

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

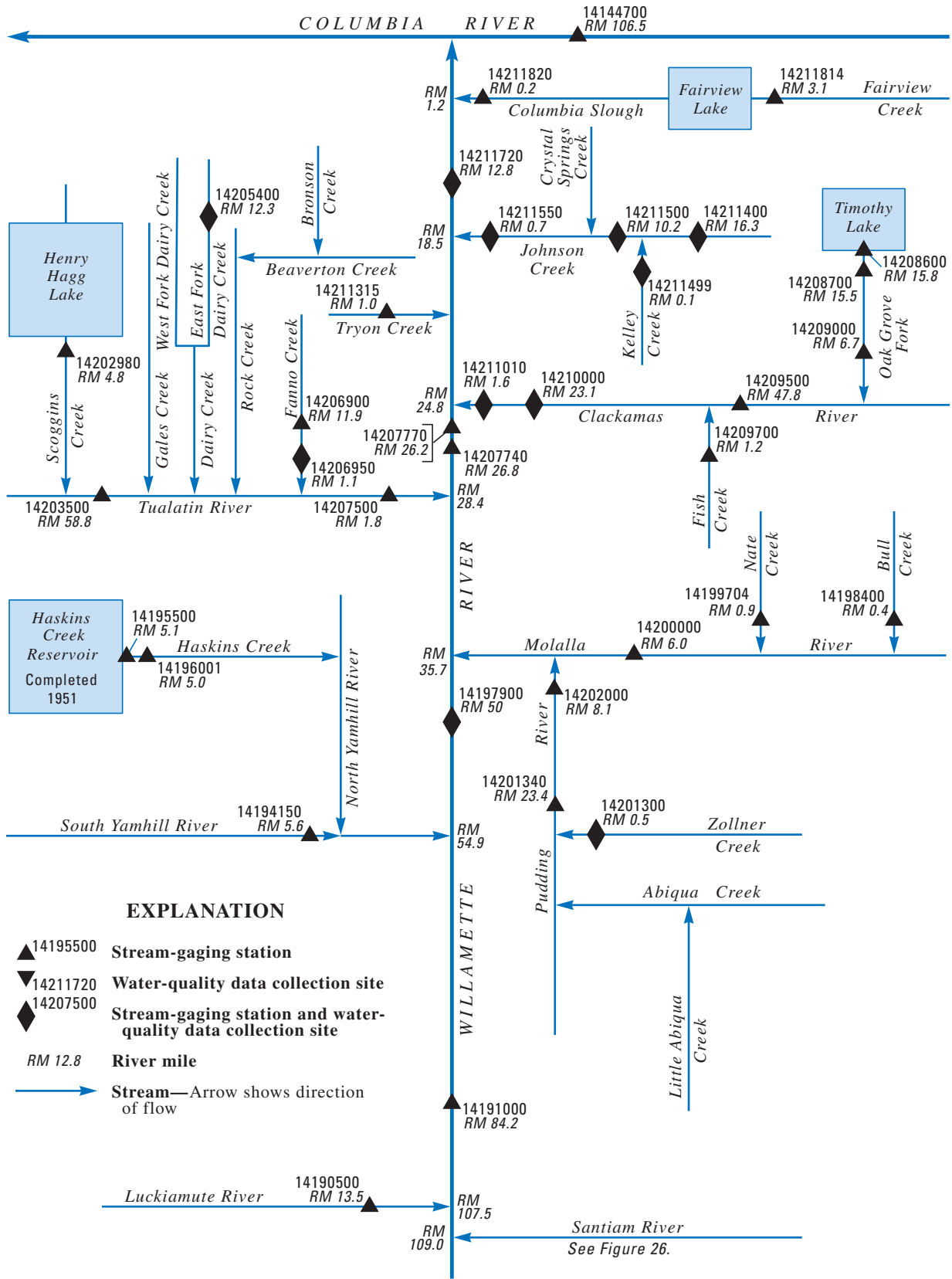


Figure 27. Schematic diagram showing gaging stations in the Willamette River Basin, from the Luckiamute River downstream to the mouth.

WILLAMETTE RIVER BASIN

14208600 TIMOTHY LAKE NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'35", in NE ¼ sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, in intake structure 350 ft upstream from dam on Oak Grove Fork, 0.4 mi upstream from Anvil Creek, 14 mi south of Government Camp, and at mile 15.8.

DRAINAGE AREA.--53.8 mi².

PERIOD OF RECORD.--May 1956 to current year. Prior to October 1957, published as Timothy Meadows Reservoir.

GAGE.--Nonrecording gage. Datum of gage is NGVD of 1929 (levels by Portland General Electric Co.).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway built by Portland General Electric Co. Usable storage began May 28, 1956. Capacity, 65,710 acre-ft at elevation 3,190 ft, normal maximum operating level. Usable capacity increased in 1966 water year to 64,450 acre-ft between elevations 3,125.0 ft, invert of outlet pipe, and 3,192.0 ft, top of radial gates. Storage of 4,060 acre-ft below elevation 3,125.0 ft not normally available for release. Water is used for power generation. Figures given herein represent total contents.

COOPERATION.--Elevations and capacity table furnished by Portland General Electric Co.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 68,800 acre-ft Oct. 3, 1967, elevation, 3,192.2 ft; minimum contents observed, 16,010 acre-ft Feb. 24, 1957, elevation, 3,144.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 67,620 acre-ft July 11, 12, elevation, 3,191.37 ft; minimum contents observed, 56,230 acre-ft Dec. 5, 6, elevation, 3,182.83 ft.

MONTHEND ELEVATION AND CONTENTS AT 0800
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre- feet)	Change in contents (acre-feet)
Sept.30	3,187.68	62,560	-
Oct. 31	3,186.65	61,200	-1,360
Nov. 30	3,182.89	56,310	-4,890
Dec. 31	3,183.96	57,680	+1,370
CAL YR 2004	-	-	+360
Jan. 31	3,185.50	59,680	+2,000
Feb. 28	3,186.57	61,090	+1,410
Mar. 31	3,188.46	63,610	+2,520
Apr. 30	3,190.16	65,930	+2,320
May 31	3,191.16	67,330	+1,400
June 30	3,191.32	67,550	+220
July 31	3,191.17	67,340	-210
Aug. 31	3,189.30	64,750	-2,590
Sept.30	3,185.88	60,180	-4,570
WTR YR 2005	-	-	-2,380

WILLAMETTE RIVER BASIN

14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR

LOCATION.--Lat 45°06'50", long 121°48'50", in NE ¼ sec.27, T.5 S., R.8 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi upstream from Anvil Creek, 0.3 mi downstream from Timothy Lake, 14 mi south of Government Camp, and at mile 15.5.

DRAINAGE AREA.--54.4 mi².

PERIOD OF RECORD.--July 1956 to current year.

GAGE.--Water-stage recorder and artificial control. Datum of gage is 3,041.83 ft above NGVD of 1929 (Portland General Electric Co. bench mark).

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1956 by Timothy Lake (station 14208600). No diversion upstream from station.

AVERAGE DISCHARGE.--49 years (water years 1957-2005), 131 ft³/s, 32.70 in/yr, 94,910 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s Dec. 24, 1964, gage height, 3.93 ft, from rating curve extended above 290 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 3.7 ft³/s Sept. 23, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 281 ft³/s Nov. 10, gage height, 2.34 ft; minimum discharge, 39 ft³/s Dec. 12, 13, July 5, 7-11, 25-31, Aug. 1-3.

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	108	89	69	44	45	43	44	45	45	42	39	67
2	108	94	69	43	45	43	44	45	45	40	39	62
3	109	45	80	43	45	43	44	45	52	39	60	54
4	108	47	67	43	45	43	44	50	66	39	80	54
5	108	55	67	43	45	43	44	47	63	39	80	54
6	103	66	67	43	45	43	44	47	67	39	80	101
7	106	66	74	43	45	43	47	47	67	39	80	123
8	102	89	71	43	45	43	81	47	63	39	80	124
9	86	174	44	43	45	42	90	53	54	39	80	123
10	86	250	44	43	45	42	90	73	50	39	80	123
11	84	249	44	43	45	42	90	75	50	43	80	123
12	84	248	43	43	45	42	90	70	55	45	80	123
13	68	248	78	43	45	42	84	62	54	49	80	124
14	57	248	102	44	45	42	80	62	54	51	80	124
15	60	248	108	43	45	43	88	62	53	51	80	124
16	60	248	70	44	44	43	73	70	51	51	80	125
17	60	235	42	44	44	43	66	75	46	47	80	124
18	77	181	42	44	44	43	66	76	64	43	80	124
19	86	110	42	45	44	43	66	72	64	42	80	123
20	86	100	42	45	44	43	54	69	64	42	80	123
21	85	103	45	45	44	43	47	69	53	42	80	123
22	76	117	47	45	44	43	47	69	44	42	80	123
23	75	121	62	45	44	43	47	69	44	42	80	123
24	75	118	94	45	44	43	47	69	44	42	80	123
25	75	112	94	45	44	43	47	53	44	40	80	123
26	76	143	86	45	43	43	47	45	44	40	80	123
27	75	142	82	45	43	44	47	45	44	39	80	123
28	75	142	82	45	43	44	46	45	44	39	80	123
29	75	97	81	45	---	44	45	45	44	39	73	123
30	65	69	69	45	---	44	45	45	44	39	67	108
31	60	---	57	45	---	44	---	45	---	39	67	---
TOTAL	2,558	4,254	2,064	1,364	1,244	1,332	1,794	1,791	1,576	1,301	2,345	3,337
MEAN	82.5	142	66.6	44.0	44.4	43.0	59.8	57.8	52.5	42.0	75.6	111
MAX	109	250	108	45	45	44	90	76	67	51	80	125
MIN	57	45	42	43	43	42	44	45	44	39	39	54
AC-FT	5,070	8,440	4,090	2,710	2,470	2,640	3,560	3,550	3,130	2,580	4,650	6,620
MEAN†	60.3	59.7	88.8	76.6	69.9	83.9	98.8	80.5	56.3	38.5	33.5	34.5
CFSM†	1.11	1.10	1.63	1.41	1.28	1.54	1.82	1.48	1.03	0.71	0.62	0.63
IN.†	1.28	1.22	1.88	1.62	1.34	1.78	2.03	1.71	1.15	0.82	0.71	0.71
AC-FT†	3,710	3,550	5,460	4,710	3,880	5,160	5,880	4,950	3,350	2,370	2,060	2,050

CAL YR2004 TOTAL 35,819 MEAN 97.9 MAX 250 MIN 42 AC-FT 71,050 MEAN† 98.4 CFSM† 1.81 IN. 24.61 AC-FT† 71,410
WTR YR2005 TOTAL 24,960 MEAN 68.4 MAX 250 MIN 39 AC-FT 49,510 MEAN† 65.1 CFSM† 1.20 IN. 16.24 AC-FT† 47,130

† Adjusted for change in contents in Timothy Lake. Data provided by Portland General Electric Co.

WILLAMETTE RIVER BASIN

14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR—Continued



2005 Water Year
WILLAMETTE RIVER BASIN

14208700 OAK GROVE FORK NEAR GOVERNMENT CAMP, OR

Latitude: 45° 06' 50"

Longitude: 121° 48' 50"

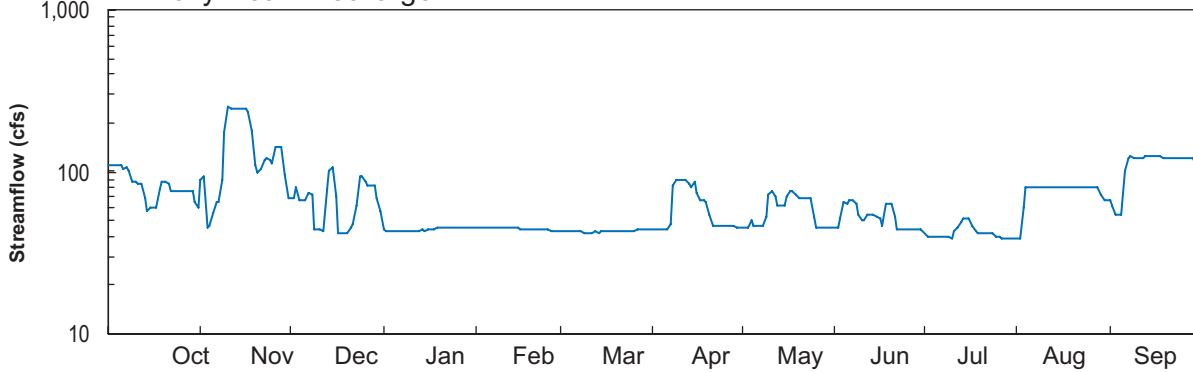
Hydrologic Unit Code: 17090011

Clackamas County

Datum: 3041.83 feet

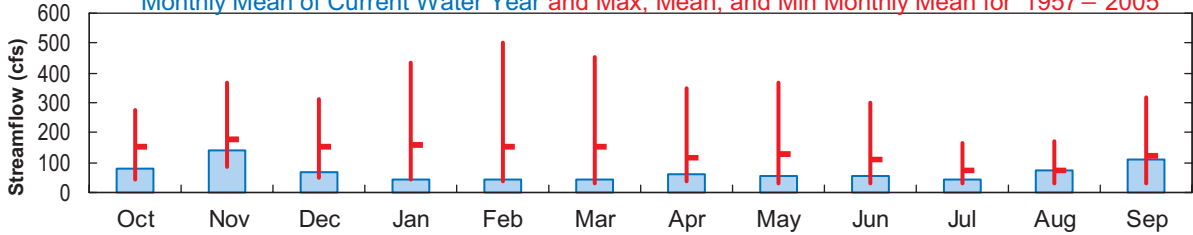
Drainage Area: 54.4 mi²

Daily Mean Discharge

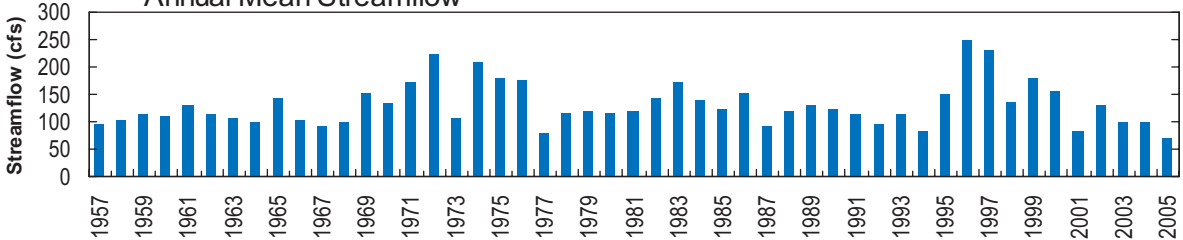


Monthly Statistics

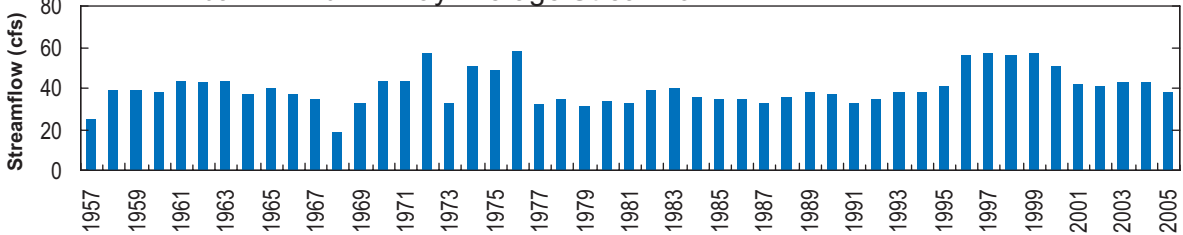
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1957 – 2005



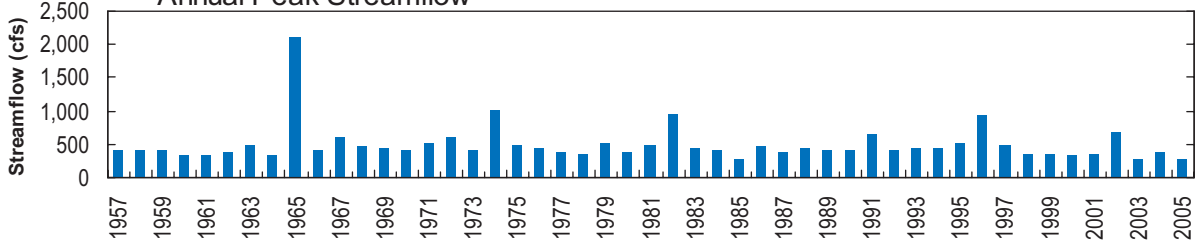
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



WILLAMETTE RIVER BASIN

14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR

LOCATION.--Lat 45°04'17", long 121°56'22", SW ¼ SE ¼ sec. 3, T.6 S., R.7 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on left bank 0.8 mi upstream from Spring Creek, 1.3 mi upstream from Kink Creek, 1.7 mi upstream from Portland General Electric Co. diversion dam, 24 mi southeast of Estacada, and at mile 6.7.

DRAINAGE AREA.--124 mi².

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only for some periods, published in WSP 1318. Published as both Oak Grove Fork of Clackamas River at proposed intake, near Cazadero, and Oak Grove Fork of Clackamas River at intake, near Cazadero, May 1909 to September 1910, as Oak Grove Fork of Clackamas River at intake, near Cazadero, October 1910 to September 1921, and as Oak Grove Fork at Portland General Electric Power Co. intake, October 1921 to September 1929.

REVISED RECORDS.--WSP 1248:1909, 1910(M), 1916, 1918, 1923, 1932. WSP 1935: 1914, 1921.

GAGE.--Water-stage recorder. Elevation of gage is 2,100 ft above NGVD of 1929, from topographic map. May 21, 1909 to Nov. 17, 1911, nonrecording gage Mar. 26, 1912 to Sept. 30, 1923, water-stage recorder, at various sites 0.7 mi downstream, below Kink Creek, at different datum, Dec. 1923 to Sept. 1996, at site 0.6 mi downstream at different datum.

REMARKS.--Records poor. Flow regulated since 1956 by Timothy Lake (station 14208600). Low flows are affected at times by diversion to Stone Creek Hydroelectric Project. Unit value discharges may not be representative of instantaneous flow conditions, however, daily discharge values are representative of the average daily flow rate.

AVERAGE DISCHARGE.--47 years (water years 1910-56), 511 ft³/s, 369,900 acre-ft/yr. 49 years (water years 1957-2005), 474 ft³/s, 343,300 acre-ft/yr (regulated).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,000 ft³/s Jan. 7, 1923, gage height, 5.45 ft, site and datum then in use, from rating curve extended above 2,300 ft³/s on basis of peak discharge for other stations in Clackamas River basin; minimum discharge, 128 ft³/s Aug. 16, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 687 ft³/s Mar. 27, gage height, 5.89 ft; minimum discharge, 137 ft³/s Aug. 29.

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	294	305	292	271	294	237	368	306	307	226	204	227
2	294	392	281	261	287	235	358	319	297	220	203	231
3	297	307	292	255	283	233	349	294	293	218	224	211
4	295	288	274	251	287	229	343	294	305	216	251	210
5	295	288	272	246	288	227	325	284	300	214	250	210
6	303	292	274	247	284	226	323	283	301	215	251	269
7	300	285	292	250	281	229	340	274	300	215	249	306
8	297	312	451	246	273	231	391	283	290	213	249	308
9	296	388	446	241	267	231	394	359	273	215	249	308
10	277	512	567	237	264	233	376	424	264	214	251	309
11	268	499	614	234	263	235	401	408	266	218	250	308
12	264	492	548	236	266	233	387	381	283	223	250	306
13	254	492	504	234	271	230	367	356	272	223	249	307
14	227	488	543	228	e270	227	355	349	267	224	249	307
15	229	486	501	227	e260	226	362	355	262	225	248	308
16	232	484	430	225	249	226	378	e370	272	224	247	309
17	236	477	366	251	246	231	372	373	307	218	250	309
18	263	422	349	400	244	226	355	404	299	212	249	308
19	292	328	342	372	245	254	343	420	289	211	249	306
20	281	305	335	349	244	261	325	401	282	209	247	306
21	299	305	330	341	239	253	308	394	265	208	248	305
22	296	324	327	331	237	245	304	389	248	211	246	305
23	305	334	331	325	234	242	347	370	244	209	248	306
24	309	386	369	318	233	238	341	358	241	207	245	304
25	299	407	368	312	231	233	348	330	238	205	245	304
26	309	423	357	312	231	267	331	310	237	205	245	303
27	316	409	341	317	230	571	319	304	240	205	245	303
28	300	395	334	310	238	480	309	299	240	204	245	303
29	297	332	335	317	---	427	300	294	233	204	232	303
30	298	287	315	309	---	383	294	289	231	204	232	318
31	289	---	294	301	---	360	---	287	---	203	228	---
TOTAL	8,811	11,444	11,674	8,754	7,239	8,359	10,413	10,561	8,146	6,618	7,528	8,717
MEAN	284	381	377	282	259	270	347	341	272	213	243	291
MAX	316	512	614	400	294	571	401	424	307	226	251	318
MIN	227	285	272	225	230	226	294	274	231	203	203	210
AC-FT	17,480	22,700	23,160	17,360	14,360	16,580	20,650	20,950	16,160	13,130	14,930	17,290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	387	492	556	572	580	559	568	571	437	323	303	345
MAX	527	798	1,047	1,095	1,433	1,377	1,024	1,104	1,126	595	473	619
(WY)	(1997)	(1996)	(1965)	(1997)	(1996)	(1972)	(1997)	(1971)	(1974)	(1996)	(1996)	(1996)
MIN	236	288	265	255	228	256	297	279	236	213	218	215
(WY)	(1982)	(1988)	(1994)	(1977)	(2001)	(2001)	(2001)	(1994)	(2001)	(2005)	(1994)	(1994)

WILLAMETTE RIVER BASIN

14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	139,378		108,264			
ANNUAL MEAN	381		297		474	
HIGHEST ANNUAL MEAN					739	
LOWEST ANNUAL MEAN					286	
HIGHEST DAILY MEAN	1,220	Jan 29	614	Dec 11	3,940	Feb 7, 1996
LOWEST DAILY MEAN	190	Aug 16	203	Jul 31	170	Feb 25, 2001
ANNUAL SEVEN-DAY MINIMUM	196	Aug 15	204	Jul 27	193	Mar 5, 2001
ANNUAL RUNOFF (AC-FT)	276,500		214,700		343,300	
10 PERCENT EXCEEDS	553		390		680	
50 PERCENT EXCEEDS	327		289		454	
90 PERCENT EXCEEDS	234		225		263	

e Estimated



2005 Water Year
 WILLAMETTE RIVER BASIN

14209000 OAK GROVE FORK ABOVE POWERPLANT INTAKE, OR

Latitude: 45° 04' 17"

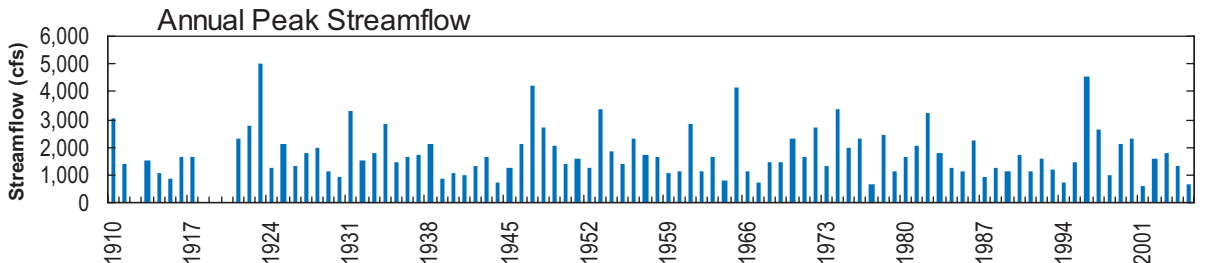
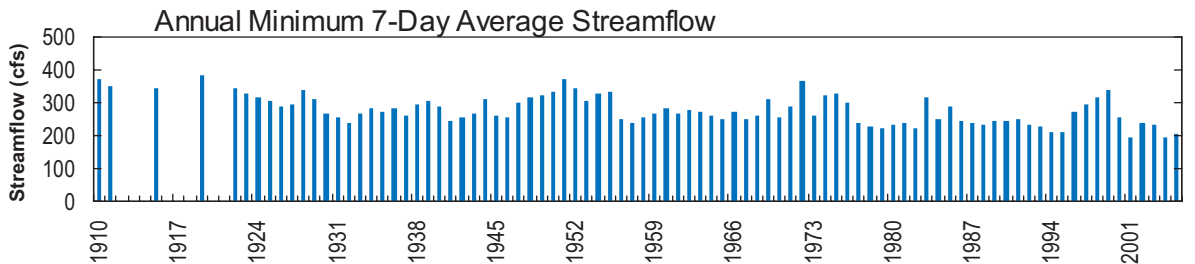
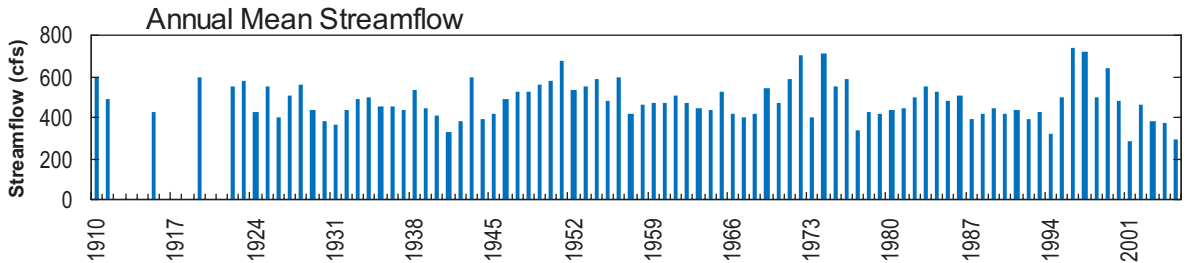
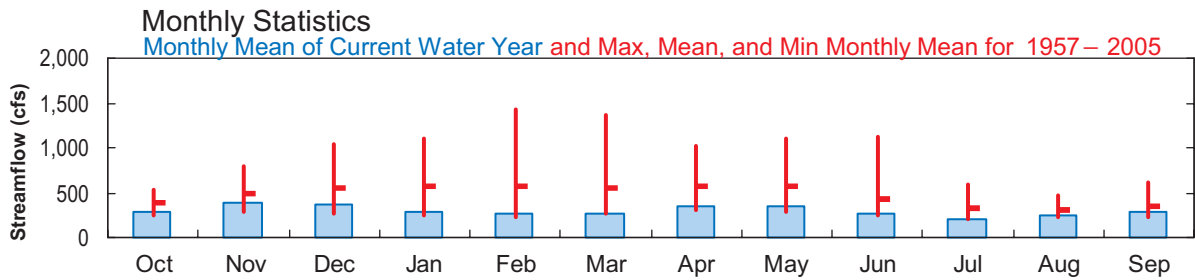
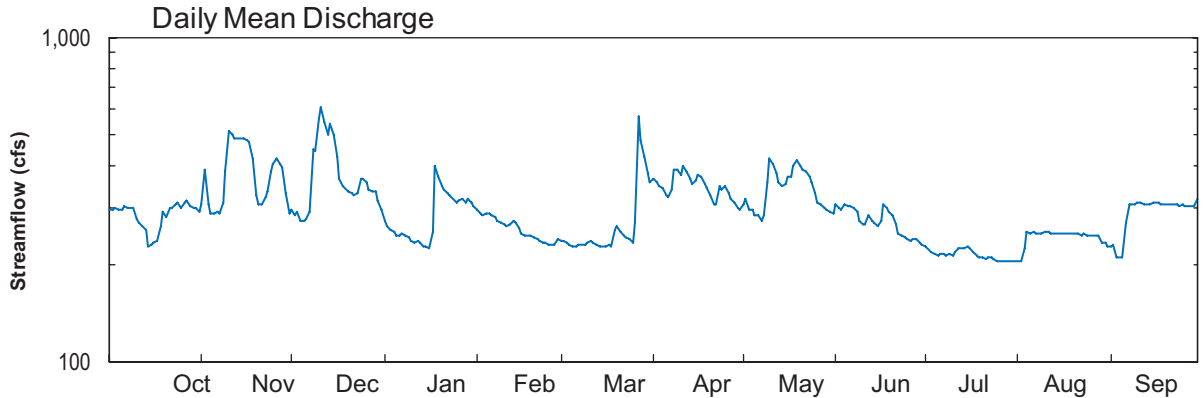
Longitude: 121° 56' 22"

Hydrologic Unit Code: 17090011

Clackamas County

Datum: 2100 feet

Drainage Area: 124 mi²



WILLAMETTE RIVER BASIN

14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR

LOCATION.--Lat 45°07'30", long 122°04'20", in SE ¼ NE ¼ sec.21, T.5 S., R.6 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank 0.1 mi upstream from Three Lynx Creek, 0.25 mi downstream from powerplant, 17 mi southeast of Estacada, and at mile 47.8.

DRAINAGE AREA.--479 mi².

PERIOD OF RECORD.--April 1909 to December 1913, October 1921 to current year. Prior to October 1911 (monthly discharge only), published in WSP 1318.

REVISED RECORDS.--WSP 1148: Drainage area. WSP 1248: 1910(M), 1912, 1948-50(M).

GAGE.--Water-stage recorder. Datum of gage is 1,091.69 ft above NGVD of 1929 (levels by Portland General Electric Co.). Apr. 23, 1909 to Jan. 4, 1914, nonrecording gage at about same site and datum. Nov. 1, 1921 to Dec. 27, 1924, water-stage recorder at present site at datum 0.91 ft higher.

REMARKS.--No estimated daily discharges. Records good. Regulation since May 1956 by Timothy Lake (station 14208600) and by Oak Grove powerhouse.

AVERAGE DISCHARGE.--39 years (water years 1910-13, 1922-1956), 1,942 ft³/s, 55.08 in/yr, 1,407,000 acre-ft/yr. 49 years (water years 1957-2005), 1,995 ft³/s, 56.60 in/yr, 1,446,000 acre-ft/yr (regulated period).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,200 ft³/s Dec. 22, 1964, gage height, 21.7 ft, from floodmark, from rating curve extended above 34,100 ft³/s on basis of slope-area measurement at gage height 15.06 ft; minimum recorded discharge, 260 ft³/s Oct. 15, 2001.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 27	1700	*11,900	*8.27	No other peak greater than base discharge.			

Minimum discharge, 513 ft³/s, Aug. 29, gage height, 0.29 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	745	1,180	1,030	1,110	1,320	952	2,650	1,540	1,240	835	607	570
2	730	1,540	989	1,070	1,260	935	2,540	1,600	1,220	810	606	571
3	721	2,140	964	1,020	1,210	931	2,350	1,470	1,160	793	622	550
4	712	1,700	931	994	1,210	913	2,220	1,430	1,120	777	643	548
5	704	1,460	932	957	1,260	897	2,020	1,380	1,080	763	639	547
6	782	1,320	944	964	1,210	884	1,920	1,450	1,250	765	637	597
7	806	1,200	1,080	965	1,190	879	2,040	1,410	1,250	762	632	629
8	773	1,140	3,580	966	1,140	885	2,210	1,410	1,220	742	629	629
9	1,040	1,180	4,370	924	1,100	882	2,160	1,830	1,140	767	627	627
10	971	1,210	5,760	899	1,070	878	2,000	2,050	1,080	755	625	637
11	871	1,150	6,430	878	1,050	877	2,200	2,040	1,080	745	622	638
12	819	1,110	4,490	880	1,050	872	2,170	1,860	1,120	727	621	632
13	763	1,090	3,260	886	1,130	853	2,010	1,700	1,070	716	618	629
14	718	1,060	3,200	852	1,070	832	1,920	1,590	1,030	714	614	627
15	711	1,050	2,940	841	1,030	817	1,840	1,570	994	706	610	625
16	696	1,050	2,380	837	1,000	813	2,250	1,640	1,010	695	608	628
17	743	1,010	2,100	1,000	978	901	2,830	1,650	1,360	684	611	642
18	1,100	1,010	1,900	4,550	964	849	2,450	1,990	1,300	674	612	635
19	1,490	939	1,780	3,930	962	985	2,170	2,560	1,240	664	611	628
20	1,250	878	1,680	2,970	1,010	1,200	1,980	2,410	1,260	654	603	623
21	1,220	850	1,570	2,530	963	1,190	1,850	2,410	1,160	653	599	620
22	1,260	845	1,490	2,180	946	1,110	1,780	2,260	1,100	661	597	619
23	1,320	846	1,410	1,960	926	1,080	1,990	2,030	1,050	652	592	617
24	1,330	963	1,370	1,800	914	1,060	2,140	1,830	1,000	641	593	615
25	1,230	1,300	1,330	1,660	905	1,050	2,010	1,640	962	637	590	615
26	1,190	1,400	1,360	1,590	898	1,380	1,890	1,510	934	631	588	614
27	1,170	1,270	1,270	1,580	891	9,110	1,790	1,420	931	624	586	612
28	1,080	1,180	1,210	1,490	923	6,480	1,730	1,340	936	620	585	610
29	1,030	1,070	1,210	1,530	---	4,530	1,640	1,280	894	616	582	610
30	1,070	1,010	1,180	1,470	---	3,430	1,550	1,220	861	611	582	665
31	1,170	---	1,140	1,390	---	2,770	---	1,180	---	606	575	---
TOTAL	30,215	35,151	65,280	46,673	29,580	51,225	62,300	52,700	33,052	21,700	18,866	18,409
MEAN	975	1,172	2,106	1,506	1,056	1,652	2,077	1,700	1,102	700	609	614
MAX	1,490	2,140	6,430	4,550	1,320	9,110	2,830	2,560	1,360	835	643	665
MIN	696	845	931	837	891	813	1,550	1,180	861	606	575	547
AC-FT	59,930	69,720	129,500	92,580	58,670	101,600	123,600	104,500	65,560	43,040	37,420	36,510
CFSM	2.03	2.45	4.40	3.14	2.21	3.45	4.34	3.55	2.30	1.46	1.27	1.28
IN.	2.35	2.73	5.07	3.62	2.30	3.98	4.84	4.09	2.57	1.69	1.47	1.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2005, BY WATER YEAR (WY)

MEAN	1,014	2,166	3,045	3,035	2,965	2,646	2,650	2,471	1,610	892	732	778
MAX	2,145	4,239	8,271	6,139	7,671	6,559	3,896	4,701	4,136	1,565	972	1,242
(WY)	(1998)	(1996)	(1965)	(1970)	(1996)	(1972)	(2002)	(1971)	(1974)	(1974)	(1974)	(1959)
MIN	593	666	786	751	734	1,353	1,417	1,057	674	592	534	510
(WY)	(1993)	(1988)	(1977)	(1977)	(1977)	(1992)	(1967)	(1992)	(1992)	(1992)	(1992)	(1994)

WILLAMETTE RIVER BASIN

14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1957 - 2005	
ANNUAL TOTAL	620,577		465,151			
ANNUAL MEAN	1,696		1,274		1,995	
HIGHEST ANNUAL MEAN					3,128	1974
LOWEST ANNUAL MEAN					1,062	1977
HIGHEST DAILY MEAN	9,620	Jan 29	9,110	Mar 27	48,000	Dec 23, 1964
LOWEST DAILY MEAN	564	Aug 21	547	Sep 5	410	Sep 4, 1986
ANNUAL SEVEN-DAY MINIMUM	572	Aug 15	563	Aug 30	490	Sep 1, 1992
ANNUAL RUNOFF (AC-FT)	1,231,000		922,600		1,446,000	
ANNUAL RUNOFF (CFSM)	3.54		2.66		4.17	
ANNUAL RUNOFF (INCHES)	48.20		36.12		56.60	
10 PERCENT EXCEEDS	2,720		2,140		3,650	
50 PERCENT EXCEEDS	1,380		1,040		1,540	
90 PERCENT EXCEEDS	714		618		682	



2005 Water Year
 WILLAMETTE RIVER BASIN

14209500 CLACKAMAS RIVER ABOVE THREE LYNX CREEK, OR

Latitude: 45° 07' 30"

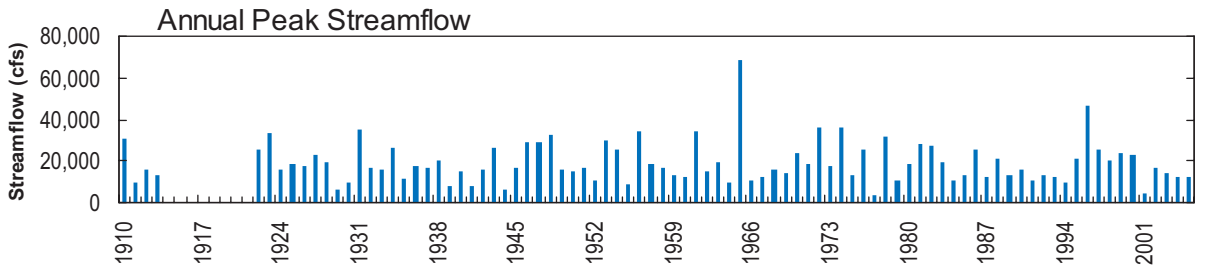
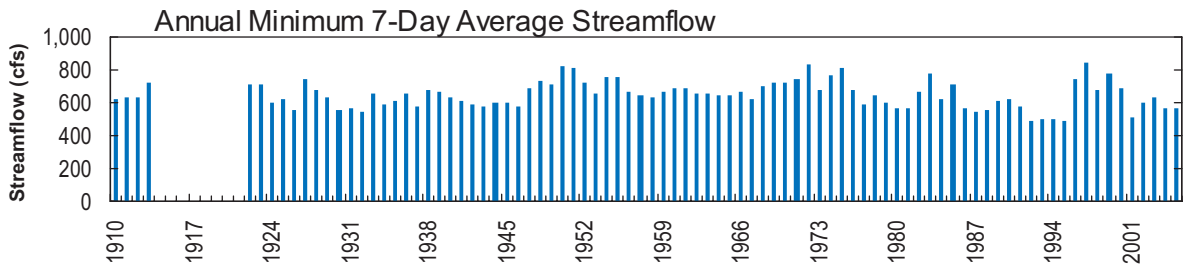
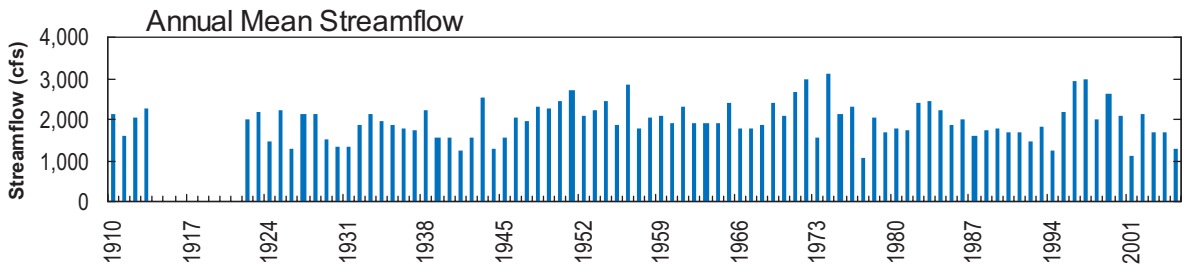
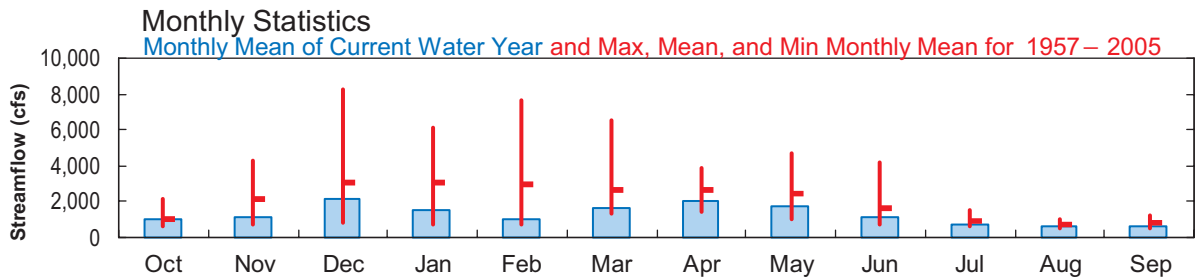
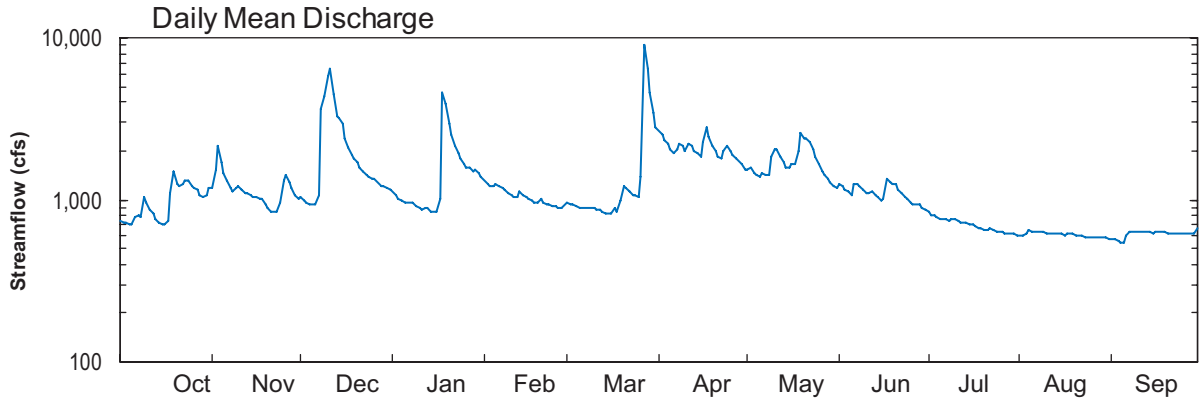
Longitude: 122° 04' 20"

Hydrologic Unit Code: 17090011

Clackamas County

Datum: 1091.69 feet

Drainage Area: 479 mi²



WILLAMETTE RIVER BASIN

14209700 FISH CREEK NEAR THREE LYNX, OR

LOCATION.--Lat 45°08'52", long 122°09'07", in NE ¼ SE ¼ sec.11, T.5 S., R.5 E., Clackamas County, Hydrologic Unit 17090011, Mount Hood National Forest, on right bank, 0.7 mi upstream from Clackamas River, and at mile 1.15.

DRAINAGE AREA.--45.1 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 940 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--16 years (water years 1990-2005), 202 ft³/s, 60.95 in/yr, 146,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,540 ft³/s Feb. 7, 1996, gage height, 11.83 ft, from rating curve extended above 2,800 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 15.40 ft, backwater from debris flow; minimum discharge, 6.0 ft³/s Sept. 1, 2, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 27	1400	*1,700	*8.04				

Minimum discharge, 8.0 ft³/s, Sept. 29, 30, gage height, 3.52 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	36	188	174	92	105	50	342	134	106	57	17	11
2	34	389	159	85	95	48	332	131	118	54	17	11
3	32	496	133	79	88	49	276	119	103	50	16	10
4	30	322	118	72	92	47	247	116	91	47	16	10
5	28	231	111	67	100	45	218	108	91	44	15	9.9
6	44	176	106	67	97	44	204	124	98	46	15	9.8
7	45	140	145	68	97	43	235	116	100	46	15	9.6
8	55	116	1,030	65	91	43	287	114	98	42	14	9.5
9	171	99	934	60	85	42	277	174	89	45	14	9.3
10	124	87	1,080	57	80	41	240	268	81	43	14	9.7
11	92	78	1,100	53	76	40	276	280	96	41	14	9.9
12	73	70	765	55	77	39	268	226	127	38	13	9.6
13	61	64	488	57	96	37	236	184	121	35	13	9.5
14	53	59	459	54	89	35	221	156	110	34	13	9.3
15	47	58	374	53	82	34	212	140	98	32	12	9.2
16	43	59	293	61	76	35	339	143	110	30	12	9.3
17	59	52	237	222	71	45	453	158	231	29	12	10
18	176	75	202	1,120	67	38	360	241	204	27	13	9.9
19	218	73	181	675	65	62	299	493	179	26	12	9.6
20	170	65	163	426	63	87	253	397	164	25	12	9.4
21	181	60	147	311	58	97	222	341	137	24	12	9.1
22	218	57	140	241	55	87	205	287	118	25	11	8.9
23	259	55	127	199	52	77	234	230	103	23	11	8.8
24	268	142	117	168	49	72	251	188	90	22	11	8.7
25	213	351	111	145	48	68	239	156	80	22	11	8.6
26	182	302	127	132	47	144	223	132	73	21	10	8.5
27	163	216	115	125	45	1,300	202	114	73	20	10	8.4
28	138	166	105	113	49	917	182	101	81	19	10	8.3
29	122	135	103	131	---	619	160	91	70	18	11	8.2
30	150	126	99	127	---	449	142	84	63	18	12	22
31	185	---	93	116	---	335	---	79	---	17	11	---
TOTAL	3,670	4,507	9,536	5,296	2,095	5,069	7,635	5,625	3,303	1,020	399	295.0
MEAN	118	150	308	171	74.8	164	254	181	110	32.9	12.9	9.83
MAX	268	496	1,100	1,120	105	1,300	453	493	231	57	17	22
MIN	28	52	93	53	45	34	142	79	63	17	10	8.2
AC-FT	7,280	8,940	18,910	10,500	4,160	10,050	15,140	11,160	6,550	2,020	791	585
CFSM	2.62	3.33	6.82	3.79	1.66	3.63	5.64	4.02	2.44	0.73	0.29	0.22
IN.	3.03	3.72	7.87	4.37	1.73	4.18	6.30	4.64	2.72	0.84	0.33	0.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2005, BY WATER YEAR (WY)

MEAN	86.1	294	392	374	331	289	283	200	112	34.6	18.3	20.9
MAX	233	756	1,006	654	817	564	447	389	236	62.8	39.7	86.4
(WY)	(1998)	(1996)	(1997)	(1997)	(1996)	(1997)	(1993)	(1999)	(1999)	(1993)	(2004)	(2004)
MIN	10.1	26.7	177	98.1	74.8	87.0	181	68.0	20.9	13.6	8.20	9.61
(WY)	(2003)	(1994)	(2001)	(2001)	(2005)	(1992)	(1998)	(1992)	(1992)	(1992)	(1992)	(2001)

WILLAMETTE RIVER BASIN

14209700 FISH CREEK NEAR THREE LYNX, OR—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1990 - 2005	
ANNUAL TOTAL	70,719		48,450.0			
ANNUAL MEAN	193		133		202	
HIGHEST ANNUAL MEAN					335 1997	
LOWEST ANNUAL MEAN					99.6 2001	
HIGHEST DAILY MEAN	2,260	Jan 29	1,300	Mar 27	5,970	Feb 7, 1996
LOWEST DAILY MEAN	10	Aug 19	8.2	Sep 29	6.1	Sep 2, 1992
ANNUAL SEVEN-DAY MINIMUM	11	Aug 15	8.5	Sep 23	6.4	Aug 28, 1992
ANNUAL RUNOFF (AC-FT)	140,300		96,100		146,600	
ANNUAL RUNOFF (CFSM)	4.28		2.94		4.49	
ANNUAL RUNOFF (INCHES)	58.33		39.96		60.95	
10 PERCENT EXCEEDS	355		276		455	
50 PERCENT EXCEEDS	146		85		121	
90 PERCENT EXCEEDS	21		11		13	



2005 Water Year
 WILLAMETTE RIVER BASIN

14209700 FISH CREEK NEAR THREE LYNX, OR

Latitude: 45° 08' 52"

Longitude: 122° 09' 07"

Hydrologic Unit Code: 17090011

Clackamas County

Datum: 940 feet

Drainage Area: 45.1 mi²

