03		18.34	
10 PERCENT EXCEEDS	6.4		5.0		7.4	
50 PERCENT EXCEEDS	0.75		1.0		1.1	
90 PERCENT EXCEEDS	0.13		0.13		0.19	

e Estimated



2005 Water Year  
 WILLAMETTE RIVER BASIN

14206900 FANNO CREEK AT 56TH AVE, AT PORTLAND, OR

Latitude: 45° 29' 17"

Longitude: 122° 44' 01"

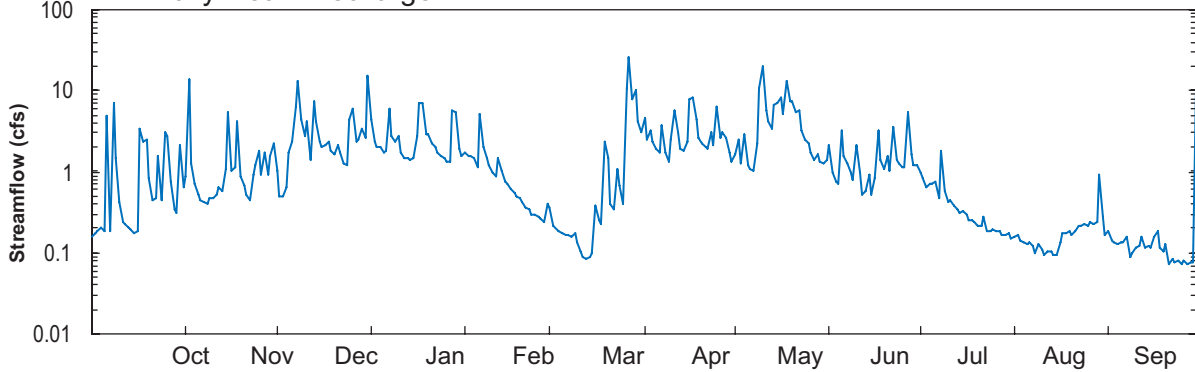
Hydrologic Unit Code: 17090010

Multnomah County

Datum: 250 feet

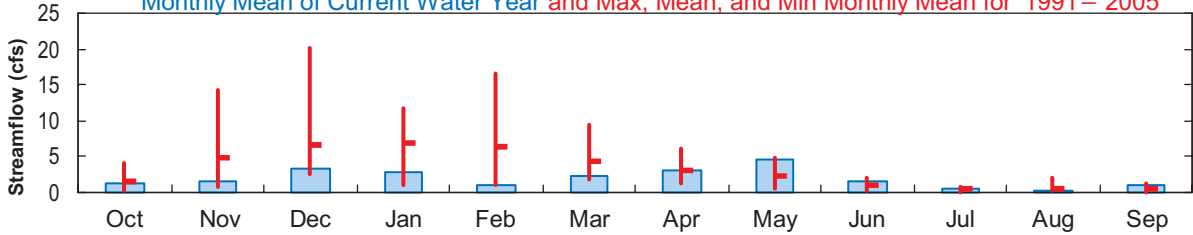
Drainage Area: 2.37 mi<sup>2</sup>

Daily Mean Discharge

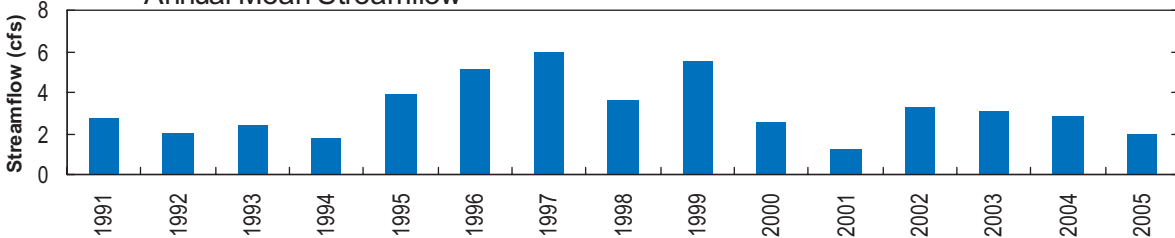


Monthly Statistics

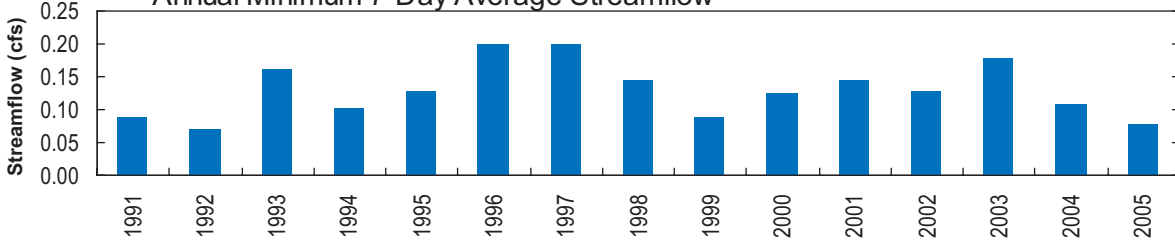
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1991–2005



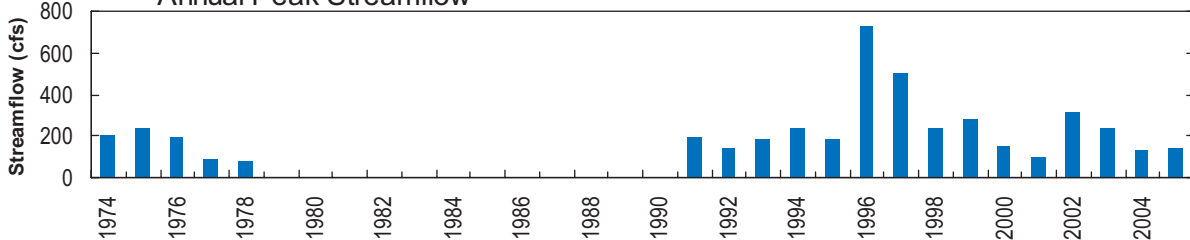
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



WILLAMETTE RIVER BASIN

14206950 FANNO CREEK AT DURHAM, OR

LOCATION.--Lat 45°24'13", long 122°45'13", in NE ¼ NW ¼ sec.13, T.2 S., R.1 W., Washington County, Hydrologic Unit 17090010, on right bank under Durham Road bridge, at Durham and at mile 1.13.

DRAINAGE AREA.--31.5 mi<sup>2</sup>.

PERIOD OF RECORD.--September to November 1966, September 1972 to September 1977 (discharge measurements only), October 1993 to February 1996, October 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 116.83 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except for those above 100 ft<sup>3</sup>/s and estimated daily discharges, which are fair. No regulation or diversion upstream from station.

COOPERATION.--Gage height record collected and low-flow discharge measurements made by Oregon Water Resources Department.

AVERAGE DISCHARGE.--7 years (water years 1994-95, 2001-05), 39.4 ft<sup>3</sup>/s, 17.00 in/yr, 28,550 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft<sup>3</sup>/s Feb. 6, 1996, gage height, 9.45 ft (from outside high-water mark); minimum discharge, 1.0 ft<sup>3</sup>, Sept. 13, 2001.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 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 27	1145	*641	*7.16	No other peak greater than base discharge.			

Minimum discharge, 1.6 ft<sup>3</sup>/s, Sept. 25, gage height, 1.51 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	4.0	23	27	104	21	19	61	17	16	9.5	4.7	3.8
2	3.4	129	16	32	17	11	40	25	19	8.1	5.3	3.7
3	3.5	95	12	22	16	9.2	40	18	13	7.9	e7.5	3.5
4	3.6	25	12	18	18	8.5	31	48	11	7.1	e11	3.5
5	4.0	18	31	15	16	8.1	23	22	20	5.9	e11	3.7
6	67	14	44	14	39	7.8	20	17	17	6.5	5.5	3.5
7	13	11	76	47	42	8.1	53	14	23	6.2	5.5	3.3
8	61	12	243	50	20	7.8	34	21	13	16	7.4	3.2
9	88	9.8	68	24	17	7.6	20	120	11	24	7.0	3.1
10	30	8.9	82	27	15	7.3	25	237	14	9.4	6.2	3.5
11	14	11	106	18	14	7.4	97	80	24	7.9	6.3	3.4
12	9.5	8.2	42	15	19	7.2	44	43	14	6.3	6.1	3.6
13	7.5	7.7	50	15	19	6.7	42	32	15	9.8	5.5	6.4
14	6.5	8.2	111	13	14	6.5	26	69	8.8	5.5	e7.0	3.2
15	6.2	44	37	e17	13	6.5	25	48	9.1	4.7	e3.2	3.5
16	6.2	44	26	22	12	7.1	114	87	8.9	4.3	3.4	4.4
17	55	19	21	57	11	11	56	73	46	4.2	4.2	5.9
18	41	55	18	117	11	8.2	81	158	35	4.2	3.9	4.6
19	53	23	16	40	11	49	39	98	52	3.7	4.5	4.0
20	28	14	14	30	10	40	30	92	14	3.3	3.9	3.5
21	25	11	15	26	9.8	24	25	69	11	3.5	3.5	3.1
22	14	9.9	20	21	9.8	12	20	68	12	6.1	3.6	3.0
23	14	13	13	18	8.6	18	28	44	19	5.4	3.3	2.9
24	18	16	12	16	8.4	22	32	31	9.2	4.3	3.5	2.8
25	22	22	18	15	8.1	19	68	24	7.7	3.7	3.8	2.7
26	55	14	91	14	8.4	e85	33	20	7.5	3.6	3.4	3.0
27	45	21	25	14	8.9	517	26	18	53	3.4	3.3	2.8
28	17	15	18	27	11	219	75	15	51	3.5	3.2	3.3
29	15	13	19	113	---	179	24	14	15	3.8	7.0	3.5
30	44	49	20	36	---	70	20	14	11	4.8	7.6	128
31	26	---	76	24	---	47	---	13	---	4.6	4.8	---
TOTAL	799.4	763.7	1,379	1,021	428.0	1,456.0	1,252	1,649	575.0	196.9	167.0	229.4
MEAN	25.8	25.5	44.5	32.9	15.3	47.0	41.7	53.2	19.2	6.35	5.39	7.65
MAX	88	129	243	117	42	517	114	237	53	24	11	128
MIN	3.4	7.7	12	13	8.1	6.5	20	13	7.5	3.3	3.2	2.7
AC-FT	1,590	1,510	2,740	2,030	849	2,890	2,480	3,270	1,140	391	331	455
CFSM	0.82	0.81	1.41	1.05	0.49	1.49	1.32	1.69	0.61	0.20	0.17	0.24
IN.	0.94	0.90	1.63	1.21	0.51	1.72	1.48	1.95	0.68	0.23	0.20	0.27

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

	22.7	49.8	96.4	92.2	71.5	56.7	41.7	24.3	14.6	6.90	8.64	9.00
MEAN												
MAX	49.8	115	153	147	111	91.8	90.4	53.2	22.6	12.6	21.7	12.9
(WY)	(1995)	(1996)	(2002)	(2002)	(1995)	(2003)	(2003)	(2005)	(1995)	(1995)	(2004)	(2004)
MIN	6.64	10.3	40.0	17.1	15.3	27.6	20.5	12.7	9.96	4.02	3.83	7.00
(WY)	(2003)	(1994)	(2001)	(2001)	(2005)	(2001)	(2004)	(2004)	(2003)	(2004)	(1994)	(2001)

WILLAMETTE RIVER BASIN

14206950 FANNO CREEK AT DURHAM, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1994 - 2005	
ANNUAL TOTAL	12,446.3		9,916.4			
ANNUAL MEAN	34.0		27.2		39.4	
HIGHEST ANNUAL MEAN					56.2	1995
LOWEST ANNUAL MEAN					19.3	2001
HIGHEST DAILY MEAN	300	Jan 29	517	Mar 27	841	Jan 31, 2003
LOWEST DAILY MEAN	2.6	Jul 31	2.7	Sep 25	1.3	Oct 1, 1993
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 12	2.9	Sep 21	1.9	Aug 24, 1994
ANNUAL RUNOFF (AC-FT)	24,690		19,670		28,550	
ANNUAL RUNOFF (CFSM)	1.08		0.862		1.25	
ANNUAL RUNOFF (INCHES)	14.70		11.71		17.00	
10 PERCENT EXCEEDS	93		67		94	
50 PERCENT EXCEEDS	15		15		15	
90 PERCENT EXCEEDS	4.0		3.6		3.8	

e Estimated



2005 Water Year  
 WILLAMETTE RIVER BASIN  
 14206950 FANNO CREEK AT DURHAM, OR

Latitude: 45° 24' 13"

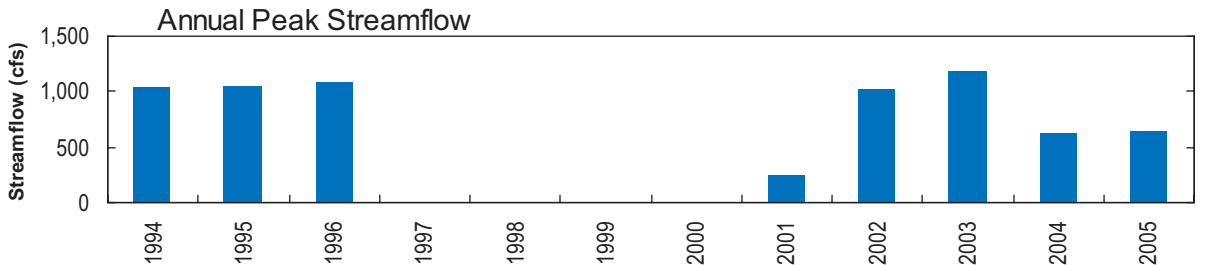
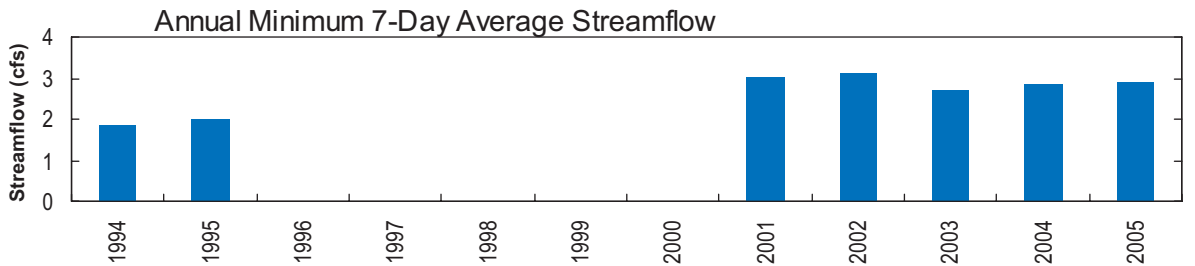
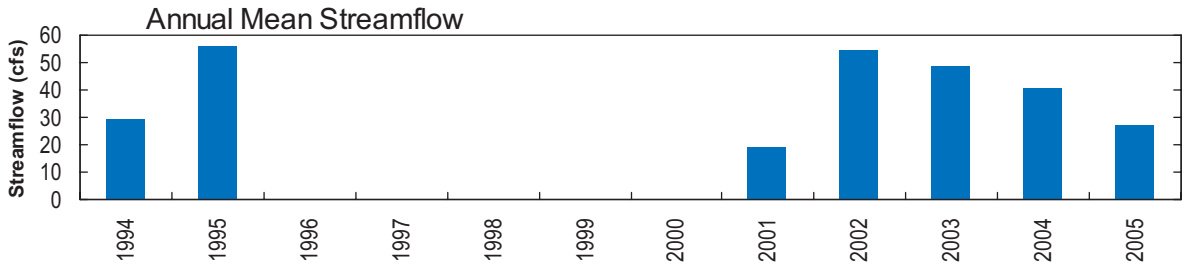
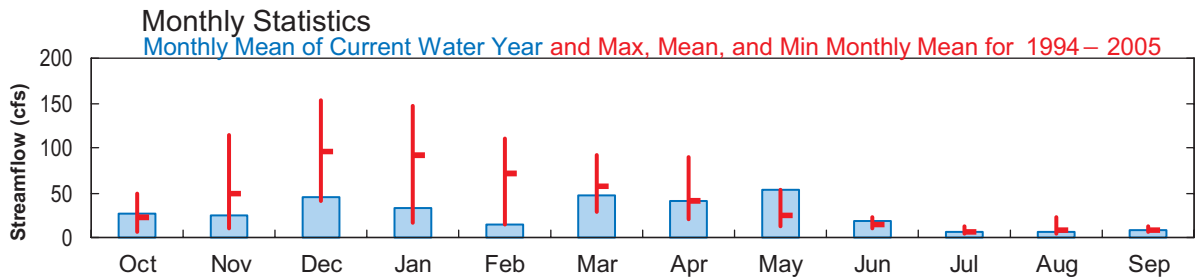
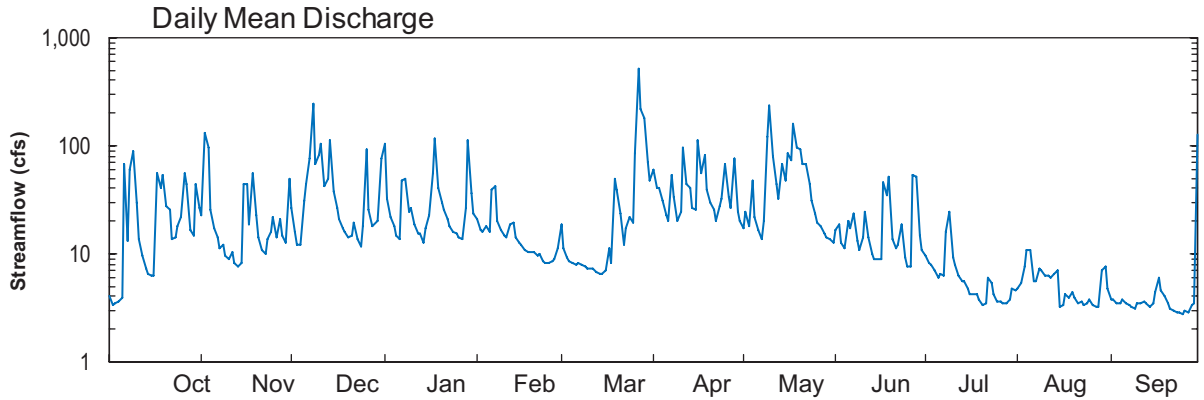
Longitude: 122° 45' 13"

Hydrologic Unit Code: 17090010

Washington County

Datum: 116.83 feet

Drainage Area: 31.5 mi<sup>2</sup>



WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR

LOCATION.--Lat 45°21'03", long 122°40'30", in SW ¼ sec.34, T.2 S., R.1 E., Clackamas County, Hydrologic Unit 17090010, on left bank 300 ft upstream from bridge on State Highway 212, 0.4 mi west of West Linn city limits, and at mile 1.8.

DRAINAGE AREA.--706 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1928 to current year. Prior to October 1960, published as "near Willamette."

REVISED RECORDS.--WSP 1014: 1943. WSP 1184: 1947. WSP 1248: 1941. WSP 1935: Drainage area. WDR OR-75-1: 1974(M). WDR OR-77-1: 1971-73, 1975, 1976(M).

GAGE.--Water-stage recorder. Datum of gage is 85.61 ft above NGVD of 1929 (levels by Corps of Engineers). Prior to June 12, 1941, nonrecording gage at datum 1.02 ft higher.

REMARKS.--No estimated daily discharges. Records good. October 1951 to September 1970, records published for this station included the daily flow in Oswego Canal, which diverts at point 5.0 mi upstream from station for development of power between outlet of Lake Oswego and Willamette River. Adjustment for diversion to Lake Oswego are published for the 1971-95 water years. Some regulation in low-water season by flashboards on crest or diversion dam for Oswego Canal and regulation by Henry Hagg Lake since January 1975. Several diversions upstream from station for irrigation. U.S. Geological Survey satellite telemeter at station. Periodic suspended sediment data are available for the period October 1974 to September 1995.

AVERAGE DISCHARGE.--30 years (water years 1976-2005), 1,417 ft<sup>3</sup>/s, 1,027,000 acre-ft/yr, river only, not adjusted for diversion to Oswego Canal.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,400 ft<sup>3</sup>/s Feb. 10, 1996, gage height, 18.32 ft, does not include an estimated 3,600 ft<sup>3</sup>/s flowing in Oswego Canal; minimum daily discharge, 0.20 ft<sup>3</sup>/s July 30 to Aug. 2, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,450 ft<sup>3</sup>/s Apr. 1, 2, gage height, 8.18 ft; minimum discharge, 146 ft<sup>3</sup>/s Aug. 6, 1996.

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	184	399	386	817	1,010	436	4,410	830	728	370	181	212
2	189	539	371	918	949	462	4,370	800	713	317	179	167
3	200	792	343	938	884	489	4,180	811	684	283	174	155
4	213	963	322	856	847	463	3,860	873	610	263	158	168
5	211	871	329	781	811	434	3,430	881	567	250	152	186
6	294	675	372	722	822	416	2,910	885	588	234	153	205
7	317	522	456	708	863	404	2,350	833	620	224	158	201
8	373	437	976	781	876	388	1,960	791	661	223	173	183
9	498	390	1,580	917	865	374	1,710	893	666	273	192	172
10	512	347	2,040	1,030	820	369	1,500	1,460	621	321	180	172
11	435	322	2,220	1,030	778	350	1,470	1,850	573	356	166	178
12	353	303	2,210	991	755	348	1,450	1,900	529	349	164	188
13	290	281	2,190	927	746	340	1,460	1,620	503	322	173	204
14	240	266	2,230	863	725	333	1,510	1,450	456	295	171	197
15	218	276	1,920	817	687	326	1,470	1,380	406	267	168	179
16	232	348	1,580	801	654	317	1,530	1,400	380	248	169	177
17	294	353	1,300	843	619	318	1,610	1,480	408	239	166	194
18	367	384	1,100	1,140	593	329	1,830	1,630	485	245	153	202
19	452	372	961	1,820	562	383	1,850	1,870	592	232	154	216
20	482	351	856	2,380	546	468	1,710	2,160	485	209	164	225
21	501	321	774	2,560	538	548	1,530	2,230	414	202	171	210
22	446	295	715	2,570	524	662	1,370	2,150	350	209	192	189
23	363	281	658	2,470	499	700	1,250	1,960	346	223	206	179
24	319	278	619	2,260	477	662	1,170	1,760	357	229	202	179
25	311	296	576	1,970	458	645	1,140	1,550	334	227	187	184
26	390	306	685	1,650	443	694	1,130	1,340	300	224	170	190
27	464	362	712	1,370	435	1,860	1,110	1,160	339	209	160	195
28	518	396	704	1,180	425	3,280	1,090	1,020	428	192	165	188
29	477	365	638	1,210	---	4,070	969	905	453	178	187	184
30	439	382	607	1,190	---	4,220	898	822	427	179	217	303
31	399	---	626	1,120	---	4,300	---	757	---	179	244	---
TOTAL	10,981	12,473	31,056	39,630	19,211	29,388	58,227	41,451	15,023	7,771	5,449	5,782
MEAN	354	416	1,002	1,278	686	948	1,941	1,337	501	251	176	193
MAX	518	963	2,230	2,570	1,010	4,300	4,410	2,230	728	370	244	303
MIN	184	266	322	708	425	317	898	757	300	178	152	155
AC-FT	21,780	24,740	61,600	78,610	38,110	58,290	115,500	82,220	29,800	15,410	10,810	11,470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2005, BY WATER YEAR (WY)

MEAN	293	1,088	3,063	3,379	3,474	2,586	1,557	742	368	188	163	208
MAX	995	3,062	7,035	7,845	9,490	5,625	3,758	2,437	762	292	286	420
(WY)	(1998)	(1984)	(1997)	(1997)	(1996)	(1999)	(1991)	(1996)	(1984)	(1998)	(2004)	(1997)
MIN	71.7	130	158	163	180	638	354	229	147	59.9	79.9	79.1
(WY)	(1988)	(1988)	(1977)	(1977)	(1977)	(2001)	(1977)	(1977)	(1992)	(1977)	(1986)	(1987)



WILLAMETTE RIVER BASIN

14207500 TUALATIN RIVER AT WEST LINN, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1976 - 2005	
ANNUAL TOTAL	365,338		276,442		1,417	
ANNUAL MEAN	998		757		2,787	
HIGHEST ANNUAL MEAN					1999	
LOWEST ANNUAL MEAN					278	
HIGHEST DAILY MEAN	5,200	Feb 4	4,410	Apr 1	25,900	Feb 10, 1996
LOWEST DAILY MEAN	143	Jul 24	152	Aug 5	18	Jul 1, 1977
ANNUAL SEVEN-DAY MINIMUM	162	Jul 20	164	Aug 14	24	Jun 29, 1977
ANNUAL RUNOFF (AC-FT)	724,600		548,300		1,027,000	
10 PERCENT EXCEEDS	2,910		1,730		4,110	
50 PERCENT EXCEEDS	458		463		534	
90 PERCENT EXCEEDS	185		182		131	



2005 Water Year  
 WILLAMETTE RIVER BASIN  
 14207500 TUALATIN RIVER AT WEST LINN, OR

Latitude: 45° 21 ' 03"  
 Clackamas County

Longitude: 122° 40 ' 30"  
 Datum: 85.61 feet

Hydrologic Unit Code: 17090010  
 Drainage Area: 706 mi<sup>2</sup>

