

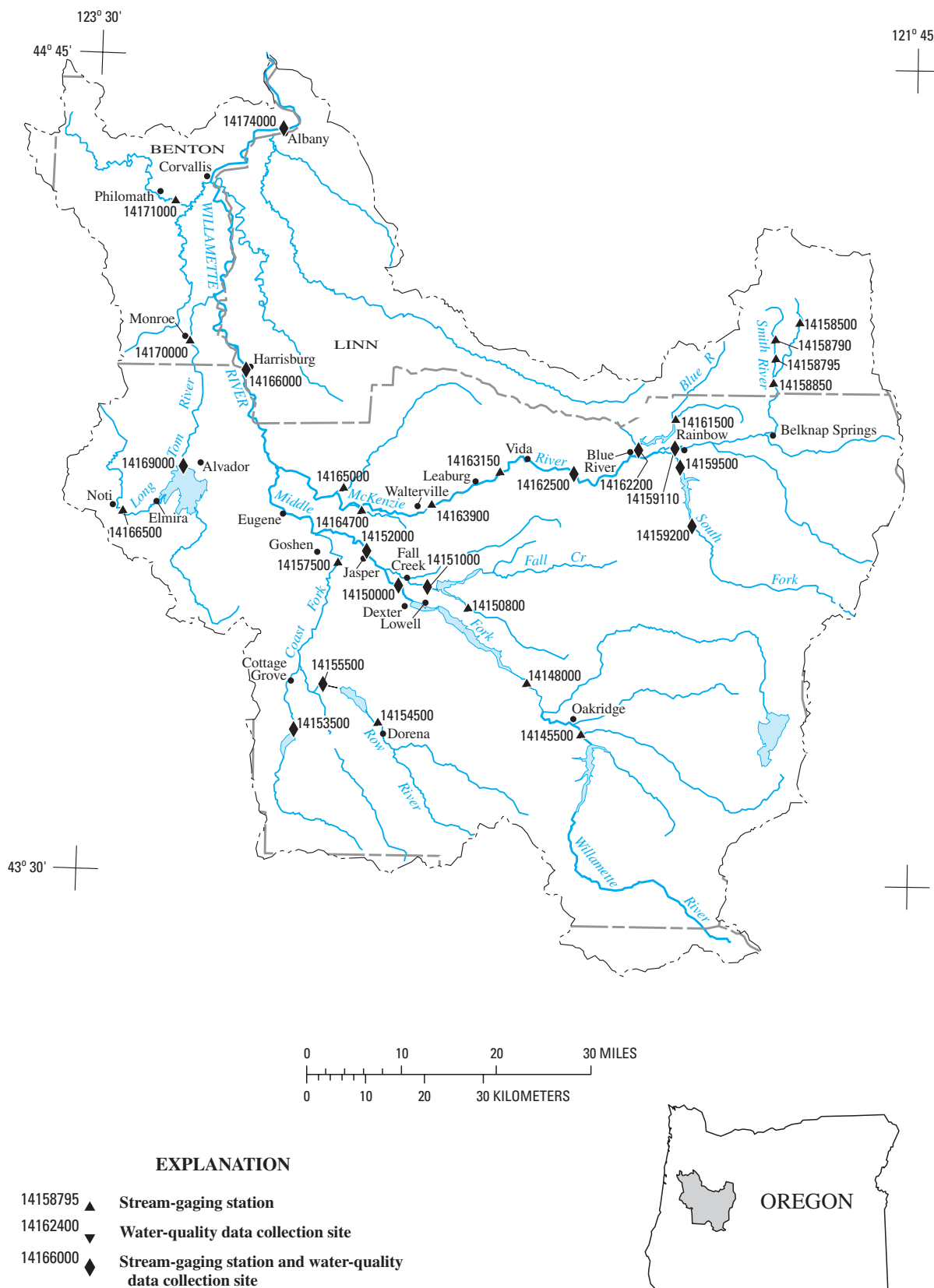


Figure 21. Location of surface-water and water-quality stations in the Willamette River Basin upstream from the Luckiamute River.

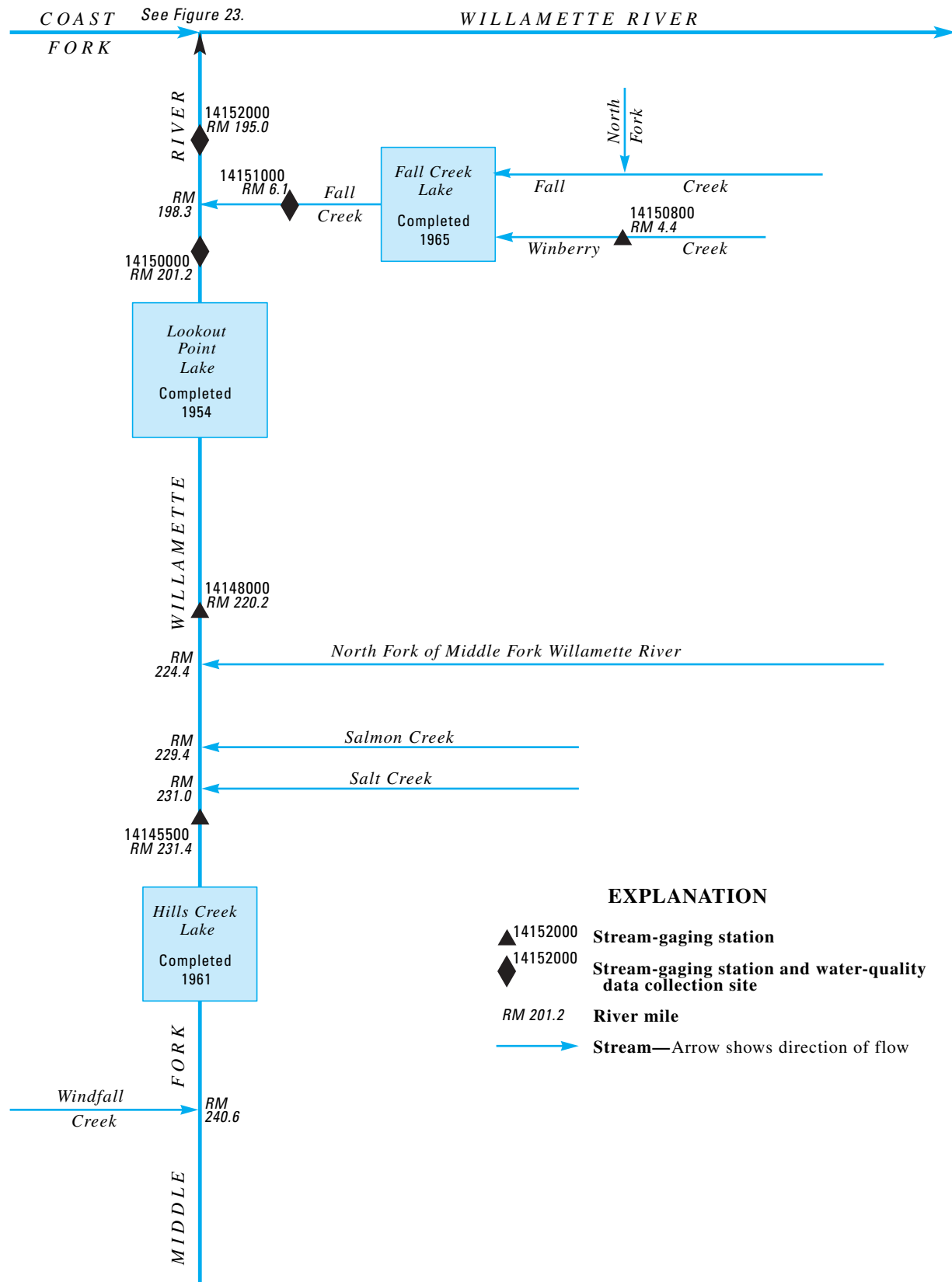


Figure 22. Schematic diagram showing gaging stations in the Middle Fork Willamette River Basin.

14145500 MIDDLE FORK WILLAMETTE RIVER ABOVE SALT CREEK, NEAR OAKRIDGE, OR

LOCATION.--Lat 43°43'20", long 122°26'15", in NW ¼ NE ¼ sec.27, T.21 S., R.3 E., Lane County, Hydrologic Unit 17090001, in Willamette National Forest, on right bank 90 ft upstream from highway bridge, 0.4 mi upstream from Salt Creek, 1.1 mi downstream from Hills Creek Dam, 2.3 mi southeast of Oakridge, and at mile 231.4.

DRAINAGE AREA.--392 mi².

PERIOD OF RECORD.--October 1913 to September 1914, September 1935 to current year. Monthly discharge only September 1935, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1914.

GAGE.--Water-stage recorder. Datum of gage is 1,208.01 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Oct. 3, 1913, to Sept. 30, 1914, nonrecording gage and Sept. 1, 1935, to Aug. 18, 1960, water-stage recorder at sites 400 ft and 1,000 ft downstream, respectively, at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1961 by Hills Creek Lake (station 14145100). No diversions upstream from station.

AVERAGE DISCHARGE.--70 years (water years 1914, 1936-2004), 1,143 ft³/s, 39.60 in/yr, 828,100 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft³/s Dec. 28, 1945, gage height, 12.06 ft, site and datum then in use, from rating curve extended above 13,000 ft³/s; minimum observed discharge, 0.70 ft³/s Sept. 8-11, 13, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,780 ft³/s Dec. 24, gage height, 5.94 ft; minimum discharge, 317 ft³/s Mar. 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,120	667	1,120	1,480	3,450	411	404	1,190	584	628	1,480	1,130
2	1,060	661	1,210	1,590	1,660	411	405	1,190	603	628	1,490	1,130
3	1,010	660	990	1,600	1,590	410	900	1,190	606	629	1,490	1,140
4	950	659	800	1,620	1,530	400	1,610	1,200	604	628	1,480	1,140
5	949	611	803	1,580	1,310	414	1,620	1,150	606	629	1,480	1,140
6	923	567	813	1,530	885	415	1,620	1,010	600	627	1,550	1,140
7	859	581	806	1,570	869	413	1,630	1,010	598	628	1,600	1,130
8	858	583	984	1,560	871	408	1,630	1,000	610	627	1,500	1,130
9	859	583	1,610	1,770	707	413	1,630	1,000	618	626	1,120	1,300
10	857	574	1,770	2,120	420	412	1,630	1,010	619	631	1,080	1,590
11	855	571	1,800	2,150	418	437	1,630	1,010	625	628	1,180	1,580
12	852	571	1,810	2,100	418	415	1,620	1,010	625	625	1,120	1,570
13	850	577	1,230	2,540	418	414	1,620	988	627	621	1,120	1,570
14	819	569	1,110	2,630	419	413	1,620	1,010	625	624	1,120	1,660
15	763	565	2,290	2,650	419	414	1,630	1,020	629	621	1,120	1,440
16	749	573	3,040	2,470	421	416	1,630	1,000	624	783	1,120	1,010
17	667	576	3,100	2,160	429	415	1,620	999	617	786	1,120	1,020
18	659	576	3,070	2,150	411	422	1,620	995	618	773	1,130	1,030
19	656	575	3,030	1,600	399	416	1,620	999	617	744	1,130	1,050
20	652	581	3,030	1,580	405	418	1,630	999	616	756	1,130	1,050
21	663	526	3,080	1,590	404	406	1,610	996	614	758	1,130	1,050
22	663	416	3,110	1,570	406	400	1,600	996	623	757	1,130	1,030
23	671	417	2,950	1,590	404	416	1,610	1,010	628	886	1,130	1,030
24	675	417	2,560	1,600	410	397	1,640	1,020	629	1,020	1,130	1,010
25	676	416	1,650	1,620	402	399	1,640	1,010	626	1,010	841	1,010
26	675	416	1,520	1,660	402	398	1,420	1,010	626	1,010	834	1,010
27	666	416	1,560	1,660	401	401	1,200	1,020	629	1,010	829	958
28	665	419	1,580	1,610	405	403	1,200	1,010	632	1,010	828	783
29	664	429	1,590	1,620	406	406	1,200	894	632	1,070	829	795
30	667	735	1,580	2,170	---	404	1,190	750	629	1,340	833	797
31	667	---	1,570	3,110	---	406	---	667	---	1,470	990	---
TOTAL	24,319	16,487	57,166	58,250	21,089	12,723	43,629	31,363	18,539	24,583	36,064	34,423
MEAN	784	550	1,844	1,879	727	410	1,454	1,012	618	793	1,163	1,147
MAX	1,120	735	3,110	3,110	3,450	437	1,640	1,200	632	1,470	1,600	1,660
MIN	652	416	800	1,480	399	397	404	667	584	621	828	783
AC-FT	48,240	32,700	113,400	115,500	41,830	25,240	86,540	62,210	36,770	48,760	71,530	68,280
MEAN†	280	439	1,828	2,187	1,730	1,318	1,344	1,483	907	417	399	386
CFSM†	0.71	1.12	4.66	5.58	4.41	3.36	3.43	3.78	2.31	1.06	1.02	0.98
IN.†	0.82	1.25	5.38	6.43	4.76	3.88	3.82	4.36	2.58	1.23	1.17	1.10
AC-FT†	17,240	26,100	112,400	134,500	99,530	81,040	79,940	91,210	53,970	25,660	24,530	22,980

CAL YR2003 TOTAL 377331 MEAN 1034 MAX 3450 MIN 409 AC-FT 748400 MEAN† 1014 CFSM† 2.59 IN.† 35.12 AC-FT† 734200
WTR YR2004 TOTAL 378635 MEAN 1035 MAX 3450 MIN 397 AC-FT 751000 MEAN† 1060 CFSM† 2.70 IN.† 36.79 AC-FT† 769100

† Adjusted for change in contents in Hills Creek Lake. Lake elevation provided by U.S. Army Corps of Engineers.



2004 Water Year
WILLAMETTE RIVER BASIN

14145500 MF WILLAMETTE RIVER ABV SALT CRK, NEAR OAKRIDGE, OR

Latitude: 43° 43 ' 20"

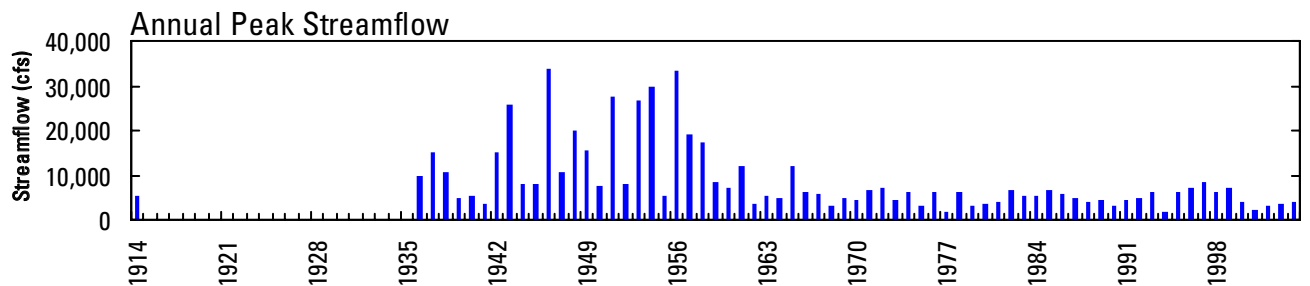
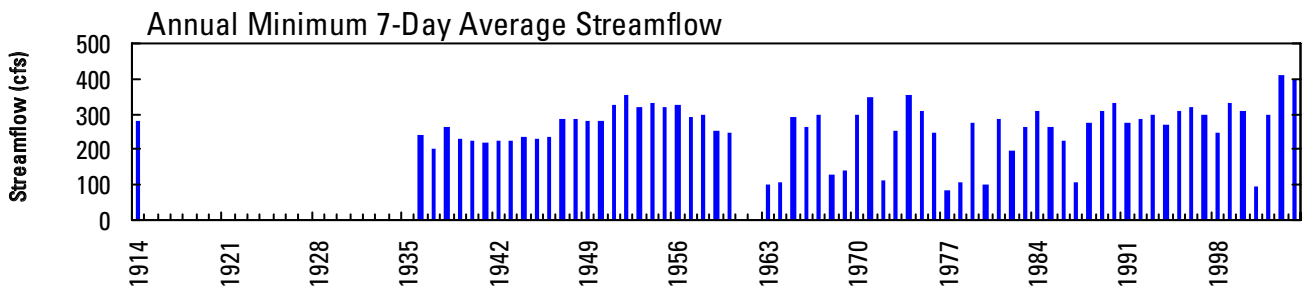
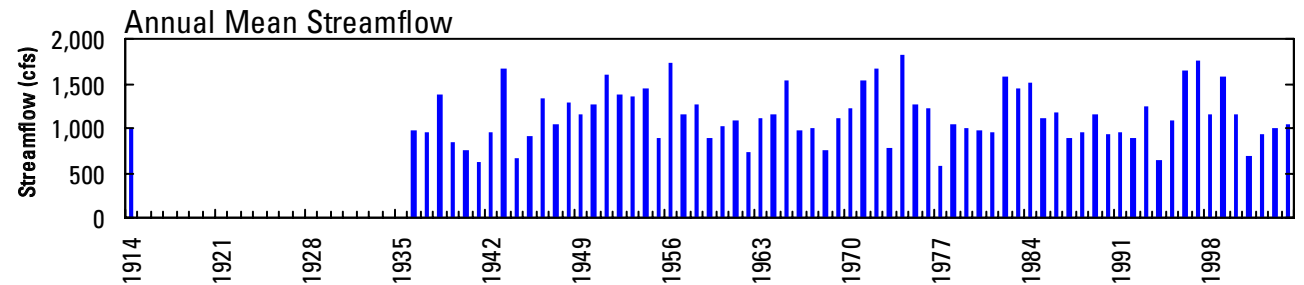
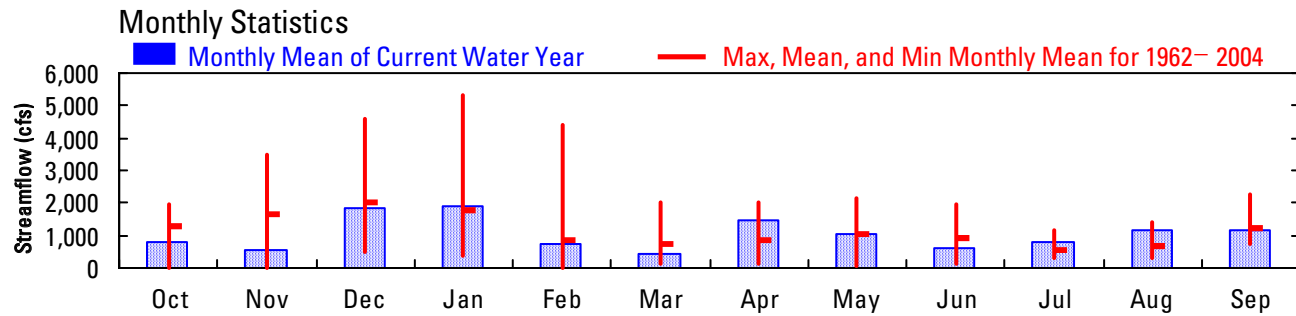
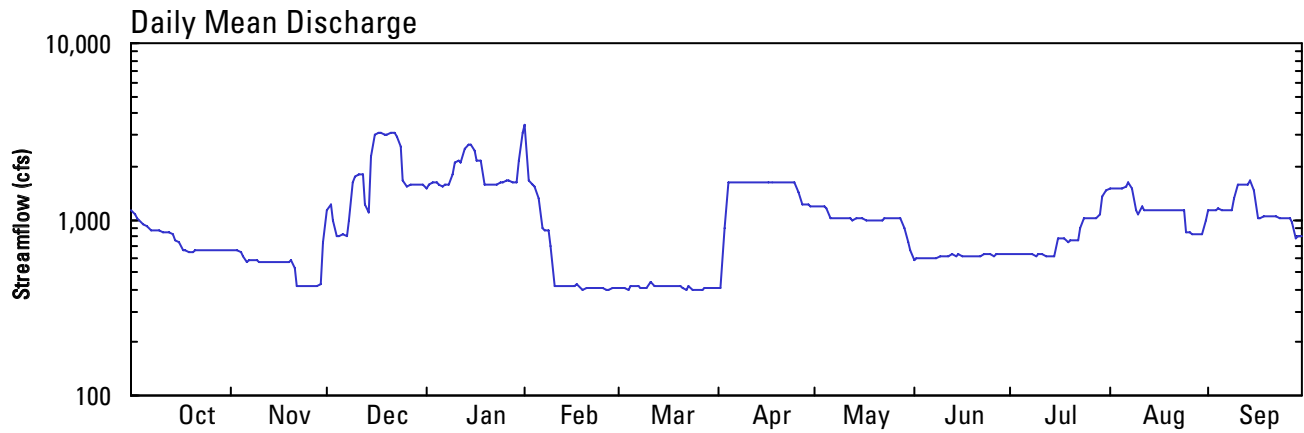
Longitude: 122° 26 ' 15"

Hydrologic Unit Code: 17090001

Lane County

Datum: 1,208.01 feet

Drainage Area: 392 square miles



14148000 MIDDLE FORK WILLAMETTE RIVER BELOW NORTH FORK, NEAR OAKRIDGE, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1962 - 2004	
ANNUAL TOTAL	956,771		1,012,691			
ANNUAL MEAN	2,621		2,767		2,841	
HIGHEST ANNUAL MEAN					4,710	1997
LOWEST ANNUAL MEAN					1,416	1977
HIGHEST DAILY MEAN	13,000	Dec 13	13,000	Dec 13	43,500	Dec 23, 1964
LOWEST DAILY MEAN	921	Nov 6	921	Nov 6	334	Oct 5, 1961
ANNUAL SEVEN-DAY MINIMUM	947	Nov 4	947	Nov 4	349	Oct 1, 1961
ANNUAL RUNOFF (AC-FT)	1,898,000		2,009,000		2,059,000	
10 PERCENT EXCEEDS	4,980		4,960		5,420	
50 PERCENT EXCEEDS	1,900		2,420		2,090	
90 PERCENT EXCEEDS	1,070		1,130		1,010	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14148000 MF WILLAMETTE RIVER BLW N FORK, NR OAKRIDGE, OR

Latitude: 43° 48 ' 05"

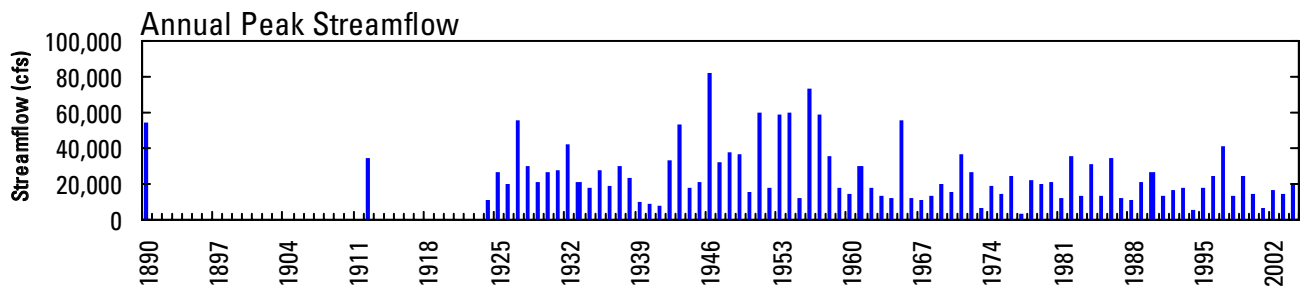
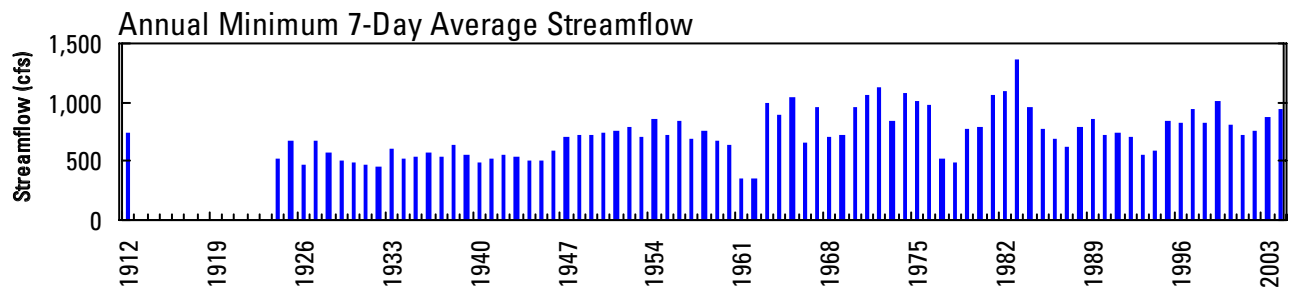
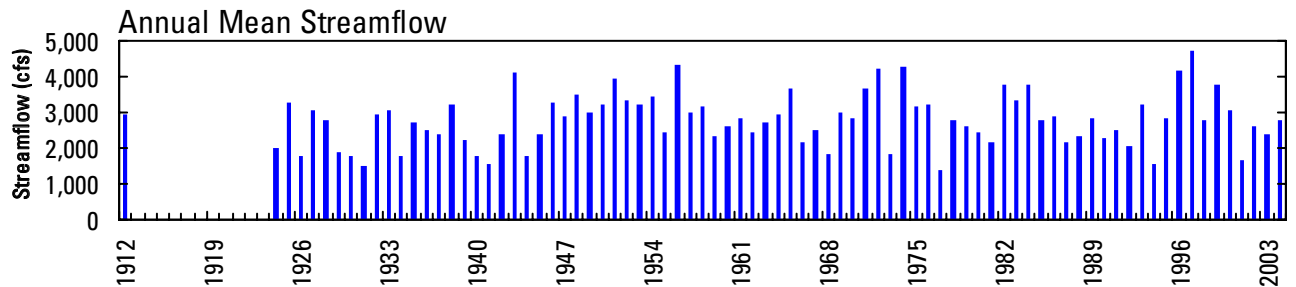
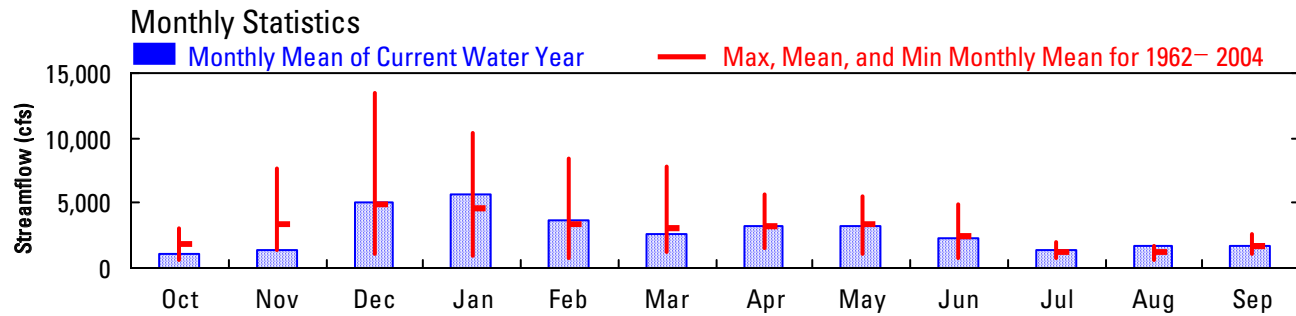
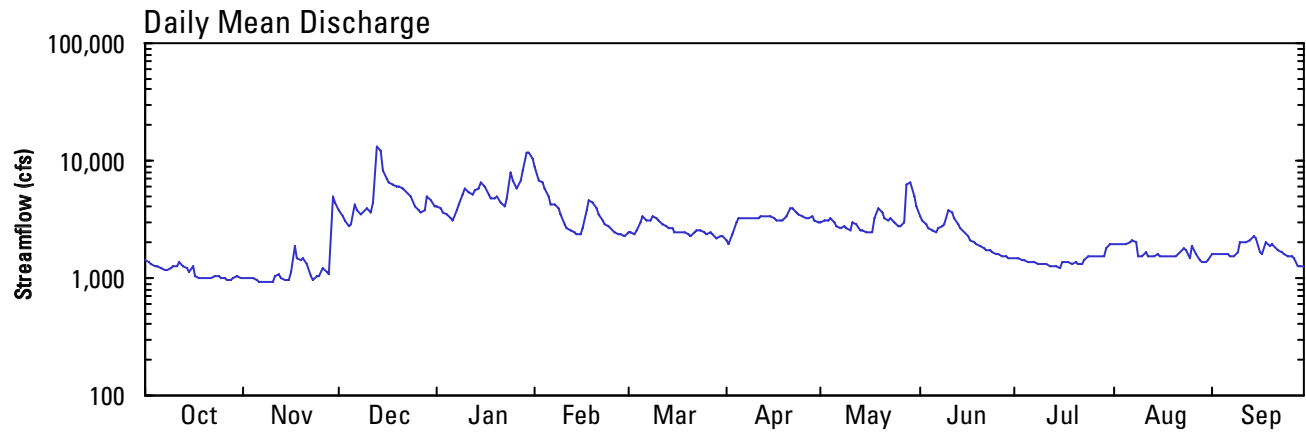
Longitude: 122° 33 ' 35"

Hydrologic Unit Code: 17090001

Lane County

Datum: 934.76 feet

Drainage Area: 924 square miles



14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1953 - 2004	
ANNUAL TOTAL	1,004,460		1,028,870			
ANNUAL MEAN	2,752		2,811		3,041	
HIGHEST ANNUAL MEAN					4,660	1997
LOWEST ANNUAL MEAN					1,392	1977
HIGHEST DAILY MEAN	10,100	Dec 17	10,100	Dec 17	43,200	Jan 18, 1953
LOWEST DAILY MEAN	1,080	Mar 3	1,130	Feb 18	100	Nov 25, 1960
ANNUAL SEVEN-DAY MINIMUM	1,100	Mar 18	1,160	Feb 22	344	May 4, 1977
ANNUAL RUNOFF (AC-FT)	1,992,000		2,041,000		2,203,000	
10 PERCENT EXCEEDS	5,050		5,030		6,010	
50 PERCENT EXCEEDS	2,260		2,070		2,250	
90 PERCENT EXCEEDS	1,230		1,240		1,160	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR

Latitude: 43° 56' 45"

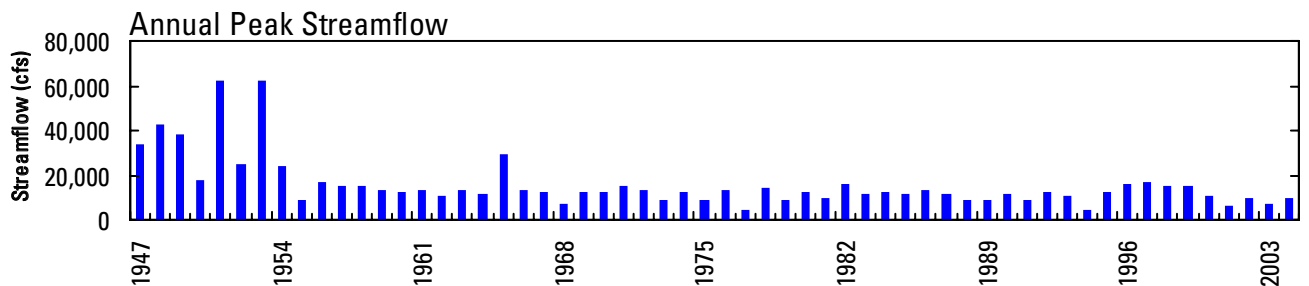
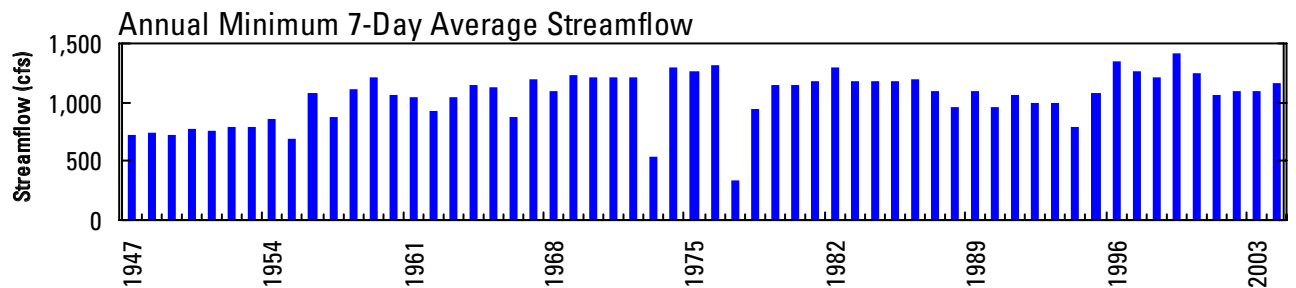
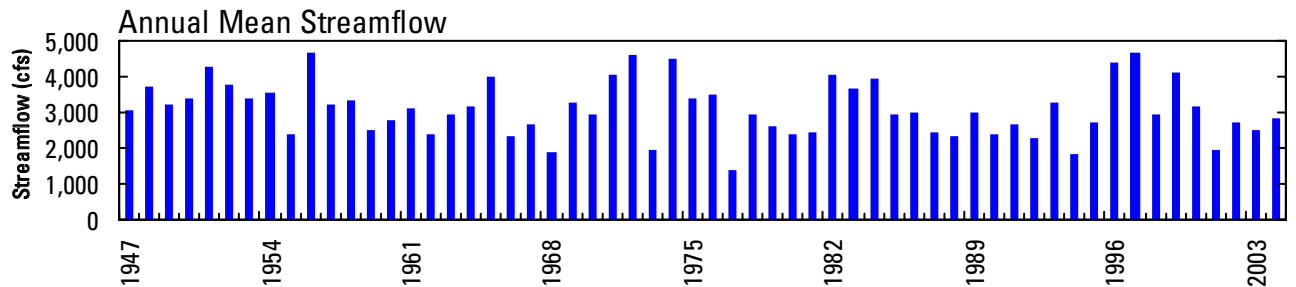
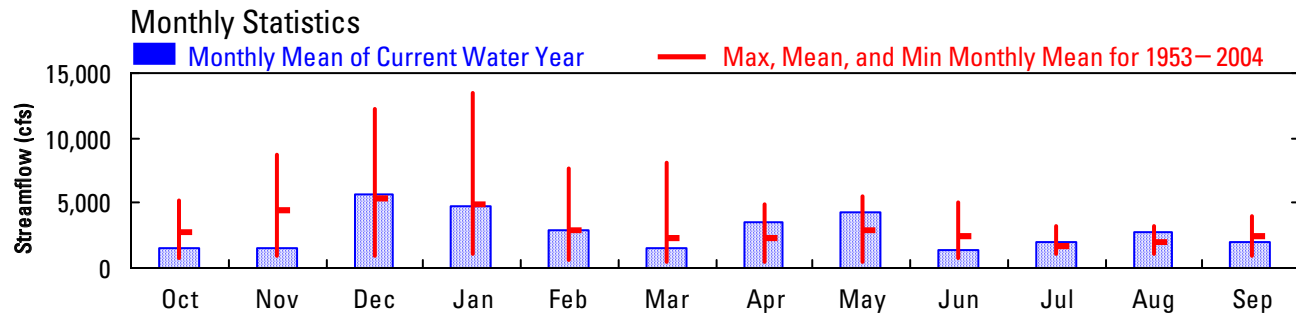
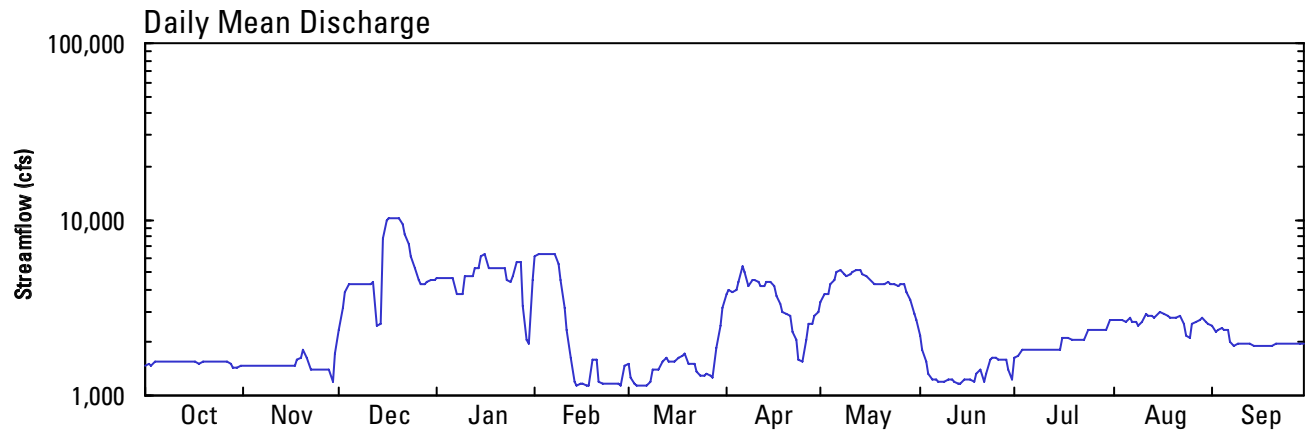
Longitude: 122° 50' 10"

Hydrologic Unit Code: 17090001

Lane County

Datum: 592.30 feet

Drainage Area: 1,001 square miles



14150000 MIDDLE FORK WILLAMETTE RIVER NEAR DEXTER, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--August 1955 to September 1997, August 2001 to current year.

INSTRUMENTATION.--Water-temperature recorder.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--Maximum, 20.5°C several days in September, 1992, Aug. 28, Sept. 15, 16, 2001; minimum recorded, 2.5°C Feb. 6-8, 1989, but may have been lower during period of missing record Feb. 9 to Mar. 30, 1989

EXTREMES FOR CURRENT YEAR.--Maximum, 19.4°C Oct. 1, Sept. 10; minimum, 5.2°C Jan. 6, 7.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	19.4	17.6	18.2	14.5	13.4	13.8	10.0	9.4	9.6	6.4	5.9	6.2
2	18.7	17.7	18.0	13.8	13.2	13.5	9.9	9.4	9.7	6.2	5.8	6.0
3	19.1	17.8	18.2	13.5	12.8	13.2	9.9	9.4	9.7	6.2	5.8	6.0
4	18.2	17.7	17.9	13.1	12.6	12.9	9.6	9.1	9.4	6.1	5.7	5.9
5	18.2	17.8	17.9	12.9	12.3	12.6	9.6	9.2	9.4	6.0	5.3	5.7
6	19.0	17.6	18.0	12.9	12.1	12.4	9.6	9.0	9.3	5.6	5.2	5.4
7	18.6	17.5	17.9	12.8	12.0	12.3	9.3	8.9	9.1	5.8	5.2	5.4
8	18.0	17.3	17.6	12.4	12.0	12.2	9.0	8.8	8.9	6.0	5.5	5.7
9	18.2	17.1	17.5	12.5	11.9	12.1	8.9	8.6	8.8	6.1	5.6	5.8
10	18.4	16.7	17.3	12.5	11.9	12.2	9.0	8.5	8.7	6.2	5.6	5.9
11	16.9	16.5	16.7	12.5	12.0	12.2	8.9	8.4	8.7	6.1	5.7	5.9
12	17.0	16.2	16.5	12.4	11.9	12.1	8.8	8.4	8.6	6.0	5.6	5.8
13	17.1	15.8	16.3	12.7	11.8	12.0	8.9	7.6	8.4	6.2	5.7	5.9
14	17.3	15.8	16.3	12.5	11.7	12.0	8.5	7.7	8.2	6.2	5.9	6.1
15	16.4	15.7	15.9	12.1	11.7	11.9	8.3	7.8	8.1	6.4	6.0	6.2
16	16.9	15.7	16.1	11.9	11.6	11.7	8.0	7.6	7.8	6.4	6.0	6.2
17	17.3	15.6	16.2	11.9	11.5	11.7	8.0	7.6	7.8	6.5	6.0	6.2
18	16.8	15.3	15.8	12.3	11.4	11.8	7.9	7.4	7.6	6.5	6.1	6.3
19	16.7	15.6	16.0	11.7	10.8	11.3	7.6	7.0	7.2	6.6	6.2	6.4
20	16.9	16.0	16.3	11.3	10.9	11.1	7.3	6.9	7.2	6.6	6.2	6.4
21	17.4	15.8	16.4	11.3	10.3	10.8	7.3	7.0	7.2	6.7	6.1	6.4
22	17.3	16.0	16.4	10.8	10.1	10.4	7.3	6.9	7.1	6.6	6.1	6.3
23	17.1	15.7	16.2	10.9	9.8	10.2	7.3	6.9	7.1	6.5	6.1	6.3
24	16.6	15.5	15.9	10.6	9.7	10.1	7.3	6.9	7.1	6.7	6.2	6.4
25	16.6	15.3	15.8	10.2	9.7	9.9	7.3	6.8	7.1	6.6	6.1	6.3
26	16.6	15.2	15.6	10.3	9.3	9.8	7.2	6.8	7.0	6.4	5.9	6.2
27	16.5	15.1	15.6	9.9	9.2	9.4	7.0	6.6	6.8	6.4	5.9	6.2
28	16.2	15.3	15.7	9.6	9.2	9.4	7.0	6.6	6.8	6.5	6.1	6.3
29	15.9	14.8	15.3	9.7	9.4	9.5	6.8	6.3	6.6	6.9	6.2	6.4
30	15.8	14.2	15.0	9.7	9.4	9.6	6.6	6.3	6.5	7.0	6.2	6.4
31	15.3	13.6	14.3	---	---	---	6.6	6.2	6.4	6.6	6.1	6.3
MONTH	19.4	13.6	16.5	14.5	9.2	11.5	10.0	6.2	8.0	7.0	5.2	6.1

14150800 WINBERRY CREEK NEAR LOWELL, OR

LOCATION.--Lat 43°54'52", long 122°41'15", in NE ¼ SE ¼ sec.16, T.19 S., R.1 E., Lane County, Hydrologic Unit 17090001, on right bank 0.9 mi upstream from Nelson Creek, 4.6 mi east of Lowell, and at mile 4.4.

DRAINAGE AREA.--43.9 mi².

PERIOD OF RECORD.--August 1963 to September 1981, October 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 863.70 ft above NGVD of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--22 years (water years 1964-1981, 2001-04), 114 ft³/s, 35.30 in/yr, 82,640 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s Dec. 22, 1964, gage height, 8.07 ft; minimum discharge, 1.5 ft³/s Sept. 4, 5, 8-10, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 29	1030	1,140	4.33	Jan 28	2100	1,520	4.85
Dec 13	1830	*3,030	*6.70				

Minimum discharge, 2.7 ft³/s, Oct. 1-6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	5.7	247	263	428	195	109	53	172	22	6.5	8.3
2	2.8	6.7	180	221	397	e180	92	49	132	20	6.3	9.5
3	2.8	13	192	170	366	e170	82	46	107	20	6.3	10
4	2.8	8.6	164	142	340	263	74	43	88	19	6.2	8.3
5	2.8	8.1	186	122	297	334	69	40	78	18	7.1	7.5
6	2.8	14	362	163	256	300	63	37	78	17	6.9	7.1
7	e4.0	11	296	456	260	248	58	36	104	17	6.7	6.6
8	e5.0	11	296	541	235	213	54	40	176	16	6.1	6.3
9	e7.5	11	238	571	195	189	51	37	271	15	5.6	6.1
10	9.1	9.4	295	448	164	e160	49	46	535	15	5.3	6.0
11	7.8	48	199	323	142	e130	48	126	402	14	5.1	7.2
12	15	39	251	284	126	121	e49	105	264	13	5.0	13
13	10	20	1,490	254	113	108	e48	79	189	13	4.9	19
14	7.1	14	1,150	281	102	98	54	65	145	12	4.8	35
15	6.7	13	541	e300	101	91	68	56	116	12	4.6	42
16	9.8	18	322	e260	133	83	72	60	96	11	4.6	35
17	6.6	94	274	205	291	79	71	52	80	11	4.4	41
18	5.0	61	272	184	369	78	98	201	68	10	4.3	93
19	4.6	57	245	276	403	77	92	369	59	10	4.3	55
20	4.5	66	225	315	313	69	135	227	51	10	4.3	43
21	4.1	54	181	242	229	67	226	157	46	9.4	4.2	34
22	4.1	41	145	185	176	68	227	125	42	8.9	18	27
23	11	29	122	390	154	69	169	119	41	8.4	20	22
24	7.5	49	126	848	129	74	131	98	38	7.9	20	20
25	5.5	69	154	593	115	73	107	83	34	7.6	14	17
26	4.6	131	163	390	113	79	93	75	31	7.4	62	16
27	4.1	92	143	575	111	106	84	109	28	7.2	33	15
28	3.8	80	218	927	161	104	75	811	26	7.1	17	14
29	6.0	826	676	1,150	164	89	66	709	25	6.8	12	13
30	11	401	383	843	---	111	59	381	23	6.7	10	12
31	7.1	---	251	578	---	129	---	243	---	6.6	8.8	---
TOTAL	188.3	2,300.5	9,987	12,500	6,383	4,155	2,673	4,677	3,545	379.0	328.3	648.9
MEAN	6.07	76.7	322	403	220	134	89.1	151	118	12.2	10.6	21.6
MAX	15	826	1,490	1,150	428	334	227	811	535	22	62	93
MIN	2.8	5.7	122	122	101	67	48	36	23	6.6	4.2	6.0
AC-FT	373	4,560	19,810	24,790	12,660	8,240	5,300	9,280	7,030	752	651	1,290
CFSM	0.14	1.75	7.34	9.19	5.01	3.05	2.03	3.44	2.69	0.28	0.24	0.49
IN.	0.16	1.95	8.46	10.59	5.41	3.52	2.27	3.96	3.00	0.32	0.28	0.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																															
24.1	82.6	(1969)	5.70	(2003)	129	429	(1974)	19.2	(2003)	228	668	(1965)	16.3	(1977)	264	512	(1971)	32.1	(1977)	161	311	(1979)	57.8	(1978)	80.4	(1968)	116	258	(1977)	35.8	(1966)	60.1	170	(1964)	14.3	(1966)	16.1	46.8	(1969)	5.46	(2003)	10.4	33.0	(1978)	3.31	(2003)	14.0	73.1	(1978)	3.68	(2001)

14150800 WINBERRY CREEK NEAR LOWELL, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	39,338.7		47,765.0		114	
ANNUAL MEAN	108		131		182	
HIGHEST ANNUAL MEAN					57.9	
LOWEST ANNUAL MEAN					2001	
HIGHEST DAILY MEAN	1,490	Dec 13	1,490	Dec 13	3,130	Dec 22, 1964
LOWEST DAILY MEAN	2.1	Sep 5	2.8	Oct 1	2.0	Sep 9, 1967
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 31	3.0	Oct 1	2.2	Aug 30, 1967
ANNUAL RUNOFF (AC-FT)	78,030		94,740		82,640	
ANNUAL RUNOFF (CFSM)	2.46		2.97		2.60	
ANNUAL RUNOFF (INCHES)	33.33		40.48		35.30	
10 PERCENT EXCEEDS	281		317		268	
50 PERCENT EXCEEDS	48		68		58	
90 PERCENT EXCEEDS	3.1		6.3		6.2	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14150800 WINBERRY CREEK NEAR LOWELL, OR

Latitude: 43° 54 ' 52 "

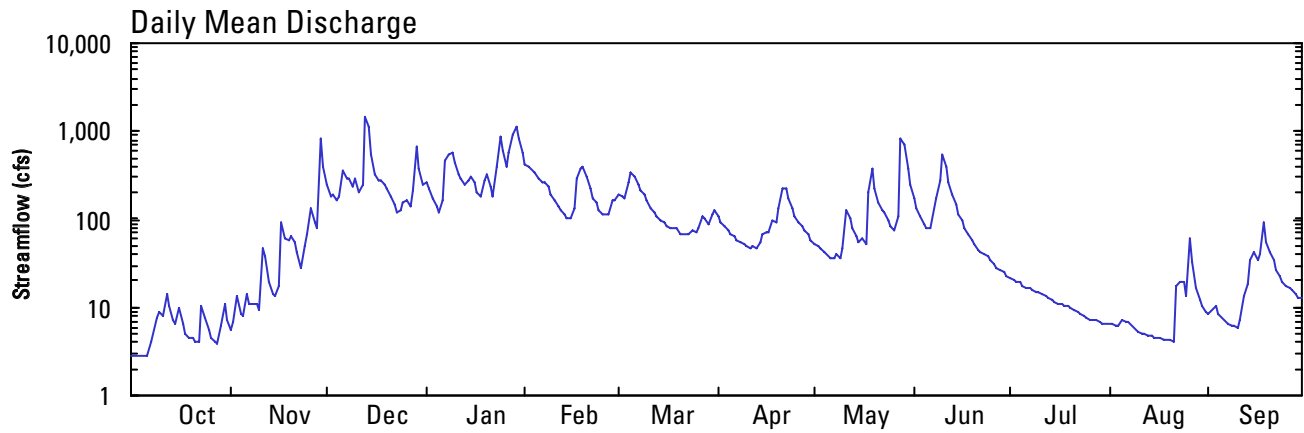
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Hydrologic Unit Code: 17090001

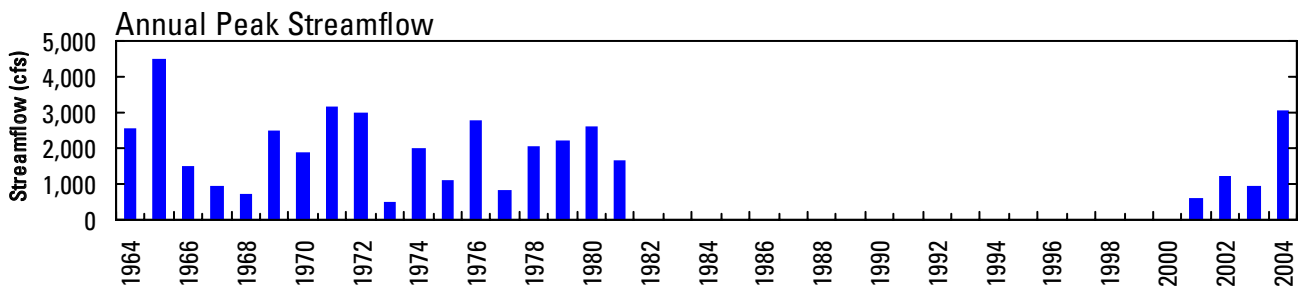
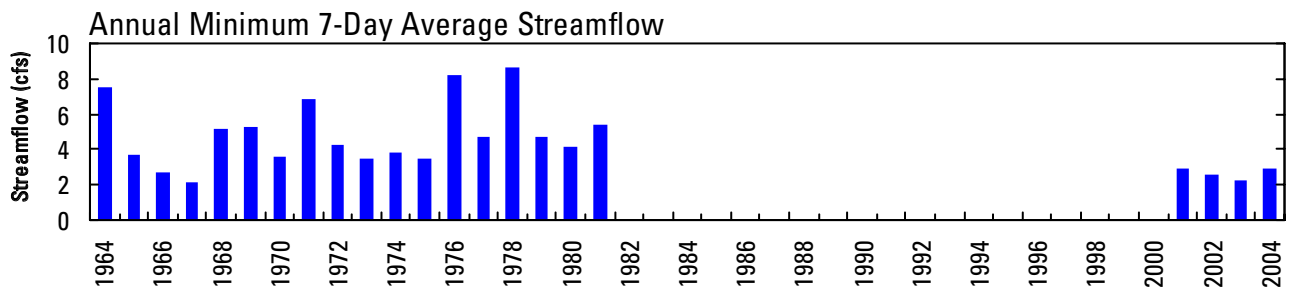
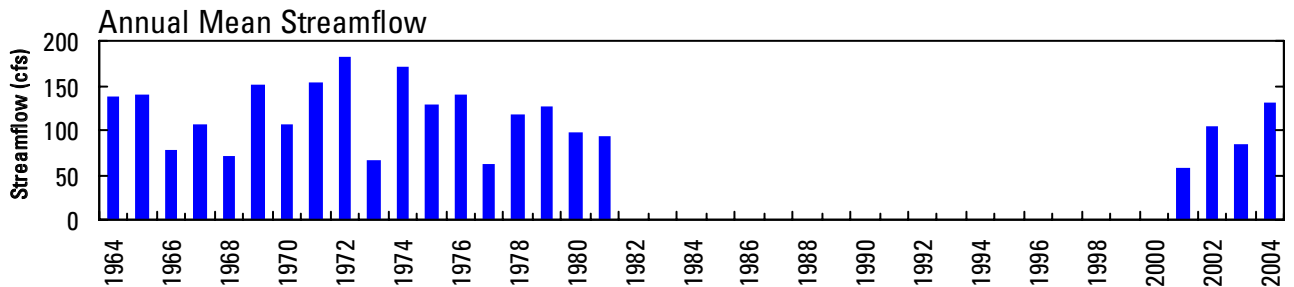
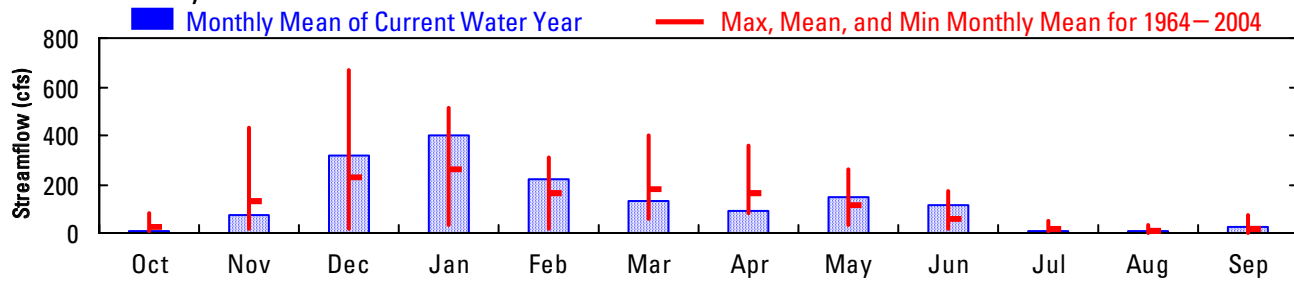
Lane County

Datum: 863.70 feet

Drainage Area: 43.9 square miles



Monthly Statistics



14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR

LOCATION.--Lat 43°56'40", long 122°46'25", in NW ¼ SE ¼ sec.2, T.19 S., R.1 W., Lane County, Hydrologic Unit 17090001, on right bank 10 ft upstream from highway bridge, 1.1 mi downstream from Fall Creek Dam, 2.3 mi southeast of town of Fall Creek, and at mile 6.1.

DRAINAGE AREA.--186 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October to December 1911 (published as Big Fall Creek near Fall Creek; gage heights and discharge measurements only), September 1935 to current year.

REVISED RECORDS.--WSP 1094: 1946(M). WSP 1248: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 637.81 ft above NGVD of 1929 (Corps of Engineers bench mark). Oct. 1 to Dec. 31, 1911, nonrecording gage at site 0.25 mi downstream at different datum. Sept. 9, 1935, to Aug. 3, 1950, nonrecording gage on left bank at present site and datum. Aug. 4, 1950 to Aug. 27, 1982 water-stage recorder. Aug. 27, 1982 gage moved to right bank at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated since 1966 by Fall Creek Lake (station 14150900). No diversion upstream from station.

AVERAGE DISCHARGE.--69 years (water years 1936-2004), 575 ft³/s, 41.98 in/yr, 416,600 acre-ft/yr, adjusted for storage in Fall Creek Lake since January 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,700 ft³/s Dec. 11, 1956, gage height, 18.80 ft, from rating curve extended above 9,700 ft³/s; minimum discharge, 1.5 ft³/s Oct. 7, 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3530 ft³/s Dec. 31, gage height, 6.99 ft; minimum discharge, 42 ft³/s Apr. 30 to May 10.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	509	191	1,320	1,340	1,630	133	55	43	553	72	362	292
2	505	191	1,480	1,240	1,640	132	44	42	553	72	362	292
3	478	191	1,370	941	1,640	133	44	42	554	72	352	292
4	417	191	1,280	716	1,640	136	44	42	606	72	349	290
5	415	191	1,270	712	1,640	137	44	42	607	72	351	289
6	412	188	1,270	710	1,640	510	44	42	607	72	424	365
7	410	188	1,280	1,320	1,630	516	44	42	564	72	456	398
8	407	188	1,220	1,570	1,230	510	44	42	644	72	455	397
9	406	188	1,110	1,610	1,040	511	44	42	928	138	454	418
10	404	188	1,310	1,640	990	511	43	43	1,230	246	454	456
11	402	186	1,520	1,650	897	508	43	440	1,380	246	453	455
12	400	247	1,590	1,650	633	452	43	451	1,370	246	453	444
13	398	371	1,150	1,640	356	400	43	454	1,180	245	452	394
14	397	523	1,120	1,630	299	400	44	466	839	245	451	392
15	395	561	2,930	1,640	300	301	45	414	499	245	450	392
16	394	555	2,970	1,550	305	145	45	410	278	244	450	389
17	390	597	2,950	1,410	319	96	45	411	197	243	449	383
18	390	674	2,890	1,400	321	96	45	411	197	243	448	394
19	394	795	2,840	1,570	323	78	45	412	197	247	446	415
20	346	748	2,770	1,630	324	56	47	411	197	297	446	416
21	283	661	2,180	1,610	326	56	52	411	197	297	445	415
22	306	628	e1,240	1,590	326	56	49	411	197	296	448	415
23	304	751	627	1,580	328	56	48	411	274	332	367	414
24	304	892	599	1,860	329	57	47	411	375	363	300	413
25	303	428	651	2,010	328	57	47	411	374	362	300	411
26	301	99	1,090	2,240	330	57	46	411	374	361	300	411
27	300	102	712	2,390	330	58	45	417	373	361	299	411
28	298	105	1,010	1,540	181	58	45	353	371	359	352	410
29	296	551	1,490	535	130	58	44	146	123	362	356	409
30	258	1,150	2,350	774	---	60	43	288	72	362	329	408
31	191	---	2,970	1,630	---	59	---	554	---	362	292	---
TOTAL	11,413	12,519	50,559	45,328	21,405	6,393	1,361	8,926	15,910	7,278	12,305	11,680
MEAN	368	417	1,631	1,462	738	206	45.4	288	530	235	397	389
MAX	509	1,150	2,970	2,390	1,640	516	55	554	1,380	363	456	456
MIN	191	99	599	535	130	56	43	42	72	72	292	289
AC-FT	22,640	24,830	100,300	89,910	42,460	12,680	2,700	17,700	31,560	14,440	24,410	23,170
MEAN†	54.0	394	1,542	1,883	1,129	631	396	535	457	47.8	58.2	112
CFSM†	0.29	2.12	8.29	10.1	6.07	3.39	2.13	2.88	2.46	0.26	0.31	0.60
IN.†	0.33	2.36	9.56	11.67	6.55	3.91	2.37	3.32	2.74	0.30	0.36	0.67
ACFT†	3,320	23,420	94,810	115,800	64,980	38,800	23,550	32,900	27,160	2,940	3,580	6,640

CAL YR2003 TOTAL 209923 MEAN 575 MAX 2970 MIN 49 AC-FT 416400 MEAN† 571 CFSM† 3.07 IN.† 41.71 AC-FT† 413800
WTR YR2004 TOTAL 205077 MEAN 560 MAX 2970 MIN 42 AC-FT 406800 MEAN† 603 CFSM† 3.24 IN.† 44.14 AC-FT† 437900

e Estimated.

† Adjusted for change in contents, in Fall Creek Lake. Data provided by the U.S. Army Corps of Engineers.



2004 Water Year
WILLAMETTE RIVER BASIN

14151000 FALL CREEK BLW WINBERRY CREEK, NEAR FALL CREEK, OR

Latitude: 43° 56 ' 40"

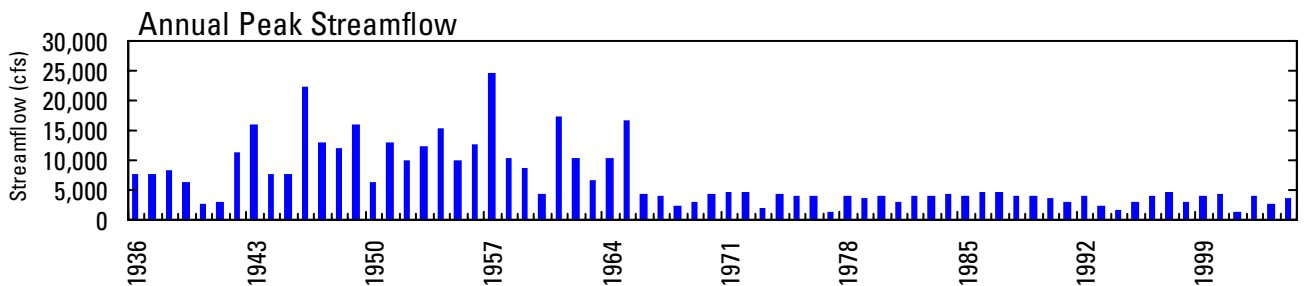
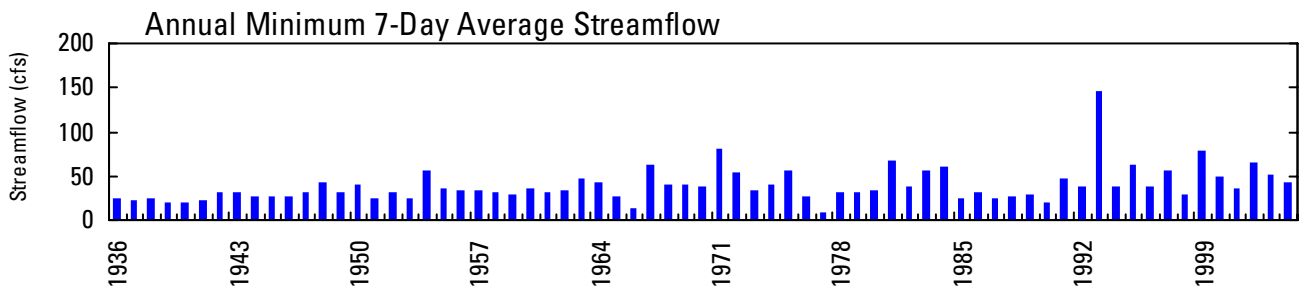
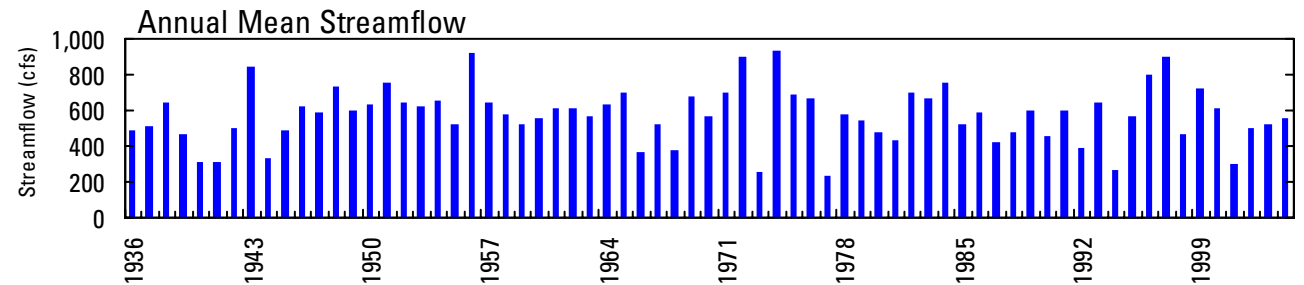
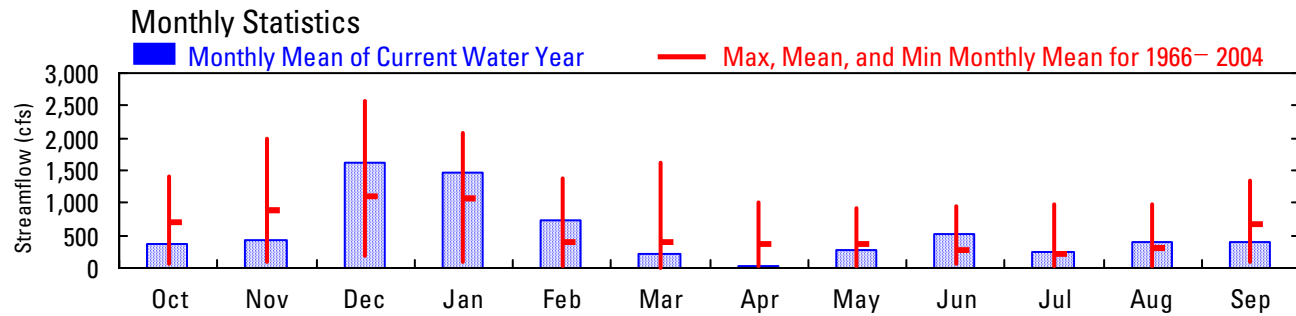
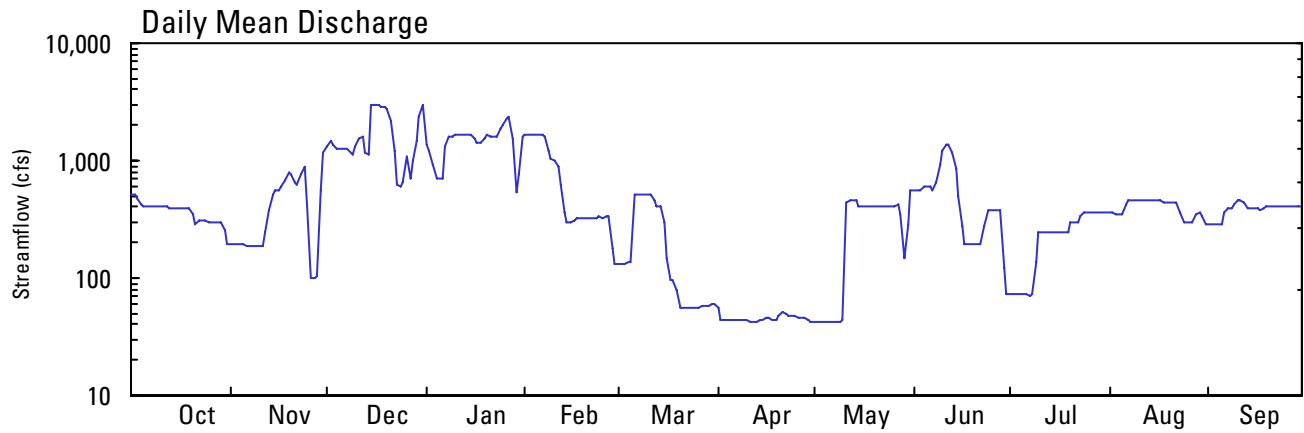
Longitude: 122° 46 ' 25"

Hydrologic Unit Code: 17090001

Lane County

Datum: 637.81 feet

Drainage Area: 186 square miles



14151000 FALL CREEK BELOW WINBERRY CREEK, NEAR FALL CREEK, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1950 to September 1997. August 2001 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--Records good except those for the period Jan. 13 to June 22, which are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.0°C July 28, 1958; minimum, 0.0°C Dec. 23, 24, 1990.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 18.6°C Oct. 7, 9, 10; minimum, 4.6°C Jan. 7.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.5	15.6	16.1	14.5	13.5	14.1	7.8	7.3	7.5	6.1	5.3	5.7
2	16.9	16.2	16.6	13.7	13.0	13.3	8.3	7.7	8.0	5.6	5.2	5.4
3	17.5	16.8	17.2	13.2	12.3	12.8	8.3	7.7	8.0	5.3	4.9	5.1
4	17.9	17.2	17.6	12.5	11.8	12.2	8.5	8.1	8.3	5.3	4.8	5.0
5	18.2	17.7	17.9	12.0	11.3	11.7	8.6	8.0	8.3	5.2	4.8	5.0
6	18.5	18.0	18.2	11.7	11.4	11.6	8.7	8.1	8.4	5.1	4.7	4.9
7	18.6	18.2	18.4	11.6	11.2	11.4	8.6	8.2	8.4	5.1	4.6	4.8
8	18.5	18.3	18.4	11.5	11.1	11.3	8.4	8.0	8.2	5.7	4.9	5.3
9	18.6	18.4	18.5	11.4	11.1	11.3	8.3	7.9	8.1	6.2	5.3	5.8
10	18.6	18.0	18.4	11.5	11.1	11.3	8.1	7.7	7.9	6.6	6.1	6.4
11	18.2	17.6	18.0	11.5	11.0	11.3	8.1	7.7	7.8	6.7	6.3	6.5
12	17.8	17.2	17.6	11.4	11.0	11.2	8.0	7.6	7.8	6.6	6.3	6.4
13	17.3	16.9	17.1	11.4	11.0	11.2	9.0	6.8	8.0	6.7	6.3	6.5
14	17.2	16.7	17.0	11.5	11.1	11.3	8.1	6.9	7.7	6.8	6.4	6.6
15	17.0	16.7	16.9	11.5	11.1	11.2	8.0	7.6	7.8	7.0	6.6	6.8
16	17.1	16.3	16.8	11.3	10.9	11.1	8.0	7.5	7.7	7.3	6.7	7.0
17	16.6	16.2	16.4	11.1	10.2	10.7	7.7	7.3	7.5	7.3	6.8	7.0
18	16.7	16.2	16.4	10.4	10.0	10.2	7.5	6.9	7.2	7.2	6.7	6.9
19	16.8	16.3	16.5	10.6	10.0	10.3	7.2	6.8	7.0	7.3	6.7	7.0
20	16.9	16.5	16.7	10.3	9.4	9.9	7.1	6.8	7.0	7.3	6.8	7.1
21	17.1	16.5	16.7	9.4	8.5	9.0	7.5	7.0	7.3	7.1	6.6	6.9
22	17.0	16.4	16.7	8.8	8.3	8.6	7.5	7.0	7.3	7.0	6.5	6.7
23	16.8	16.2	16.5	8.5	8.1	8.4	7.3	6.9	7.1	6.9	6.3	6.6
24	16.7	16.2	16.4	8.5	7.8	8.2	7.2	6.9	7.1	6.7	6.2	6.4
25	16.6	16.1	16.3	8.2	7.2	7.8	7.1	6.8	6.9	7.0	6.6	6.8
26	16.4	15.9	16.2	7.3	6.5	6.9	7.1	6.6	6.8	6.9	6.5	6.7
27	16.4	15.9	16.1	7.5	6.7	7.0	6.9	6.4	6.7	6.7	6.3	6.6
28	16.4	15.9	16.1	7.4	6.9	7.2	6.6	6.2	6.3	7.1	6.3	6.8
29	16.2	15.8	16.0	7.4	6.7	7.1	6.3	5.8	6.1	7.9	7.0	7.3
30	16.1	15.2	15.8	7.8	7.0	7.5	6.1	5.8	6.0	7.4	7.0	7.2
31	15.4	14.5	15.0	---	---	---	6.2	5.8	6.0	7.6	7.1	7.4
MONTH	18.6	14.5	16.9	14.5	6.5	10.2	9.0	5.8	7.4	7.9	4.6	6.3

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004	
ANNUAL TOTAL	1,409,720		1,420,870			
ANNUAL MEAN	3,862		3,882		4,118	
HIGHEST ANNUAL MEAN					6,722	1997
LOWEST ANNUAL MEAN					1,877	1977
HIGHEST DAILY MEAN	15,000	Dec 16	15,000	Dec 16	38,600	Dec 27, 1964
LOWEST DAILY MEAN	1,450	Mar 2	1,420	Jun 30	536	Apr 30, 1977
ANNUAL SEVEN-DAY MINIMUM	1,500	Feb 27	1,600	Mar 22	555	Apr 24, 1977
ANNUAL RUNOFF (AC-FT)	2,796,000		2,818,000		2,983,000	
10 PERCENT EXCEEDS	7,420		8,170		8,430	
50 PERCENT EXCEEDS	2,770		2,770		2,950	
90 PERCENT EXCEEDS	1,820		1,810		1,540	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR

Latitude: 43° 59 ' 54"

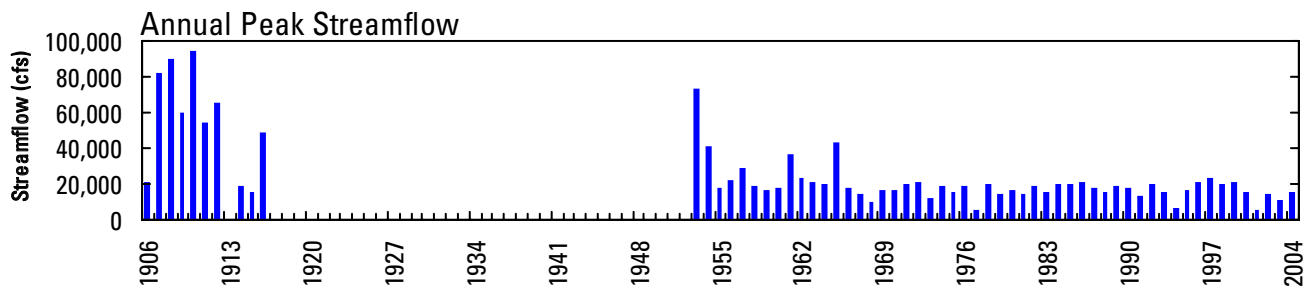
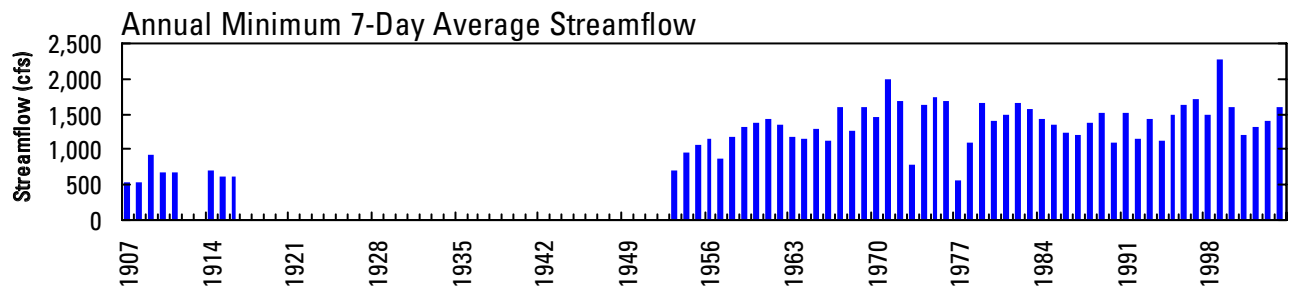
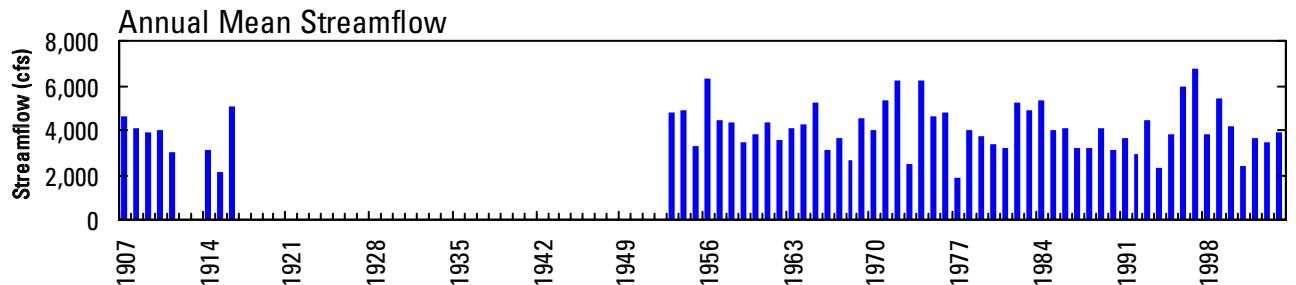
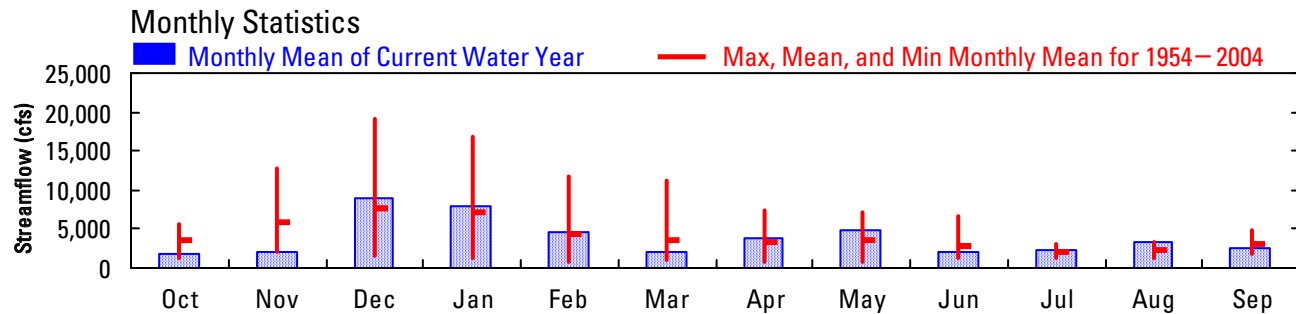
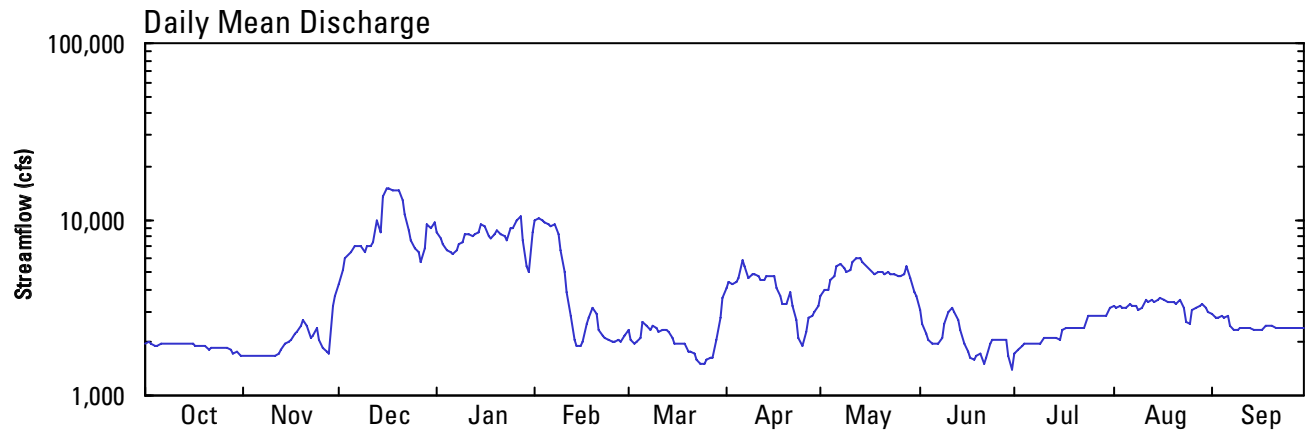
Longitude: 122° 54 ' 17"

Hydrologic Unit Code: 17090001

Lane County

Datum: 513.45 feet

Drainage Area: 1,340 square miles



14152000 MIDDLE FORK WILLAMETTE RIVER AT JASPER, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Oct. 1953 to Dec. 1962, Oct. 1963 to Sept. 1987, Oct. 2000 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 21.4°C Aug. 9, 2001; minimum, 1.5°C Jan. 25-27, 1969.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.8°C Oct. 6; minimum, 7.5°C Nov. 27, but may have been lower during period of missing record.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	19.6	16.4	17.6	13.8	11.8	12.6	9.1	8.5	8.7	---	---	---
2	18.3	16.9	17.4	12.7	11.9	12.3	9.2	8.6	8.9	---	---	---
3	19.2	17.3	17.9	12.8	11.4	12.0	---	---	---	---	---	---
4	18.1	17.2	17.6	12.2	11.3	11.7	---	---	---	---	---	---
5	18.2	17.4	17.7	11.9	11.5	11.7	---	---	---	---	---	---
6	19.8	17.5	18.2	12.1	11.0	11.5	---	---	---	---	---	---
7	19.2	17.2	18.0	12.0	11.1	11.6	---	---	---	---	---	---
8	18.0	16.7	17.3	11.9	11.3	11.5	---	---	---	---	---	---
9	18.0	16.6	17.1	12.1	11.2	11.5	---	---	---	---	---	---
10	18.7	16.2	17.0	12.2	11.4	11.7	---	---	---	---	---	---
11	16.4	15.9	16.2	12.4	11.5	11.8	---	---	---	---	---	---
12	17.0	15.6	16.1	11.8	11.3	11.5	---	---	---	---	---	---
13	16.9	14.9	15.8	12.3	10.9	11.4	---	---	---	---	---	---
14	17.8	15.3	16.1	12.3	11.0	11.5	---	---	---	---	---	---
15	16.2	15.1	15.5	11.7	11.1	11.3	---	---	---	---	---	---
16	17.3	15.2	15.9	11.3	10.9	11.1	---	---	---	---	---	---
17	17.9	15.4	16.2	11.1	10.6	10.8	---	---	---	---	---	---
18	17.5	14.8	15.8	12.0	10.7	11.1	---	---	---	---	---	---
19	17.1	15.4	16.1	10.9	9.5	10.3	---	---	---	---	---	---
20	17.7	16.0	16.7	10.0	9.5	9.7	---	---	---	---	---	---
21	18.3	15.7	16.7	10.1	8.6	9.5	---	---	---	---	---	---
22	17.6	16.1	16.6	9.5	8.5	8.9	---	---	---	---	---	---
23	17.5	15.2	16.1	9.6	8.2	8.7	---	---	---	---	---	---
24	16.8	14.8	15.5	9.2	8.2	8.6	---	---	---	---	---	---
25	16.9	14.5	15.4	8.9	8.2	8.5	---	---	---	---	---	---
26	16.9	14.4	15.4	9.1	8.0	8.5	---	---	---	---	---	---
27	17.0	14.5	15.5	8.7	7.5	8.1	---	---	---	---	---	---
28	16.6	15.0	15.7	9.3	8.3	8.8	---	---	---	---	---	---
29	15.6	14.1	14.9	9.1	8.7	8.8	---	---	---	---	---	---
30	15.5	13.2	14.2	8.8	8.6	8.7	---	---	---	---	---	---
31	14.7	12.5	13.2	---	---	---	---	---	---	---	---	---
MONTH	19.8	12.5	16.3	13.8	7.5	10.5	---	---	---	---	---	---

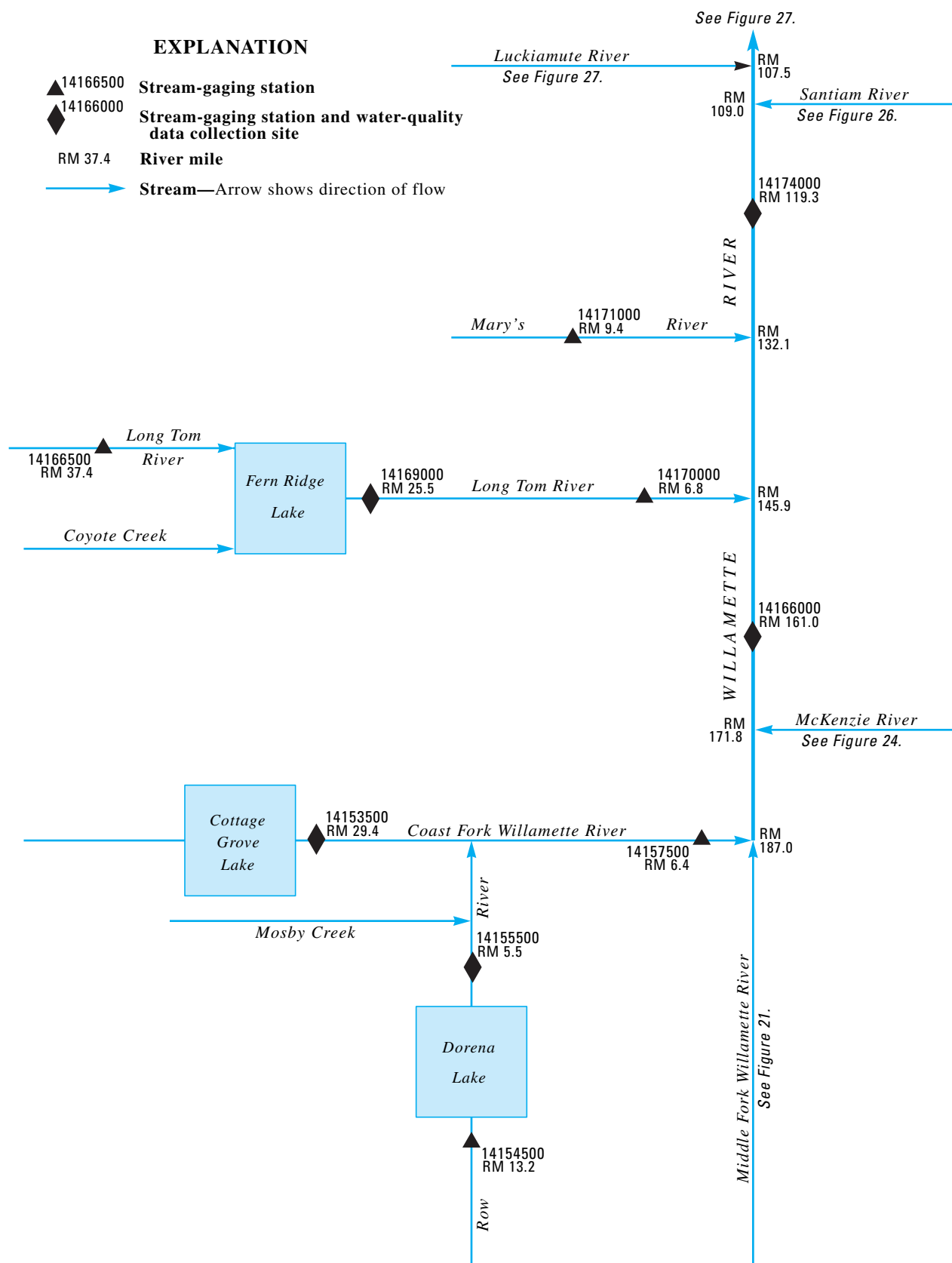


Figure 23. Schematic diagram showing gaging stations in the Long Tom, Coast Fork Willamette and upper Willamette River Basins.

14153500 COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM, OR

LOCATION.--Lat 43°43'15", long 123°02'55", in NE ¼ sec.28, T.21 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank at bridge 0.3 mi downstream from Cottage Grove Dam, 5.5 mi south of Cottage Grove, and at mile 29.4.

DRAINAGE AREA.--104 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1939 to current year. Prior to October 1944, published as "near Cottage Grove."

REVISED RECORDS.--WSP 1448: 1949(M).

GAGE.--Water-stage recorder. Datum of gage is 711.00 ft above NGVD of 1929 (Corps of Engineers bench mark). Jan. 1 to Oct. 12, 1939, nonrecording gage and Oct. 13, 1939 to Sept. 30, 1944, water-stage recorder at several sites and datums 0.8 mi downstream.

REMARKS.--Records good. Flow regulated since 1942 by Cottage Grove Lake (station 14153000). Small diversions for irrigation upstream from station. Discharges for the periods Dec. 12-31, Apr. 20 to May 5, computed from data obtained through U.S. Army Corps of Engineers Columbia River Operational Hydromet System (CROHMS) database.

AVERAGE DISCHARGE.--65 years (water years 1940-2004), 264 ft³/s, 34.47 in/yr, 191,300 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft³/s Dec. 24, 1964, gage height, 11.83 ft; no flow July 5-7, 1945, and for part of Aug. 24, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,340 ft³/s Dec. 14, gage height, 7.73 ft; minimum discharge, 22 ft³/s July 21, 22.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	63	317	751	903	154	78	74	71	58	91	53
2	109	62	188	884	899	165	78	74	e143	58	91	53
3	109	62	172	841	817	341	77	74	160	58	91	53
4	109	62	172	524	509	401	76	74	156	58	91	53
5	109	61	174	491	428	401	76	73	132	58	91	54
6	108	60	436	375	358	491	76	71	103	58	103	88
7	87	60	499	800	332	495	76	71	103	58	115	130
8	52	60	502	1,010	235	328	76	71	132	58	115	157
9	52	60	499	1,030	237	197	76	71	244	58	115	157
10	52	60	557	1,020	258	198	76	71	466	58	115	157
11	52	59	582	889	275	198	76	71	488	58	115	157
12	52	58	436	695	407	156	76	71	174	58	115	157
13	52	59	373	474	418	115	76	71	83	58	115	156
14	72	69	770	428	386	115	78	71	83	58	115	155
15	103	69	1,760	428	383	96	78	69	84	58	115	155
16	126	69	1,770	419	336	87	77	69	84	58	114	155
17	207	87	1,590	367	392	87	76	69	83	58	113	155
18	209	113	1,180	341	560	87	76	70	85	58	113	154
19	206	157	930	296	626	87	76	71	85	58	113	153
20	233	235	765	405	600	87	76	71	81	58	113	154
21	228	234	388	405	525	87	76	69	70	29	113	153
22	261	220	263	449	395	79	e76	69	71	52	113	153
23	259	159	263	502	395	74	e76	69	69	43	78	153
24	260	121	263	717	477	76	e76	69	69	44	53	153
25	257	103	294	846	313	76	76	69	63	45	53	153
26	254	103	541	786	146	76	76	69	58	45	53	151
27	258	103	592	719	146	76	76	69	58	45	53	204
28	258	103	427	749	150	76	76	69	58	45	97	287
29	208	283	806	465	151	76	e75	71	58	45	107	287
30	146	394	1,210	441	---	78	e74	69	58	68	86	284
31	117	---	996	905	---	78	---	69	---	91	53	---
TOTAL	4,714	3,408	19,715	19,452	12,057	5,138	2,287	2,188	3,672	1,712	3,018	4,484
MEAN	152	114	636	627	416	166	76.2	70.6	122	55.2	97.4	149
MAX	261	394	1,770	1,030	903	495	78	74	488	91	115	287
MIN	52	58	172	296	146	74	74	69	58	29	53	53
AC-FT	9,350	6,760	39,100	38,580	23,920	10,190	4,540	4,340	7,280	3,400	5,990	8,890
MEAN†	29.1	604	136	670	519	293	213	130	126	21.6	21.6	32.9
CFSM†	0.28	5.80	1.31	6.45	4.99	2.82	2.04	1.24	1.21	0.21	0.21	0.32
IN.†	0.32	6.48	1.51	7.44	5.39	3.25	2.28	1.44	1.35	0.24	0.24	0.35
AC-FT†	1,790	35,910	8,380	41,230	29,870	18,040	12,670	7,960	7,480	1,330	1,330	1,960

CAL YR2003 TOTAL 92321 MEAN 253 MAX 1770 MIN 22 AC-FT 183100 MEAN† 249 CFSM† 2.39 IN.† 32.50 AC-FT† 180200
WTR YR2004 TOTAL 81845 MEAN 224 MAX 1770 MIN 29 AC-FT 162300 MEAN† 231 CFSM† 2.22 IN.† 30.28 AC-FT† 167900

† Adjusted for change in contents, in Cottage Grove Lake.

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14153500 COAST FORK WILLAMETTE R BLW COTTAGE GROVE DAM, OR

Latitude: 43° 43 ' 15"

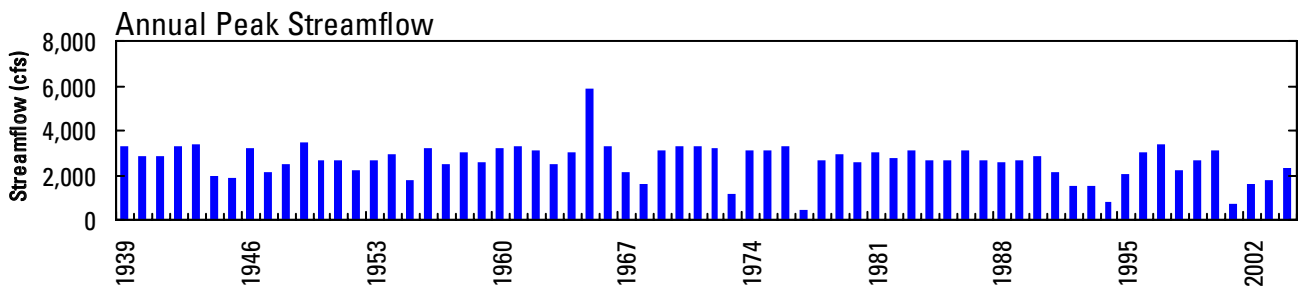
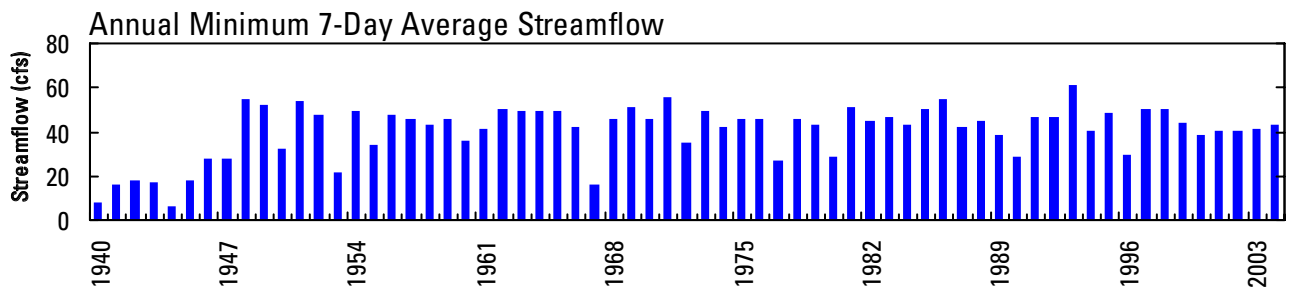
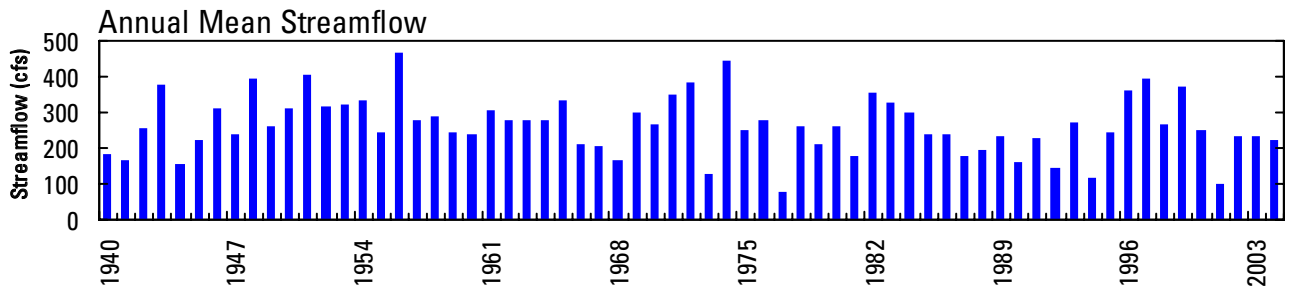
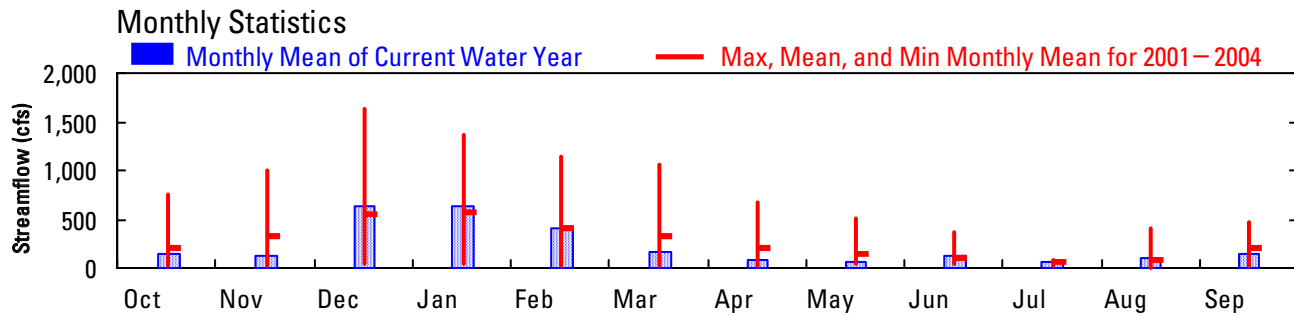
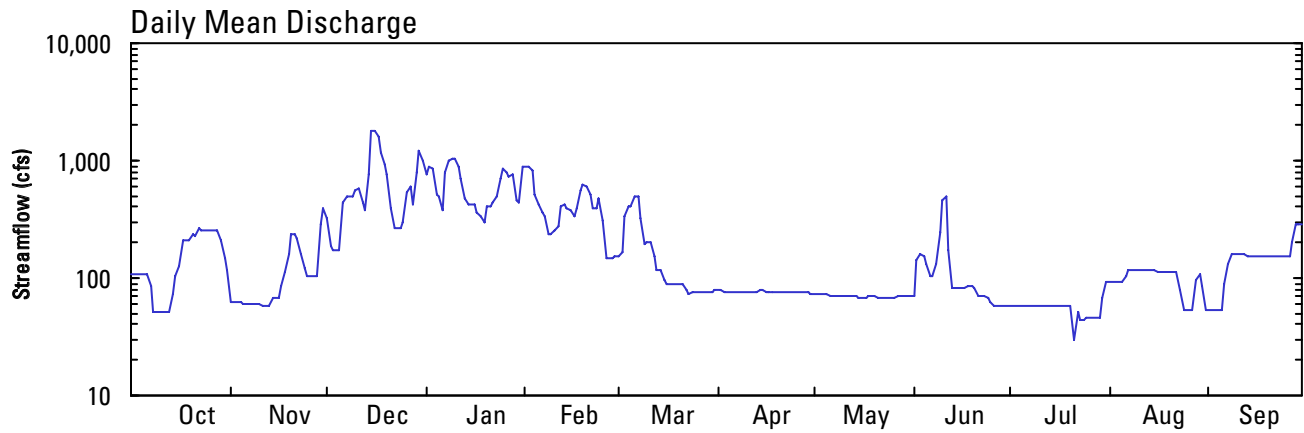
Longitude: 123° 02 ' 55"

Hydrologic Unit Code: 17090002

Lane County

Datum: 711.00 feet

Drainage Area: 104 square miles



14153500 COAST FORK WILLAMETTE RIVER BELOW COTTAGE GROVE DAM, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 2001 to current year.

INSTRUMENTATION.--Temperature recorder since August 2001.

REMARKS.--Records fair except those for the period Oct. 1 to Nov. 3, which are poor.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 22.0°C Aug. 31, Sept. 2, 15, 2001; minimum recorded, 4.5°C Jan 7, 2004, but may have been lower during periods of missing record.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 20.7°C Sept. 14, 16; minimum recorded, 4.5°C Jan. 7, but may have been lower during periods of missing record.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.1	19.1	19.4	13.4	12.4	12.8	8.2	7.7	7.9	---	---	---
2	19.8	19.1	19.3	12.5	11.8	11.9	8.4	7.8	8.1	---	---	---
3	19.7	19.2	19.3	12.0	10.9	11.6	8.5	7.9	8.2	---	---	---
4	19.7	19.1	19.2	11.0	10.3	10.8	8.5	8.1	8.4	---	---	---
5	19.3	19.0	19.1	10.4	9.8	10.2	9.2	8.3	8.7	---	---	---
6	19.6	18.8	19.0	10.1	9.8	9.9	9.2	8.7	8.9	5.4	4.8	5.1
7	19.4	18.8	18.9	10.4	9.8	10	8.8	8.4	8.6	5.1	4.5	4.7
8	19.2	18.2	18.5	10.0	9.6	9.8	8.6	8.2	8.3	6.4	5.1	5.8
9	18.8	18.0	18.3	10.2	9.6	9.8	8.2	7.9	8.0	7.0	6.4	6.8
10	18.7	17.5	17.9	10.1	9.6	9.9	8.1	7.9	8.0	7.4	6.9	7.2
11	18.6	17.0	17.3	10.3	9.8	10.1	8.0	7.8	7.9	7.6	7.1	7.4
12	17.5	16.8	17.1	10.2	9.8	9.9	---	---	---	7.4	6.9	7.2
13	17.5	16.5	16.9	10.4	9.7	9.9	---	---	---	7.4	7.2	7.3
14	17.2	16.0	16.4	10.4	9.7	9.9	---	---	---	7.7	7.2	7.4
15	16.7	15.9	16.1	10.2	9.8	10	7.9	7.6	7.8	8.3	7.7	8.0
16	16.8	15.9	16.1	9.9	9.8	9.9	---	---	---	8.6	8.1	8.3
17	17.0	16.2	16.4	10.0	9.7	9.9	---	---	---	8.5	8.2	8.4
18	16.9	16.3	16.5	10.4	9.8	10.0	7.4	7.2	7.3	8.5	8.0	8.2
19	16.5	16.0	16.2	10.1	9.5	9.9	7.4	7.3	7.3	8.5	8.0	8.2
20	17.1	16.1	16.4	9.7	9.1	9.5	7.5	7.2	7.3	8.5	8.1	8.3
21	17.4	16.6	16.8	9.2	8.4	8.9	8.0	7.5	7.9	8.4	8.1	8.2
22	17.3	16.6	16.8	8.4	7.9	8.2	8.0	7.4	7.8	8.3	7.8	7.9
23	17.2	16.8	16.9	8.1	7.5	7.8	7.5	7.2	7.4	7.8	7.1	7.4
24	16.9	16.5	16.6	8.2	7.5	7.7	7.5	7.2	7.4	7.8	7.4	7.7
25	16.7	16.1	16.3	7.6	7.2	7.4	7.4	7.1	7.3	7.8	7.4	7.6
26	16.2	15.8	15.9	7.6	7.1	7.3	7.2	6.9	7.1	7.5	7.1	7.2
27	16.0	15.5	15.7	7.2	7.0	7.1	6.9	6.3	6.6	7.3	6.9	7.0
28	15.9	15.6	15.7	7.5	7.0	7.2	---	---	---	7.8	7.3	7.5
29	15.9	15.5	15.8	7.3	7.0	7.1	---	---	---	8.5	7.7	8.0
30	15.5	14.7	15.2	7.7	7.0	7.3	---	---	---	8.6	8.3	8.5
31	14.7	13.4	14.2	---	---	---	---	---	---	8.4	8.0	8.2
MONTH	20.1	13.4	17.1	13.4	7.0	9.4	---	---	---	---	---	---

14154500 ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA, OR

LOCATION.--Lat 43°44'10", long 122°52'20", in NE ¼ sec.24, T.21 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank 0.5 mi upstream from Pitcher Creek, 1.2 mi northwest of Dorena, and at mile 13.2.

DRAINAGE AREA.--211 mi².

PERIOD OF RECORD.--September 1935 to current year. Prior to October 1949, published as "at Star."

GAGE.--Water-stage recorder. Datum of gage is 856.16 ft above NGVD of 1929. Sept. 16, 1935 to Oct. 17, 1938, nonrecording gage at site 450 ft upstream at datum 1.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair. Slight regulation caused by upstream logponds. No diversions upstream from station.

AVERAGE DISCHARGE.--69 years (water years 1936-2004), 591 ft³/s, 38.08 in/yr, 428,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,100 ft³/s Dec. 22, 1964, gage height, 18.19 ft, from rating curve extended above 12,000 ft³/s, on basis of slope-area measurement of peak flow; minimum discharge, 9.7 ft³/s Sept. 4-6, 2003.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 13	2100	*14,200	*11.98				

No other peak greater than base discharge.

Minimum discharge, 14 ft³/s, Oct. 1-3.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	34	855	1,260	1,800	1,120	504	276	699	93	35	40
2	14	33	607	1,140	2,000	1,140	424	267	557	88	34	40
3	15	41	649	832	1,640	907	374	248	461	85	34	40
4	15	40	603	689	1,330	934	348	232	386	83	33	38
5	15	42	819	584	1,130	1,310	329	208	340	78	34	36
6	15	58	1,980	668	998	1,430	303	187	323	73	35	34
7	17	52	1,240	1,770	1,210	1,200	279	180	384	72	35	33
8	19	48	1,240	2,350	1,100	1,110	259	193	558	70	32	32
9	21	51	872	2,820	905	1,060	246	173	885	67	30	31
10	39	48	1,080	2,230	768	876	236	186	1,450	66	28	31
11	36	55	734	1,660	709	711	235	469	1,250	63	27	32
12	62	109	1,120	1,580	669	633	244	538	915	61	26	41
13	53	68	8,470	1,470	607	561	236	411	695	58	26	47
14	38	53	5,280	1,510	548	507	237	323	556	57	26	78
15	34	50	2,120	1,590	582	473	273	272	457	54	25	82
16	53	82	1,300	1,210	693	424	361	263	387	53	25	119
17	43	656	1,190	940	1,990	395	392	234	329	51	24	82
18	32	347	1,400	827	2,450	394	403	930	282	49	23	384
19	28	243	1,250	1,130	1,930	394	383	1,600	246	49	23	243
20	26	372	1,090	1,440	1,450	342	657	919	214	49	23	335
21	24	233	868	1,070	1,080	324	1,560	642	193	47	23	209
22	24	161	688	828	846	357	1,380	505	178	45	38	125
23	36	110	577	1,320	737	357	921	447	173	43	108	90
24	42	165	785	3,190	653	357	709	375	161	41	84	73
25	33	229	1,200	2,170	601	333	581	318	145	40	62	64
26	28	395	960	1,520	749	425	533	280	130	39	268	59
27	25	339	741	2,390	950	685	497	301	120	37	183	56
28	24	273	838	2,650	995	633	425	3,120	113	37	82	52
29	26	2,580	2,380	2,860	934	506	346	2,490	105	36	59	48
30	46	1,500	1,710	2,840	---	535	297	1,410	99	35	49	47
31	42	---	1,100	2,200	---	597	---	936	---	35	43	---
TOTAL	939	8,467	45,746	50,738	32,054	21,030	13,972	18,933	12,791	1,754	1,577	2,621
MEAN	30.3	282	1,476	1,637	1,105	678	466	611	426	56.6	50.9	87.4
MAX	62	2,580	8,470	3,190	2,450	1,430	1,560	3,120	1,450	93	268	384
MIN	14	33	577	584	548	324	235	173	99	35	23	31
AC-FT	1,860	16,790	90,740	100,600	63,580	41,710	27,710	37,550	25,370	3,480	3,130	5,200
CFSM	0.14	1.34	6.99	7.76	5.24	3.22	2.21	2.89	2.02	0.27	0.24	0.41
IN.	0.17	1.49	8.07	8.95	5.65	3.71	2.46	3.34	2.26	0.31	0.28	0.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2004, BY WATER YEAR (WY)

	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947
MEAN	153	743	1,172	1,174	1,080	986	825	565	268	74.3	37.1	45.3
MAX	1,152	2,569	4,114	2,606	2,322	2,168	2,161	1,333	847	236	107	259
(WY)	(1951)	(1974)	(1965)	(1971)	(1986)	(1972)	(1937)	(1963)	(1993)	(1983)	(1976)	(1978)
MIN	12.8	19.2	58.0	86.0	81.1	159	290	116	52.1	26.3	15.0	15.4
(WY)	(1988)	(1937)	(1977)	(1977)	(1977)	(1992)	(1941)	(1987)	(1987)	(1940)	(1940)	(2001)

14154500 ROW RIVER ABOVE PITCHER CREEK, NEAR DORENA, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1936 - 2004	
ANNUAL TOTAL	191,158		210,622			
ANNUAL MEAN	524		575		591	
HIGHEST ANNUAL MEAN					1,008	1974
LOWEST ANNUAL MEAN					233	1977
HIGHEST DAILY MEAN	8,470	Dec 13	8,470	Dec 13	23,800	Dec 22, 1964
LOWEST DAILY MEAN	10	Sep 5	14	Oct 1	10	Sep 5, 2003
ANNUAL SEVEN-DAY MINIMUM	11	Aug 31	15	Oct 1	11	Oct 21, 1987
ANNUAL RUNOFF (AC-FT)	379,200		417,800		428,400	
ANNUAL RUNOFF (CFSM)	2.48		2.73		2.80	
ANNUAL RUNOFF (INCHES)	33.70		37.13		38.08	
10 PERCENT EXCEEDS	1,420		1,450		1,430	
50 PERCENT EXCEEDS	196		310		274	
90 PERCENT EXCEEDS	15		33		27	



2004 Water Year
WILLAMETTE RIVER BASIN

14154500 ROW RIVER ABOVE PITCHER CREEK NEAR DORENA, OR

Latitude: 43° 44' 10"

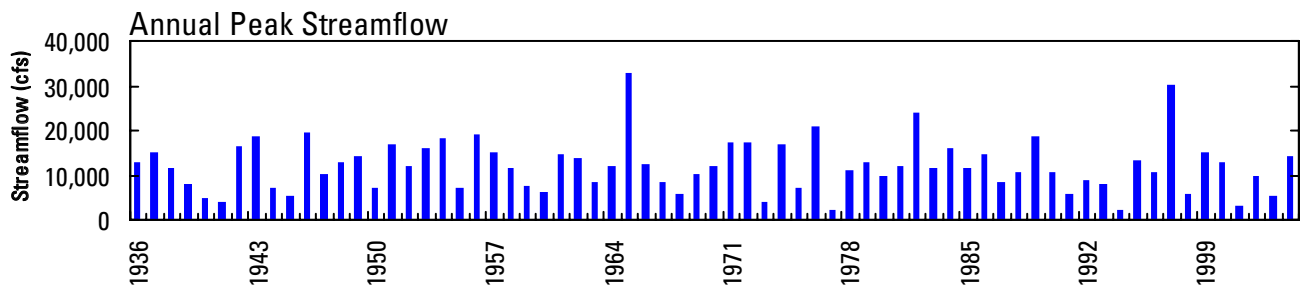
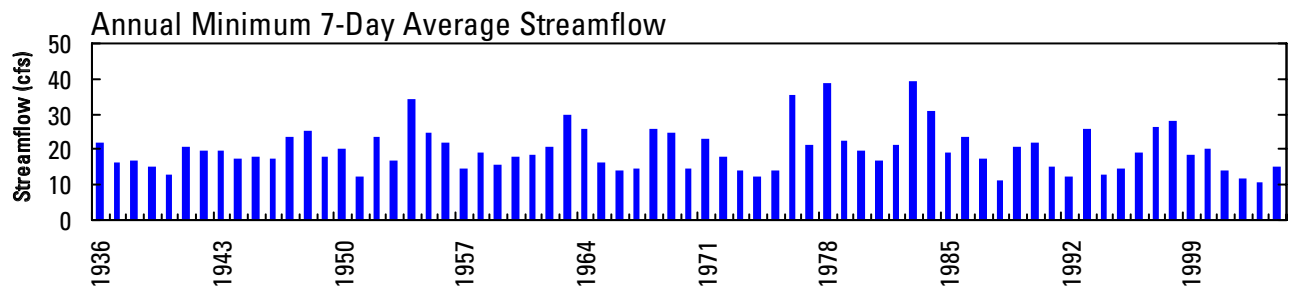
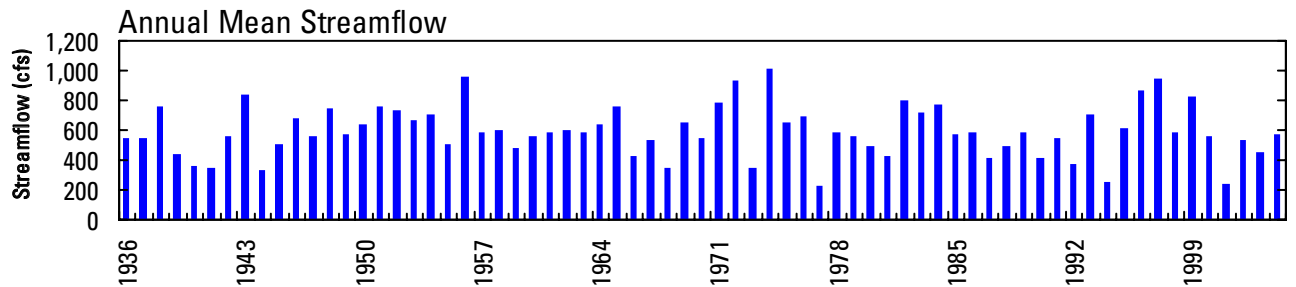
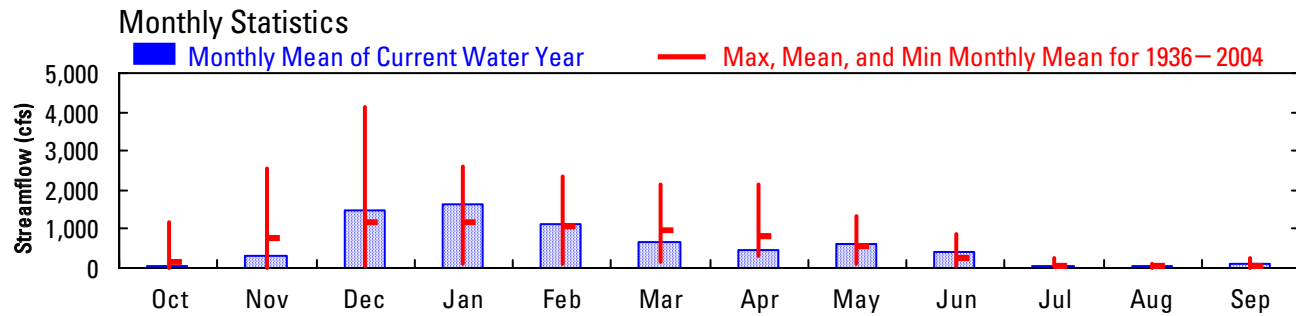
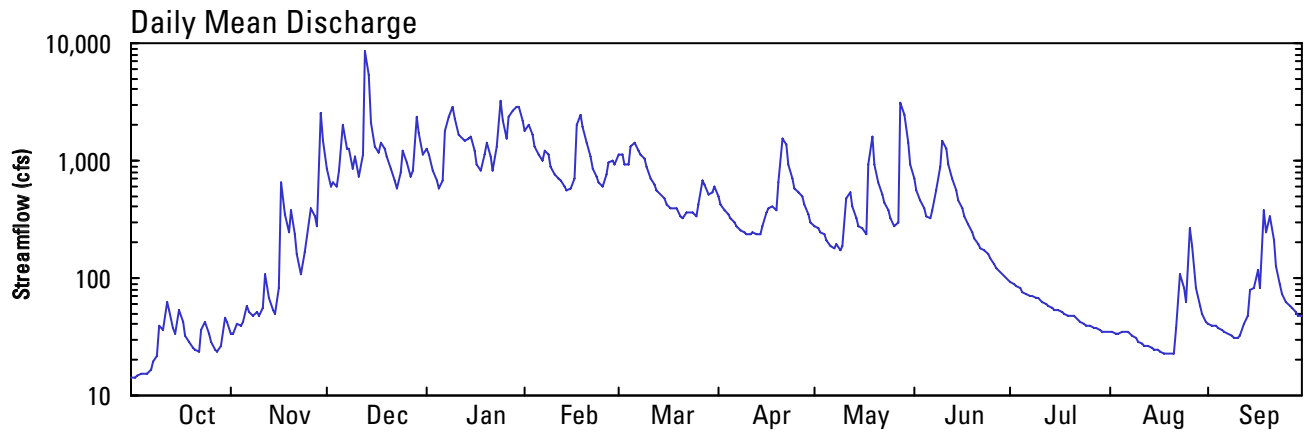
Longitude: 122° 52' 20"

Hydrologic Unit Code: 17090002

Lane County

Datum: 856.16 feet

Drainage Area: 211 square miles



14155500 ROW RIVER NEAR COTTAGE GROVE, OR

LOCATION.--Lat 43°47'35", long 122°59'25", in NE ¼ sec.36, T.20 S., R.3 W., Lane County, Hydrologic Unit 17090002, on right bank 1.7 mi upstream from Mosby Creek, 2.1 mi downstream from Dorena Dam, 3.5 mi east of Cottage Grove, and at mile 5.5.

DRAINAGE AREA.--270 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1939 to current year. Prior to October 1947, published as "near Dorena."

GAGE.--Water-stage recorder. Datum of gage is 685.24 ft above NGVD of 1929 (levels by Corps of Engineers). Jan. 5 to Oct. 12, 1939, nonrecording gage at site 180 ft upstream at datum 1.00 ft higher.

REMARKS.--Records good. Flow regulated since October 1949 by Dorena Lake (station 14155000). No diversion upstream from station.

AVERAGE DISCHARGE.--65 years (water years 1940-2004), 736 ft³/s, 37.02 in/yr, 533,200 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,400 ft³/s Dec. 28, 1945, gage height, 18.20 ft; minimum discharge, 0.20 ft³/s Sept. 25 to Oct. 7, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,710 ft³/s Dec. 15, gage height, 7.91 ft; minimum discharge, 44 ft³/s Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	399	1,440	2,370	3,450	798	217	208	e911	85	135	337
2	145	352	1,570	1,850	3,080	803	217	208	e746	87	135	368
3	145	210	1,340	1,120	2,500	894	217	207	627	87	135	431
4	145	110	1,160	793	1,850	999	217	208	565	87	135	431
5	144	110	1,130	778	1,350	1,010	217	208	525	87	134	431
6	142	110	1,700	697	873	1,010	217	207	462	87	150	430
7	113	110	2,080	1,500	862	1,020	217	209	411	87	174	453
8	79	109	1,820	2,070	876	1,030	217	206	524	86	174	480
9	87	107	1,480	2,560	883	1,030	217	205	953	86	174	479
10	87	107	1,460	2,610	885	824	217	204	1,610	86	174	476
11	87	107	982	2,580	885	822	217	203	1,930	86	174	475
12	87	107	916	2,510	883	768	217	204	1,580	85	174	474
13	87	107	1,340	2,450	729	718	217	204	907	87	174	442
14	104	145	1,410	2,490	612	632	217	204	387	91	174	406
15	146	213	4,450	2,110	611	508	220	204	359	91	173	406
16	144	213	4,530	1,470	615	324	219	204	625	91	165	402
17	160	398	4,450	1,030	834	238	221	204	575	82	152	402
18	193	631	3,750	867	1,280	238	220	204	541	77	152	401
19	191	803	3,440	1,050	1,450	238	220	201	363	77	152	402
20	232	602	2,750	1,690	1,410	238	223	435	361	77	152	400
21	294	372	2,420	1,730	1,330	238	230	889	269	77	152	400
22	336	287	1,290	1,200	798	222	231	850	267	77	154	400
23	333	181	685	1,080	778	208	331	778	267	105	160	400
24	354	146	603	2,650	778	209	527	610	265	135	159	396
25	401	148	839	3,060	778	209	520	464	224	135	195	395
26	397	155	1,470	3,240	778	209	361	388	185	135	238	395
27	455	436	1,390	3,020	779	213	207	373	173	135	238	447
28	508	439	825	2,550	783	213	208	1,240	164	135	238	523
29	501	980	1,530	753	789	213	208	3,410	156	135	238	521
30	456	1,280	2,480	1,430	---	216	207	1,920	156	135	239	518
31	404	---	2,880	3,490	---	217	---	1,230	---	135	246	---
TOTAL	7,102	9,474	59,610	58,798	33,509	16,509	7,391	16,489	17,088	3,048	5,419	12,921
MEAN	229	316	1,923	1,897	1,155	533	246	532	570	98.3	175	431
MAX	508	1,280	4,530	3,490	3,450	1,030	527	3,410	1,930	135	246	523
MIN	79	107	603	697	611	208	207	201	156	77	134	337
AC-FT	14,090	18,790	118,200	116,600	66,470	32,750	14,660	32,710	33,890	6,050	10,750	25,630
MEAN†	47.0	317	1,848	2,067	1,346	791	543	724	517	44.6	41.0	114
CFSM†	0.17	1.18	6.85	7.65	4.98	2.93	2.01	2.68	1.92	0.16	0.15	0.42
IN.†	0.20	1.31	7.90	8.83	5.38	3.38	2.25	3.09	2.14	0.19	0.18	0.47
AC-FT†	2,890	18,880	113,700	127,100	77,420	48,640	32,330	44,540	30,760	2,740	2,520	6,790

CAL YR2003 TOTAL 244685 MEAN 670 MAX 4530 MIN 79 AC-FT 485300 MEAN† 659 CFSM† 2.44 IN.† 33.15 AC-FT† 477200
WTR YR2004 TOTAL 247358 MEAN 676 MAX 4530 MIN 77 AC-FT 490600 MEAN† 652 CFSM† 2.41 IN.† 32.85 AC-FT† 473000

† Adjusted for change in contents, in Dorena Lake.

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14155500 ROW RIVER NEAR COTTAGE GROVE, OR

Latitude: 43° 47 ' 35"

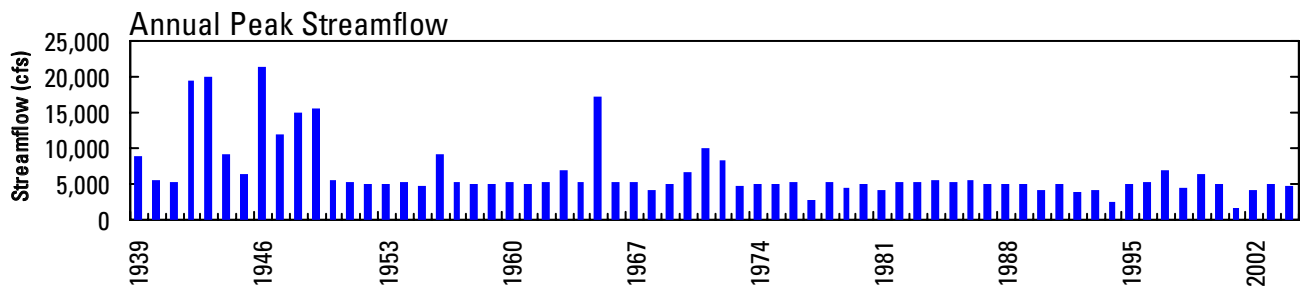
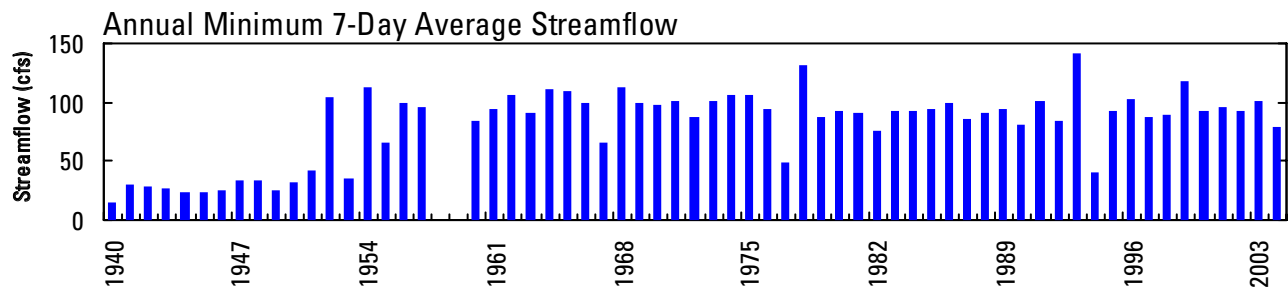
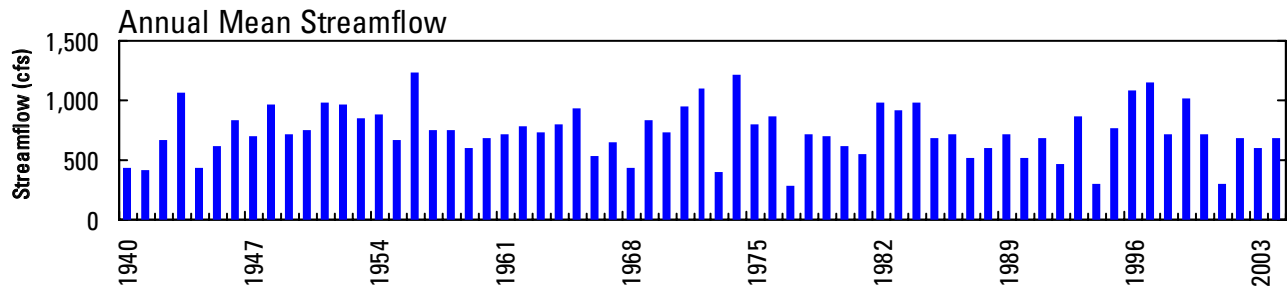
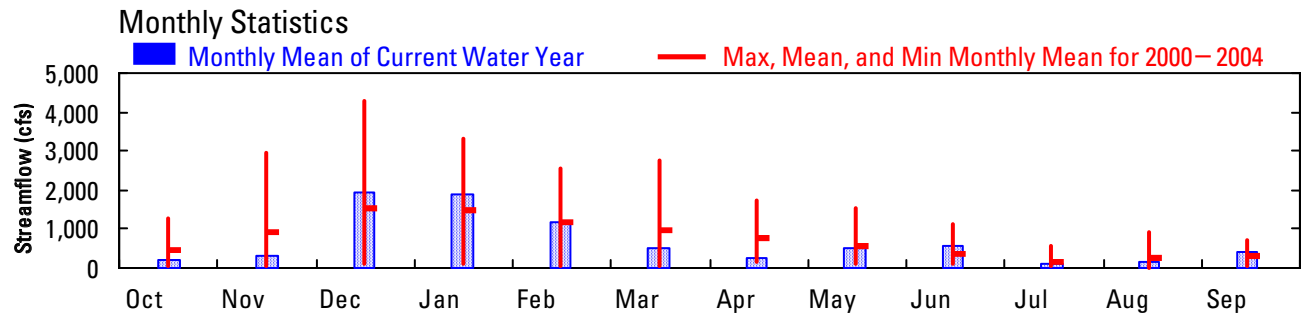
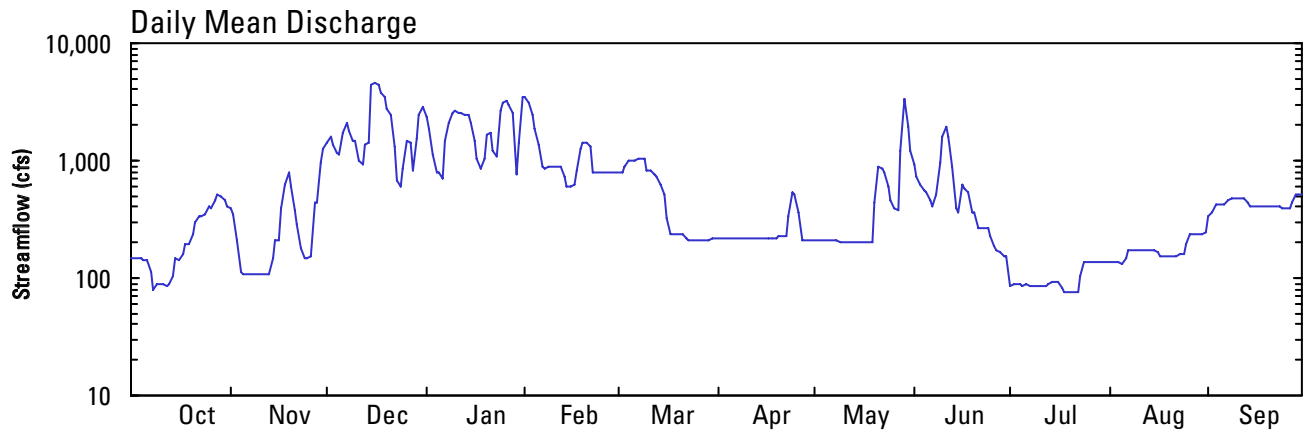
Longitude: 122° 59 ' 25"

Hydrologic Unit Code: 17090002

Lane County

Datum: 685.24 feet

Drainage Area: 270 square miles



14155500 ROW RIVER NEAR COTTAGE GROVE, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 2001 to current year.

INSTRUMENTATION.--Temperature recorder.

REMARKS.--Records good except those for the period Mar. 27 to Sept. 30, which are fair.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 22.4°C Sept. 10, 11, 13, 2003; minimum, 4.6°C Dec. 27, 2001.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 21.5°C Oct. 1; minimum, 5.0°C Jan. 7.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.5	19.0	19.9	14.5	13.8	14.1	8.5	8.1	8.3	6.6	5.8	6.3
2	20.3	19.2	19.6	13.8	13.2	13.5	9.0	8.5	8.8	5.8	5.6	5.7
3	21.0	19.4	20.0	13.2	11.9	12.9	8.8	8.4	8.6	6.1	5.8	6.0
4	20.2	19.3	19.6	12.4	11.7	12.0	9.1	8.8	8.9	6.3	6.0	6.1
5	20.1	19.3	19.6	11.7	11.2	11.5	9.4	8.6	8.9	6.0	5.5	5.8
6	20.8	19.2	19.7	11.6	11.0	11.2	9.4	8.9	9.2	5.5	5.1	5.3
7	20.6	18.8	19.7	11.9	10.9	11.2	8.9	8.4	8.7	6.6	5.0	5.6
8	19.5	18.1	18.7	11.2	10.6	10.9	8.6	8.3	8.4	7.3	6.6	7.0
9	19.5	18.1	18.7	11.4	10.5	10.8	8.3	8.0	8.2	7.6	7.2	7.4
10	19.8	17.6	18.4	11.3	10.5	10.9	8.1	7.9	8.0	7.9	7.6	7.8
11	17.9	17.2	17.6	11.4	10.8	11.0	8.3	8.0	8.2	7.8	7.4	7.6
12	18.8	17.1	17.8	11.3	10.7	10.9	8.3	8.1	8.2	7.5	7.3	7.5
13	18.2	16.5	17.2	11.4	10.3	10.7	9.4	7.1	8.5	7.6	7.2	7.5
14	18.5	16.4	17.2	11.6	10.2	10.7	8.8	7.1	8.2	8.0	7.6	7.8
15	17.2	16.3	16.6	11.1	10.5	10.8	8.5	8.1	8.3	8.3	8.0	8.1
16	18.2	16.4	17.0	10.7	10.4	10.6	8.1	7.8	7.9	8.5	8.1	8.3
17	18.4	16.3	17.0	10.7	10.4	10.5	7.9	7.6	7.7	8.1	7.6	7.9
18	17.8	16.1	16.7	10.7	10.2	10.4	7.7	7.5	7.6	7.9	7.6	7.7
19	17.8	16.4	16.9	10.5	9.7	10.1	7.6	7.4	7.5	8.2	7.8	8.1
20	18.0	16.6	17.1	9.7	9.2	9.5	8.0	7.4	7.7	8.4	7.8	8.1
21	18.4	16.7	17.2	9.3	8.3	8.9	8.3	7.9	8.1	7.9	7.3	7.6
22	17.8	16.7	17.2	8.5	7.8	8.2	7.9	7.4	7.7	7.4	7.1	7.2
23	17.7	16.6	17.0	8.3	7.7	7.9	7.6	7.4	7.4	7.2	6.9	7.0
24	17.4	16.6	16.9	8.3	7.4	7.8	7.5	7.3	7.5	7.9	7.2	7.5
25	17.5	16.5	16.9	7.8	7.4	7.5	7.9	7.4	7.6	7.9	7.2	7.5
26	17.3	16.4	16.7	8.0	7.1	7.5	7.5	7.0	7.3	7.5	7.3	7.3
27	17.2	16.4	16.6	7.3	6.8	7.0	7.1	6.9	7.0	7.8	7.4	7.5
28	17.2	16.4	16.8	7.3	6.7	7.0	7.0	6.7	6.8	8.2	7.8	8.0
29	16.6	15.9	16.3	7.8	7.2	7.3	6.9	6.7	6.8	8.9	8.2	8.5
30	16.1	15.0	15.7	8.4	7.8	8.2	6.9	6.8	6.9	8.7	8.1	8.4
31	15.1	14.2	14.7	---	---	---	6.8	6.6	6.7	8.5	7.8	8.0
MONTH	21.5	14.2	17.6	14.5	6.7	10.1	9.4	6.6	7.9	8.9	5.0	7.3

14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR

LOCATION.--Lat 43°58'50", long 122°57'55", in NW ¼ sec.29, T.18 S., R.2 W., Lane County, Hydrologic Unit 17090002, on right bank at downstream side of bridge on State Highway 58, 2.5 mi southeast of Goshen, and at mile 6.4.

DRAINAGE AREA.--642 mi².

PERIOD OF RECORD.--August 1905 to February 1912, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1248: 1905-12. WSP 1935: 1956.

GAGE.--Water-stage recorder. Datum of gage is 473.80 ft above NGVD of 1929. Aug. 23, 1905 to Feb. 7, 1912, nonrecording gage at site 600 ft upstream at different datum.

REMARKS.--Records good. Flow regulated since 1942 by Cottage Grove Lake (station 14153000) and since 1949 by Dorena Lake (station 14155000). Several small diversions for logponds and irrigation upstream from station. Continuous water-quality records for the period October 1961 to September 1975 have been collected at this location. Periodic suspended sediment data are available for the period October 1991 to September 1993.

AVERAGE DISCHARGE.--60 years (water years 1906-11, 1951-2004), 1,574 ft³/s, 1,140,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 58,500 ft³/s Nov. 22, 1909, gage height, 19.5 ft, site and datum then in use, from rating curve extended above 15,000 ft³/s; minimum discharge, 36 ft³/s Sept. 29, 30, Oct. 11, 12, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,300 ft³/s Dec. 14, gage height, 13.54 ft; minimum discharge, 135 ft³/s Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229	526	2,300	6,260	6,330	2,170	791	481	1,580	249	212	332
2	227	470	2,230	5,990	5,910	2,160	699	451	1,260	229	215	416
3	227	403	2,140	4,330	4,920	2,160	643	449	1,090	221	218	500
4	226	219	1,900	3,350	3,920	2,380	595	432	e1,000	215	219	501
5	228	211	2,020	2,750	3,050	2,420	555	427	902	210	219	498
6	227	214	3,410	2,400	2,410	2,610	530	413	834	206	220	505
7	230	207	3,990	4,050	2,450	2,500	510	416	e750	201	276	557
8	165	204	3,960	5,530	2,230	2,280	490	464	961	197	279	665
9	144	198	3,060	5,910	2,050	1,970	471	423	e1,650	194	276	664
10	146	194	3,640	5,420	1,950	1,740	456	417	e2,800	193	270	666
11	148	193	2,760	4,920	1,890	1,600	446	474	e3,000	190	271	674
12	156	191	2,190	4,390	1,890	1,500	435	484	e1,900	188	271	673
13	155	190	7,630	4,010	1,840	1,310	432	450	e1,400	185	272	676
14	151	192	10,200	3,870	1,570	1,220	450	423	e1,000	182	273	611
15	213	275	8,340	3,680	1,580	1,070	561	404	612	178	274	613
16	241	300	7,530	2,990	1,930	822	677	400	879	175	272	606
17	309	562	7,030	2,270	3,230	626	709	386	928	173	255	623
18	390	823	6,170	2,070	4,070	606	638	448	842	170	253	682
19	395	1,160	5,280	2,400	3,920	588	604	769	643	167	253	704
20	393	1,280	4,530	3,360	3,440	564	976	730	595	165	253	700
21	579	907	3,770	3,240	3,120	545	2,010	1,250	504	163	253	656
22	593	713	2,500	2,730	2,260	526	1,910	1,250	454	158	283	630
23	647	547	1,640	2,780	2,020	478	1,330	1,130	e450	155	291	614
24	645	387	1,620	5,150	2,050	516	1,340	1,000	442	170	251	607
25	710	403	2,140	5,650	1,970	526	1,200	747	412	181	250	601
26	708	563	2,830	5,270	1,810	672	1,040	642	338	181	347	600
27	726	726	3,010	5,620	1,940	893	682	611	308	181	348	614
28	837	772	3,380	5,140	1,870	838	611	1,640	297	181	340	880
29	828	1,910	6,250	3,740	1,820	709	567	4,560	275	181	363	883
30	726	2,630	5,980	3,300	---	760	528	3,270	270	181	356	880
31	567	---	5,890	6,420	---	917	---	2,230	---	202	318	---
TOTAL	12,166	17,570	129,320	128,990	79,440	39,676	22,886	27,671	28,376	5,822	8,451	18,831
MEAN	392	586	4,172	4,161	2,739	1,280	763	893	946	188	273	628
MAX	837	2,630	10,200	6,420	6,330	2,610	2,010	4,560	3,000	249	363	883
MIN	144	190	1,620	2,070	1,570	478	432	386	270	155	212	332
AC-FT	24,130	34,850	256,500	255,900	157,600	78,700	45,390	54,890	56,280	11,550	16,760	37,350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 2004, BY WATER YEAR (WY)

MEAN	784	1,918	3,335	3,563	2,767	2,198	1,565	1,054	581	250	354	542
MAX	3,119	6,305	9,820	7,814	6,891	5,716	4,020	3,285	2,424	588	1,115	1,057
(WY)	(1951)	(1974)	(1965)	(1909)	(1961)	(1957)	(1963)	(1963)	(1993)	(1957)	(1955)	(1978)
MIN	147	121	196	200	203	385	460	247	129	90.3	49.7	63.5
(WY)	(1911)	(1953)	(1977)	(1977)	(1977)	(1992)	(1987)	(1987)	(1987)	(1910)	(1910)	(1910)

14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1906 - 2004	
ANNUAL TOTAL	540,919		519,199		1,574	
ANNUAL MEAN	1,482		1,419		2,701	1956
HIGHEST ANNUAL MEAN					512	1977
LOWEST ANNUAL MEAN					36,500	Jan 4, 1907
HIGHEST DAILY MEAN	10,200	Dec 14	10,200	Dec 14	42	Sep 29, 1908
LOWEST DAILY MEAN	144	Oct 9	144	Oct 9	1,140,000	Aug 28, 1911
ANNUAL SEVEN-DAY MINIMUM	152	Oct 8	152	Oct 8	4,130	
ANNUAL RUNOFF (AC-FT)	1,073,000		1,030,000		736	
10 PERCENT EXCEEDS	3,970		3,880		173	
50 PERCENT EXCEEDS	629		644			
90 PERCENT EXCEEDS	227		200			

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14157500 COAST FORK WILLAMETTE RIVER NEAR GOSHEN, OR

Latitude: 43° 58' 50"

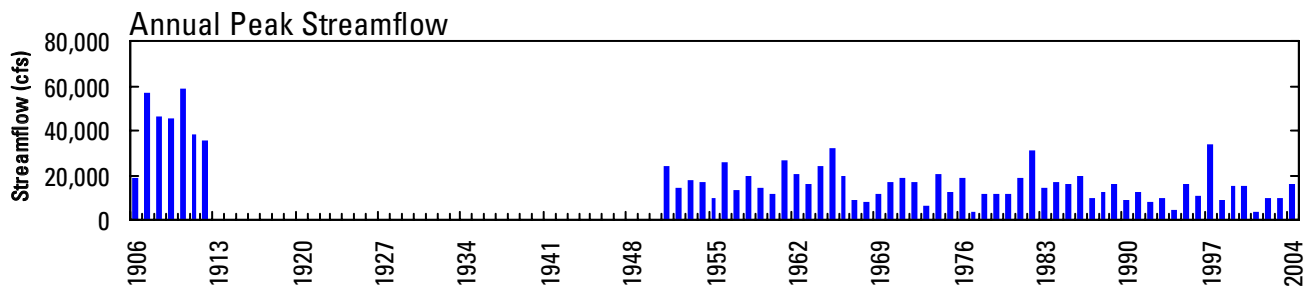
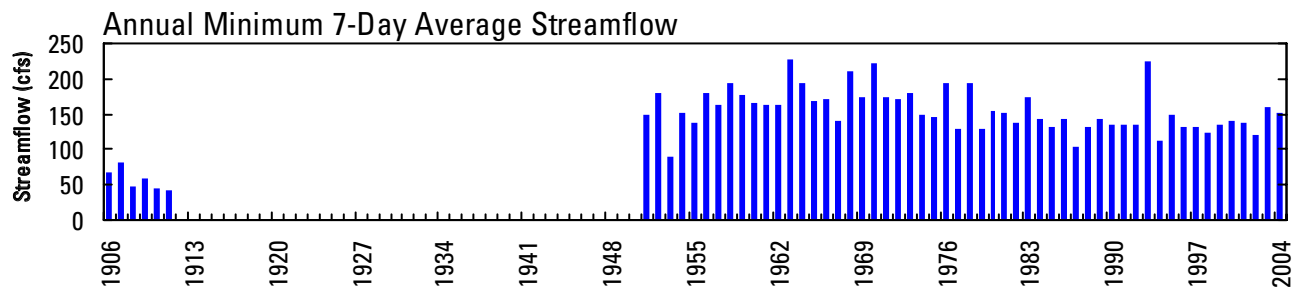
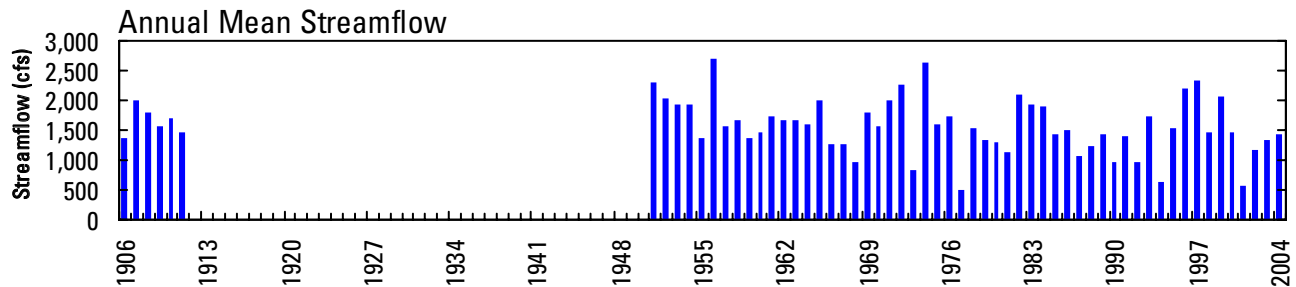
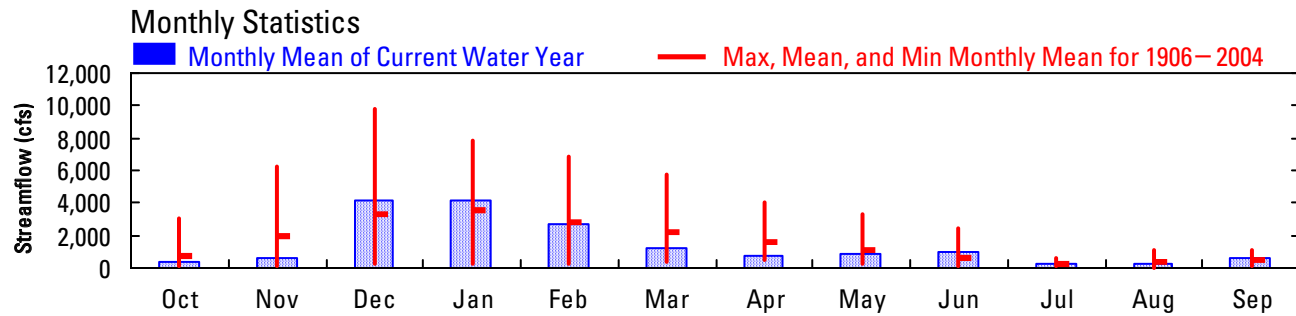
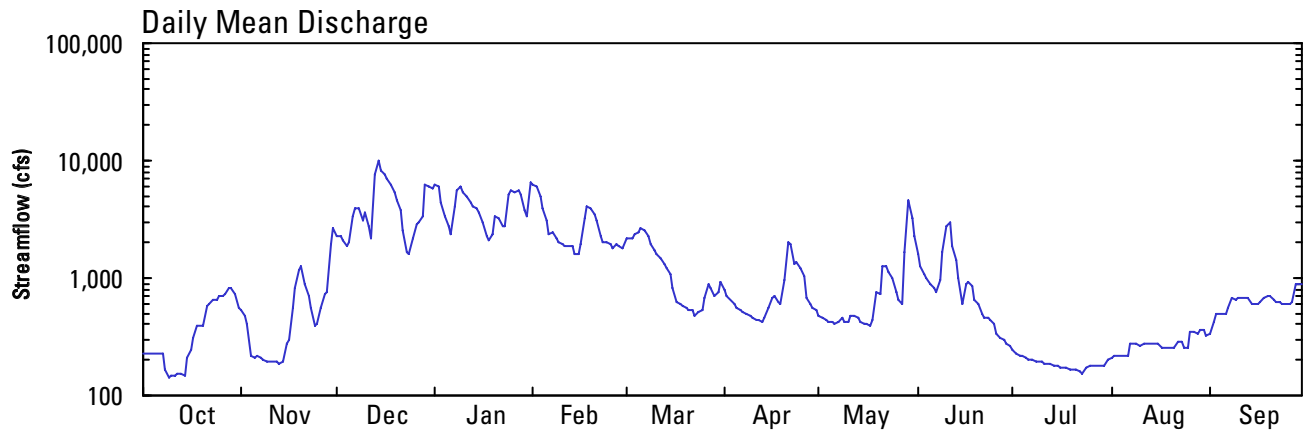
Longitude: 122° 57' 55"

Hydrologic Unit Code: 17090002

Lane County

Datum: 473.80 feet

Drainage Area: 642 square miles



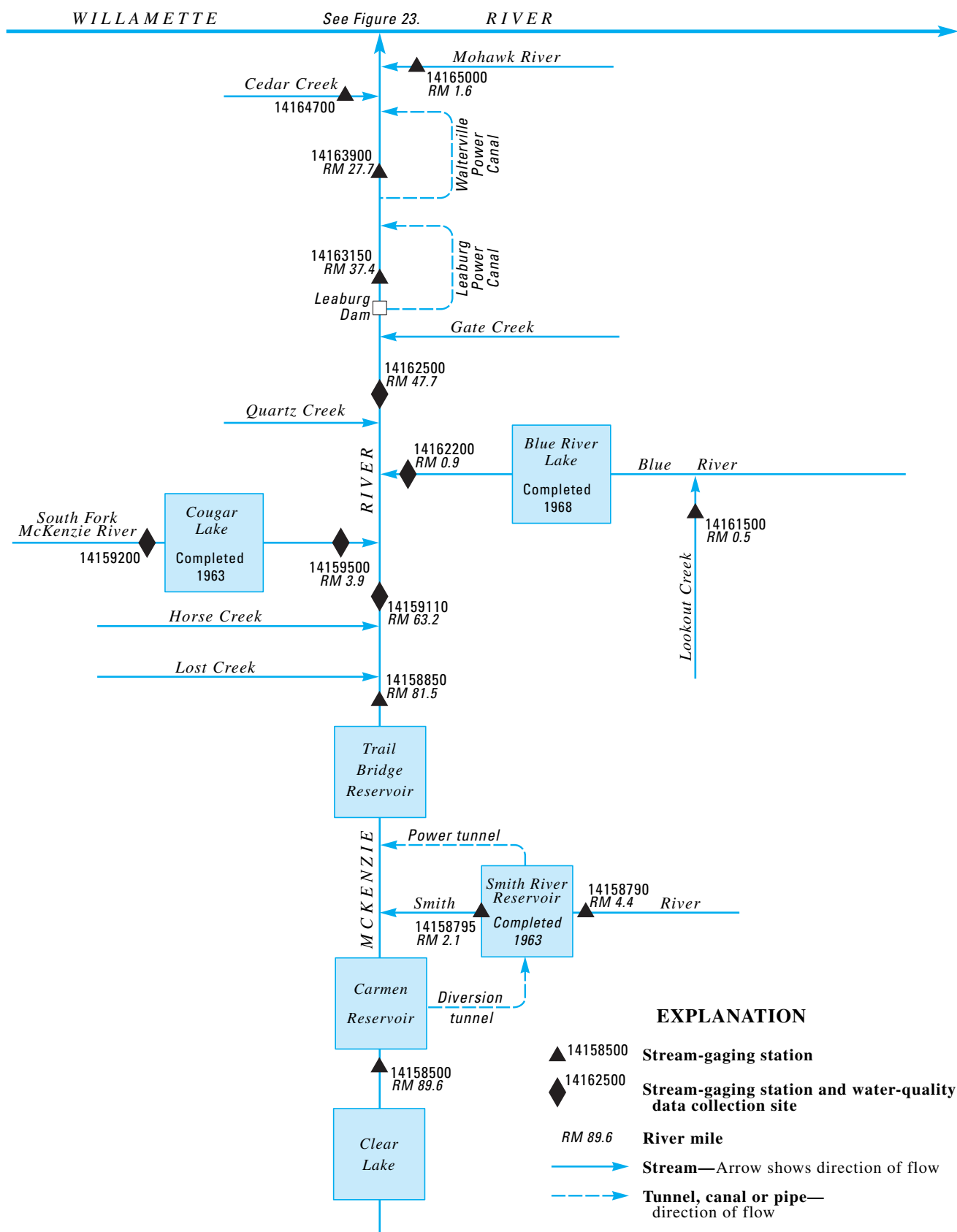


Figure 24. Schematic diagram showing gaging stations and diversions in the McKenzie River Basin.

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

LOCATION.--Lat 44°21'40", long 121°59'40", in SE ¼ sec.8, T.14 S., R.7 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, on west bank of Clear Lake in narrow channel, 150 ft upstream from outlet and at mile 89.6.

DRAINAGE AREA.--92.4 mi², hydrologic drainage boundary uncertain owing to ground-water exchange.

PERIOD OF RECORD.--June 1912 to September 1915, October 1947 to current year. Monthly discharge only for some periods, published in WSP 1318.

REVISED RECORDS.--WSP 1288: 1949. WSP 1318: 1915(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,015.32 ft above NGVD of 1929 (levels by Eugene Water and Electric Board). June 20, 1912 to July 31, 1915, nonrecording gage at site 1.0 mi north at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by natural storage in lake. At high stages an undetermined flow enters numerous sinkholes in lava rock along south edge of lake upstream from station.

AVERAGE DISCHARGE.--60 years (water years 1913-15, 1948-2004), 456 ft³/s, 66.99 in/yr, 330,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,300 ft³/s Dec. 23, 1964, gage height, 8.15 ft; minimum discharge, 116 ft³/s Oct. 27, 28, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft³/s Jan. 30, gage height, 4.12 ft; minimum discharge, 161 ft³/s Nov. 12.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	169	259	409	759	472	665	624	615	409	278	262
2	183	169	287	401	715	463	650	633	607	404	277	260
3	182	168	307	393	701	457	642	641	606	399	275	258
4	182	166	314	385	686	456	645	641	599	394	272	254
5	180	166	334	374	667	454	648	623	588	388	270	252
6	179	165	354	368	657	451	646	604	581	383	271	249
7	181	164	371	363	643	445	641	590	581	377	269	245
8	179	164	382	357	610	443	634	589	582	371	266	243
9	179	163	394	352	578	444	627	579	586	365	266	241
10	178	163	408	343	549	455	626	565	582	359	265	239
11	179	164	418	335	525	474	633	556	575	353	264	238
12	181	163	435	330	509	489	642	549	561	346	263	236
13	178	164	603	326	495	503	650	536	551	339	262	237
14	179	166	942	324	474	519	670	526	539	333	260	236
15	182	170	750	326	460	534	681	519	526	328	259	237
16	181	177	636	328	458	544	660	517	513	322	256	238
17	178	178	592	331	465	551	647	517	502	318	255	244
18	178	178	576	338	480	565	639	529	495	314	253	250
19	180	188	568	347	506	582	632	539	487	311	252	252
20	179	196	567	352	529	578	659	535	477	306	251	257
21	177	205	563	355	522	571	675	529	463	303	249	262
22	177	211	546	359	514	582	660	525	451	299	257	265
23	177	212	524	380	509	609	648	541	443	297	254	265
24	175	213	520	412	504	636	639	542	436	294	253	264
25	174	214	512	429	500	643	630	530	432	292	258	262
26	174	213	489	501	494	656	631	524	428	290	259	260
27	173	208	478	529	488	673	654	539	425	287	258	258
28	173	206	468	558	483	670	669	623	421	285	261	255
29	173	223	453	784	476	665	650	701	417	283	263	250
30	171	227	428	1,030	---	678	628	670	413	282	263	247
31	168	---	416	874	---	681	---	633	---	280	263	---
TOTAL	5,515	5,533	14,894	13,293	15,956	16,943	19,421	17,769	15,482	10,311	8,122	7,516
MEAN	178	184	480	429	550	547	647	573	516	333	262	251
MAX	185	227	942	1,030	759	681	681	701	615	409	278	265
MIN	168	163	259	324	458	443	626	517	413	280	249	236
AC-FT	10,940	10,970	29,540	26,370	31,650	33,610	38,520	35,240	30,710	20,450	16,110	14,910
CFSM	1.93	2.00	5.20	4.64	5.95	5.92	7.01	6.20	5.59	3.60	2.84	2.71
IN.	2.22	2.23	6.00	5.35	6.42	6.82	7.82	7.15	6.23	4.15	3.27	3.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2004, BY WATER YEAR (WY)

	MEAN	246	365	534	519	530	510	597	675	559	386	299	252
MAX	428	828	1,209	1,123	1,313	1,205	873	1,178	1,202	737	499	392	
(WY)	(1951)	(1951)	(1965)	(1997)	(1996)	(1972)	(1997)	(1949)	(1974)	(1950)	(1974)	(1974)	
MIN	122	141	209	191	180	224	341	319	203	173	149	132	
(WY)	(1993)	(1988)	(1977)	(1977)	(1977)	(1977)	(1955)	(1992)	(1992)	(1977)	(1992)	(1992)	

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1913 - 2004	
ANNUAL TOTAL	149,149		150,755			
ANNUAL MEAN	409		412		456	
HIGHEST ANNUAL MEAN					688	1997
LOWEST ANNUAL MEAN					241	1977
HIGHEST DAILY MEAN	1,380	Jan 31	1,030	Jan 30	3,100	Dec 23, 1964
LOWEST DAILY MEAN	163	Nov 9	163	Nov 9	116	Oct 27, 1992
ANNUAL SEVEN-DAY MINIMUM	164	Nov 7	164	Nov 7	117	Oct 22, 1992
ANNUAL RUNOFF (AC-FT)	295,800		299,000		330,100	
ANNUAL RUNOFF (CFSM)	4.42		4.46		4.93	
ANNUAL RUNOFF (INCHES)	60.05		60.69		66.99	
10 PERCENT EXCEEDS	711		644		792	
50 PERCENT EXCEEDS	392		406		394	
90 PERCENT EXCEEDS	179		179		209	



2004 Water Year
WILLAMETTE RIVER BASIN

14158500 MCKENZIE RIVER AT OUTLET OF CLEAR LAKE, OR

Latitude: 44° 21 ' 40"

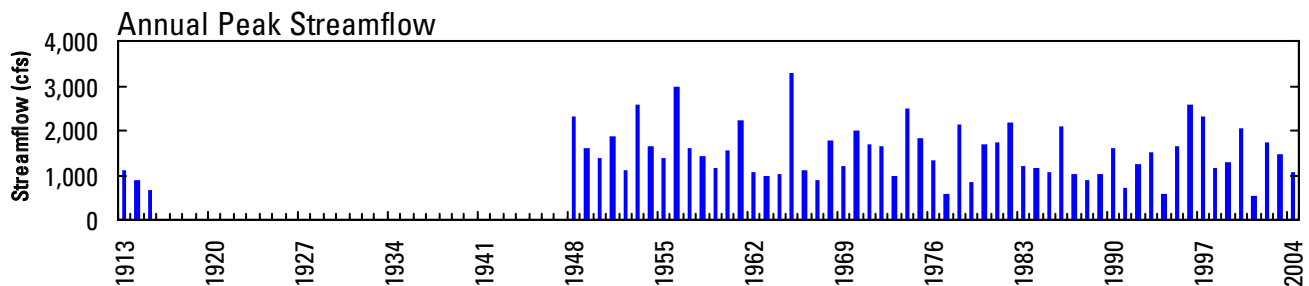
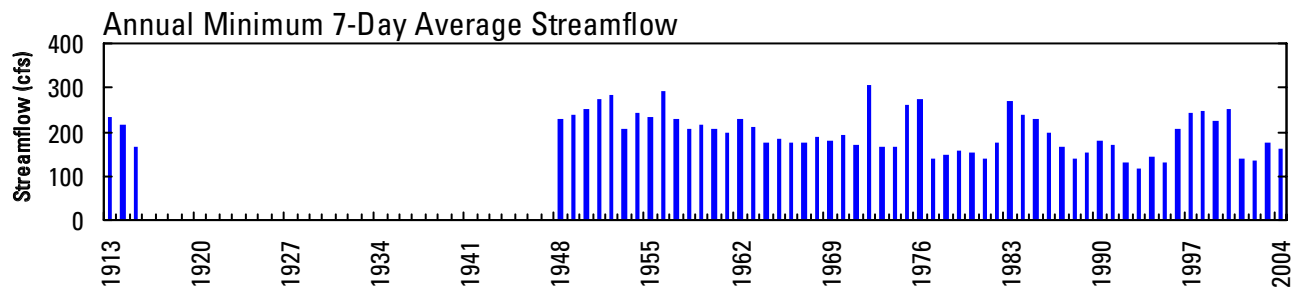
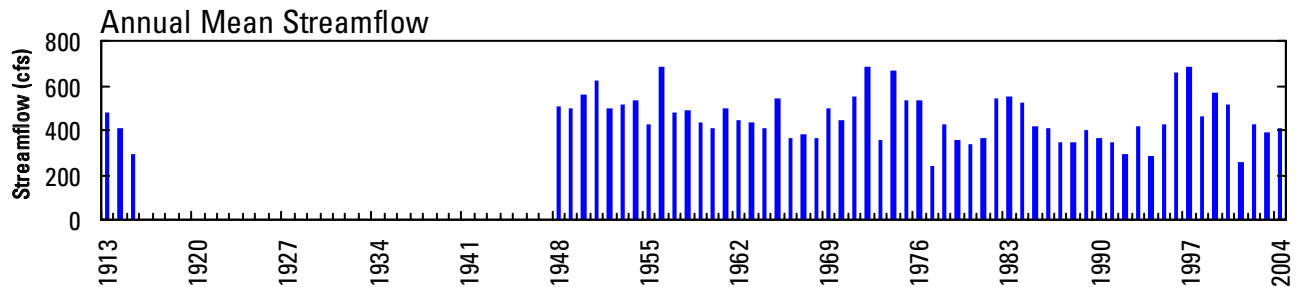
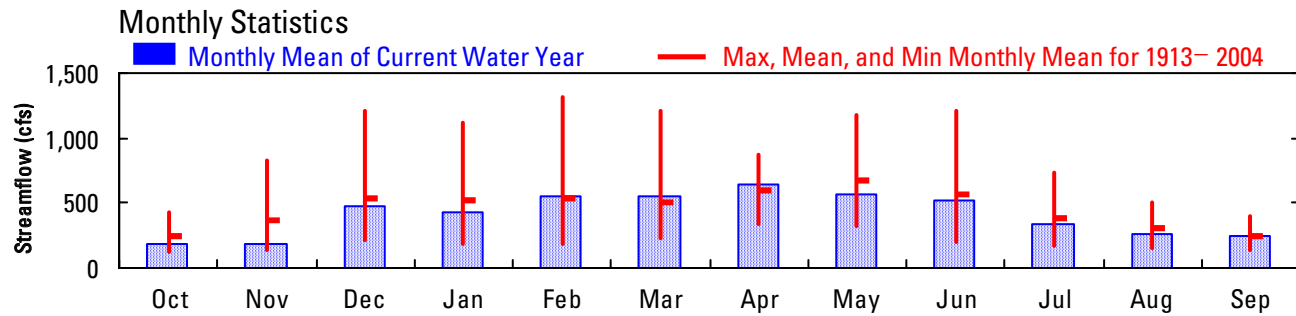
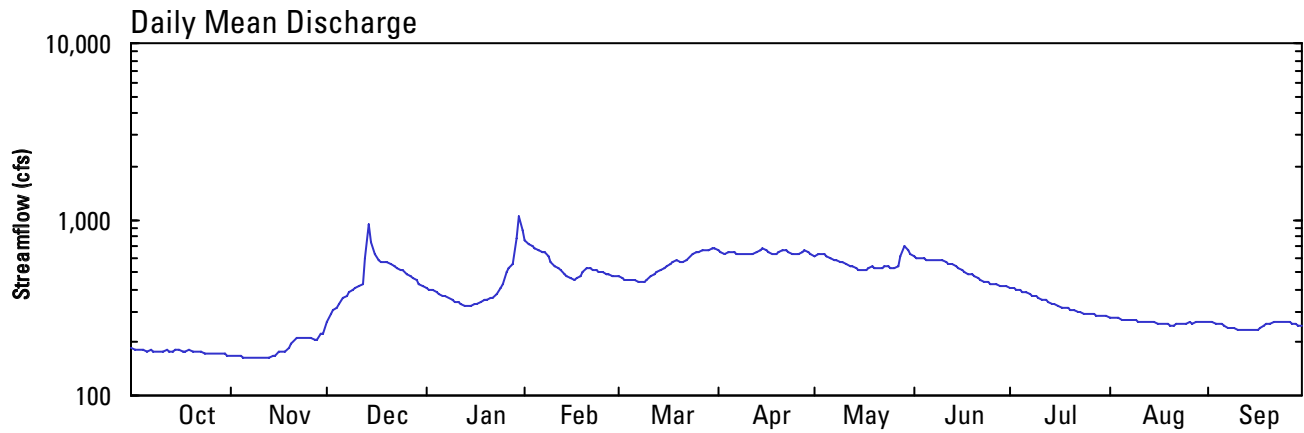
Longitude: 121° 59 ' 40"

Hydrologic Unit Code: 17090004

Linn County

Datum: 3,015.32 feet

Drainage Area: 92.4 square miles



14158790 SMITH RIVER ABOVE SMITH RIVER RESERVOIR, NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°20'05", long 122°02'45", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.24, T.14 S., R.6 E., Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 200 ft upstream from Smith River Reservoir, 0.7 mi downstream from Browder Creek, 10 mi north of town of Belknap Springs, and at mile 4.4.

DRAINAGE AREA.--16.2 mi².

PERIOD OF RECORD.--October 1960 to current year.

REVISED RECORDS.--WDR OR 80-2: 1978(P).

GAGE.--Water-stage recorder. Datum of gage is 2,610.00 ft above NGVD of 1929 (levels by Eugene Water and Electric Board). Prior to Sept. 10, 1964, at datum 1.56 ft higher.

REMARKS.--No estimated daily discharges. Records good. Eugene Water and Electric Board telemetry at station. No regulation or diversion upstream from station.

AVERAGE DISCHARGE.--44 years (water years 1961-2004), 89.0 ft³/s, 74.68 in/yr, 64,510 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,160 ft³/s Dec. 22, 1964, gage height, 11.9 ft, from floodmark, from rating curve extended above 560 ft³/s, on basis of slope-area measurement of peak flow; minimum discharge, 1.2 ft³/s Oct. 13, 1991, result of log jam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 13	1500	*1,180	*8.52				
						No other peak greater than base discharge.	

Minimum discharge, 2.8 ft³/s, part or all of each day, Oct. 4, 5, 6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	6.0	146	47	187	78	115	121	108	17	6.1	7.1
2	3.0	6.2	128	42	153	74	102	126	91	15	6.0	7.3
3	3.0	5.9	188	38	131	68	104	127	81	15	5.8	7.0
4	2.9	5.6	146	35	111	68	115	117	72	14	5.6	6.6
5	2.8	5.6	258	32	95	73	120	100	66	13	5.6	6.1
6	2.9	5.6	319	31	96	84	118	87	73	12	6.2	6.0
7	3.8	5.6	199	39	95	81	116	84	91	12	5.9	5.7
8	4.1	5.7	141	59	83	104	113	87	103	11	5.6	5.6
9	5.1	5.9	108	82	74	145	112	78	110	11	5.5	5.6
10	5.7	7.1	88	88	68	148	117	74	120	11	5.2	5.5
11	8.8	14	76	85	64	138	125	82	115	10	5.1	7.8
12	17	12	123	84	61	141	134	75	97	9.9	5.1	6.8
13	8.6	9.6	704	90	57	141	134	68	85	9.6	5.1	10
14	6.5	8.5	440	112	55	139	150	64	73	9.3	5.1	15
15	12	11	227	149	59	141	141	63	65	8.9	5.0	15
16	10	42	160	153	101	131	125	65	58	8.4	4.8	13
17	7.3	62	131	128	170	132	113	67	52	8.3	4.6	23
18	6.3	72	114	118	237	140	105	85	47	8.0	4.6	59
19	7.4	78	100	140	192	137	104	93	42	8.3	4.6	50
20	7.1	59	107	132	147	119	138	84	38	7.7	4.6	40
21	6.3	42	104	109	119	116	147	79	35	7.7	4.4	32
22	6.3	31	95	92	100	137	139	79	32	7.3	20	25
23	8.4	26	85	157	88	159	131	95	30	7.1	11	20
24	6.6	24	111	329	82	157	121	81	28	7.0	8.9	17
25	6.0	22	101	221	77	148	118	72	26	6.6	20	15
26	5.7	20	84	157	77	143	134	71	23	6.6	22	14
27	5.6	17	75	146	83	180	161	106	21	6.5	13	13
28	6.1	21	69	227	86	159	150	249	20	6.3	9.8	12
29	8.1	282	62	612	81	147	125	246	19	6.1	8.6	11
30	7.4	187	53	476	---	153	116	176	18	6.1	7.8	10
31	6.3	---	49	262	---	135	---	133	---	6.1	7.1	---
TOTAL	200.1	1,099.3	4,791	4,472	3,029	3,916	3,743	3,134	1,839	292.8	238.7	471.1
MEAN	6.45	36.6	155	144	104	126	125	101	61.3	9.45	7.70	15.7
MAX	17	282	704	612	237	180	161	249	120	17	22	59
MIN	2.8	5.6	49	31	55	68	102	63	18	6.1	4.4	5.5
AC-FT	397	2,180	9,500	8,870	6,010	7,770	7,420	6,220	3,650	581	473	934
CFSM	0.40	2.26	9.54	8.90	6.45	7.80	7.70	6.24	3.78	0.58	0.48	0.97
IN.	0.46	2.52	11.00	10.27	6.96	8.99	8.60	7.20	4.22	0.67	0.55	1.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

MEAN	22.2	111	148	138	133	121	147	148	72.7	16.7	6.72	7.29
MAX	95.4	239	404	293	371	321	270	318	260	51.5	12.9	23.5
(WY)	(1998)	(1996)	(1965)	(1970)	(1996)	(1993)	(1993)	(1971)	(1974)	(1971)	(1999)	(1978)
MIN	3.33	4.47	9.88	13.5	12.8	41.2	50.3	28.1	8.63	5.23	3.22	3.71
(WY)	(1988)	(1994)	(1977)	(1977)	(1977)	(1992)	(1967)	(1992)	(1992)	(1992)	(1992)	(2003)

14158790 SMITH RIVER ABOVE SMITH RIVER RESERVOIR, NEAR BELKNAP SPRINGS, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	30,858.0		27,226.0		89.0	
ANNUAL MEAN	84.5		74.4		136	
HIGHEST ANNUAL MEAN					37.1	
LOWEST ANNUAL MEAN					2,590	
HIGHEST DAILY MEAN	783	Jan 30	704	Dec 13	Dec 22, 1964	
LOWEST DAILY MEAN	2.8	Sep 5	2.8	Oct 5	2.5	
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 31	3.1	Oct 1	2.6	
ANNUAL RUNOFF (AC-FT)	61,210		54,000		64,510	
ANNUAL RUNOFF (CFSM)	5.22		4.59		5.50	
ANNUAL RUNOFF (INCHES)	70.86		62.52		74.68	
10 PERCENT EXCEEDS	218		148		211	
50 PERCENT EXCEEDS	51		65		53	
90 PERCENT EXCEEDS	3.3		5.7		4.9	



2004 Water Year
WILLAMETTE RIVER BASIN

14158790 SMITH R ABV SMITH R RESERVOIR, NR BELKNAP SPRINGS, OR

Latitude: 44° 20 ' 05"

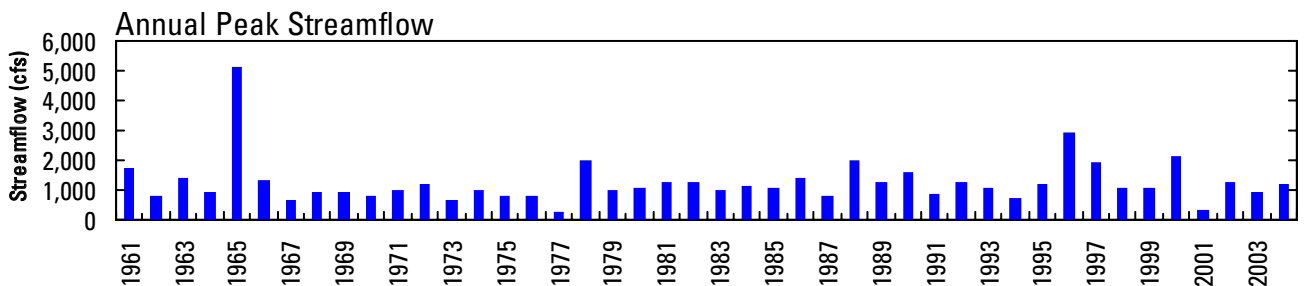
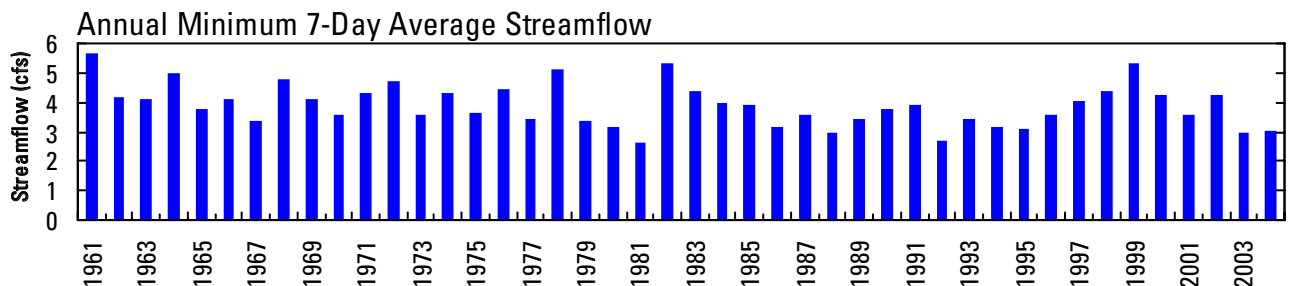
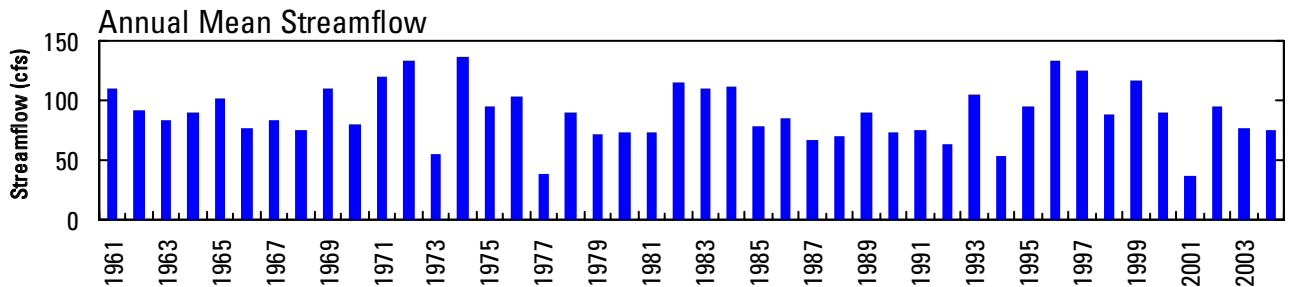
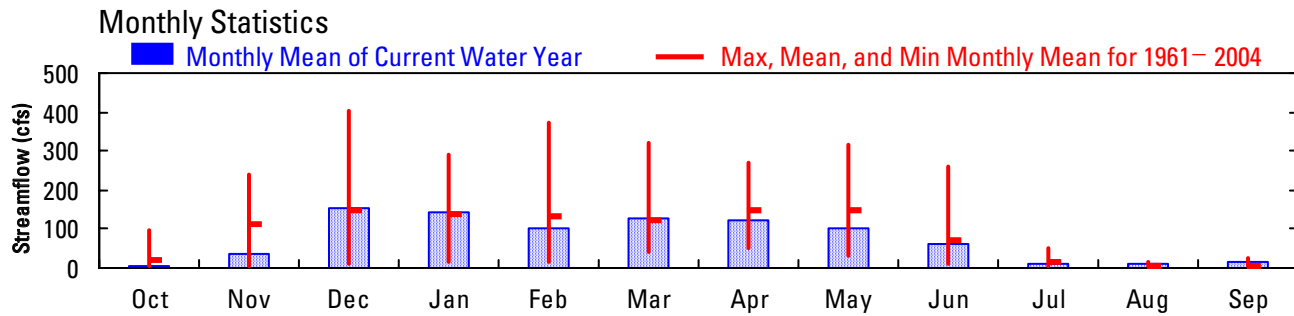
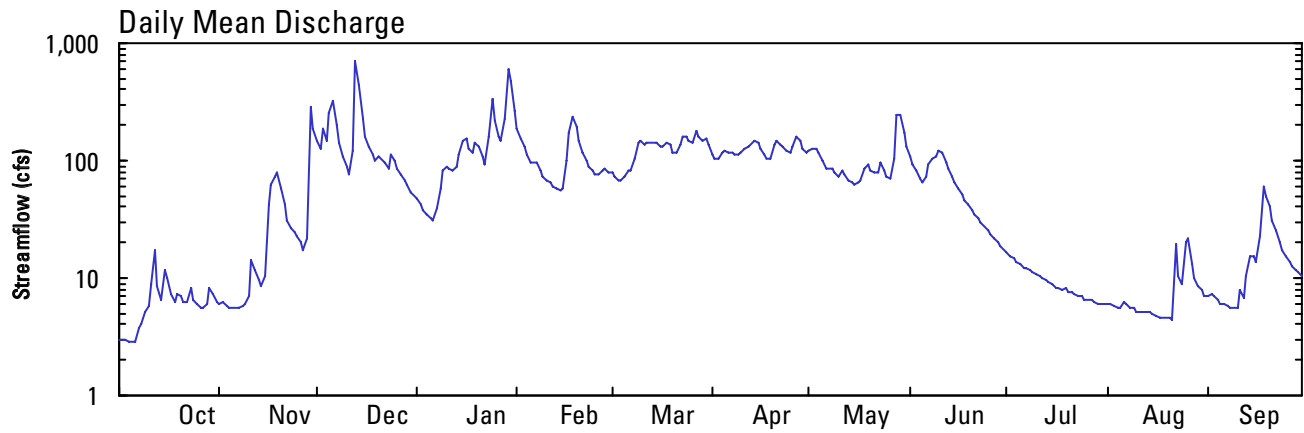
Longitude: 122° 02 ' 45"

Hydrologic Unit Code: 17090004

Linn County

Datum: 2,610.00 feet

Drainage Area: 16.2 square miles



14158795 SMITH RIVER RESERVOIR NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°18'20", long 122°02'40", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.36, T.14 S., R.6 E., Linn County, Hydrologic Unit 17090004, Willamette National Forest, in intake tower near left end of Smith River Dam on Smith River, 800 ft upstream from Bunchgrass Creek, 8 mi north of town of Belknap Springs, and at mile 2.1.

DRAINAGE AREA.--18.2 mi².

PERIOD OF RECORD.--March 1963 to current year.

REVISED RECORDS.--WDR OR-86-2: 1985.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Eugene Water and Electric Board).

REMARKS.--Reservoir is formed by earthfill dam with concrete spillway completed in 1963 by Eugene Water and Electric Board; storage began Mar. 18, 1963. Total capacity is 15,000 acre-ft at elevation 2,605.0 ft, top of spillway gates, and usable capacity is 9,900 acre-ft between elevations 2,525.0 ft, minimum power pool, and 2,605.0 ft. Storage of 5,100 acre-ft, below elevation 2,525.0 ft, not normally available for release. Water used for power generation. Figures herein represent total contents and are furnished by Eugene Water and Electric Board.

COOPERATION.--Elevations and area-volume curves furnished by Eugene Water and Electric Board.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 15,200 acre-ft Dec. 22, 1964, elevation, 2,606.5 ft; minimum contents, 5,700 acre-ft Apr. 11, 14, 1964, elevation, 2,532.90 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,560 acre-ft Oct. 1, elevation, 2,602.71 ft; minimum contents, 11,430 acre-ft Nov. 12, elevation, 2,582.79 ft.

MONTH END ELEVATION AND CONTENTS AT 2400
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
Sept.30	2,598.34	13,830	-
Oct. 31	2,597.58	13,710	-120
Nov. 30	2,594.05	13,150	-560
Dec. 31	2,592.88	12,960	-190
CAL YR 2003	-	-	-370
Jan. 31	2,594.18	13,170	+210
Feb. 29	2,588.46	12,250	-920
Mar. 31	2,588.79	12,310	+60
Apr. 30	2,593.26	13,020	+710
May 31	2,599.77	14,060	+1,040
June 30	2,597.71	13,730	-330
July 31	2,598.70	13,890	+160
Aug. 31	2,601.05	14,280	+390
Sept.30	2,599.63	14,040	-240
WTR YR 2004	-	-	+210

14158850 MCKENZIE RIVER BELOW TRAIL BRIDGE DAM, NEAR BELKNAP SPRINGS, OR

LOCATION.--Lat 44°16'05", long 122°02'55", in T.15 S., R.6 E., (unsurveyed), Linn County, Hydrologic Unit 17090004, in Willamette National Forest, on left bank 0.4 mi downstream from Trail Bridge Dam, 0.5 mi upstream from Anderson Creek, 5 mi north of town of Belknap Springs, and at mile 81.5.

DRAINAGE AREA.--184 mi².

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,980.00 ft above NGVD of 1929 (levels by Eugene Water and Electric Board). Prior to Oct. 11, 1963, at datum 5.60 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1963 by Smith River Reservoir (station 14158795). Diurnal fluctuations by powerplants and by Trail Bridge re-regulation reservoir upstream. Water is diverted from McKenzie River in SW $\frac{1}{4}$ sec.20, T.14 S., R.7 E., to Smith River Reservoir and returned to river upstream from station. Continuous water-quality records for the period November 1976 to September 1985, July 1992 September 1993 have been collected at this location.

AVERAGE DISCHARGE.--45 years (water years 1960-2004), 1,012 ft³/s, 74.69 in/yr, 733,200 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft³/s Dec. 22, 1964, gage height, 12.45 ft, from rating curve extended above 3,700 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 185 ft³/s Feb. 3, 1963; minimum daily, 423 ft³/s Nov. 22, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,800 ft³/s Dec. 13, gage height, 8.56 ft; minimum discharge, 522 ft³/s Oct. 13-17.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	575	548	856	930	1,600	1,090	1,310	1,230	1,230	873	706	684
2	579	789	867	1,020	1,560	1,060	1,260	1,230	1,230	824	709	687
3	579	668	930	966	1,470	1,040	1,270	1,260	1,160	841	709	687
4	587	679	948	933	1,430	1,050	1,270	1,250	1,160	872	709	686
5	595	709	1,030	923	1,430	1,070	1,270	1,220	1,150	847	703	683
6	594	688	1,210	940	1,400	1,050	1,270	1,190	1,150	841	694	669
7	622	670	1,050	908	1,400	1,070	1,270	1,160	1,160	841	712	670
8	610	653	990	944	1,340	1,080	1,260	1,160	1,210	842	709	669
9	606	633	948	959	1,310	1,230	1,260	1,120	1,200	813	690	670
10	606	628	988	921	1,230	1,160	1,260	1,070	1,200	797	674	648
11	609	628	961	950	1,180	1,090	1,260	1,090	1,200	816	669	640
12	580	623	1,000	959	1,130	1,110	1,260	1,070	1,200	827	669	647
13	537	600	2,020	961	1,120	1,170	1,270	1,050	1,130	802	669	651
14	522	600	1,630	967	1,100	1,220	1,290	1,070	1,100	747	670	672
15	551	600	1,480	1,070	1,080	1,220	1,280	1,080	1,090	735	670	672
16	551	632	1,420	1,100	1,170	1,210	1,280	1,050	1,070	784	670	673
17	524	731	1,370	1,070	1,210	1,160	1,240	1,040	1,060	783	670	684
18	536	710	1,350	1,000	1,360	1,260	1,220	1,040	1,070	783	671	710
19	546	715	1,320	1,030	1,310	1,230	1,220	1,080	994	760	670	715
20	549	722	1,240	1,050	1,230	1,230	1,230	1,100	986	744	671	728
21	553	697	1,230	1,040	1,230	1,190	1,250	1,110	997	732	671	735
22	558	697	1,160	1,010	1,220	1,220	1,330	1,070	999	728	674	701
23	562	679	1,140	1,040	1,190	1,280	1,320	1,060	998	728	674	736
24	562	666	1,200	1,380	1,160	1,280	1,260	1,060	935	728	675	735
25	565	655	1,160	1,320	1,130	1,280	1,240	1,050	934	728	676	734
26	563	656	1,120	1,250	1,110	1,280	1,240	1,060	932	728	676	737
27	566	648	1,080	1,210	1,130	1,330	1,260	1,080	900	728	676	735
28	564	646	1,080	1,370	1,150	1,320	1,360	1,380	879	728	676	735
29	567	1,090	1,070	1,970	1,150	1,310	1,340	1,330	890	717	676	723
30	563	914	1,020	1,920	---	1,450	1,250	1,220	875	706	683	711
31	545	---	965	1,680	---	1,540	---	1,250	---	707	682	---
TOTAL	17,626	20,574	35,833	34,791	36,530	37,280	38,100	35,230	32,089	24,130	21,153	20,827
MEAN	569	686	1,156	1,122	1,260	1,203	1,270	1,136	1,070	778	682	694
MAX	622	1,090	2,020	1,970	1,600	1,540	1,360	1,380	1,230	873	712	737
MIN	522	548	856	908	1,080	1,040	1,220	1,040	875	706	669	640
AC-FT	34,960	40,810	71,070	69,010	72,460	73,940	75,570	69,880	63,650	47,860	41,960	41,310
MEAN†	567	676	1,153	1,126	1,244	1,204	1,282	1,153	1,064	781	689	690
CFSM†	3.08	3.68	6.26	6.12	6.76	6.54	6.97	6.27	5.78	4.24	3.74	3.75
IN.†	3.55	4.10	7.22	7.06	7.29	7.54	7.78	7.23	6.45	4.90	4.32	4.19
AC-FT†	34,840	40,250	70,880	69,220	71,540	74,000	76,280	70,920	63,320	48,020	42,350	41,070
CAL YR2003 TOTAL	347516		MEAN 952	MAX 2270	MIN 522	AC-FT 689300	MEAN† 952	CFSM† 5.17	IN.† 70.22	AC-FT† 688930		
WTR YR2004 TOTAL	354163		MEAN 968	MAX 2020	MIN 522	AC-FT 702500	MEAN† 968	CFSM† 5.26	IN.† 71.63	AC-FT† 702710		

† Adjusted for change in contents in Smith Reservoir.



2004 Water Year
WILLAMETTE RIVER BASIN

14158850 MCKENZIE R BLW TRAIL BR DAM, NR BELKNAP SPRINGS, OR

Latitude: 44° 16 ' 05"

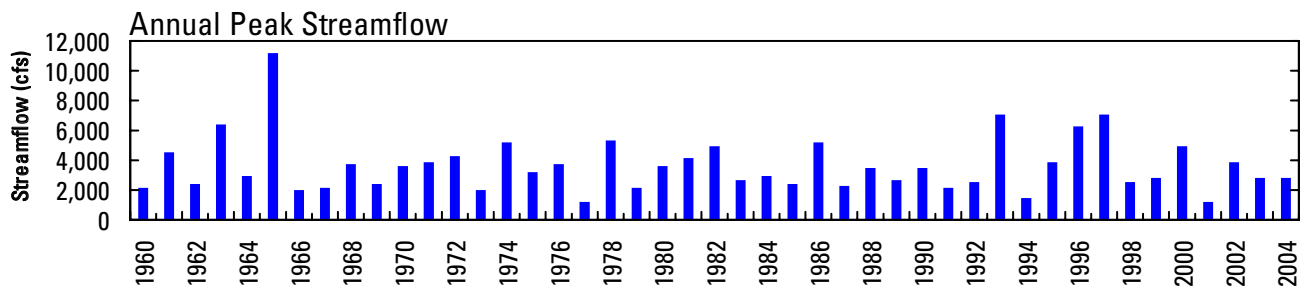
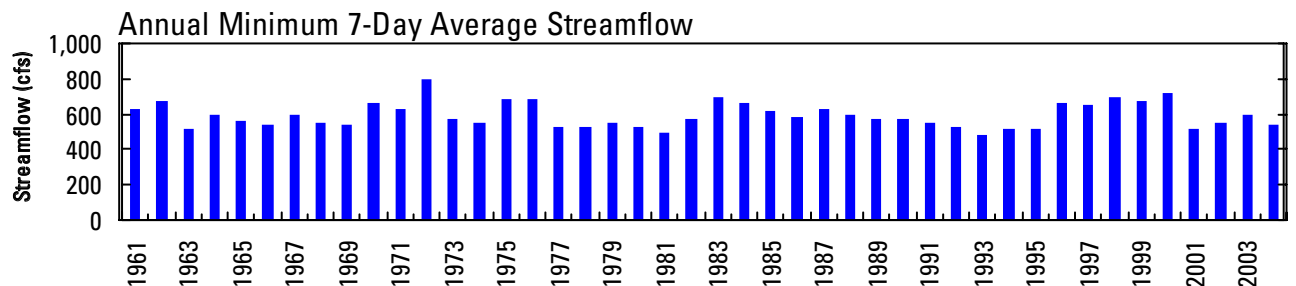
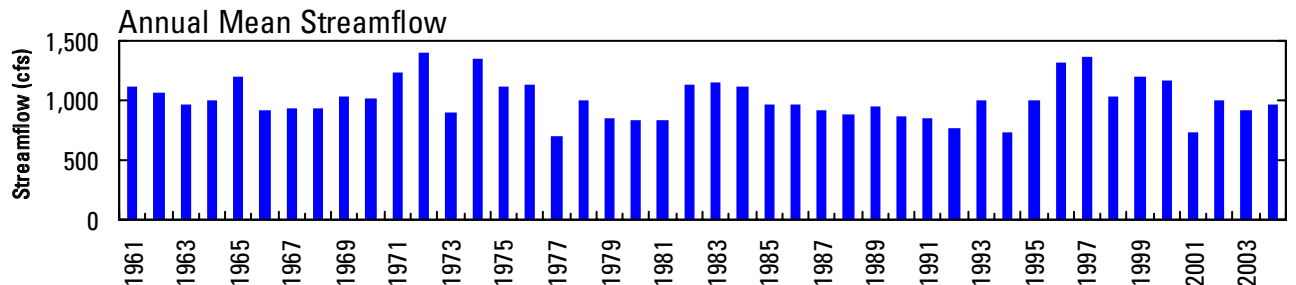
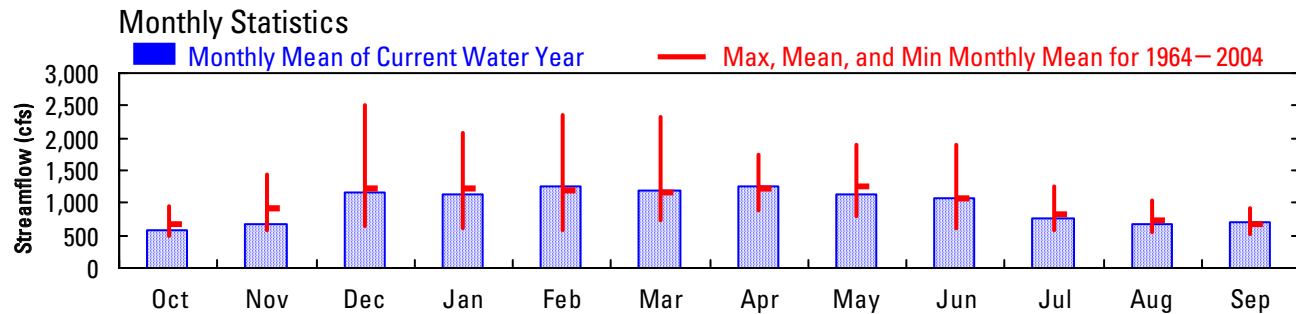
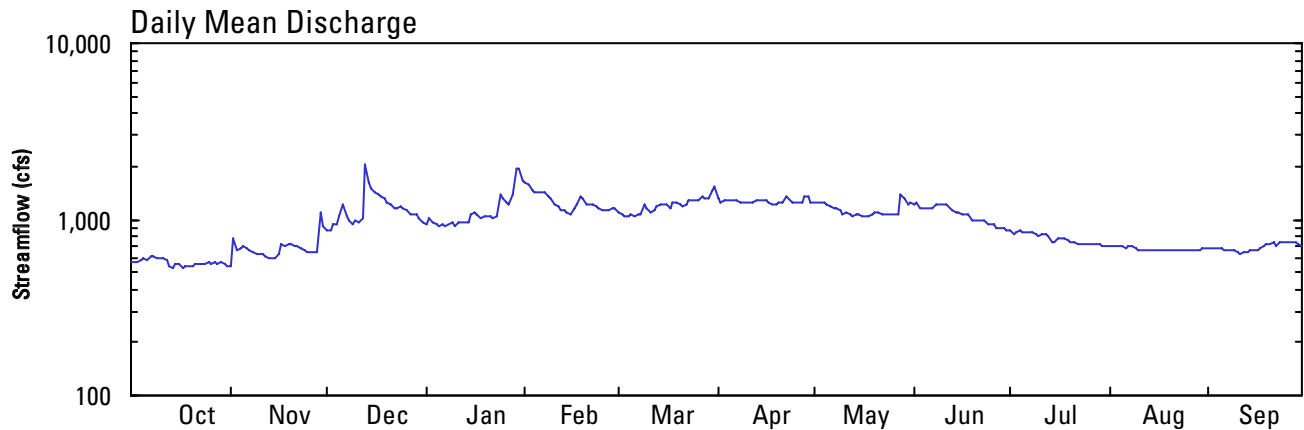
Longitude: 122° 02 ' 55"

Hydrologic Unit Code: 17090004

Linn County

Datum: 1,980.00 feet

Drainage Area: 184 square miles



14159110 MCKENZIE RIVER ABOVE SOUTH FORK, NEAR RAINBOW, OR

LOCATION.--Lat 44°10'00", long 122°15'19", in NW ¼ sec.19 T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 0.6 mi downstream from Mill Creek, and at mile 62.3.

DRAINAGE AREA.--526 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 2003 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,150 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. Flow regulated since 1963 by Smith River Reservoir (14158795). No diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,900 ft³/s Dec. 13, 2003, gage height, 13.21 ft; minimum discharge, 1,250 ft³/s Oct. 14, 15, 18, 22, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,900 ft³/s Dec. 13, gage height, 13.21 ft; minimum discharge, 1,250 ft³/s Oct. 14, 15, 18, 22.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,350	1,310	2,650	2,580	5,020	2,790	2,900	2,780	3,010	2,140	1,720	1,630
2	1,350	1,630	2,480	2,550	4,720	2,670	2,760	2,800	2,930	2,090	1,720	1,640
3	1,340	1,500	2,570	2,450	4,370	2,630	2,740	2,860	2,790	2,060	1,720	1,640
4	1,330	1,500	2,540	2,350	4,040	2,750	2,780	2,840	2,750	2,100	1,710	1,620
5	1,350	1,550	2,780	2,270	3,840	2,830	2,770	2,750	2,700	2,060	1,700	1,620
6	1,350	1,540	3,450	2,310	3,760	2,900	2,780	2,650	2,740	2,040	1,690	1,600
7	1,390	1,550	2,980	2,460	3,760	2,860	2,770	2,580	2,840	2,040	1,710	1,590
8	1,370	1,520	2,730	2,650	3,520	2,900	2,740	2,650	2,930	2,030	1,700	1,590
9	1,390	1,480	2,580	3,030	3,350	3,150	2,730	2,570	e3,000	1,990	1,670	1,580
10	1,410	1,480	2,590	3,060	3,180	3,100	2,730	2,440	e3,000	1,960	1,650	1,560
11	1,430	1,540	2,460	3,010	3,060	2,920	2,750	2,530	e3,000	1,960	1,640	1,560
12	1,460	1,490	2,820	3,040	2,940	2,890	2,790	2,490	e3,000	1,970	1,630	1,590
13	1,350	1,430	7,510	3,060	2,880	2,920	2,810	2,400	e2,800	1,950	1,630	1,670
14	1,290	1,440	6,580	3,180	2,840	2,960	2,860	2,390	2,700	1,890	1,630	1,750
15	1,360	1,470	4,510	3,480	2,840	2,930	2,850	2,360	2,660	1,850	1,630	1,720
16	1,400	1,620	3,910	3,470	3,090	2,890	2,820	2,380	2,590	1,900	1,620	1,680
17	1,310	1,980	3,630	3,280	3,540	2,830	2,730	2,360	2,540	1,890	1,610	1,760
18	1,290	1,900	3,490	3,110	3,910	2,920	2,650	2,540	2,550	1,880	1,610	2,020
19	1,310	1,890	3,390	3,230	3,790	2,900	2,620	2,750	2,450	1,870	1,610	1,870
20	1,340	1,870	3,280	3,180	3,470	2,840	2,790	2,650	2,400	1,840	1,600	1,840
21	1,310	1,750	3,150	3,020	3,320	2,790	3,010	2,570	2,390	1,810	1,600	1,800
22	1,320	1,680	2,980	2,880	3,190	2,870	3,060	2,520	2,390	1,800	1,730	1,740
23	1,380	1,650	2,920	3,170	3,070	3,010	2,950	2,610	2,400	1,790	1,720	1,730
24	1,360	1,680	3,050	4,600	2,960	3,010	2,810	2,510	2,310	1,790	1,690	1,730
25	1,370	1,670	2,980	4,200	2,930	2,960	2,760	2,450	2,290	1,780	1,790	1,710
26	1,370	1,690	2,810	3,750	2,850	2,960	2,790	2,440	2,270	1,770	1,880	1,700
27	1,380	1,640	2,710	3,810	2,820	3,180	2,900	2,640	2,220	1,770	1,730	1,690
28	1,420	1,680	2,820	4,510	2,850	3,080	3,030	4,160	2,180	1,760	1,670	1,690
29	1,400	3,790	2,920	7,680	2,830	2,980	2,930	4,060	2,190	1,750	1,650	1,670
30	1,370	3,150	2,690	7,580	---	3,110	2,800	3,460	2,150	1,730	1,640	1,650
31	1,330	---	2,620	5,840	---	3,320	---	3,200	---	1,730	1,630	---
TOTAL	42,180	52,070	100,580	108,790	98,740	90,850	84,410	84,390	78,170	58,990	51,930	50,640
MEAN	1,361	1,736	3,245	3,509	3,405	2,931	2,814	2,722	2,606	1,903	1,675	1,688
MAX	1,460	3,790	7,510	7,680	5,020	3,320	3,060	4,160	3,010	2,140	1,880	2,020
MIN	1,290	1,310	2,460	2,270	2,820	2,630	2,620	2,360	2,150	1,730	1,600	1,560
AC-FT	83,660	103,300	199,500	215,800	195,900	180,200	167,400	167,400	155,100	117,000	103,000	100,400
CFSM	2.59	3.30	6.17	6.67	6.47	5.57	5.35	5.18	4.95	3.62	3.18	3.21
IN.	2.98	3.68	7.11	7.69	6.98	6.43	5.97	5.97	5.53	4.17	3.67	3.58

WTR YR2004 TOTAL 901740 MEAN 2464 MAX 7680 MIN 1290 AC-FT 1789000 CFSM 4.68 IN. 63.78

e Estimated

14159110 MCKENZIE RIVER ABOVE SOUTH FORK, NEAR RAINBOW, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: February 2003 to current year.

TURBIDITY: January 2003 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Water temperature records excellent, turbidity records good except for the period May 30 to June 14, which is fair. Turbidity data are highly dependent on the instrumentation used for the measurement. See the "Definitions" section for turbidity in the front of this report.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 14.2°C July 22, 31, 2003; minimum, 3.8°C Jan. 6, 2004.

TURBIDITY: Maximum, 82 FNU Dec. 13, 2003; minimum, <1 FNU on many days.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.0°C July 24, 25, 31 Aug. 1, 13; minimum, 3.8°C Jan. 6.

TURBIDITY: Maximum, 82 FNU Dec. 13; minimum, <1 FNU on many days.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10.3	8.5	9.3	5.5	3.9	4.6	6.3	6.0	6.1	4.8	4.0	4.4
2	10.6	8.8	9.5	6.0	5.0	5.4	6.5	6.0	6.2	4.9	4.3	4.6
3	10.2	8.4	9.3	6.4	5.3	5.8	6.6	5.8	6.3	4.7	4.5	4.6
4	10.3	8.5	9.3	6.4	5.5	5.9	6.3	5.5	5.8	4.8	4.4	4.6
5	10.4	8.8	9.4	6.8	5.8	6.3	6.4	6.2	6.3	4.7	3.9	4.2
6	10.2	8.5	9.3	6.8	5.5	6.1	6.3	5.9	6.2	4.7	3.8	4.2
7	10.3	9.0	9.5	7.3	6.3	6.8	6.0	5.3	5.8	5.2	4.6	4.8
8	9.2	8.1	8.7	7.1	6.3	6.7	6.0	5.3	5.6	5.2	4.8	5.0
9	9.3	8.3	8.7	7.1	6.3	6.7	5.9	5.4	5.6	5.5	5.0	5.2
10	9.2	7.7	8.4	7.1	6.8	6.9	6.1	5.4	5.7	5.5	5.2	5.3
11	8.1	7.4	7.7	7.4	7.0	7.2	6.0	5.5	5.8	5.5	5.0	5.2
12	8.8	8.0	8.3	7.1	6.4	6.9	6.3	5.8	6.0	5.6	5.0	5.3
13	8.5	7.4	8.0	6.6	5.6	6.1	6.4	5.1	6.1	5.6	5.2	5.4
14	8.6	7.2	7.9	6.9	5.8	6.3	5.5	5.1	5.4	5.8	5.3	5.6
15	7.4	6.8	7.1	7.0	6.5	6.7	5.8	5.4	5.6	6.0	5.5	5.7
16	8.1	7.1	7.5	6.8	6.5	6.6	5.7	5.3	5.5	5.9	5.3	5.6
17	8.4	7.4	7.8	6.9	6.6	6.8	5.9	5.3	5.6	5.8	5.0	5.4
18	8.2	6.7	7.4	7.5	6.8	7.1	5.7	5.2	5.4	6.0	5.5	5.7
19	8.0	7.2	7.6	7.1	5.6	6.6	6.0	5.2	5.6	6.0	5.6	5.8
20	8.8	7.6	8.1	6.0	5.4	5.8	6.2	5.7	5.9	5.6	5.0	5.3
21	8.6	7.6	8.1	5.9	5.3	5.6	6.2	5.5	5.9	5.2	4.7	4.9
22	8.6	7.4	7.9	5.4	5.0	5.2	5.8	5.2	5.5	5.3	4.5	4.9
23	8.1	7.2	7.7	5.3	4.7	5.0	6.1	5.5	5.8	5.6	5.0	5.4
24	7.4	6.2	6.8	5.7	5.1	5.4	6.0	5.6	5.9	5.6	4.8	5.3
25	7.6	6.3	6.9	5.2	4.4	4.8	5.6	5.2	5.4	5.3	4.7	5.0
26	7.9	6.6	7.2	5.6	4.8	5.2	5.5	5.0	5.2	5.6	5.0	5.3
27	7.9	6.8	7.3	5.6	4.8	5.2	5.2	4.4	4.9	6.0	5.2	5.5
28	8.2	7.2	7.7	5.9	5.1	5.5	4.8	4.3	4.5	6.0	5.4	5.6
29	8.0	6.7	7.3	5.9	5.5	5.7	4.9	4.4	4.6	6.2	5.5	5.8
30	6.7	5.3	6.1	6.2	5.7	5.9	4.8	4.0	4.4	6.1	4.9	5.4
31	5.3	4.4	4.8	---	---	---	4.7	4.1	4.5	5.6	5.0	5.4
MONTH	10.6	4.4	8.0	7.5	3.9	6.0	6.6	4.0	5.6	6.2	3.8	5.2

TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/-2.5 DEGREES, FNU—
CONTINUED

[illegible]

14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1958 - 2004	
ANNUAL TOTAL	221,081		235,543			
ANNUAL MEAN	606		644		627	
HIGHEST ANNUAL MEAN					917	1972
LOWEST ANNUAL MEAN					346	1977
HIGHEST DAILY MEAN	4,130	Jan 30	4,110	Dec 13	14,000	Dec 23, 1964
LOWEST DAILY MEAN	173	Oct 6	173	Oct 6	173	Sep 24, 2001
ANNUAL SEVEN-DAY MINIMUM	175	Sep 30	176	Oct 1	174	Oct 1, 2001
ANNUAL RUNOFF (AC-FT)	438,500		467,200		454,300	
ANNUAL RUNOFF (CFSM)	3.79		4.02		3.92	
ANNUAL RUNOFF (INCHES)	51.40		54.76		53.25	
10 PERCENT EXCEEDS	1,260		1,110		1,190	
50 PERCENT EXCEEDS	475		663		475	
90 PERCENT EXCEEDS	184		202		217	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14159200 SO FK MCKENZIE RIVER ABV COUGAR LAKE, NR RAINBOW, OR

Latitude: 44° 02 ' 50"

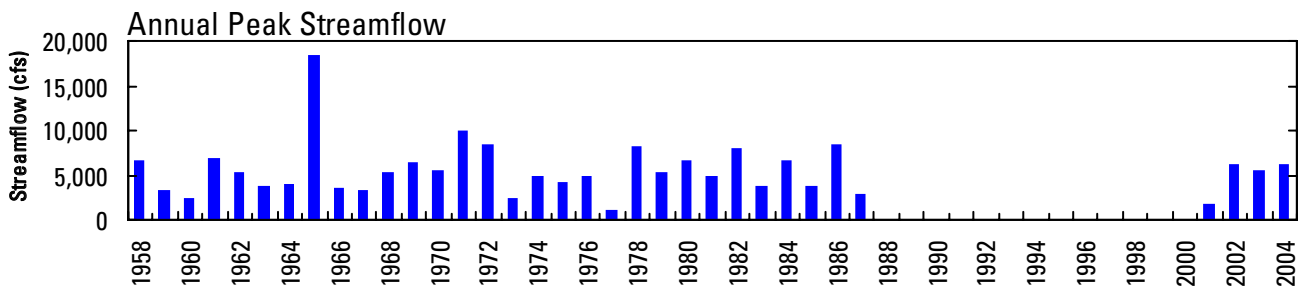
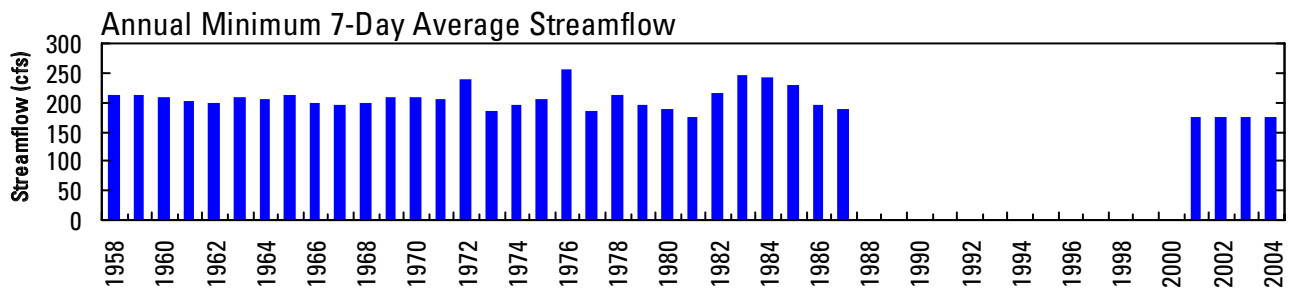
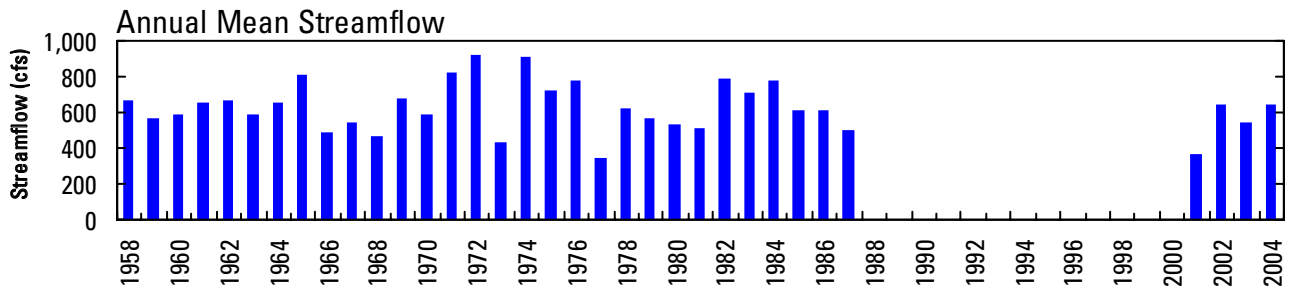
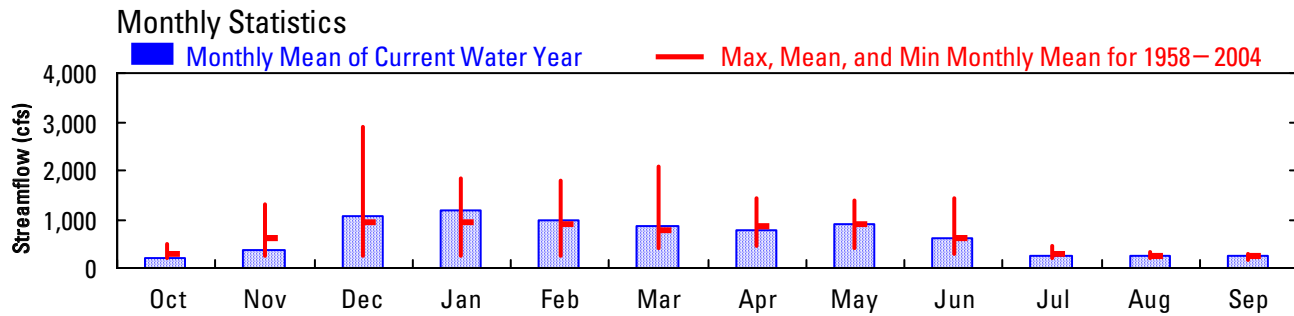
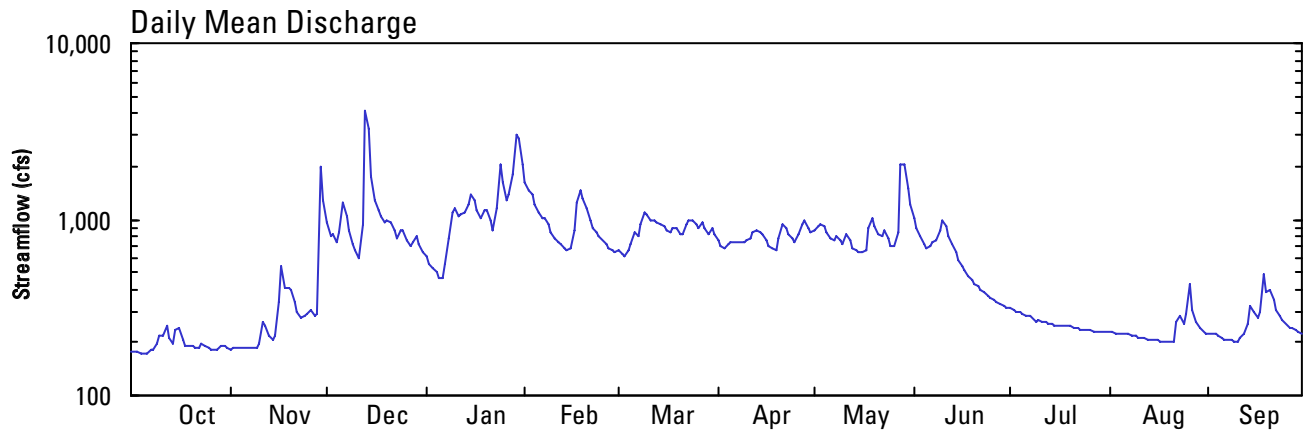
Longitude: 122° 13 ' 00"

Hydrologic Unit Code: 17090004

Lane County

Datum: 1,709.51 feet

Drainage Area: 160 square miles



14159200 SOUTH FORK MCKENZIE RIVER ABOVE COUGAR LAKE, NEAR RAINBOW, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1957 to September 1987, December 2000 to current year.

TURBIDITY: November 2000 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--

WATER TEMPERATURE: Records good.

TURBIDITY: Records good. Turbidity data are highly dependent on the instrumentation used for the measurement. See the "Definitions" section for turbidity in the front of this report.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 17.0°C July 8, 1968, July 19, 20, 1979; minimum, 0.0°C Dec. 7-11, 1972, Dec. 30, 1978, Jan. 1, 1979, Jan. 4, 1982, Dec. 24, 1983.

TURBIDITY: Maximum, 323 FNU Apr. 14, 2002; minimum, <1 FNU many days each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 14.8°C July 24; minimum, 2.7°C Jan. 1, 4.

TURBIDITY: Maximum, 128 FNU Dec. 13; minimum, <1 FNU many days during year.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10.2	8.6	9.4	5.2	3.6	4.4	6.0	5.6	5.8	4.0	2.7	3.3
2	10.6	9.0	9.7	5.4	4.7	5.0	6.2	5.6	5.9	4.0	2.9	3.6
3	10.1	8.4	9.3	5.7	4.9	5.3	6.3	5.5	6.0	3.8	3.2	3.5
4	10.1	8.5	9.3	5.5	4.9	5.2	---	5.2	---	3.6	2.7	3.2
5	10.4	9.0	9.6	6.7	5.0	5.8	---	---	---	3.8	3.3	3.6
6	10.2	8.3	9.2	6.4	5.4	6.0	---	---	---	4.0	3.6	3.8
7	10.2	9.1	9.6	7.1	6.0	6.6	---	---	---	4.0	3.7	3.9
8	9.3	8.0	8.7	7.0	5.9	6.5	---	---	---	4.4	3.8	4.2
9	9.0	8.3	8.7	7.2	6.2	6.8	---	---	---	4.8	4.2	4.6
10	8.8	7.8	8.3	7.1	6.6	6.9	6.0	5.0	5.5	5.0	4.6	4.8
11	8.3	7.1	7.7	7.4	6.9	7.2	5.8	5.2	5.5	4.9	4.5	4.7
12	8.9	8.0	8.4	7.2	6.1	6.8	6.0	5.5	5.8	5.1	4.5	4.8
13	8.6	7.4	8.1	6.1	5.4	5.8	6.4	5.0	6.0	5.0	4.7	4.8
14	8.9	7.8	8.3	6.5	5.3	5.9	5.3	4.9	5.1	5.3	4.8	5.1
15	8.2	7.0	7.6	6.8	6.1	6.4	5.2	4.8	5.0	5.5	5.0	5.2
16	8.8	7.7	8.2	6.6	6.2	6.4	5.1	4.7	4.9	5.3	4.7	5.0
17	9.2	8.0	8.5	7.0	6.5	6.8	5.3	4.8	5.0	5.1	4.5	4.8
18	8.7	7.1	7.9	7.5	6.9	7.1	5.2	4.8	4.9	5.5	4.9	5.1
19	9.1	7.9	8.4	7.0	5.4	6.4	5.7	4.8	5.3	5.4	4.9	5.1
20	10.0	8.5	9.2	5.7	5.1	5.5	5.8	5.3	5.6	5.1	4.4	4.7
21	9.7	8.6	9.2	5.5	4.9	5.2	5.8	5.0	5.5	4.6	4.0	4.4
22	9.4	8.2	8.8	5.0	4.2	4.6	5.4	4.8	5.1	4.6	4.0	4.4
23	9.1	7.8	8.5	4.6	4.0	4.4	6.2	5.0	5.7	5.2	4.6	4.9
24	7.8	6.6	7.3	5.0	4.2	4.6	6.0	5.0	5.7	5.1	4.4	4.8
25	8.0	6.5	7.2	4.6	3.5	4.3	5.2	4.6	4.9	4.8	4.2	4.5
26	8.5	7.1	7.8	4.4	3.5	4.0	4.7	4.3	4.5	4.9	4.4	4.7
27	8.5	7.3	7.9	4.7	4.1	4.4	4.5	3.8	4.2	5.2	4.5	4.9
28	9.2	7.9	8.5	5.2	4.4	4.8	4.2	3.4	3.8	5.4	4.9	5.1
29	9.0	6.9	7.9	5.7	4.5	5.2	4.2	3.3	3.9	5.6	5.2	5.4
30	6.9	5.4	6.4	5.9	5.5	5.7	4.2	3.6	3.9	5.4	4.4	4.7
31	5.4	4.2	4.7	---	---	---	4.3	3.6	3.9	4.8	4.3	4.5
MONTH	10.6	4.2	8.3	7.5	3.5	5.7	6.4	3.3	5.1	5.6	2.7	4.5

TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/- 2.5 DEGREES, FNU—
CONTINUED

[illegible]

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR

LOCATION.--Lat 44°08'10", long 122°14'50", in NE $\frac{1}{4}$ sec.31, T.16 S., R.5 E., Lane County, Hydrologic Unit 17090004, in Willamette National Forest, on right bank 0.2 mi upstream from Cougar Creek, 0.6 mi downstream from Cougar Dam, 2.1 mi south of Rainbow, and at mile 3.9.

DRAINAGE AREA.--208 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1638: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,236.42 ft above NGVD of 1929 (Federal Highway Administration bench mark). Oct. 1 to Nov. 4, 1947, nonrecording gage at site 40 ft upstream at datum 0.80 ft higher.

REMARKS.--Records good except for the period Oct. 13 to Nov. 6, which are poor. Flow regulated since 1963 by Cougar Lake (station 14159400), usable capacity, 164,800 acre-ft. No diversion upstream from station.

AVERAGE DISCHARGE.--57 years (water years 1948-2004), 848 ft³/s, 55.36 in/yr, 614,400 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,600 ft³/s Dec. 11, 1956, gage height, 8.66 ft, from rating curve extended above 8,100 ft³/s; maximum gage height, 8.90 ft Dec. 22, 1955 (backwater from debris); minimum discharge, 17 ft³/s Nov. 18, 1965; minimum daily, 85 ft³/s April 26-28, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 24,500 ft³/s Dec. 28, 1945, gage height, 8.8 ft, from floodmarks, at Corps of Engineers gage at site 40 ft upstream at datum 0.80 ft higher; gage height at present site and datum, about 9.3 ft, computed by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,850 ft³/s Dec. 14, gage height, 3.71 ft; minimum discharge, 166 ft³/s Oct. 8.

CORRECTIONS.--Calendar year adjustments for storage from Cougar Lake were revised for the Annual Data Report for the water years 2001-2003 and are listed below:

CAL YR	2000	MEAN†	758	CFSM†	3.64	IN.†	49.61	AC-FT†	550,150
CAL YR	2001	MEAN†	617	CFSM†	2.97	IN.†	40.30	AC-FT†	446,920
CAL YR	2002	MEAN†	717	CFSM†	3.45	IN.†	46.81	AC-FT†	519,150

† Adjusted for change in contents, in Cougar Lake.

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	227	1,720	663	2,570	800	1,060	976	1,490	387	239	259
2	189	241	1,480	744	2,550	803	877	894	1,080	378	239	259
3	189	208	1,360	828	2,530	837	808	979	1,070	271	239	259
4	189	207	1,300	679	2,490	877	808	1,120	893	274	239	259
5	189	207	1,160	468	1,880	1,030	815	1,110	896	280	239	259
6	190	207	1,470	496	1,330	1,120	831	985	840	274	239	259
7	192	209	1,380	900	1,340	1,130	959	833	822	273	239	259
8	186	211	1,370	1,240	1,220	1,160	1,020	792	1,070	273	239	259
9	196	215	1,240	1,330	1,120	1,410	833	798	1,230	273	239	259
10	271	221	1,060	1,600	1,030	1,540	800	870	1,240	273	239	304
11	310	333	791	1,600	782	1,280	805	962	1,360	274	239	387
12	316	346	1,110	1,590	849	1,150	907	1,070	1,420	276	239	387
13	326	269	1,160	1,590	884	1,200	1,040	934	903	277	239	387
14	273	238	1,950	1,660	885	1,200	1,070	676	782	277	239	387
15	257	249	2,810	1,920	885	1,200	1,070	677	808	277	239	387
16	247	346	2,780	1,860	960	1,090	1,070	714	812	277	239	387
17	256	734	2,680	1,510	1,690	919	844	757	811	279	239	387
18	254	601	2,610	1,320	1,930	960	803	935	662	282	239	577
19	244	533	2,200	1,350	2,040	1,020	804	1,220	649	281	239	640
20	222	539	2,130	1,490	1,450	1,060	858	1,300	519	268	239	640
21	226	521	2,060	1,480	1,300	1,060	1,170	1,190	522	239	239	640
22	232	396	1,570	1,240	1,190	1,060	1,270	898	466	239	239	640
23	247	318	1,140	1,280	1,040	1,130	1,170	1,030	460	239	239	470
24	223	315	898	2,270	999	1,180	944	1,060	468	239	239	288
25	236	331	1,300	2,380	1,040	1,180	950	980	435	239	244	259
26	254	403	1,060	2,330	881	1,180	968	737	371	239	288	262
27	239	415	1,060	2,020	898	1,180	1,060	1,030	386	239	259	264
28	213	401	938	2,280	892	1,150	1,150	2,020	387	239	259	264
29	222	1,530	1,100	2,510	791	986	1,190	2,430	391	239	259	264
30	221	1,890	1,160	2,570	---	986	1,150	2,420	382	239	259	264
31	240	---	905	2,580	---	1,040	---	2,090	---	239	259	---
TOTAL	7,238	12,861	46,952	47,778	39,446	33,918	29,104	34,487	23,625	8,353	7,563	10,816
MEAN	233	429	1,515	1,541	1,360	1,094	970	1,112	788	269	244	361
MAX	326	1,890	2,810	2,580	2,570	1,540	1,270	2,430	1,490	387	288	640
MIN	186	207	791	468	782	800	800	676	371	239	239	259
AC-FT	14,360	25,510	93,130	94,770	78,240	67,280	57,730	68,400	46,860	16,570	15,000	21,450
MEAN†	234	471	1,471	1,663	1,232	1,099	963	1,120	781	281	260	334
CFSM†	1.12	2.26	7.07	8.00	5.92	5.28	4.63	5.39	3.75	1.35	1.25	1.60
IN.†	1.30	2.53	8.15	9.22	6.39	6.09	5.17	6.21	4.19	1.56	1.44	1.79
AC-FT†	14,360	28,010	90,430	102,270	70,840	67,580	57,330	68,900	46,460	17,270	16,000	19,850
CAL YR	2003	TOTAL 282510	MEAN 774	MAX 2810	MIN 183	AC-FT 560400	MEAN† 787	CFSM† 3.78	IN.† 51.39	AC-FT† 569980		
WTR YR	2004	TOTAL 302141	MEAN 826	MAX 2810	MIN 186	AC-FT 599300	MEAN† 826	CFSM† 3.97	IN.† 54.05	AC-FT† 599400		

† Adjusted for change in contents, in Cougar Lake.

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR

Latitude: 44° 08 ' 10"

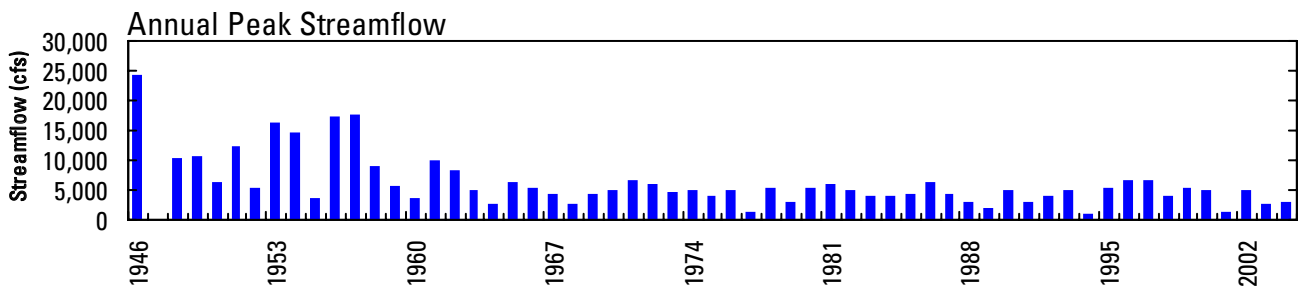
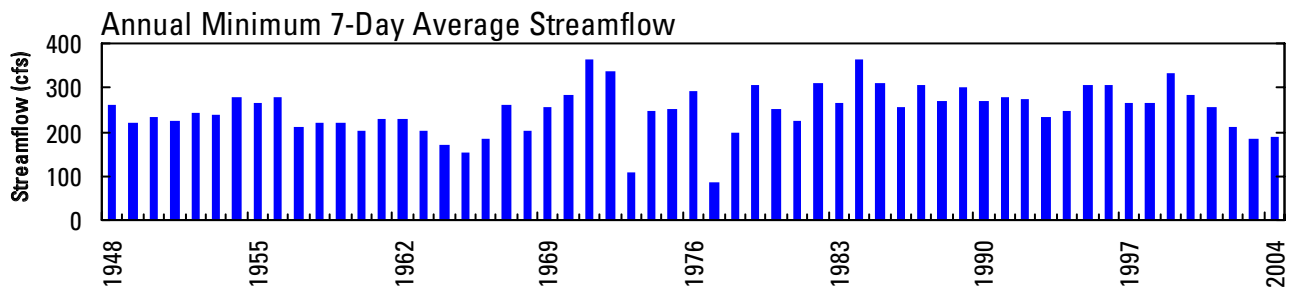
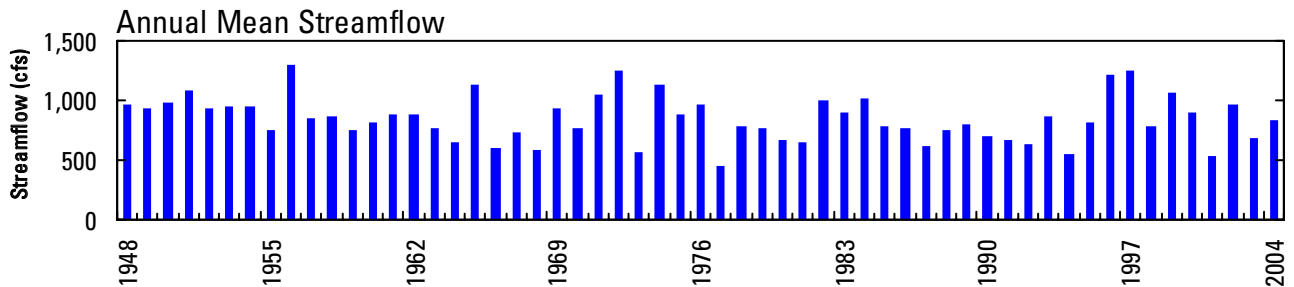
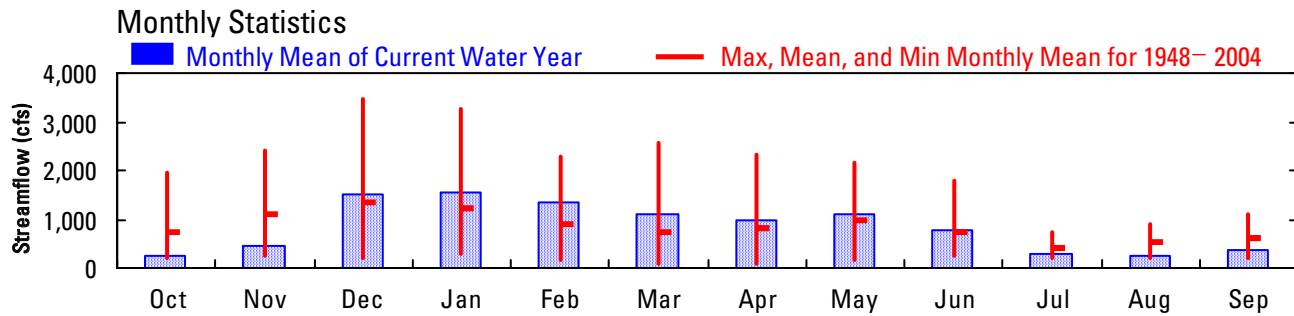
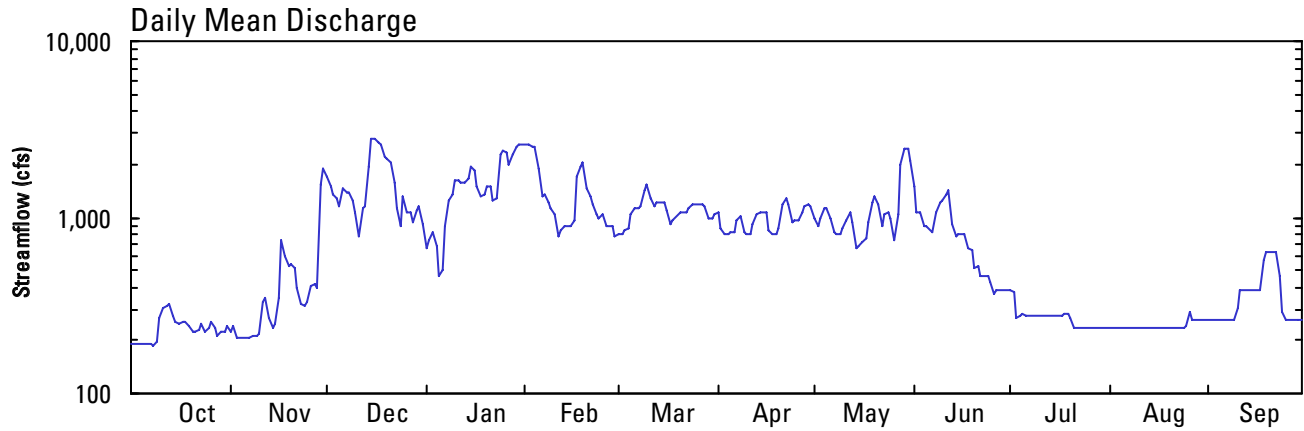
Longitude: 122° 14 ' 50"

Hydrologic Unit Code: 17090004

Lane County

Datum: 1,236.42 feet

Drainage Area: 208 square miles



14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July 1955 to November 1999, December 2000 to current year.

DISSOLVED OXYGEN: December 2000 to current year.

TURBIDITY: December 2000 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--

WATER TEMPERATURE: Records good.

DISSOLVED OXYGEN: Records fair.

TURBIDITY: Records good. Turbidity data are highly dependent on the instrumentation used for the measurement. See the "Definitions" section for turbidity in the front of this report. Water-quality data collected at this site may not always provide a representative value of the total stream due to inadequate mixing of the flow between the dam (0.6 mi upstream) and the gage.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 20.0°C July 28, 1958; minimum, 0.5°C Jan. 20-23, 1962.

DISSOLVED OXYGEN: Maximum, 14.5 mg/L Feb. 23, 2002, due to Cougar Lake tunnel tap; minimum, 7.4 mg/L Sept. 15, 2001.

TURBIDITY: Maximum, 1,410 FNU Feb. 23, 2002, due to Cougar Lake tunnel tap; minimum, <1 FNU many days each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 18.1°C Aug. 20; minimum, 3.9°C Jan. 5.

DISSOLVED OXYGEN: Maximum, 13.0 mg/L Jan. 9-11; minimum, 7.7 mg/L Aug. 22.

TURBIDITY: Maximum, 146 FNU Dec. 14, but may have been higher during periods of missing record; minimum, <1 FNU on many days during year.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	15.2	14.2	14.5	10.6	9.7	10.2	6.7	6.4	6.5	4.9	4.4	4.6
2	15.3	14.2	14.4	10.1	9.6	9.8	6.7	6.4	6.6	4.9	4.5	4.7
3	15.3	14.1	14.4	10.1	9.5	9.8	6.8	6.5	6.6	4.8	4.3	4.6
4	15.0	14.0	14.3	9.8	9.4	9.6	6.9	6.6	6.7	4.6	4.2	4.4
5	15.2	14.1	14.3	9.8	9.3	9.5	6.7	6.4	6.6	4.4	3.9	4.2
6	15.1	13.9	14.3	9.7	9.2	9.4	7.0	6.6	6.8	4.4	4.0	4.2
7	14.6	13.8	14.2	9.7	9.2	9.4	6.9	6.5	6.8	4.4	4.0	4.2
8	14.3	13.6	13.9	9.6	9.1	9.4	6.6	6.2	6.5	4.4	4.0	4.2
9	14.1	13.6	13.8	9.6	9.1	9.3	6.5	6.1	6.3	4.5	4.1	4.2
10	14.2	13.2	13.5	9.5	9.2	9.3	6.3	6.1	6.2	4.5	4.1	4.3
11	13.5	13.0	13.2	9.5	9.2	9.3	6.3	6.0	6.1	4.6	4.1	4.4
12	13.2	12.7	13.0	9.4	9.1	9.2	6.4	6.0	6.2	4.8	4.4	4.6
13	13.4	12.6	12.9	9.4	8.8	9.1	7.1	6.2	6.6	4.9	4.6	4.8
14	13.2	12.5	12.8	9.2	8.7	8.9	6.8	6.2	6.4	5.1	4.8	4.9
15	12.7	12.3	12.6	9.0	8.6	8.8	6.3	6.1	6.2	5.2	4.8	5.0
16	12.6	12.0	12.3	8.9	8.6	8.7	6.2	5.8	6.1	5.3	5.0	5.2
17	12.8	12.0	12.3	8.9	8.5	8.7	6.0	5.5	5.8	5.4	5.0	5.2
18	12.8	12.0	12.2	8.6	8.4	8.5	5.8	5.5	---	5.4	5.0	5.2
19	12.4	12.0	12.2	8.7	8.3	8.5	5.8	5.5	---	5.5	5.2	5.4
20	12.7	12.0	12.3	8.7	7.8	8.3	5.7	5.4	5.6	5.5	5.2	5.4
21	12.8	12.1	12.3	8.0	7.7	7.9	5.9	5.6	5.7	5.6	5.3	5.4
22	12.7	12.0	12.2	7.9	7.5	7.7	6.0	5.8	5.9	5.5	5.1	5.4
23	12.7	11.9	12.2	7.6	7.2	7.4	6.0	5.7	5.8	5.4	4.9	5.1
24	12.6	11.6	12.1	7.4	7.1	7.3	5.9	5.7	5.8	5.3	5.0	5.2
25	12.4	11.5	11.8	7.3	6.9	7.1	6.0	5.7	5.8	5.4	5.1	5.2
26	12.2	11.4	11.6	7.3	6.7	7.0	5.9	5.5	5.8	5.3	5.0	5.2
27	12.1	11.2	11.6	7.0	6.6	6.8	5.6	5.3	5.4	5.3	5.0	5.1
28	11.9	11.5	11.7	6.8	6.5	6.7	5.5	5.0	5.3	5.4	5.1	5.2
29	11.8	11.3	11.5	7.1	6.3	6.8	5.2	4.8	5.0	5.7	5.2	5.4
30	11.6	10.8	11.2	6.7	6.4	6.5	5.1	4.8	5.0	5.8	5.4	5.6
31	11.0	10.2	10.6	---	---	---	4.9	4.5	4.7	5.9	5.3	5.7
MONTH	15.3	10.2	12.8	10.6	6.3	8.5	7.1	4.5	---	5.9	3.9	4.9

14159500 SOUTH FORK MCKENZIE RIVER NEAR RAINBOW, OR—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	11.0	10.8	10.9	9.8	9.6	9.7	8.6	8.1	8.3	8.7	8.3	8.5
2	10.8	10.7	10.8	9.8	9.4	9.6	8.6	8.0	8.2	8.8	8.3	8.5
3	10.8	10.7	10.7	9.7	9.3	9.5	8.6	8.0	8.2	8.9	8.4	8.6
4	10.7	10.5	10.6	9.6	9.3	9.4	8.6	8.0	8.2	8.9	8.5	8.6
5	10.6	10.5	10.6	9.6	9.2	9.4	8.6	7.9	8.2	9.0	8.5	8.7
6	10.5	10.4	10.5	9.6	9.2	9.3	8.5	8.0	8.2	9.0	8.6	8.7
7	10.4	10.3	10.4	9.6	9.1	9.3	8.5	8.0	8.2	9.1	8.6	8.7
8	10.5	10.3	10.4	9.6	9.1	9.3	8.5	7.9	8.1	9.0	8.6	8.7
9	10.5	10.4	10.4	9.6	9.0	9.2	8.9	7.9	8.3	9.1	8.6	8.8
10	10.6	10.4	10.5	9.6	9.0	9.3	8.9	8.3	8.5	9.1	8.6	8.8
11	10.7	10.5	10.6	9.7	9.0	9.2	8.8	8.2	8.4	9.0	8.8	8.9
12	10.7	10.6	10.6	9.6	8.9	9.1	8.7	8.1	8.4	9.0	8.7	8.9
13	10.6	10.4	10.5	9.8	8.8	9.2	8.7	8.1	8.3	9.0	8.7	8.8
14	10.5	10.3	10.4	9.8	8.9	9.2	8.7	8.0	8.3	9.2	8.9	9.0
15	10.4	10.3	10.4	9.8	8.9	9.2	8.6	8.0	8.2	9.2	8.9	9.0
16	10.4	10.3	10.3	9.8	8.8	9.1	8.6	8.0	8.2	9.3	8.9	9.1
17	10.4	10.2	10.3	9.7	8.8	9.1	8.6	8.0	8.2	9.1	8.9	9.0
18	10.2	10.1	10.2	9.5	8.7	9.0	8.5	7.9	8.1	9.4	8.9	9.2
19	10.3	10.1	10.2	9.6	8.6	9.0	8.4	7.9	8.1	9.5	9.3	9.4
20	10.2	10.1	10.1	9.5	8.6	8.9	8.5	7.9	8.1	9.7	9.4	9.6
21	10.2	10.0	10.1	9.3	8.5	8.8	8.4	7.8	8.0	9.8	9.6	9.7
22	10.1	10.0	10.1	9.2	8.4	8.7	8.2	7.7	7.9	9.8	9.6	9.7
23	10.2	10.0	10.1	9.1	8.3	8.6	8.3	7.8	8.0	9.8	9.5	9.6
24	10.1	10.0	10.0	9.1	8.3	8.6	8.4	8.0	8.1	9.7	9.4	9.5
25	10.2	10.0	10.1	9.0	8.3	8.6	8.4	8.0	8.2	9.7	9.3	9.4
26	10.1	9.9	10.0	8.9	8.3	8.5	8.6	8.2	8.4	9.7	9.3	9.4
27	10.1	9.9	10	8.9	8.3	8.5	8.6	8.2	8.4	9.6	9.3	9.4
28	10.0	9.8	9.9	8.8	8.2	8.4	8.6	8.3	8.4	9.6	9.2	9.4
29	9.9	9.7	9.8	8.8	8.2	8.4	8.6	8.2	8.4	9.7	9.4	9.5
30	9.8	9.6	9.7	8.7	8.1	8.3	8.6	8.2	8.3	9.7	9.3	9.4
31	---	---	---	8.7	8.1	8.3	8.7	8.2	8.4	---	---	---
MONTH	11.0	9.6	10.3	9.8	8.1	9.0	8.9	7.7	8.2	9.8	8.3	9.1

TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/-2.5 DEGREES, FNU—
CONTINUED

[illegible]

14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1950 - 2004	
ANNUAL TOTAL	44,021.2		41,182.5		123	
ANNUAL MEAN	121		113		207	
HIGHEST ANNUAL MEAN					49.2	
LOWEST ANNUAL MEAN					1997	
HIGHEST DAILY MEAN	1,320	Dec 13	1,340	Jan 29	4,890	Dec 22, 1964
LOWEST DAILY MEAN	8.2	Oct 27	8.2	Oct 27	5.1	Sep 15, 1981
ANNUAL SEVEN-DAY MINIMUM	8.6	Aug 31	8.9	Oct 26	5.2	Oct 22, 1987
ANNUAL RUNOFF (AC-FT)	87,320		81,690		88,850	
ANNUAL RUNOFF (CFSM)	5.00		4.67		5.09	
ANNUAL RUNOFF (INCHES)	67.95		63.57		69.14	
10 PERCENT EXCEEDS	287		273		276	
50 PERCENT EXCEEDS	72		75		74	
90 PERCENT EXCEEDS	9.2		12		11	



2004 Water Year
WILLAMETTE RIVER BASIN

14161500 LOOKOUT CREEK NEAR BLUE RIVER, OR

Latitude: 44° 12 ' 35"

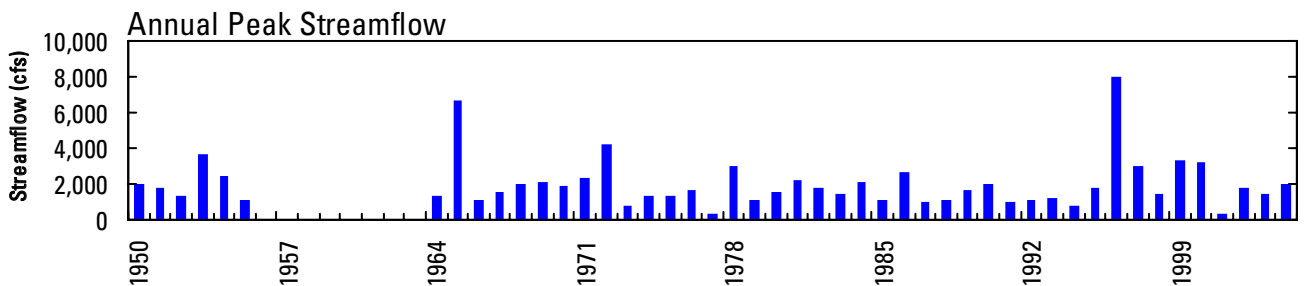
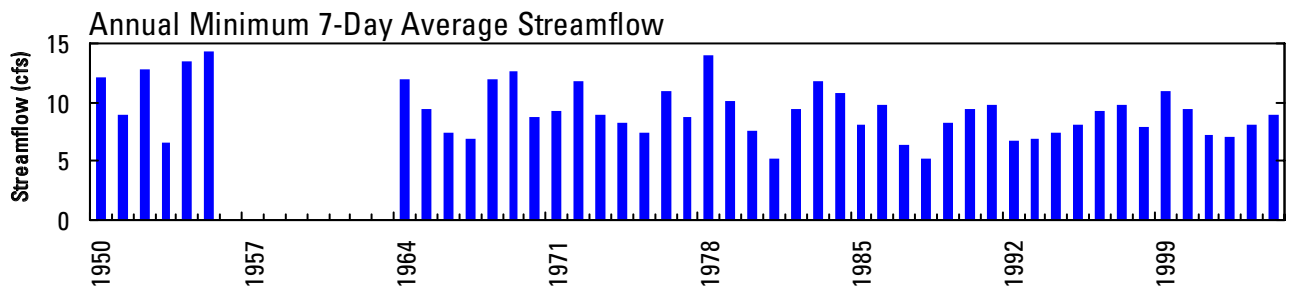
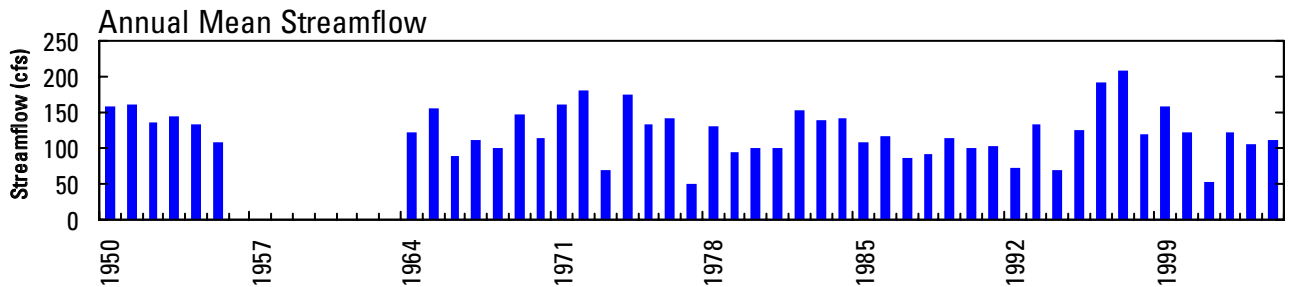
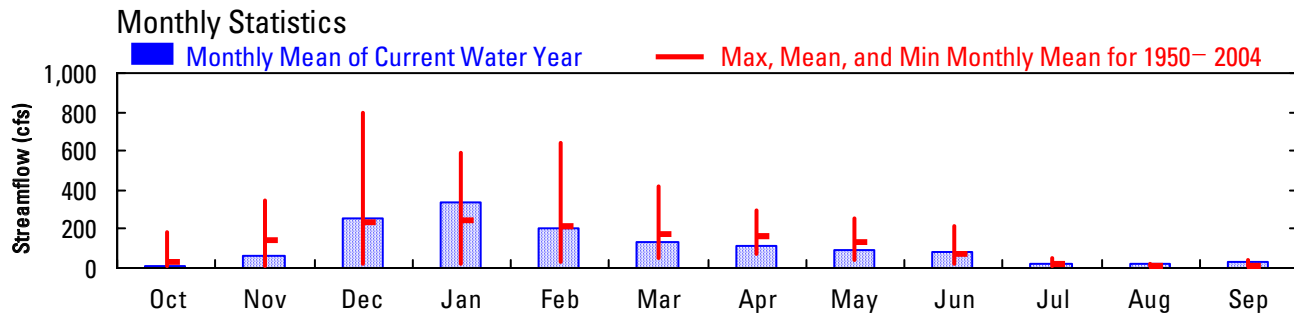
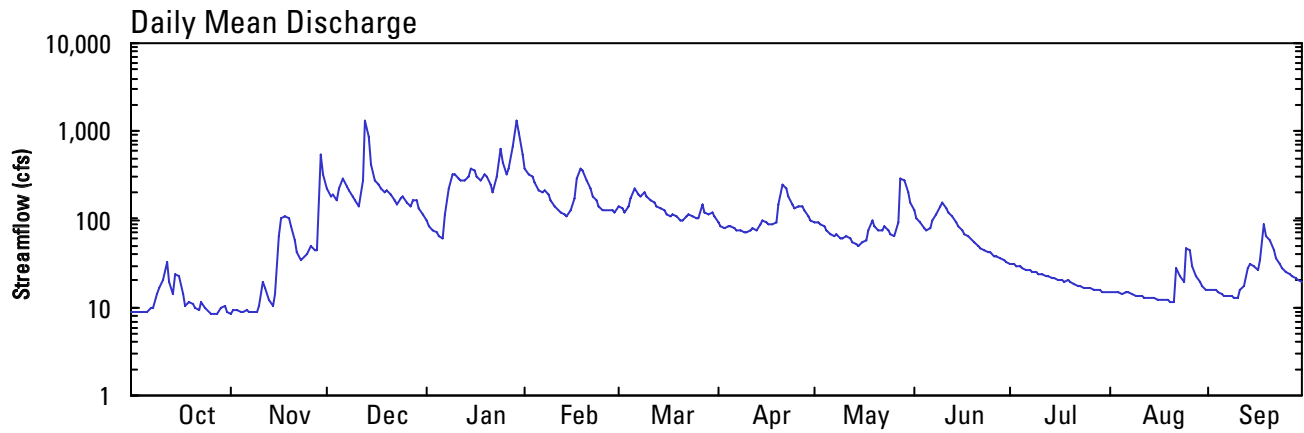
Longitude: 122° 15 ' 20"

Hydrologic Unit Code: 17090004

Lane County

Datum: 1,377.76 feet

Drainage Area: 24.1 square miles



WILLAMETTE RIVER BASIN

14162200 BLUE RIVER AT BLUE RIVER, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1967 - 2004	
ANNUAL TOTAL	166,888		143,891			
ANNUAL MEAN	457		393		455	
HIGHEST ANNUAL MEAN					727	1972
LOWEST ANNUAL MEAN					192	1977
HIGHEST DAILY MEAN	2,610	Dec 16	2,610	Dec 16	5,650	Feb 23, 1968
LOWEST DAILY MEAN	44	Feb 12	42	Feb 13	3.7	Oct 8, 1968
ANNUAL SEVEN-DAY MINIMUM	52	Feb 12	61	Feb 11	7.0	Oct 5, 1968
ANNUAL RUNOFF (AC-FT)	331,000		285,400		329,700	
10 PERCENT EXCEEDS	1,040		1,010		997	
50 PERCENT EXCEEDS	314		284		290	
90 PERCENT EXCEEDS	59		111		51	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14162200 BLUE RIVER AT BLUE RIVER, OR

Latitude: 44° 09 ' 45"

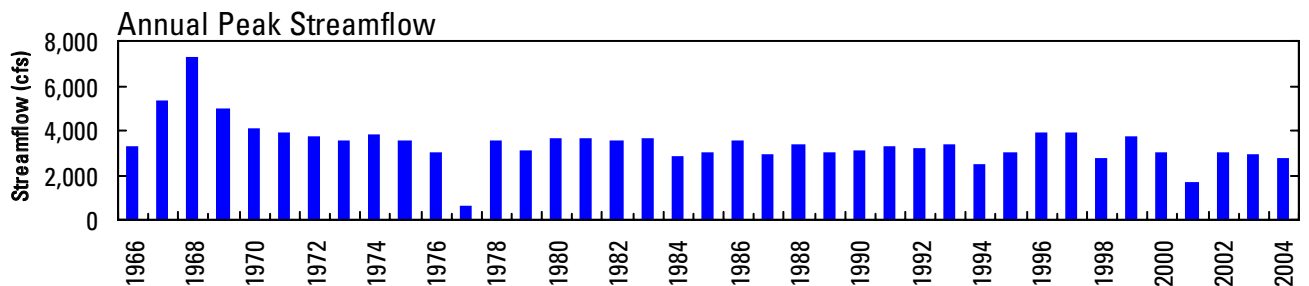
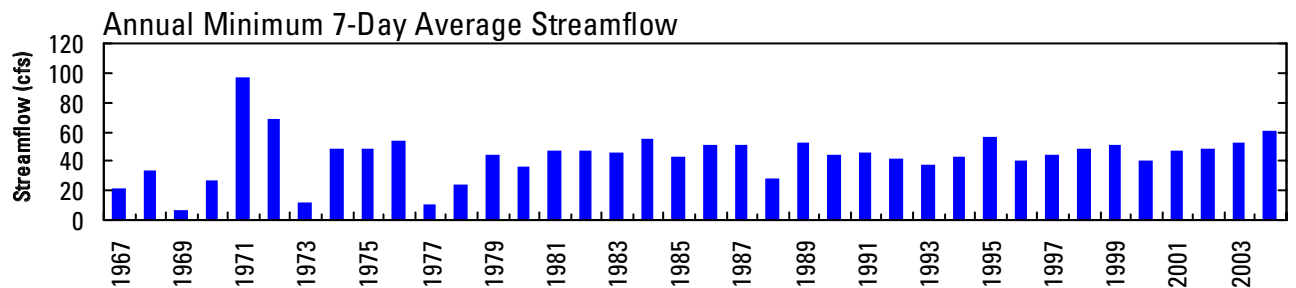
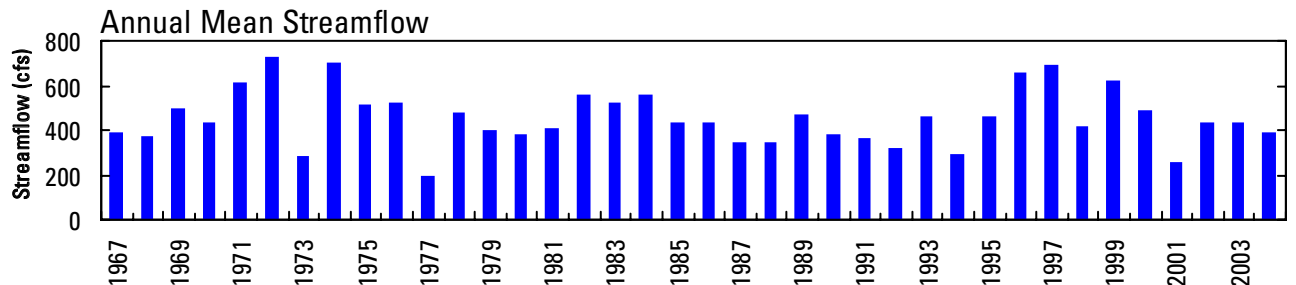
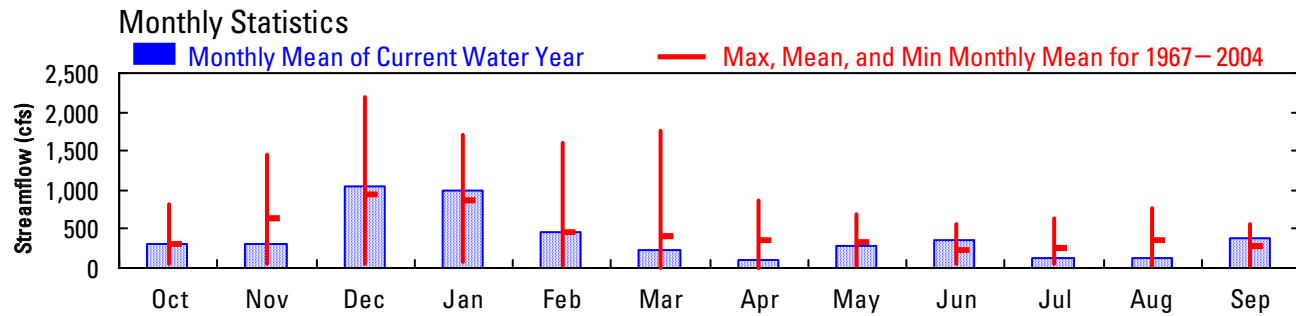
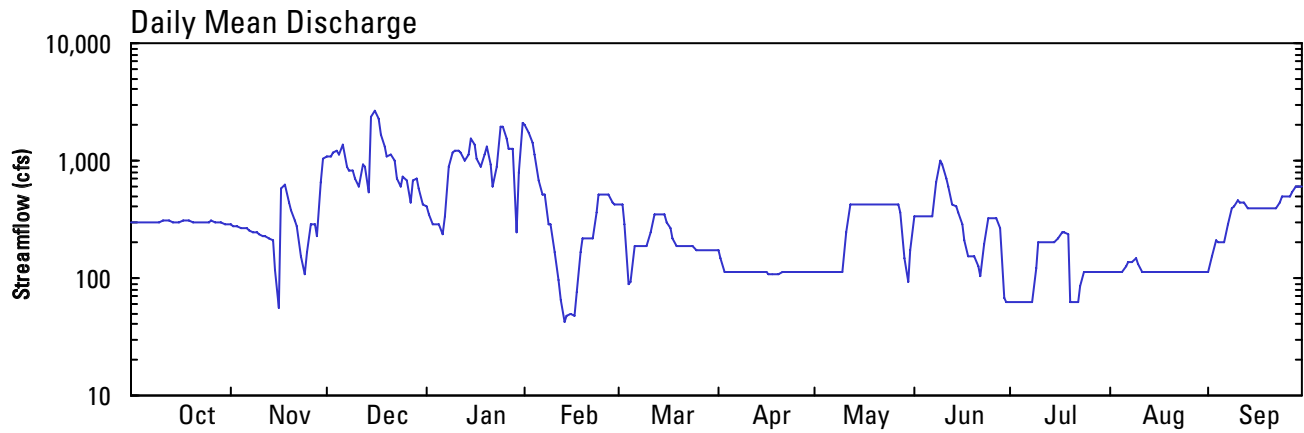
Longitude: 122° 19 ' 55"

Hydrologic Unit Code: 17090004

Lane County

Datum: 1,056.53 feet

Drainage Area: 87.7 square miles



14162200 BLUE RIVER AT BLUE RIVER, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 1966 to November 1999, August 2001 to current year.

TURBIDITY: January to 2003

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--

WATER TEMPERATURE: Records excellent.

TURBIDITY: Records fair. Turbidity data are highly dependent on the instrumentation used for the measurement. See the "Definitions" section for turbidity in the front of this report.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.0°C July 6, 1968; minimum, 0.0°C Jan. 5-9, 1974, Dec. 23, 24, 1983.

TURBIDITY: Maximum, 105 FNU Nov. 29, 2003; minimum, <1 FNU many days in June and July 2003, July 21-23, July 28, 2004 and probably during periods of missing record.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.4°C Oct. 3, 5-7; minimum, 3.0°C Jan. 7.

TURBIDITY: Maximum, 105 FNU Nov. 29; minimum, <1 FNU July 21-23, July 28 and probably during periods of missing record.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	19.3	19.1	19.2	14.2	13.1	13.5	6.7	6.5	6.6	4.0	3.5	3.7
2	19.3	19.1	19.2	13.1	12.9	13.1	6.8	6.7	6.8	3.6	3.3	3.4
3	19.4	19.1	19.2	12.9	12.4	12.7	6.9	6.7	6.8	3.4	3.3	3.3
4	19.3	19.1	19.2	12.5	12.2	12.4	6.8	6.6	6.7	3.5	3.3	3.3
5	19.4	19.2	19.3	12.3	12.1	12.2	7.0	6.3	6.6	3.4	3.2	3.2
6	19.4	19.2	19.2	12.2	11.9	12.0	7.2	7.0	7.2	3.2	3.1	3.1
7	19.4	19.2	19.2	11.9	11.8	11.8	7.2	6.5	6.9	3.4	3.0	3.2
8	19.3	19.1	19.2	11.9	11.7	11.8	6.5	5.9	6.1	4.3	3.4	3.7
9	19.3	19.0	19.2	11.7	11.4	11.6	6.1	5.9	6.0	5.3	4.3	4.9
10	19.0	18.5	18.8	11.4	11.3	11.4	6.2	5.9	6.1	5.7	5.3	5.6
11	18.5	18.1	18.3	11.3	10.8	11.2	6.4	6.1	6.2	5.7	5.3	5.6
12	18.2	17.2	17.8	10.8	10.0	10.3	6.7	6.3	6.5	5.6	5.2	5.4
13	17.2	16.4	16.7	10.2	9.7	10	10.1	6.6	7.8	5.7	5.4	5.6
14	16.6	16.3	16.4	9.8	9.4	9.7	10.4	6.8	8.8	5.9	5.6	5.7
15	16.6	16.4	16.5	9.5	8.6	9.2	6.8	6.6	6.7	6.2	5.8	6.0
16	16.7	16.1	16.5	8.7	8.4	8.5	6.6	6.4	6.5	6.3	6.0	6.1
17	16.1	15.8	15.9	8.6	8.1	8.4	6.4	6.1	6.3	6.2	5.4	5.7
18	16.0	15.7	15.8	8.1	8.0	8.0	6.1	5.9	6.0	5.9	5.6	5.8
19	16.1	16.0	16.1	8.3	8.0	8.2	5.9	5.8	5.9	6.1	5.8	6.0
20	16.3	16.1	16.2	8.0	6.6	7.3	6.0	5.7	5.8	6.1	5.4	5.8
21	16.4	16.1	16.2	6.6	6.2	6.5	6.3	6.0	6.1	5.6	4.8	5.2
22	16.5	16.2	16.3	6.2	5.9	6.1	6.3	6.0	6.2	5.0	4.6	4.8
23	16.6	16.3	16.4	5.9	5.3	5.6	6.0	5.8	5.8	5.5	4.6	4.9
24	16.5	16.3	16.4	5.3	5.1	5.2	6.3	5.7	6.0	6.0	5.5	5.9
25	16.4	16.2	16.2	5.2	5.0	5.1	6.3	5.7	6.2	5.9	5.2	5.4
26	16.3	16.0	16.1	5.2	5.0	5.1	5.7	5.2	5.5	5.4	5.2	5.3
27	16.1	15.9	16.0	5.1	4.8	5.0	5.2	5.0	5.2	5.6	5.3	5.5
28	16.0	15.8	16.0	4.9	4.7	4.8	5.0	4.0	4.6	6.3	5.6	5.9
29	16.0	15.9	15.9	6.0	4.9	5.6	4.1	3.9	4.0	9.1	6.1	7.6
30	15.9	15.2	15.6	6.5	6.0	6.4	4.2	3.7	3.9	9.3	6.1	7.7
31	15.2	14.2	14.9	---	---	---	4.0	3.8	3.9	6.2	6.0	6.2
MONTH	19.4	14.2	17.2	14.2	4.7	9.0	10.4	3.7	6.1	9.3	3.0	5.1

14162200 BLUE RIVER AT BLUE RIVER, OR—Continued

TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/- 2.5 DEGREES, FNU—
CONTINUED

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	3	2	2	---	---	---	---	---	---	---	---	---
2	3	2	2	---	---	2	---	---	---	---	---	---
3	2	2	2	3	1	3	---	---	---	---	---	---
4	3	2	2	3	3	3	---	---	---	---	---	---
5	3	2	2	---	---	---	---	---	---	---	---	---
6	3	2	2	---	---	---	---	---	---	---	---	---
7	3	2	2	---	2	---	---	---	---	---	---	---
8	4	2	2	3	2	2	---	---	---	---	---	---
9	2	1	1	4	2	2	---	---	---	---	---	---
10	2	1	1	4	1	2	---	---	---	---	---	---
11	1	1	1	4	1	2	---	---	---	---	---	---
12	2	1	1	---	2	3	---	---	---	---	---	---
13	2	1	1	---	2	3	---	---	---	---	---	---
14	2	1	1	4	2	2	---	---	---	---	---	---
15	2	1	1	2	1	2	---	---	---	---	---	---
16	2	1	1	2	1	2	---	---	---	---	---	---
17	---	1	---	2	1	2	---	---	---	---	---	---
18	---	1	2	2	1	2	---	---	---	---	---	---
19	---	1	2	2	1	1	---	---	---	---	---	---
20	3	1	2	---	---	---	---	---	---	---	---	---
21	3	<1	1	---	---	---	---	---	---	---	---	---
22	1	<1	1	---	---	---	---	---	---	---	---	---
23	---	<1	---	---	---	---	---	---	---	---	---	---
24	---	2	---	---	---	---	---	---	---	---	---	---
25	---	2	---	2	1	2	---	---	---	---	---	---
26	---	---	---	2	1	2	---	---	---	---	---	---
27	---	---	---	2	2	2	---	---	---	---	---	---
28	---	1	---	---	<1	1	---	---	---	---	---	---
29	---	3	4	---	---	---	---	---	---	---	---	---
30	3	2	3	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	4	3	4	4	3	3	---	---	---	---	---	---
MIN	1	<1	1	2	<1	1	---	---	---	---	---	---

14162500 MCKENZIE RIVER NEAR VIDA, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1963 - 2004	
ANNUAL TOTAL	1,397,700		1,382,740			
ANNUAL MEAN	3,829		3,778		4,076	
HIGHEST ANNUAL MEAN					6,014	1997
LOWEST ANNUAL MEAN					2,447	1977
HIGHEST DAILY MEAN	13,400	Mar 26	12,500	Dec 13	43,200	Dec 22, 1964
LOWEST DAILY MEAN	1,760	Oct 3	1,760	Oct 3	1,330	Feb 19, 1977
ANNUAL SEVEN-DAY MINIMUM	1,770	Sep 30	1,770	Oct 1	1,350	Oct 23, 1992
ANNUAL RUNOFF (AC-FT)	2,772,000		2,743,000		2,953,000	
10 PERCENT EXCEEDS	7,220		6,430		6,950	
50 PERCENT EXCEEDS	3,120		3,660		3,230	
90 PERCENT EXCEEDS	1,830		1,850		2,150	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14162500 MCKENZIE RIVER NEAR VIDA, OR

Latitude: 44° 07 ' 30"

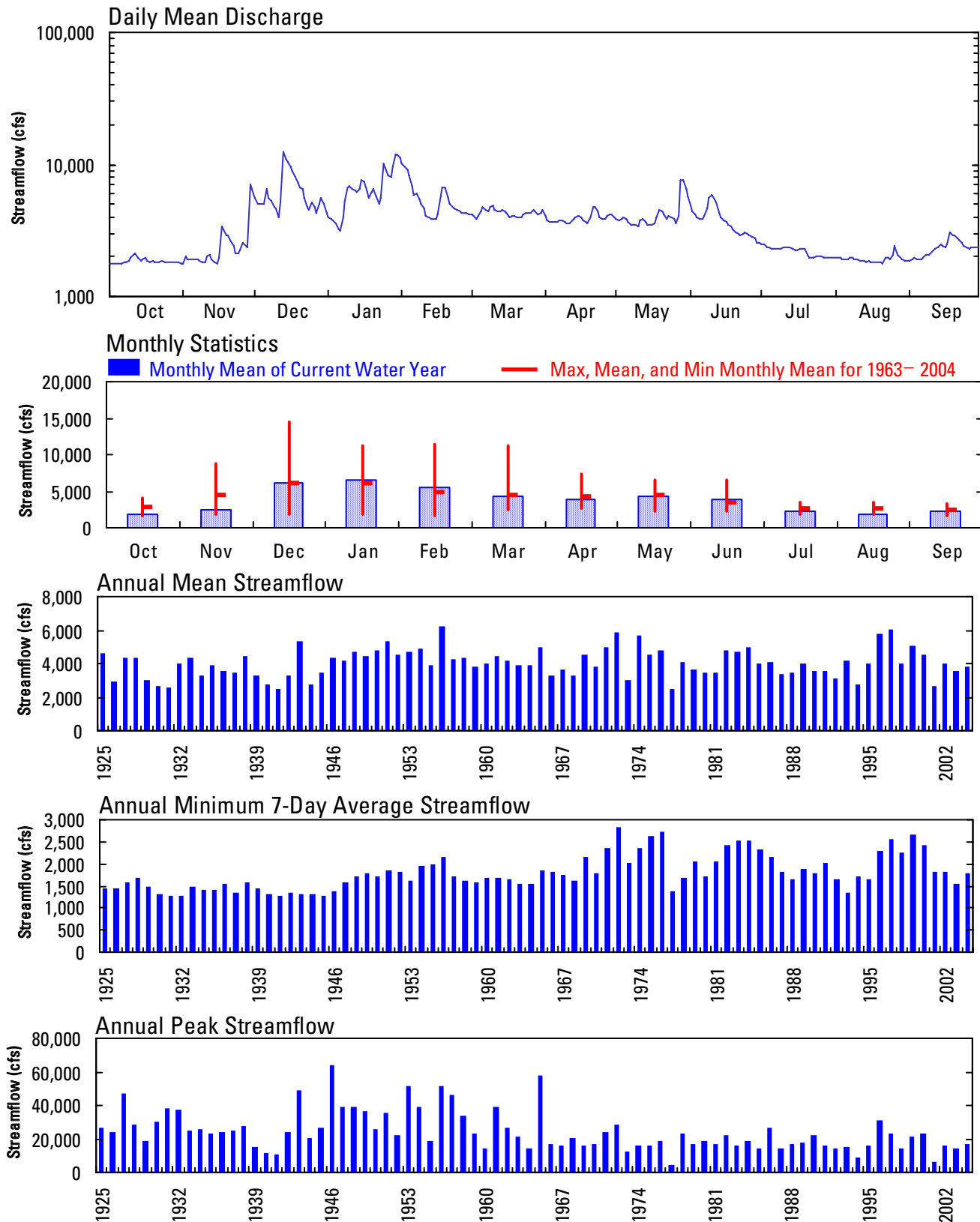
Longitude: 122° 28 ' 10"

Hydrologic Unit Code: 17090004

Lane County

Datum: 855.71 feet

Drainage Area: 930 square miles



14162500 MCKENZIE RIVER NEAR VIDA, OR—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1976 to September 1985.

WATER TEMPERATURE: June 1961 to September 1985, November 2000 to current year.

TURBIDITY: January 2003 to current year.

INSTRUMENTATION.--Water-quality monitor and data logger.

REMARKS.--

WATER TEMPERATURE: Records fair.

TURBIDITY: Records good except those for the periods Mar. 18 to Apr. 14, July 20 to Sept. 1, which are poor. Turbidity data are highly dependent on the instrumentation used for the measurement. See the "Definitions" section for turbidity in the front of this report.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 72 microsiemens Nov. 20, 1980; minimum recorded, 2.4 microsiemens Nov. 25, 1977.

WATER TEMPERATURE: Maximum, 17.0°C July 22, 2003; minimum recorded, 0.5°C Jan. 1, 1979.

TURBIDITY: Maximum, 152 FNU Dec. 13, 2003; minimum, <1 FNU many days each year.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 16.8°C Aug. 13; minimum, 3.6°C Jan. 6.

TURBIDITY: Maximum, 152 FNU Dec. 13; minimum, <1 FNU many days during the year.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.5	11.2	12.4	7.0	5.4	6.2	7.0	6.5	6.7	4.7	4.0	4.3
2	13.8	11.6	12.6	6.8	6.1	6.5	7.0	6.6	6.8	4.9	4.0	4.5
3	13.4	11.4	12.5	7.6	6.5	7.0	7.1	6.5	6.9	4.7	4.4	4.5
4	13.2	11.6	12.4	7.4	6.5	7.0	6.9	6.2	6.5	4.8	4.3	4.5
5	13.8	11.8	12.8	7.8	7.0	7.4	7.1	6.7	6.9	4.5	3.9	4.2
6	13.4	11.5	12.5	7.8	6.6	7.3	7.1	6.7	6.9	4.5	3.6	4.0
7	13.1	11.9	12.5	8.5	7.4	8.0	6.7	6.2	6.5	5.1	4.3	4.7
8	12.2	10.9	11.5	8.3	7.4	7.9	6.6	6.0	6.3	5.1	4.7	4.9
9	12.0	10.9	11.5	8.2	7.3	7.8	6.3	5.9	6.1	5.6	5.0	5.3
10	12.3	10.5	11.3	8.3	7.8	8.1	6.5	5.9	6.2	5.7	5.3	5.5
11	10.9	10.0	10.4	8.9	8.0	8.4	6.5	6.0	6.3	5.6	5.0	5.3
12	11.5	10.3	10.8	8.4	7.4	8.1	6.8	6.2	6.5	5.6	5.0	5.3
13	11.4	10.0	10.8	7.4	6.5	7.0	7.3	5.8	6.8	5.8	5.2	5.5
14	11.4	10.2	10.7	7.7	6.6	7.2	6.1	5.6	5.9	5.9	5.4	5.7
15	10.3	9.3	9.7	7.7	7.2	7.5	6.4	6.0	6.2	6.1	5.7	5.9
16	10.9	9.5	10.1	7.5	7.0	7.2	6.2	5.9	6.1	6.1	5.7	5.9
17	11.4	9.8	10.5	8.0	7.3	7.7	6.2	5.8	6.1	5.9	5.2	5.6
18	10.8	9.0	10	8.5	7.6	8.0	6.0	5.5	5.8	6.2	5.6	5.9
19	10.8	9.8	10.3	8.1	6.6	7.5	6.2	5.5	5.9	6.3	5.8	6.0
20	11.4	10.1	10.7	6.7	6.2	6.4	6.4	5.9	6.2	6.1	5.3	5.7
21	11.5	10.2	10.9	6.5	5.8	6.1	6.6	6.0	6.2	5.6	4.9	5.2
22	11.4	10.0	10.6	6.0	5.4	5.7	6.3	5.5	5.9	5.4	4.7	5.0
23	11.0	9.9	10.5	5.6	5.0	5.4	6.4	5.8	6.1	5.9	5.1	5.5
24	10.0	8.5	9.3	6.3	5.4	5.7	6.3	6.0	6.2	6.0	5.4	5.8
25	10.2	8.4	9.3	5.8	4.9	5.2	6.2	5.5	5.8	5.6	5.2	5.4
26	10.4	8.8	9.6	6.1	5.1	5.6	5.8	5.3	5.5	5.7	5.3	5.5
27	10.4	8.9	9.7	5.9	5.0	5.5	5.5	4.8	5.1	5.9	5.4	5.7
28	10.7	9.6	10.2	6.4	5.4	5.9	5.1	4.8	4.9	6.2	5.8	5.9
29	10.5	8.9	9.7	6.7	6.3	6.5	5.2	4.6	4.9	6.4	6.0	6.2
30	8.9	7.3	8.4	6.8	6.3	6.6	4.8	4.2	4.6	6.1	5.5	5.7
31	7.3	6.1	6.7	---	---	---	4.8	4.2	4.5	6.0	5.5	5.7
MONTH	13.8	6.1	10.7	8.9	4.9	6.9	7.3	4.2	6.0	6.4	3.6	5.3

14162500 MCKENZIE RIVER NEAR VIDA, OR—Continued

TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/- 2.5 DEGREES, FNU
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	3	2	2	2	2	2	7	4	6	2	2	2
2	3	2	2	4	2	2	5	3	4	3	2	2
3	3	2	2	2	2	2	4	3	3	2	2	2
4	3	2	2	2	2	2	3	3	3	2	2	2
5	3	2	2	2	2	2	3	2	3	2	1	1
6	3	2	2	2	1	2	7	3	5	2	1	1
7	3	2	2	2	1	2	4	2	3	3	1	2
8	3	2	2	2	1	2	3	2	3	4	2	3
9	3	2	2	2	1	2	3	2	2	7	4	4
10	3	2	2	2	1	2	3	2	2	5	3	5
11	4	2	2	2	2	2	3	2	2	4	3	3
12	3	2	2	3	1	2	7	2	2	3	2	3
13	3	2	2	3	1	2	152	5	60	3	2	2
14	4	2	2	2	1	2	63	22	37	4	2	2
15	4	2	2	3	<1	1	41	30	36	5	3	4
16	3	2	2	7	<1	1	31	19	24	4	3	3
17	3	2	2	16	4	6	20	11	15	3	2	3
18	3	2	2	7	3	5	11	8	9	3	2	2
19	3	2	2	4	2	3	8	6	8	4	2	3
20	3	2	2	4	2	3	8	5	6	3	2	3
21	2	2	2	2	2	2	6	5	5	3	2	2
22	3	2	2	2	1	2	6	4	5	2	2	2
23	2	2	2	2	1	1	5	3	4	8	2	2
24	2	2	2	2	1	1	4	3	3	8	6	8
25	2	2	2	2	1	2	5	4	4	7	5	5
26	2	2	2	2	2	2	4	3	3	5	4	4
27	2	2	2	2	2	2	3	2	2	5	4	4
28	3	2	2	4	1	2	4	2	4	13	4	5
29	2	2	2	126	3	18	6	4	4	15	11	12
30	2	2	2	11	7	9	4	3	3	14	9	11
31	2	2	2	---	---	---	3	2	2	10	8	9
MAX	4	2	2	126	7	18	152	30	60	15	11	12
MIN	2	2	2	2	<1	1	3	2	2	2	1	1
FEBRUARY			MARCH			APRIL			MAY			
1	8	6	7	1	1	1	---	1	---	1	<1	<1
2	6	5	6	1	<1	1	---	1	---	1	<1	<1
3	7	4	5	1	<1	1	---	1	---	1	<1	1
4	5	4	4	2	<1	1	---	1	---	1	<1	1
5	4	3	4	1	<1	1	---	1	---	1	<1	<1
6	3	2	3	2	1	1	---	1	---	1	<1	<1
7	3	2	2	1	<1	1	---	1	---	1	<1	<1
8	2	1	2	1	<1	1	---	1	---	1	<1	<1
9	2	1	2	1	<1	1	---	1	---	1	<1	<1
10	2	1	2	1	1	1	---	1	---	1	<1	<1
11	2	1	1	2	<1	1	---	1	---	2	<1	1
12	1	<1	1	1	<1	1	---	1	---	1	<1	1
13	1	<1	1	2	<1	<1	---	1	---	1	<1	1
14	1	<1	1	1	<1	<1	---	2	---	1	<1	1
15	1	<1	1	1	<1	<1	---	---	---	1	<1	1
16	2	<1	1	1	<1	1	1	<1	1	1	<1	1
17	3	2	2	1	<1	1	1	<1	<1	3	<1	1
18	2	2	2	2	<1	1	1	<1	<1	3	1	2
19	3	2	2	2	1	1	1	<1	<1	2	1	1
20	2	1	2	2	<1	1	2	<1	1	1	1	1
21	2	1	1	---	<1	1	3	2	2	1	<1	1
22	2	1	1	---	1	2	2	1	1	1	<1	1
23	1	1	1	---	1	2	1	<1	1	1	<1	1
24	1	1	1	---	1	---	1	<1	1	1	<1	1
25	1	1	1	---	1	---	1	<1	<1	1	<1	<1
26	2	1	1	---	1	---	1	<1	<1	1	<1	<1
27	1	<1	1	---	1	2	1	<1	1	13	<1	1
28	1	<1	1	---	1	2	1	<1	1	8	5	6
29	1	<1	1	---	1	---	1	<1	1	5	3	4
30	---	---	---	---	1	---	1	<1	<1	3	2	2
31	---	---	---	---	2	---	---	---	---	2	2	2
MAX	8	6	7	---	2	---	---	---	---	13	5	6
MIN	1	<1	1	---	<1	---	---	---	---	1	<1	<1

14162500 MCKENZIE RIVER NEAR VIDA, OR—Continued

TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/- 2.5 DEGREES, FNU—
CONTINUED

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	2	1	2	<1	<1	<1	1	<1	<1	1	<1	<1
2	2	1	1	<1	<1	<1	1	<1	<1	1	<1	<1
3	1	1	1	<1	<1	<1	1	<1	<1	1	<1	<1
4	2	1	1	<1	<1	<1	2	<1	<1	1	<1	<1
5	1	1	1	<1	<1	<1	1	<1	<1	1	<1	<1
6	1	<1	1	<1	<1	<1	---	<1	1	1	<1	<1
7	1	<1	1	<1	<1	<1	2	<1	<1	1	<1	<1
8	2	<1	1	<1	<1	<1	2	<1	1	1	<1	1
9	2	1	1	2	<1	<1	2	<1	1	1	<1	1
10	2	1	2	<1	<1	<1	2	<1	1	1	<1	1
11	1	1	1	<1	<1	<1	---	1	1	2	<1	1
12	1	<1	1	1	<1	<1	2	<1	1	1	<1	1
13	1	<1	<1	---	<1	<1	2	<1	1	3	<1	1
14	1	<1	<1	---	---	---	2	<1	1	2	<1	1
15	1	<1	<1	---	---	---	2	<1	1	1	<1	1
16	1	<1	<1	---	---	---	---	<1	1	1	<1	1
17	1	<1	1	---	---	---	2	<1	1	2	<1	1
18	2	<1	<1	---	---	---	2	1	1	2	1	2
19	<1	<1	<1	---	---	---	2	1	2	2	<1	1
20	<1	<1	<1	1	<1	<1	---	---	---	1	<1	1
21	1	<1	<1	1	<1	<1	---	---	---	1	<1	1
22	<1	<1	<1	1	<1	<1	---	---	---	1	<1	1
23	<1	<1	<1	2	<1	<1	---	---	---	1	<1	1
24	<1	<1	<1	2	<1	<1	---	---	---	1	<1	1
25	<1	<1	<1	2	<1	<1	---	---	---	2	<1	1
26	<1	<1	<1	---	<1	<1	---	---	---	2	<1	1
27	<1	<1	<1	---	<1	1	---	---	---	1	<1	1
28	<1	<1	<1	---	<1	<1	---	---	---	1	<1	1
29	<1	<1	<1	1	<1	<1	---	---	---	1	<1	1
30	<1	<1	<1	<1	<1	<1	---	---	---	1	<1	1
31	---	---	---	1	<1	<1	---	---	---	---	---	---
MAX	2	1	2	---	---	---	---	---	---	3	1	2
MIN	<1	<1	<1	---	---	---	---	---	---	1	<1	<1

14163150 MCKENZIE RIVER BELOW LEABURG DAM, NEAR LEABURG, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	1,180,810		1,412,900			
ANNUAL MEAN	3,235		3,860		2,739	
HIGHEST ANNUAL MEAN					4,550	1997
LOWEST ANNUAL MEAN					1,321	2001
HIGHEST DAILY MEAN	16,600	Dec 13	16,600	Dec 13	42,700	Feb 7, 1996
LOWEST DAILY MEAN	1,040	Jun 4	1,020	Jul 30	478	Dec 29, 1989
ANNUAL SEVEN-DAY MINIMUM	1,060	Jun 22	1,030	Jul 25	486	Dec 24, 1989
ANNUAL RUNOFF (AC-FT)	2,342,000		2,802,000		1,984,000	
10 PERCENT EXCEEDS	7,210		7,220		5,900	
50 PERCENT EXCEEDS	1,940		3,780		1,620	
90 PERCENT EXCEEDS	1,440		1,080		982	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14163150 MCKENZIE RIVER BLW LEABURG DAM, NR LEABURG, OR

Latitude: 44° 07 ' 26"

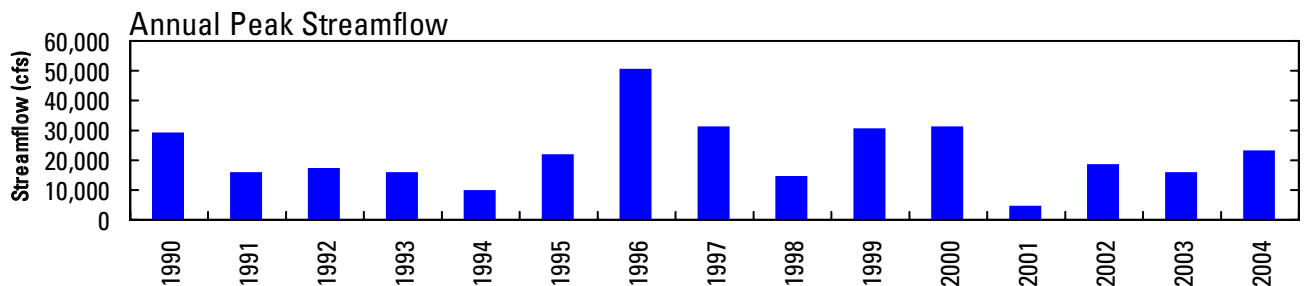
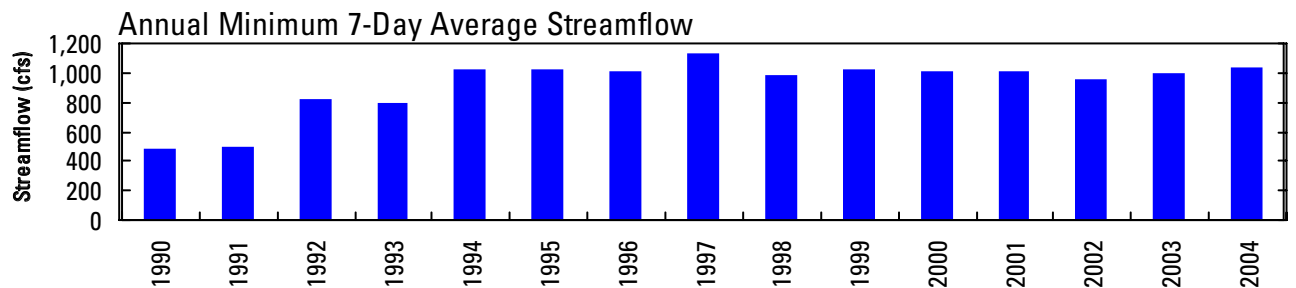
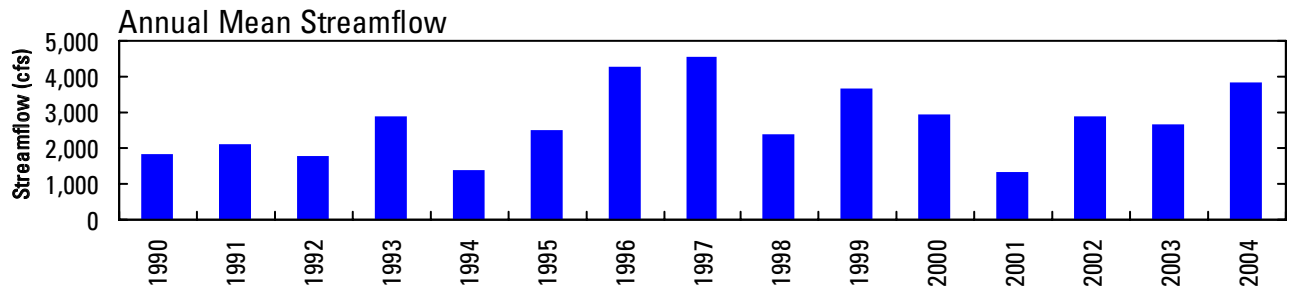
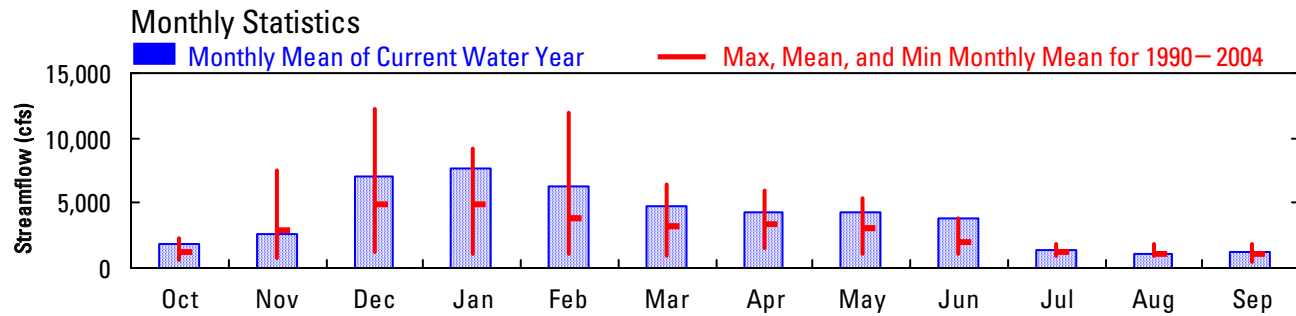
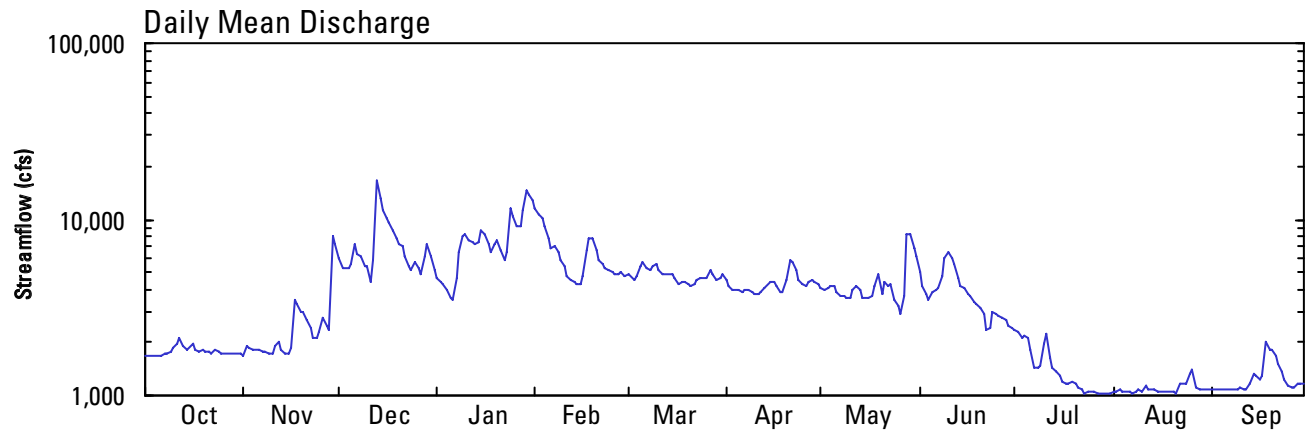
Longitude: 122° 37 ' 35"

Hydrologic Unit Code: 17090004

Lane County

Datum: 710.0 feet

Drainage Area: 1,030 square miles



14163900 MCKENZIE RIVER NEAR WALTERVILLE, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	1,178,360		1,001,540			
ANNUAL MEAN	3,228		2,736		2,979	
HIGHEST ANNUAL MEAN					5,034	1997
LOWEST ANNUAL MEAN					1,471	2001
HIGHEST DAILY MEAN	16,700	Dec 13	16,700	Dec 13	44,600	Feb 7, 1996
LOWEST DAILY MEAN	1,060	Nov 7	1,040	Sep 26	499	Dec 22, 1989
ANNUAL SEVEN-DAY MINIMUM	1,080	Nov 4	1,050	Aug 30	516	Dec 22, 1989
ANNUAL RUNOFF (AC-FT)	2,337,000		1,987,000		2,158,000	
10 PERCENT EXCEEDS	7,370		6,070		6,380	
50 PERCENT EXCEEDS	1,720		1,600		1,730	
90 PERCENT EXCEEDS	1,110		1,070		1,060	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14163900 MCKENZIE RIVER NEAR WALTERVILLE, OR

Latitude: 44° 04' 12"

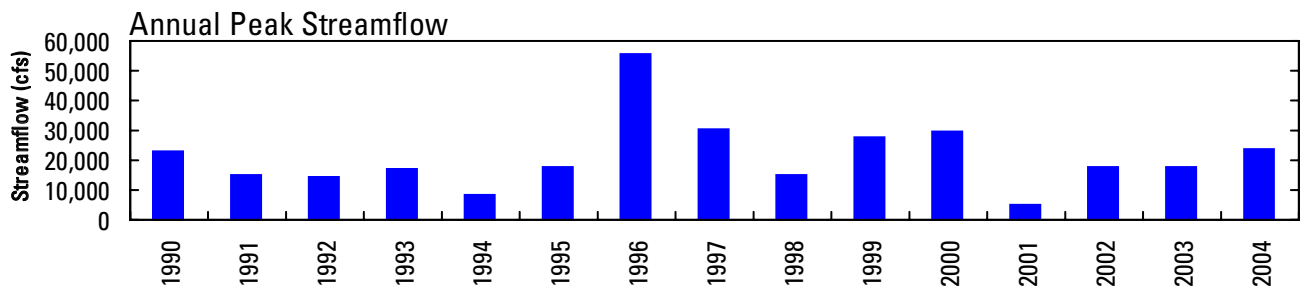
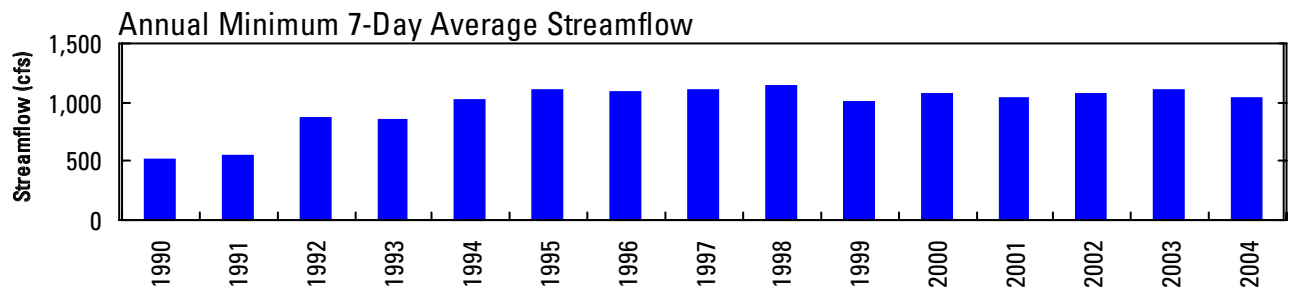
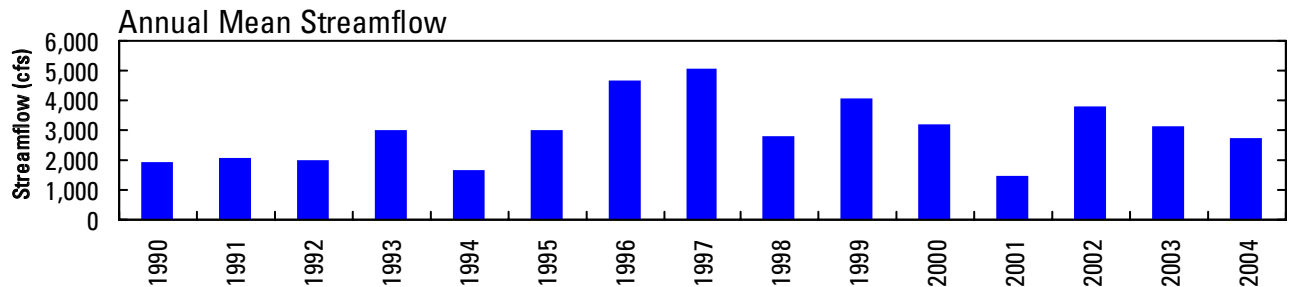
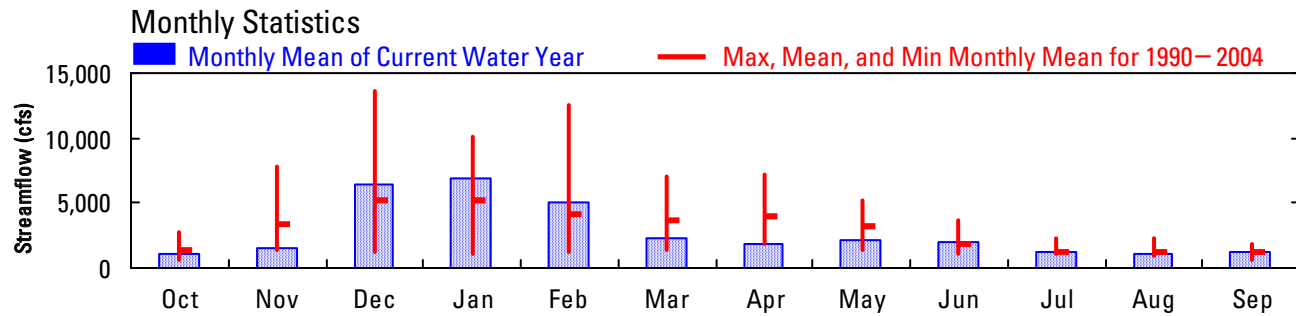
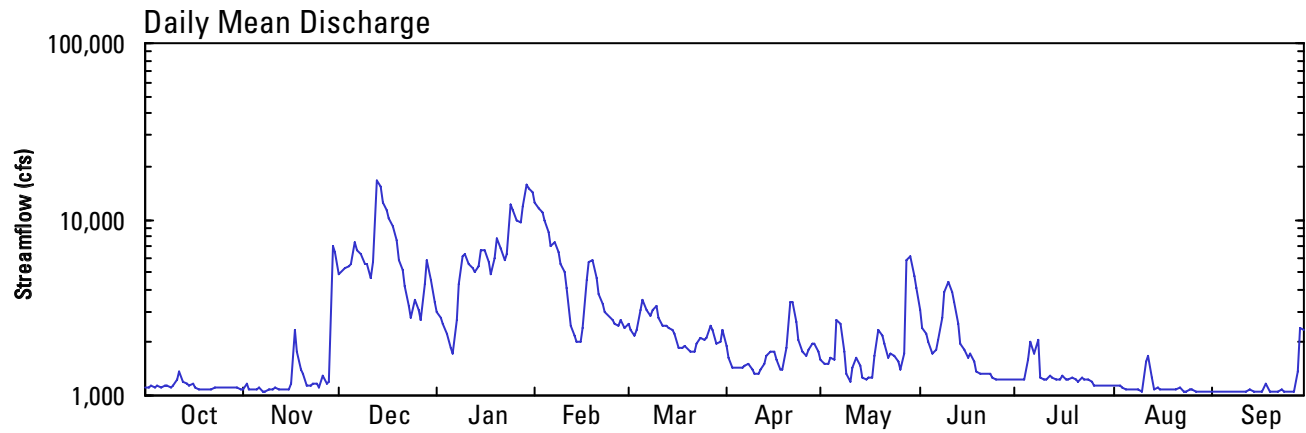
Longitude: 122° 46' 12"

Hydrologic Unit Code: 17090004

Lane County

Datum: 600.0 feet

Drainage Area: 1,081 square miles



14164700 CEDAR CREEK AT SPRINGFIELD, OR

LOCATION.--Lat 44°03'34", long 122°55'06", in land grant parcel number 75, T.17 S., R.2 W, Lane County, Hydrologic Unit 17090004, on left bank, and at mile 0.8.

DRAINAGE AREA.--9.62 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 490 ft above NGVD of 1929, from topographic map.

AVERAGE DISCHARGE.--3 years (water years 2002-04), 35.5 ft³/s, 50.15 in/yr, 25,720 ac-ft/yr.

REMARKS.--Records fair. Flow from the McKenzie River can be diverted to Cedar Creek at a point upstream from gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,070 ft³/s Dec. 14, 2003, gage height, 5.84 ft; minimum discharge, 3.6 ft³/s Oct. 27, 28, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft³/s Dec. 14, gage height, 5.84 ft; minimum discharge, 3.6 ft³/s Oct. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	18	46	170	139	38	14	37	39	14	11	17
2	23	22	36	158	118	36	12	34	30	14	9.6	16
3	22	20	38	117	93	34	11	32	24	13	9.5	16
4	22	18	36	101	79	38	10	33	21	13	9.7	15
5	22	18	44	79	63	42	9.0	33	17	12	11	15
6	21	e15	68	66	55	39	8.4	41	16	12	16	14
7	21	e12	77	79	50	35	7.9	50	18	9.6	16	14
8	21	10	79	94	44	30	7.4	40	28	9.0	15	13
9	21	7.9	72	95	38	27	11	30	31	9.7	15	13
10	20	7.2	90	80	34	23	12	26	35	17	14	12
11	23	6.9	68	64	30	22	11	26	30	16	15	13
12	23	6.6	70	52	26	19	11	27	25	16	16	12
13	21	6.0	385	44	23	17	11	25	21	16	14	11
14	19	7.7	371	40	21	16	12	22	17	16	10	9.2
15	e23	7.3	158	39	19	14	17	19	14	15	9.7	10
16	e18	8.2	112	36	35	13	18	20	13	15	9.9	8.2
17	e16	12	85	33	70	12	15	19	14	15	14	9.7
18	15	18	69	35	73	12	12	23	30	15	14	9.5
19	15	19	57	47	68	11	14	27	27	15	14	9.0
20	14	19	49	57	58	10	26	24	25	14	14	8.5
21	12	15	41	49	47	9.6	72	21	23	13	14	7.7
22	12	11	35	42	40	9.1	73	18	22	14	20	7.0
23	10	9.2	31	79	36	8.8	50	16	22	13	17	6.6
24	6.2	9.8	34	131	32	10	38	16	22	12	17	6.7
25	4.5	12	51	106	28	11	30	17	22	12	19	6.2
26	4.0	23	51	86	29	13	24	28	21	11	21	6.1
27	3.8	18	52	95	28	13	24	32	20	12	18	5.4
28	8.5	15	115	116	28	12	44	68	19	12	17	5.3
29	16	84	209	132	28	11	45	74	18	11	16	6.2
30	19	68	142	152	---	15	42	64	15	11	16	7.8
31	18	---	112	134	---	16	---	51	---	11	15	---
TOTAL	518.0	523.8	2,883	2,608	1,432	616.5	691.7	993	679	408.3	447.4	310.1
MEAN	16.7	17.5	93.0	84.1	49.4	19.9	23.1	32.0	22.6	13.2	14.4	10.3
MAX	24	84	385	170	139	42	73	74	39	17	21	17
MIN	3.8	6.0	31	33	19	8.8	7.4	16	13	9.0	9.5	5.3
AC-FT	1,030	1,040	5,720	5,170	2,840	1,220	1,370	1,970	1,350	810	887	615
CFSM	1.74	1.81	9.67	8.75	5.13	2.07	2.40	3.33	2.35	1.37	1.50	1.07
IN.	2.00	2.03	11.15	10.08	5.54	2.38	2.67	3.84	2.63	1.58	1.73	1.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
MEAN	20.1	26.6	68.7	66.0	47.2	34.6	43.0	31.8	22.7	21.2	23.1	21.1
MAX	27.1	43.1	93.0	84.1	49.4	46.2	58.8	33.2	28.4	28.7	30.3	28.0
(WY)	(2003)	(2002)	(2004)	(2004)	(2004)	(2003)	(2003)	(2002)	(2002)	(2002)	(2003)	(2003)
MIN	16.5	17.5	45.6	53.6	44.5	19.9	23.1	30.3	17.0	13.2	14.4	10.3
(WY)	(2002)	(2004)	(2003)	(2003)	(2002)	(2004)	(2004)	(2003)	(2003)	(2004)	(2004)	(2004)

WILLAMETTE RIVER BASIN

14164700 CEDAR CREEK AT SPRINGFIELD, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	14,019.8		12,110.8			
ANNUAL MEAN	38.4		33.1		35.5	
HIGHEST ANNUAL MEAN					38.0	2002
LOWEST ANNUAL MEAN					33.1	2004
HIGHEST DAILY MEAN	385	Dec 13	385	Dec 13	385	Dec 13, 2003
LOWEST DAILY MEAN	3.8	Oct 27	3.8	Oct 27	3.8	Oct 27, 2003
ANNUAL SEVEN-DAY MINIMUM	7.0	Oct 22	6.1	Sep 23	6.1	Sep 23, 2004
ANNUAL RUNOFF (AC-FT)	27,810		24,020		25,720	
ANNUAL RUNOFF (CFSM)	3.99		3.44		3.69	
ANNUAL RUNOFF (INCHES)	54.21		46.83		50.15	
10 PERCENT EXCEEDS	71		73		71	
50 PERCENT EXCEEDS	28		19		27	
90 PERCENT EXCEEDS	14		9.5		13	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14164700 CEDAR CREEK AT SPRINGFIELD, OR

Latitude: 44° 03 ' 34"

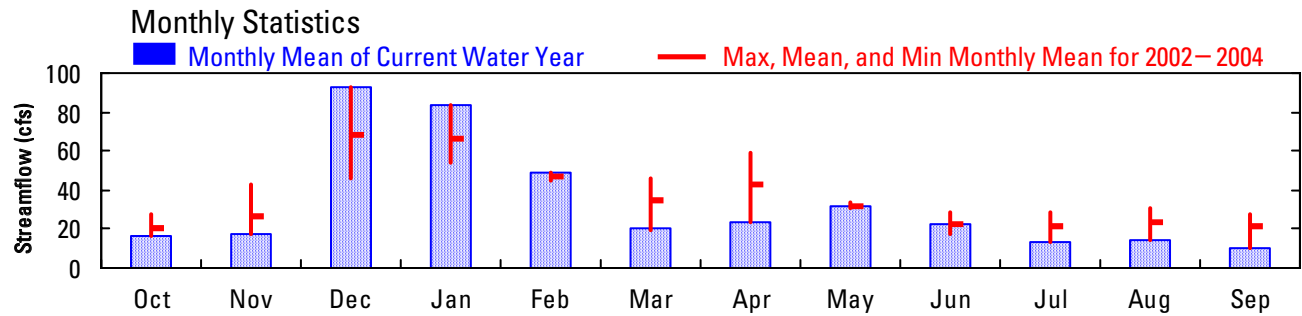
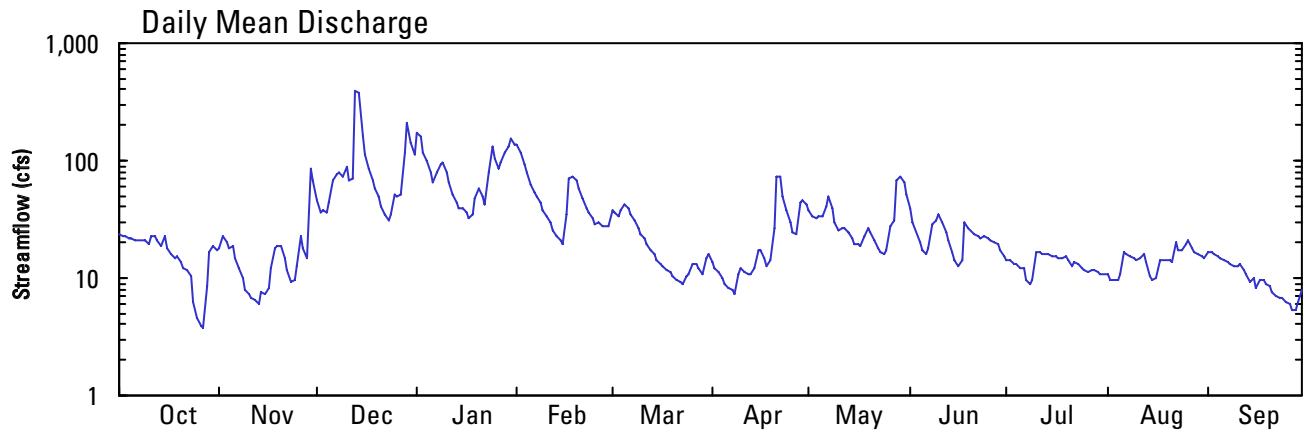
Longitude: 122° 55 ' 06"

Hydrologic Unit Code: 17090004

Lane County

Datum: 490 feet

Drainage Area: 9.62 square miles



14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

LOCATION.--Lat 44°05'35", long 122°57'22", in SE ¼ NW ¼ sec.17, T.17 S., R.2 W., Lane County, Hydrologic Unit 17090004, on left bank 50 ft downstream from bridge, 1.3 mi northeast of Springfield, and at mile 1.59.

DRAINAGE AREA.--177 mi².

PERIOD OF RECORD.--September 1935 to September 1952, October 1963 to September 1997. October 1998 to current year. Prior to October 1935 monthly discharge only, published in WSP 1318.

REVISED RECORDS.--WSP 1248: 1939. WSP 1738: Drainage area. WDR OR-86-2: 1985(m).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 442.47 ft above NGVD of 1929. Oct. 1, 1935, to Sept. 30, 1952, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Many diversions for irrigation upstream from station. Continuous water-quality records for the periods October 1963 to September 1969 and April 1983 to September 1984 have been collected at this location.

AVERAGE DISCHARGE.--58 years (water years 1936-52, 1963-97, 1999-2004), 529 ft³/s, 40.57 in/yr, 382,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft³/s Feb. 7, 1996, gage height, 23.11 ft; minimum discharge, 8.2 ft³/s Sept. 9, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 22, 1955, reached at stage of 22.9 ft, from floodmark, probably affected by backwater from McKenzie River, discharge, 9,200 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 14	0000	*8,550	*17.79	Dec 29	1530	4,640	12.48

Minimum discharge, 21 ft³/s, Oct. 1-5.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	34	445	2,270	2,610	834	324	274	216	113	44	43
2	21	38	328	2,050	2,250	752	302	255	196	109	44	50
3	22	48	338	1,620	1,870	715	288	244	184	108	43	53
4	22	42	318	1,420	1,590	775	271	235	164	108	43	47
5	23	39	534	1,180	1,320	867	259	231	171	100	45	44
6	24	42	955	1,100	1,220	1,030	251	219	192	94	46	41
7	35	41	918	1,660	1,340	926	240	222	242	90	56	40
8	38	45	1,060	2,020	1,170	825	232	245	493	88	46	39
9	48	44	763	2,180	1,030	744	222	214	648	86	40	38
10	45	42	980	1,960	931	670	212	203	588	86	36	39
11	39	49	729	1,680	840	616	204	234	514	82	35	40
12	78	63	827	1,450	760	567	196	213	435	79	35	51
13	76	49	3,850	1,280	693	521	194	191	380	75	34	55
14	47	44	5,670	1,210	651	484	205	179	343	73	33	79
15	43	44	2,730	1,230	654	448	268	173	297	70	32	69
16	71	89	1,770	1,140	849	419	264	196	268	67	31	74
17	46	207	1,450	1,000	1,290	399	269	181	241	65	30	71
18	37	138	1,170	1,020	1,450	383	251	203	220	64	29	143
19	37	135	978	1,150	1,340	370	263	248	202	67	29	147
20	43	216	843	1,160	1,140	345	486	204	189	64	28	110
21	36	164	726	1,010	995	326	1,050	182	176	62	28	86
22	34	133	623	889	882	311	972	181	169	60	58	73
23	38	106	550	1,200	815	299	719	186	175	57	85	67
24	41	136	618	2,310	777	315	577	168	169	53	69	61
25	36	199	894	1,950	741	310	490	155	158	51	90	58
26	33	296	850	1,620	763	381	431	154	146	50	116	59
27	32	223	868	1,770	809	426	381	178	139	49	90	59
28	31	173	2,350	2,120	830	372	346	323	132	48	64	55
29	33	863	4,140	2,840	790	330	322	414	125	47	54	52
30	42	722	2,780	3,020	---	349	297	296	119	45	49	53
31	38	---	1,910	2,740	---	364	---	246	---	44	45	---
TOTAL	1,212	4,464	42,965	51,249	32,400	16,473	10,786	6,847	7,691	2,254	1,507	1,896
MEAN	39.1	149	1,386	1,653	1,117	531	360	221	256	72.7	48.6	63.2
MAX	78	863	5,670	3,020	2,610	1,030	1,050	414	648	113	116	147
MIN	21	34	318	889	651	299	194	154	119	44	28	38
AC-FT	2,400	8,850	85,220	101,700	64,270	32,670	21,390	13,580	15,260	4,470	2,990	3,760
CFSM	0.22	0.84	7.83	9.34	6.31	3.00	2.03	1.25	1.45	0.41	0.27	0.36
IN.	0.25	0.94	9.03	10.77	6.81	3.46	2.27	1.44	1.62	0.47	0.32	0.40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2004, BY WATER YEAR (WY)

	MEAN	106	592	1,141	1,238	1,114	870	594	361	200	75.8	38.4	40.0
MAX	719	1,653	3,235	2,464	2,480	1,975	1,545	762	752	190	91.4	112	
(WY)	(1951)	(1951)	(1997)	(1965)	(1996)	(1972)	(1937)	(1996)	(1983)	(1968)	(1968)	(1968)	
MIN	19.2	26.5	52.6	84.0	126	281	242	118	54.3	34.3	14.7	18.9	
(WY)	(1988)	(1937)	(1977)	(1977)	(1977)	(1965)	(1942)	(1966)	(1966)	(1940)	(1966)	(1967)	

14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1936 - 2004	
ANNUAL TOTAL	201,188		179,744			
ANNUAL MEAN	551		491		529	
HIGHEST ANNUAL MEAN					883	1997
LOWEST ANNUAL MEAN					164	1977
HIGHEST DAILY MEAN	5,670	Dec 14	5,670	Dec 14	11,500	Dec 22, 1964
LOWEST DAILY MEAN	13	Sep 4	21	Oct 2	9.6	Aug 18, 1966
ANNUAL SEVEN-DAY MINIMUM	14	Aug 31	24	Oct 1	11	Aug 15, 1966
ANNUAL RUNOFF (AC-FT)	399,100		356,500		382,900	
ANNUAL RUNOFF (CFSM)	3.11		2.77		2.99	
ANNUAL RUNOFF (INCHES)	42.28		37.78		40.57	
10 PERCENT EXCEEDS	1,360		1,280		1,350	
50 PERCENT EXCEEDS	218		206		248	
90 PERCENT EXCEEDS	22		39		30	



2004 Water Year
WILLAMETTE RIVER BASIN

14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR

Latitude: 44° 05 ' 35"

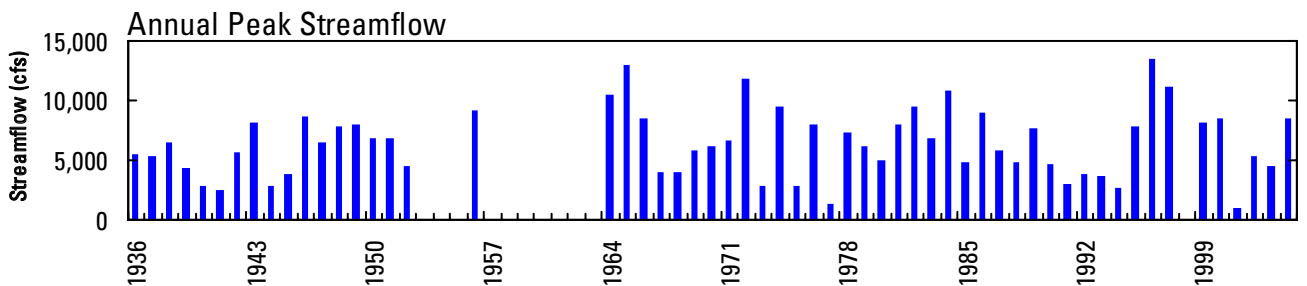
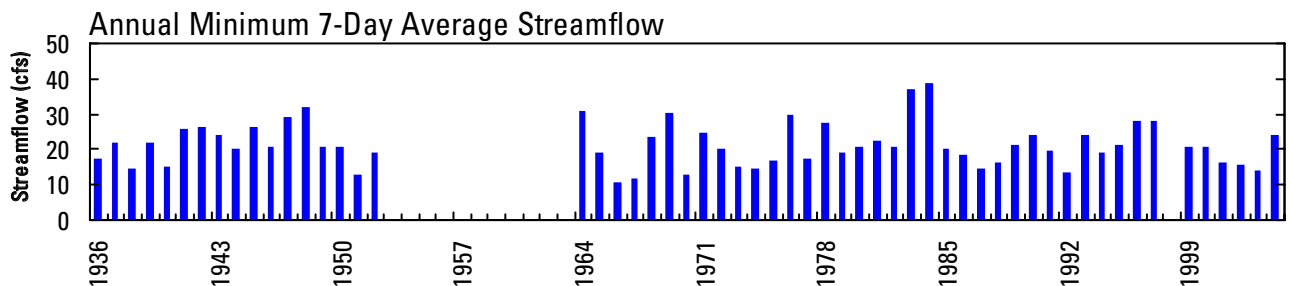
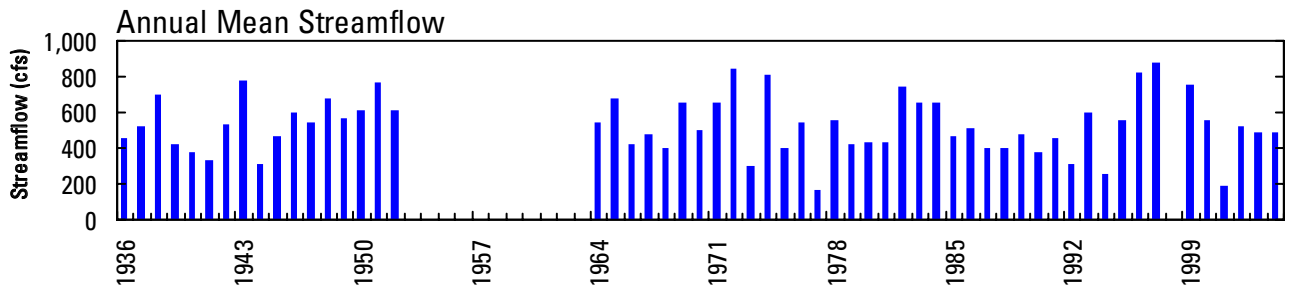
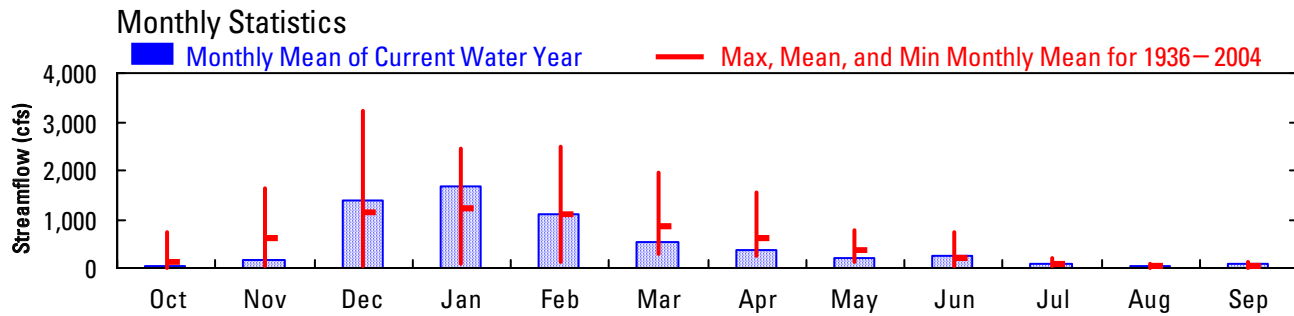
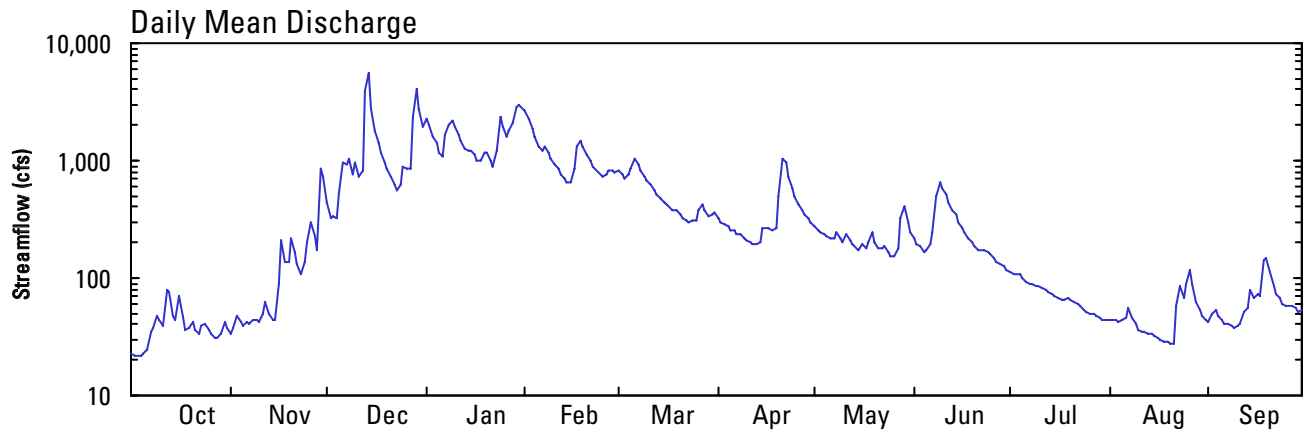
Longitude: 122° 57 ' 22"

Hydrologic Unit Code: 17090004

Lane County

Datum: 442.47 feet

Drainage Area: 177 square miles



WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1969 - 2004	
ANNUAL TOTAL	3,901,920		3,722,740		11,290	
ANNUAL MEAN	10,690		10,170		17,800	1972
HIGHEST ANNUAL MEAN					5,233	1977
LOWEST ANNUAL MEAN					72,400	Nov 20, 1996
HIGHEST DAILY MEAN	54,900	Dec 14	54,900	Dec 14	2,340	Feb 19, 1977
LOWEST DAILY MEAN	3,850	Nov 10	3,850	Nov 10	2,410	Feb 15, 1977
ANNUAL SEVEN-DAY MINIMUM	3,890	Nov 5	3,890	Nov 5	8,177,000	
ANNUAL RUNOFF (AC-FT)	7,739,000		7,384,000		24,000	
10 PERCENT EXCEEDS	22,900		21,400		7,820	
50 PERCENT EXCEEDS	7,750		7,690		4,540	
90 PERCENT EXCEEDS	4,170		4,170			

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14166000 WILLAMETTE RIVER AT HARRISBURG, OR

Latitude: 44° 16' 14"

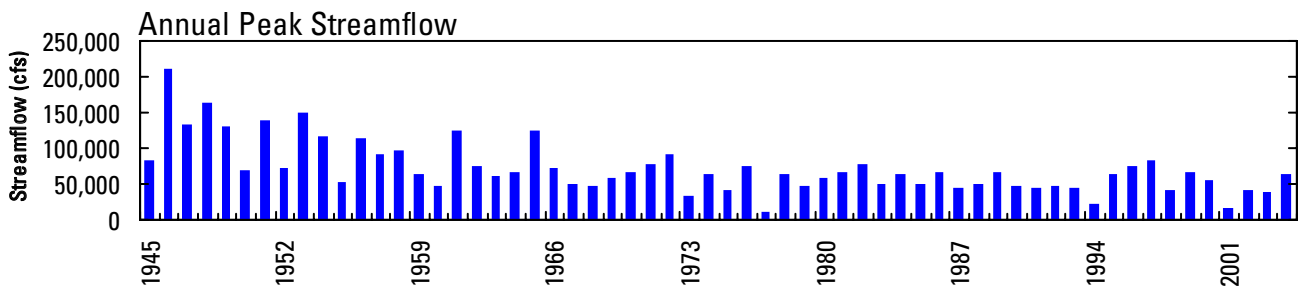
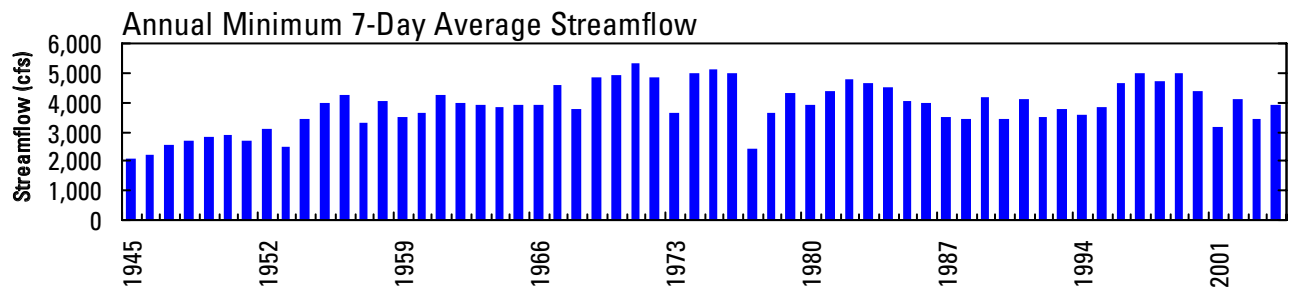
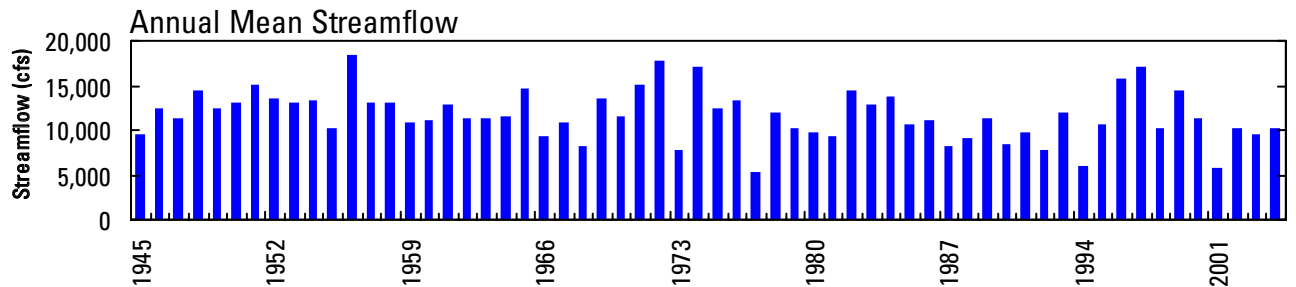
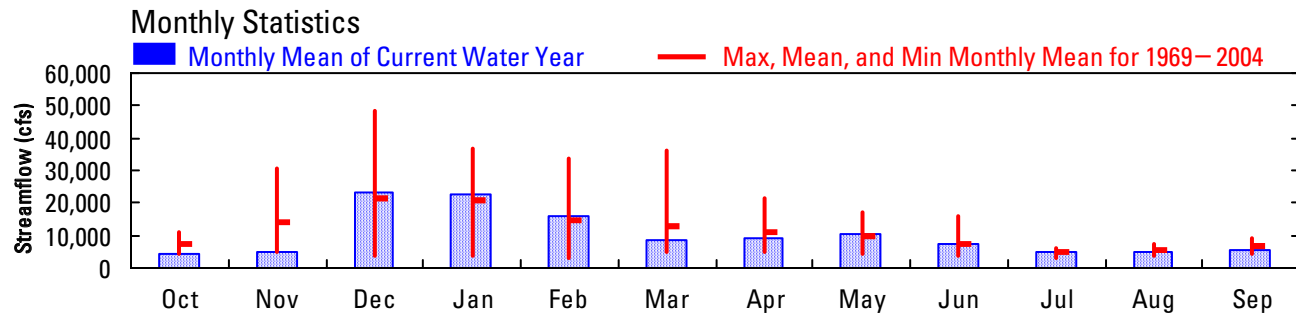
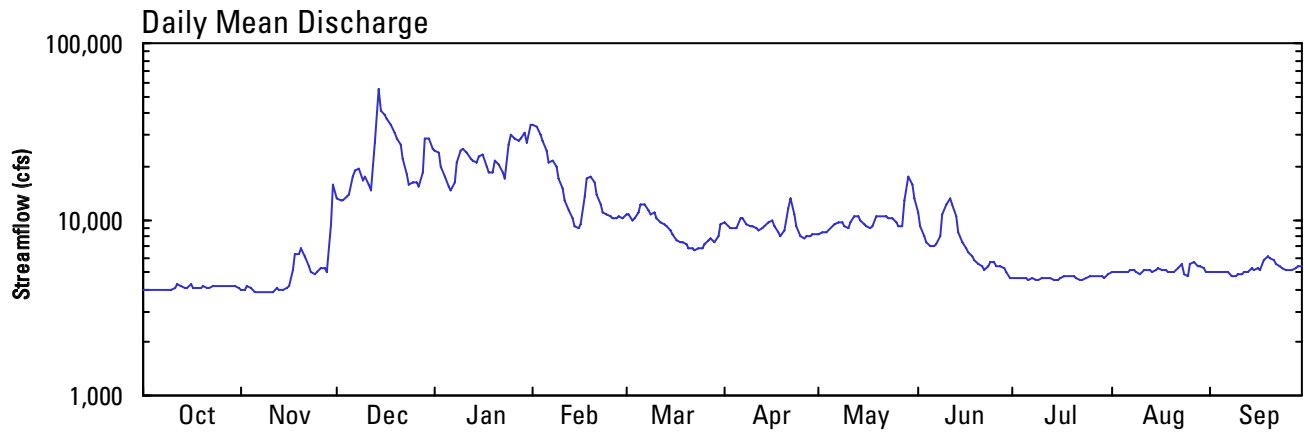
Longitude: 123° 10' 21"

Hydrologic Unit Code: 17090003

Linn County

Datum: 288.39 feet

Drainage Area: 3,420 square miles



14166500 LONG TOM RIVER NEAR NOTI, OR

LOCATION.--Lat 44°03'00", long 123°25'30", in SE ¼ NW ¼ sec.33, T.17 S., R.6 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi upstream from Southern Pacific Railroad bridge, 0.8 mi downstream from Noti Creek, 1.3 mi southeast of Noti, and at mile 37.4.

DRAINAGE AREA.--89.3 mi².

PERIOD OF RECORD.--October 1935 to current year.

REVISED RECORDS.--WSP 1318: 1936(M). WSP 1738: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 389.05 ft above NGVD of 1929 (levels by National Weather Service). Prior to Nov. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good except those for the periods Apr. 3-20, May 3 to June 3, 10-22, which are fair. Slight regulation caused by log pond upstream from Noti. No diversion upstream from station.

AVERAGE DISCHARGE.--69 years (water years 1936-2004), 229 ft³/s, 34.85 in/yr, 166,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,990 ft³/s Dec. 22, 1955, gage height, 20.17 ft; minimum discharge, 0.04 ft³/s Aug. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 14	0800	*2,420	*14.22	Jan 30	2200	1,690	11.83
Dec 29	1900	2,160	13.50				

Minimum discharge, 9.8 ft³/s, Aug. 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	146	888	1,170	485	184	e135	e70	37	18	27
2	12	22	103	1,170	1,010	424	174	e125	e65	37	17	28
3	13	40	105	1,000	809	384	e160	e117	e60	37	18	20
4	14	33	104	850	664	384	e150	e112	56	37	16	18
5	15	e37	171	674	553	392	e143	e110	56	35	17	16
6	16	e41	377	572	505	393	e136	e105	62	34	17	16
7	26	33	359	598	540	364	e130	e110	72	33	24	15
8	23	29	397	803	472	341	e125	e105	90	32	21	14
9	21	28	270	1,050	428	323	e120	e100	101	31	18	14
10	20	26	378	906	393	300	e115	e96	e95	31	15	15
11	19	26	291	824	360	284	e110	e105	e90	31	16	15
12	26	29	274	722	334	259	e106	e98	e85	30	14	17
13	32	28	949	626	316	245	e102	e92	e82	29	14	18
14	24	27	2,120	541	313	232	e150	e86	e75	27	14	20
15	21	29	1,010	513	342	219	e170	e83	e70	27	13	19
16	25	57	562	461	437	208	e160	e83	e65	27	12	21
17	21	94	412	409	765	200	e150	e86	e60	27	14	21
18	18	60	317	379	951	197	e140	e90	e55	27	12	43
19	19	73	260	383	726	195	e135	e95	e51	26	12	77
20	21	109	214	374	570	184	e250	e87	e47	26	12	46
21	20	76	193	337	498	177	653	e80	e45	25	11	32
22	18	59	172	311	442	171	647	e75	e45	23	16	26
23	17	49	157	325	416	164	397	e75	48	21	25	23
24	18	51	210	421	405	174	297	e72	49	20	26	22
25	17	71	360	437	430	178	245	e69	47	21	31	21
26	16	128	339	429	433	245	214	e66	44	20	37	21
27	16	107	352	470	605	359	189	e70	43	19	29	20
28	16	79	959	503	610	293	172	e80	41	20	23	20
29	18	279	1,810	800	516	245	159	e90	40	19	20	19
30	19	276	1,500	1,440	---	224	148	e85	38	18	34	19
31	19	---	876	1,420	---	203	---	e77	---	18	31	---
TOTAL	593	2,013	15,747	20,636	16,013	8,446	6,031	2,859	1,847	845	597	703
MEAN	19.1	67.1	508	666	552	272	201	92.2	61.6	27.3	19.3	23.4
MAX	32	279	2,120	1,440	1,170	485	653	135	101	37	37	77
MIN	12	17	103	311	313	164	102	66	38	18	11	14
AC-FT	1,180	3,990	31,230	40,930	31,760	16,750	11,960	5,670	3,660	1,680	1,180	1,390
CFSM	0.21	0.75	5.69	7.45	6.18	3.05	2.25	1.03	0.69	0.31	0.22	0.26
IN.	0.25	0.84	6.56	8.60	6.67	3.52	2.51	1.19	0.77	0.35	0.25	0.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2004, BY WATER YEAR (WY)

	MEAN	300	708	1,425	1,260	1,283	923	684	127	65.8	30.5	16.8	17.5
(WY)	(1948)	(1974)	(1956)	(1956)	(1996)	(1938)	(1937)	(1963)	(1937)	(1937)	(1937)	(1993)	(1997)
MIN	8.00	16.6	23.8	25.2	62.5	89.3	57.2	51.5	24.7	6.20	3.61	7.25	
(WY)	(1988)	(1937)	(1977)	(1977)	(1977)	(2001)	(1977)	(2001)	(1977)	(1977)	(1977)	(2001)	

14166500 LONG TOM RIVER NEAR NOTI, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1936 - 2004	
ANNUAL TOTAL	83,059.4		76,330		229	
ANNUAL MEAN	228		209		424	
HIGHEST ANNUAL MEAN					1974	
LOWEST ANNUAL MEAN					45.5	
HIGHEST DAILY MEAN	2,120	Dec 14	2,120	Dec 14	5,850	Dec 22, 1964
LOWEST DAILY MEAN	9.2	Sep 3	11	Aug 21	0.04	Aug 13, 1977
ANNUAL SEVEN-DAY MINIMUM	10	Aug 30	12	Aug 15	0.06	Aug 8, 1977
ANNUAL RUNOFF (AC-FT)	164,700		151,400		166,000	
ANNUAL RUNOFF (CFSM)	2.55		2.34		2.57	
ANNUAL RUNOFF (INCHES)	34.60		31.80		34.85	
10 PERCENT EXCEEDS	574		556		580	
50 PERCENT EXCEEDS	103		84		91	
90 PERCENT EXCEEDS	14		17		15	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14166500 LONG TOM RIVER NEAR NOTI, OR

Latitude: 44° 03 ' 00"

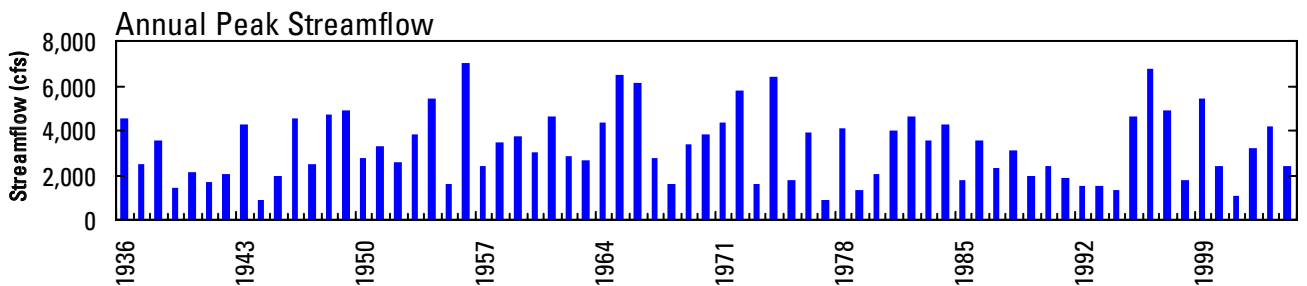
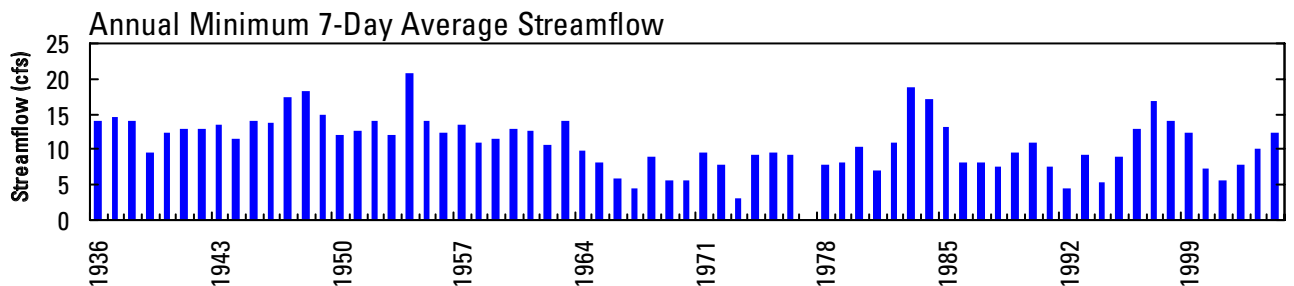
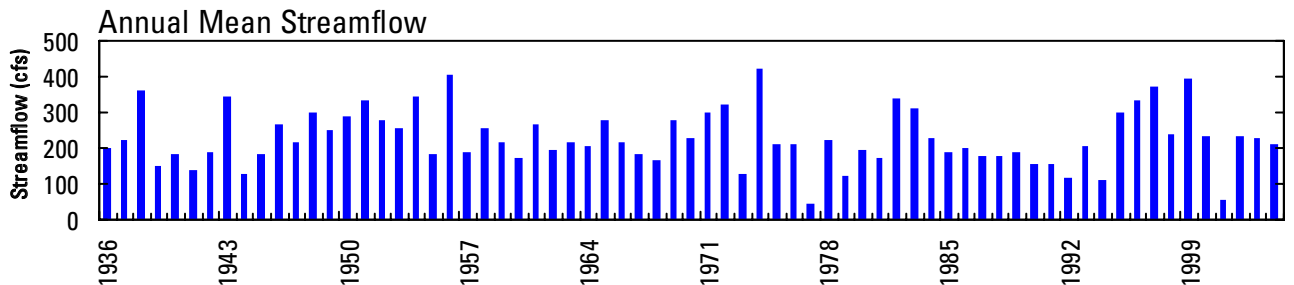
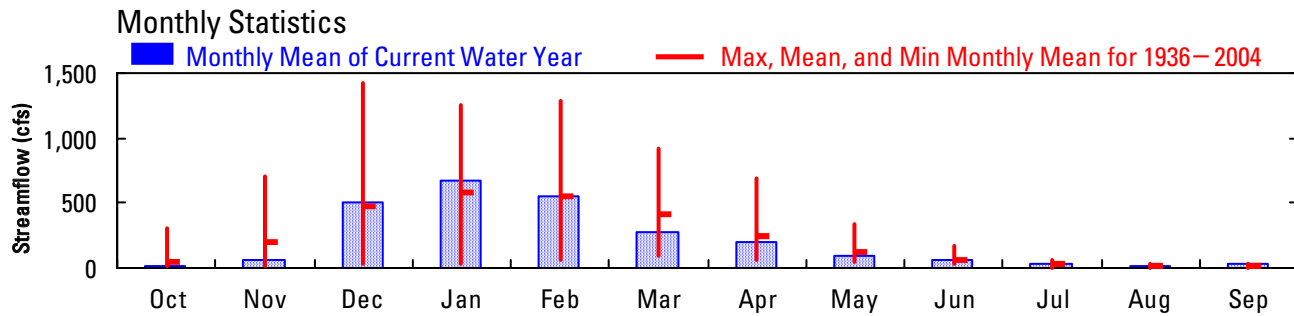
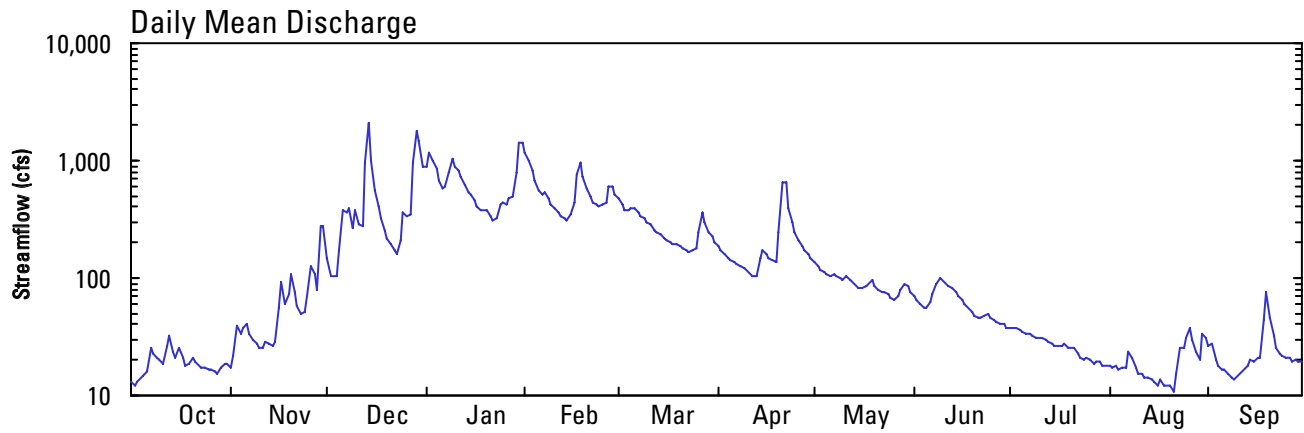
Longitude: 123° 25 ' 30"

Hydrologic Unit Code: 17090003

Lane County

Datum: 389.05 feet

Drainage Area: 89.3 square miles



14169000 LONG TOM RIVER NEAR ALVADORE, OR

LOCATION.--Lat 44°07'25", long 123°17'55", in SW ¼ NE ¼ sec.4, T.17 S., R.5 W., Lane County, Hydrologic Unit 17090003, on left bank 0.2 mi downstream from Fern Ridge Dam, 1.7 mi west of Alvadore, and at mile 25.5.

DRAINAGE AREA.--252 mi², not including Amazon Creek basin.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1939 to current year. Prior to October 1943, published as "at Smithfield," and October 1943 to September 1959, as "below Fern Ridge Dam, near Smithfield." Prior to October 1985, published figures included diversion from Fern Ridge Reservoir into Coyote Creek channel (station 14169001).

REVISED RECORDS.--WSP 1248: 1940-41, 1948.

GAGE.--Water-stage recorder and masonry control. Datum of gage is 332.00 ft above NGVD of 1929 (levels by Corps of Engineers). Prior to Sept. 21, 1939, nonrecording gage and Sept. 21, 1939, to Sept. 30, 1943, water-stage recorder at site 2.5 mi downstream at datum 11.09 ft lower.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since 1941 by Fern Ridge Lake (station 14168000). Several diversions for irrigation upstream from station. Discharge not adjusted for storage or release from Fern Ridge Lake as evaporation from reservoir at times exceeds natural flow and diversions, and beginning in November 1951, most of flow of Amazon Creek has been diverted into Fern Ridge Lake. Drainage area at point of diversion 21.3 mi².

AVERAGE DISCHARGE.--65 years (water years 1940-2004), 515 ft³/s, 373,200 acre-ft/yr, river only, not adjusted for diversions into or out of Fern Ridge Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft³/s Jan. 1, 1943, gage height, 15.12 ft, site and datum then in use; minimum daily discharge, 2 ft³/s Aug. 7, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,540 ft³/s Jan. 5, gage height, 7.59 ft; minimum discharge, 39 ft³/s July 19.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	781	597	592	2,690	1,830	464	53	48	53	53	49	45
2	775	597	503	2,590	1,870	463	53	51	53	47	50	45
3	770	589	406	2,750	1,880	461	53	53	53	42	47	45
4	772	652	272	2,970	1,700	460	53	53	53	42	47	45
5	770	743	334	3,260	1,210	459	53	53	53	42	47	45
6	781	814	736	3,410	771	459	53	53	53	42	47	45
7	783	833	828	3,410	295	459	53	53	54	42	47	45
8	774	871	832	3,050	260	271	53	53	55	42	47	45
9	770	860	834	2,900	182	86	53	53	54	42	46	45
10	797	848	1,140	2,870	98	51	53	53	54	42	46	45
11	806	834	1,370	2,870	99	51	53	53	54	42	46	45
12	803	925	1,180	2,860	70	51	54	53	55	41	46	45
13	798	960	533	2,890	46	51	54	53	55	41	49	45
14	807	1,050	1,320	2,580	45	51	54	53	55	41	50	45
15	838	1,200	2,800	2,270	45	51	54	53	55	44	50	45
16	837	1,310	2,990	1,840	47	51	54	53	55	45	50	45
17	850	325	3,000	916	267	51	54	53	55	45	50	45
18	849	101	2,980	708	847	51	54	53	54	45	50	45
19	841	141	2,980	762	955	51	49	53	55	45	54	45
20	836	182	2,810	926	952	51	47	53	54	45	58	45
21	827	182	1,970	953	950	51	47	53	55	45	63	45
22	822	181	680	709	771	51	46	53	56	45	63	45
23	797	125	310	696	768	51	47	53	56	46	62	45
24	791	80	337	832	599	51	48	53	56	49	59	45
25	796	131	603	891	558	51	48	53	54	50	59	45
26	799	184	1,210	921	551	51	48	53	53	50	59	45
27	790	178	1,510	909	550	51	48	53	53	50	58	45
28	797	181	1,610	915	487	51	48	53	53	50	45	44
29	714	602	1,450	520	462	51	48	53	53	50	45	45
30	623	685	2,290	864	---	51	48	53	53	49	45	276
31	570	---	2,970	1,780	---	51	---	53	---	50	45	---
TOTAL	24,364	16,961	43,380	58,512	19,165	4,704	1,533	1,636	1,624	1,404	1,579	1,580
MEAN	786	565	1,399	1,887	661	152	51.1	52.8	54.1	45.3	50.9	52.7
MAX	850	1,310	3,000	3,410	1,880	464	54	53	56	53	63	276
MIN	570	80	272	520	45	51	46	48	53	41	45	44
AC-FT	48,330	33,640	86,040	116,100	38,010	9,330	3,040	3,250	3,220	2,780	3,130	3,130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	707	695	1,154	1,411	982	474	245	159	66.0	45.4	76.1	180
MAX	1,623	2,171	3,195	4,244	3,148	1,660	1,565	812	469	150	533	916
(WY)	(1948)	(1974)	(1956)	(1956)	(1996)	(1957)	(1963)	(1963)	(1993)	(1993)	(1951)	(1964)
MIN	14.8	20.1	44.6	30.3	9.94	3.69	3.73	4.72	13.7	13.4	12.8	10.0
(WY)	(1940)	(1940)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1944)	(1944)	(1944)	(1943)

WILLAMETTE RIVER BASIN

14169000 LONG TOM RIVER NEAR ALVADORE, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	210,520		176,442		515	
ANNUAL MEAN	577		482		988	1974
HIGHEST ANNUAL MEAN					143	1977
LOWEST ANNUAL MEAN					10,800	Jan 1, 1943
HIGHEST DAILY MEAN	3,450	Jan 10	3,410	Jan 6	2.0	Aug 7, 1941
LOWEST DAILY MEAN	33	Jul 2	41	Jul 12	3.3	Feb 24, 1977
ANNUAL SEVEN-DAY MINIMUM	34	Jul 1	42	Jul 8		
ANNUAL RUNOFF (AC-FT)	417,600		350,000		373,200	
10 PERCENT EXCEEDS	1,450		1,240		1,510	
50 PERCENT EXCEEDS	293		54		75	
90 PERCENT EXCEEDS	54		45		30	



2004 Water Year
WILLAMETTE RIVER BASIN

14169000 LONG TOM RIVER NEAR ALVADORE, OR

Latitude: 44° 07 ' 25"

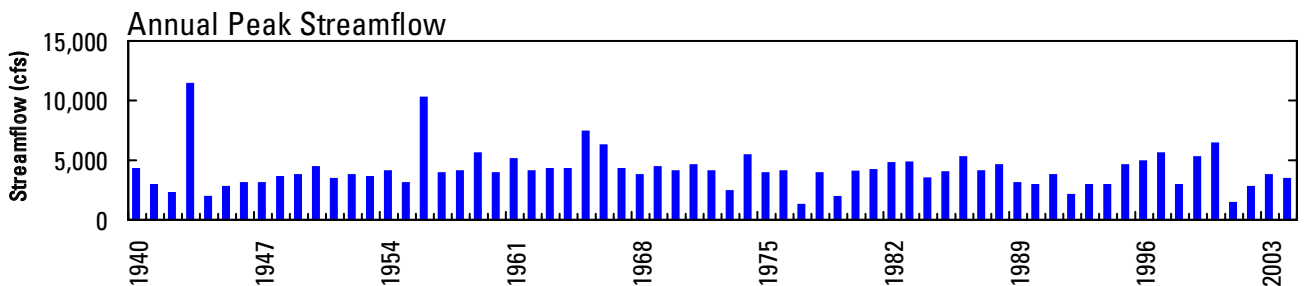
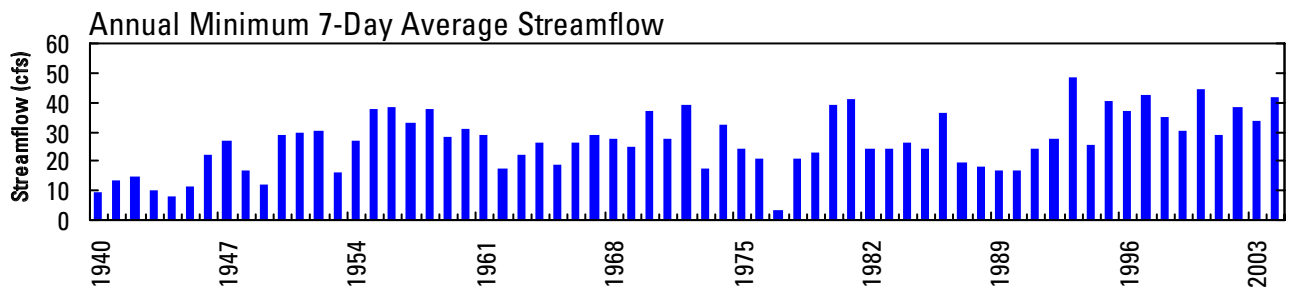
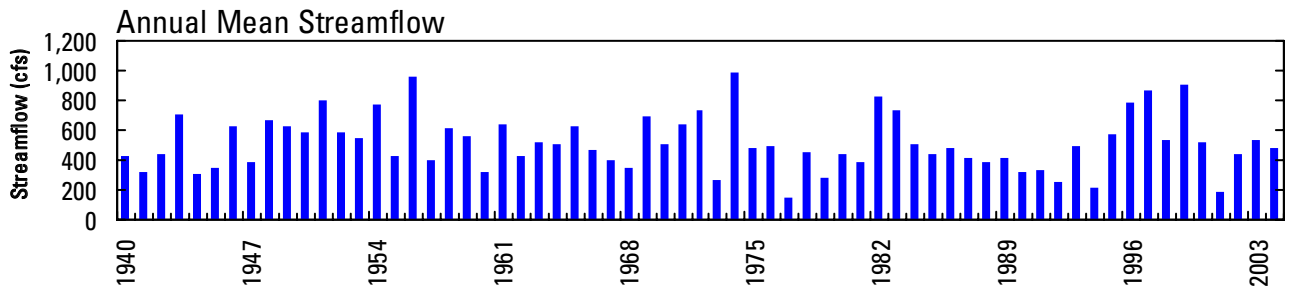
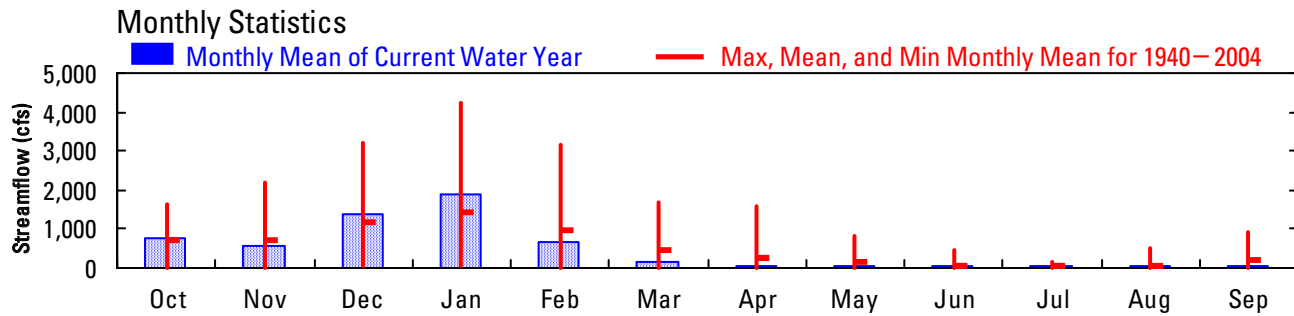
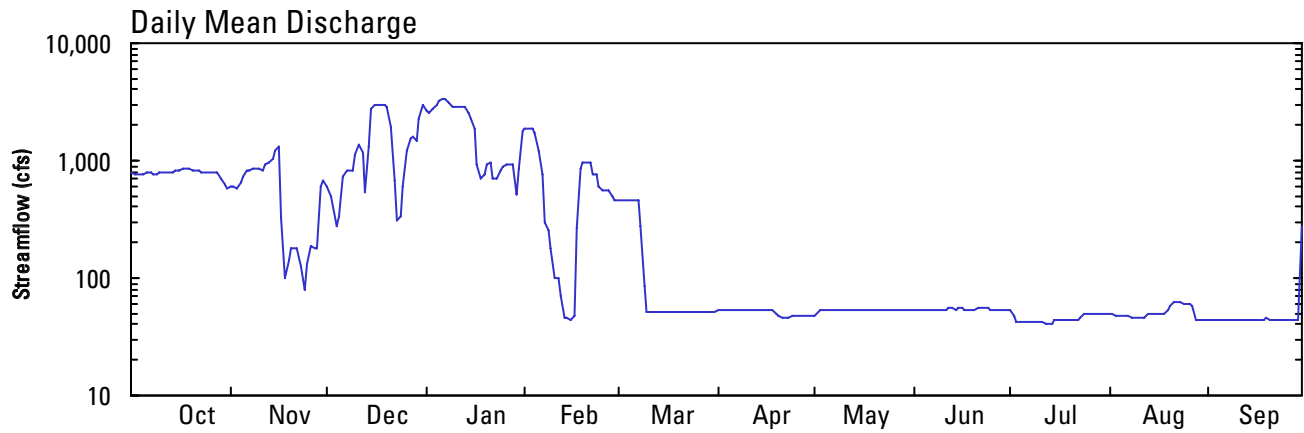
Longitude: 123° 17 ' 55"

Hydrologic Unit Code: 17090003

Lane County

Datum: 332.00 feet

Drainage Area: 252 square miles



WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 2001 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--Records good except those for the period Dec. 4 to Apr. 22, which are fair.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 25.2°C Aug. 15, 2002; minimum, 2.0°C Jan. 7, 2004.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25.0°C July 24, but may have been higher during period of missing record; minimum, 2.0°C Jan. 7.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	---	---	---	4.5	3.9	4.3
2	---	---	---	---	---	---	---	---	---	4.3	3.5	4.0
3	---	---	---	---	---	---	---	---	---	3.8	3.3	3.6
4	---	---	---	---	---	---	9.2	8.9	9.1	4.1	3.7	3.9
5	---	---	---	---	---	---	9.8	8.9	9.2	4.1	3.3	3.7
6	---	---	---	---	---	---	9.6	8.9	9.2	3.4	2.2	2.9
7	---	---	---	---	---	---	---	---	---	2.7	2.0	2.3
8	---	---	---	---	---	---	---	---	---	3.1	2.7	2.9
9	---	---	---	---	---	---	---	---	---	4.1	3.1	3.7
10	---	---	---	---	---	---	---	---	---	5.2	3.8	4.4
11	---	---	---	---	---	---	8.6	7.9	8.1	5.9	4.9	5.4
12	---	---	---	---	---	---	9.2	8.5	8.8	6.3	5.9	6.1
13	---	---	---	---	---	---	9.7	9.0	9.4	6.9	6.2	6.6
14	---	---	---	---	---	---	9.1	7.6	8.2	7.2	6.7	7.0
15	---	---	---	---	---	---	7.7	6.9	7.5	8.2	7.2	7.7
16	---	---	---	---	---	---	7.0	6.5	6.8	9.1	8.0	8.5
17	---	---	---	---	---	---	7.2	6.7	7.0	9.4	8.7	9.0
18	---	---	---	---	---	---	7.6	7.1	7.4	9.7	8.8	9.2
19	---	---	---	---	---	---	7.3	6.9	7.1	10.0	9.1	9.5
20	---	---	---	---	---	---	7.4	7.0	7.2	9.8	8.7	9.4
21	---	---	---	---	---	---	8.0	7.2	7.6	8.8	8.0	8.5
22	---	---	---	---	---	---	8.4	7.7	8.1	8.8	7.9	8.3
23	---	---	---	---	---	---	8.3	8.0	8.2	8.8	8.3	8.6
24	---	---	---	---	---	---	8.1	7.4	7.7	9.0	8.1	8.7
25	---	---	---	---	---	---	7.6	6.8	7.3	8.1	6.9	7.4
26	---	---	---	---	---	---	6.9	6.4	6.6	8.0	6.7	7.5
27	---	---	---	---	---	---	6.5	5.4	5.9	8.3	7.4	7.8
28	---	---	---	---	---	---	6.7	6.0	6.3	9.2	8.1	8.6
29	---	---	---	---	---	---	6.3	4.9	5.8	11.1	9.2	10
30	---	---	---	---	---	---	5.0	4.3	4.5	---	---	---
31	---	---	---	---	---	---	4.5	4.2	4.3	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

14170000 LONG TOM RIVER AT MONROE, OR

LOCATION.--Lat 44°18'47", long 123°17'43", in NE ¼ sec.33, T.14 S., R.5 W., Benton County, Hydrologic Unit 17090003, on left bank at Monroe, 110 ft upstream from bridge on State Highway 99W, 0.1 mi downstream from Shafer Creek, and at mile 6.8.

DRAINAGE AREA.--391 mi².

PERIOD OF RECORD.--November 1920 to July 1921, October 1921 to April 1926, November 1926 to May 1927, October 1927 to current year. Prior to October 1930, published as "near Monroe."

REVISED RECORDS.--WSP 654: Drainage area. WSP 1248: 1923, 1927, 1928(M). WSP 1288: 1952.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 270.57 ft above NGVD of 1929. Prior to Nov. 24, 1944, nonrecording gage at various sites ranging from present site to 1.5 mi downstream at different datums.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated since Nov. 1941 by Fern Ridge Lake (station 14168000). Several small diversions upstream from station. Periodic suspended sediment data are available for the period October 1991 to September 1994.

AVERAGE DISCHARGE.--18 years (water years 1922-25, 1928-1941), 689 ft³/s, 499,200 acre-ft/yr. 63 years (water years 1942-2004), 770 ft³/s, 557,900 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,300 ft³/s Jan. 2, 1943, gage height, 17.14 ft, site and datum then in use, from graph based on gage readings, includes some overflow from Willamette River near Junction City; no flow Oct. 20-22, 1944 (water filling pool at gage); minimum discharge observed prior to regulation, 7 ft³/s Sept. 29, Oct. 1, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,840 ft³/s Dec. 29, gage height, 8.09 ft; minimum discharge, 23 ft³/s Aug. 18-20.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	642	525	692	3,860	3,080	883	195	152	82	52	37	37
2	671	547	515	4,190	2,850	812	184	147	79	50	39	38
3	671	545	488	3,650	2,610	761	181	141	78	46	40	41
4	673	569	320	3,500	2,410	764	175	137	76	42	39	43
5	680	670	352	3,310	2,000	764	170	137	75	43	37	45
6	683	782	836	3,410	1,250	764	164	132	80	38	39	42
7	708	784	1,090	3,720	923	717	158	131	89	36	41	38
8	705	839	1,160	4,290	629	625	154	135	102	34	42	34
9	699	829	1,020	3,820	543	343	150	142	147	31	40	33
10	712	815	1,460	3,430	382	271	144	127	115	32	34	35
11	745	798	1,670	3,240	357	250	142	125	99	36	31	38
12	745	836	1,600	3,160	327	242	120	123	95	39	26	40
13	742	936	2,230	3,070	273	231	114	120	92	32	25	42
14	735	940	3,180	2,970	274	223	141	116	89	28	27	42
15	774	1,170	3,280	2,630	347	210	164	113	80	29	31	42
16	783	1,270	3,040	2,450	777	203	161	116	72	31	30	46
17	781	748	2,950	1,520	1,430	200	141	114	66	31	27	48
18	793	139	2,850	1,040	1,970	195	134	113	64	36	25	59
19	787	139	2,800	1,110	1,700	195	133	121	62	36	24	73
20	780	249	2,730	1,350	1,540	190	241	114	67	32	27	76
21	774	218	2,360	1,310	1,460	185	642	104	63	30	33	74
22	772	199	1,280	1,080	1,240	182	542	104	57	31	43	69
23	738	177	474	936	1,150	178	317	104	57	30	51	63
24	729	118	609	1,310	1,070	180	248	101	61	30	53	59
25	734	116	979	1,310	1,030	186	218	93	59	42	56	58
26	745	229	1,310	1,320	984	225	199	88	57	41	58	59
27	739	228	1,910	1,460	1,050	347	184	85	59	36	55	75
28	740	208	2,780	1,460	925	273	168	84	61	34	51	55
29	714	550	4,250	1,660	811	234	167	95	55	34	43	50
30	586	839	3,080	1,980	---	220	160	97	52	31	39	93
31	519	---	3,470	3,050	---	212	---	92	---	31	38	---
TOTAL	22,299	17,012	56,765	76,596	35,392	11,265	6,011	3,603	2,290	1,104	1,181	1,547
MEAN	719	567	1,831	2,471	1,220	363	200	116	76.3	35.6	38.1	51.6
MAX	793	1,270	4,250	4,290	3,080	883	642	152	147	52	58	93
MIN	519	116	320	936	273	178	114	84	52	28	24	33
AC-FT	44,230	33,740	112,600	151,900	70,200	22,340	11,920	7,150	4,540	2,190	2,340	3,070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2004, BY WATER YEAR (WY)

MEAN	757	938	1,778	2,172	1,613	900	464	251	96.2	43.8	70.6	188
MAX	1,895	3,437	5,355	6,222	4,683	2,761	2,277	1,193	697	148	524	960
(WY)	(1948)	(1951)	(1956)	(1956)	(1996)	(1957)	(1963)	(1963)	(1993)	(1993)	(1951)	(1955)
MIN	27.1	91.5	55.5	43.5	44.1	136	54.5	50.3	28.6	23.0	20.0	12.4
(WY)	(1942)	(1953)	(1977)	(1977)	(1977)	(1978)	(1977)	(1987)	(1987)	(1965)	(1944)	(1943)

14170000 LONG TOM RIVER AT MONROE, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1942 - 2004	
ANNUAL TOTAL	278,459		235,065			
ANNUAL MEAN	763		642		770	
HIGHEST ANNUAL MEAN					1,517	1956
LOWEST ANNUAL MEAN					177	1977
HIGHEST DAILY MEAN	4,250	Dec 29	4,290	Jan 8	16,400	Jan 2, 1943
LOWEST DAILY MEAN	22	Jul 7	24	Aug 19	0.00	Oct 20, 1944
ANNUAL SEVEN-DAY MINIMUM	28	Jul 2	27	Aug 13	8.4	Oct 17, 1944
ANNUAL RUNOFF (AC-FT)	552,300		466,300		557,900	
10 PERCENT EXCEEDS	2,170		1,970		2,400	
50 PERCENT EXCEEDS	515		184		232	
90 PERCENT EXCEEDS	40		36		37	



2004 Water Year
WILLAMETTE RIVER BASIN

14170000 LONG TOM RIVER AT MONROE, OR

Latitude: 44° 18 ' 47"

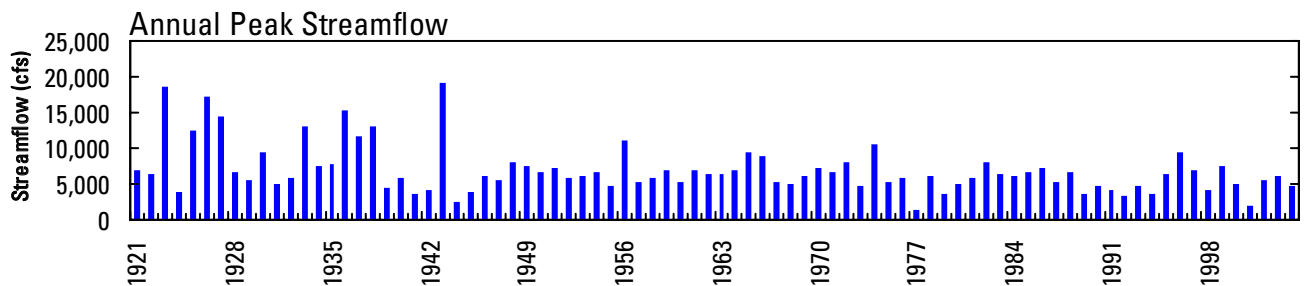
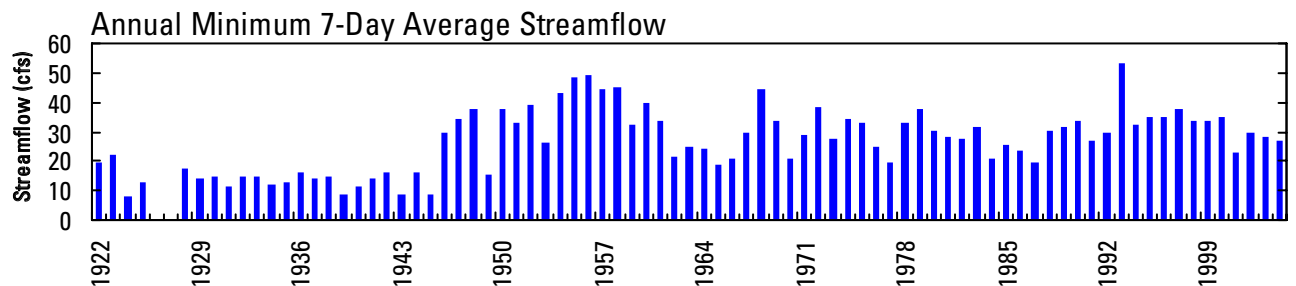
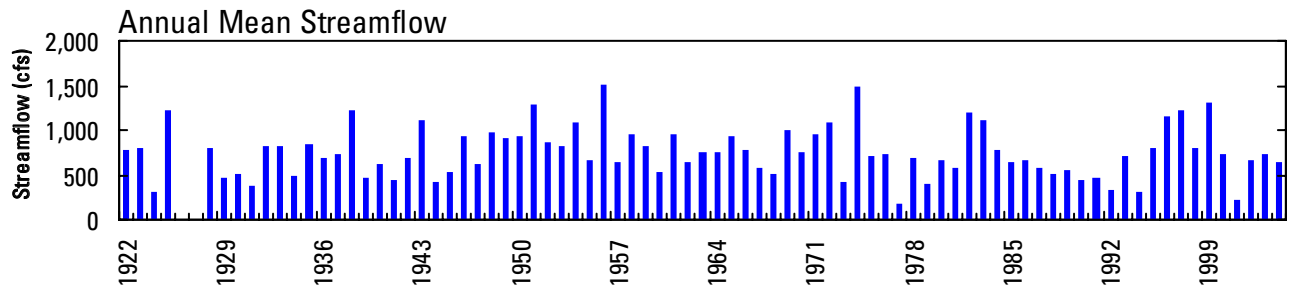
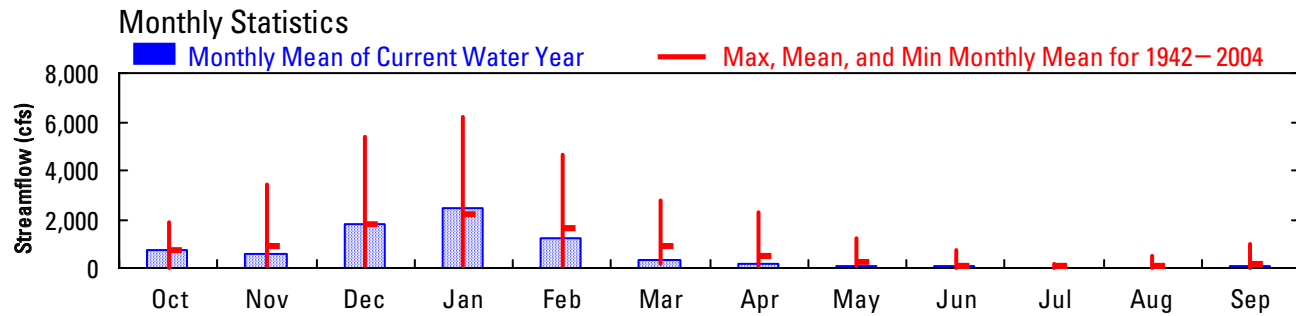
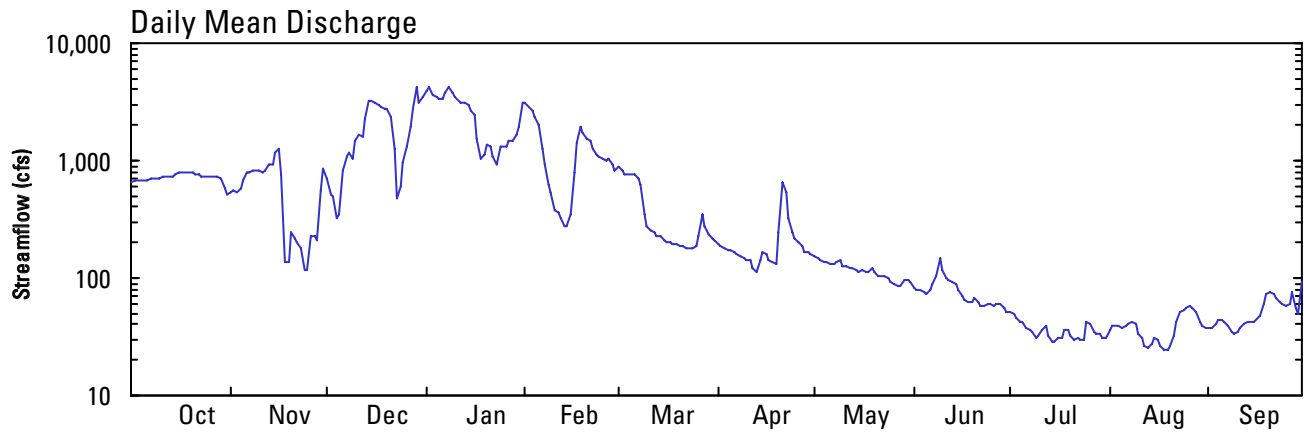
Longitude: 123° 17 ' 43"

Hydrologic Unit Code: 17090003

Benton County

Datum: 270.57 feet

Drainage Area: 391 square miles



14171000 MARYS RIVER NEAR PHILOMATH, OR

LOCATION.--Lat 44°31'35", long 123°20'00", in NE ¼ SE ¼ sec.18, T.12 S., R.5 W., Benton County, Hydrologic Unit 17090003, on right bank 15 ft downstream from bridge on Bellfountain Road, 0.6 mi downstream from Newton Creek, 2.0 mi southeast of Philomath, and at mile 9.4.

DRAINAGE AREA.--159 mi², including drainage area of Evergreen Creek upstream from Bellfountain Road, 1.4 mi south of station.

PERIOD OF RECORD.--October 1940 to September 1985, October 2000 to current year.

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1935: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 224.01 ft above NGVD of 1929 (levels by Corps of Engineers). Prior to Oct. 1 1961, nonrecording gage at bridge 50 ft upstream at same datum. October 1, 1961 to Sept. 30, 1985, gage on left bank, 35 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Records include flow of Evergreen Creek at Bellfountain Road crossing 1.4 mi south of station, with which overflow from Marys River may at times be mingled. Slight regulation by small storage reservoir on Rock Creek from which municipal supply is diverted for city of Corvallis. Other small diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--49 years (water years 1941-85, 2001-04), 451 ft³/s, 38.51 in/yr, 326,500 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft³/s Dec. 22, 1964, gage height, 20.72 ft; maximum gage height, 20.91 ft Jan. 15, 1974; minimum discharge, 0.60 ft³/s Aug. 23, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 14	0200	3,490	17.68	Jan 30	1500	*4,160	*18.83

Minimum discharge, 11 ft³/s, Oct. 1, 2.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	31	e380	1,250	2,490	991	259	185	109	60	22	21
2	13	37	255	1,400	1,860	806	242	173	100	59	21	21
3	14	37	295	1,330	1,350	685	230	168	93	56	20	23
4	14	33	281	1,340	1,050	708	216	158	88	53	20	22
5	15	33	393	1,110	856	758	205	154	88	51	21	22
6	15	34	777	937	790	707	197	150	97	49	22	20
7	24	35	823	1,040	885	634	189	155	114	47	24	19
8	24	35	878	1,550	769	571	182	150	159	45	23	18
9	25	35	669	1,840	668	513	174	140	163	44	22	18
10	25	33	909	1,760	592	462	167	137	148	42	19	18
11	23	40	694	1,620	533	422	161	140	144	41	18	18
12	33	51	632	1,390	480	388	154	137	133	39	17	20
13	33	56	1,520	1,240	436	358	151	129	125	38	17	22
14	28	47	2,990	1,210	440	333	237	120	118	36	18	28
15	28	45	1,980	1,230	478	310	257	114	107	35	17	34
16	30	64	1,230	1,190	732	294	227	112	98	35	16	36
17	25	101	879	1,040	1,080	278	213	114	90	34	16	46
18	23	e120	660	945	1,280	266	198	125	85	35	15	95
19	30	e210	533	889	1,150	262	197	129	80	33	15	141
20	32	e260	461	790	965	248	385	119	78	32	13	106
21	29	e200	397	670	820	232	641	107	75	31	14	75
22	35	e150	347	587	701	221	630	103	72	30	24	55
23	34	e130	312	577	611	211	483	105	75	28	28	46
24	31	e120	466	744	640	218	391	108	82	27	36	40
25	27	e200	808	883	679	220	333	98	80	26	40	36
26	26	e290	703	903	716	401	292	91	75	25	55	34
27	26	e270	753	913	974	539	260	92	72	24	50	33
28	26	e210	1,680	982	1,230	420	235	110	69	24	40	31
29	28	e520	2,430	2,020	1,100	350	216	137	66	23	32	29
30	29	e540	1,760	3,680	---	313	199	133	63	23	26	28
31	29	---	1,250	3,410	---	286	---	118	---	23	24	---
TOTAL	786	3,967	28,145	40,470	26,355	13,405	7,921	4,011	2,946	1,148	745	1,155
MEAN	25.4	132	908	1,305	909	432	264	129	98.2	37.0	24.0	38.5
MAX	35	540	2,990	3,680	2,490	991	641	185	163	60	55	141
MIN	12	31	255	577	436	211	151	91	63	23	13	18
AC-FT	1,560	7,870	55,830	80,270	52,280	26,590	15,710	7,960	5,840	2,280	1,480	2,290
CFSM	0.16	0.83	5.71	8.21	5.72	2.72	1.66	0.81	0.62	0.23	0.15	0.24
IN.	0.18	0.93	6.58	9.47	6.17	3.14	1.85	0.94	0.69	0.27	0.17	0.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

MEAN	68.5	457	1,054	1,193	1,041	782	456	217	93.5	35.7	17.9	19.9
MAX	568	1,897	2,360	2,455	2,398	1,736	1,133	660	295	89.6	35.8	51.9
(WY)	(1948)	(1974)	(1982)	(1970)	(1949)	(1961)	(1963)	(1963)	(1984)	(1984)	(1968)	(1941)
MIN	8.24	21.9	29.9	37.6	83.2	190	160	90.9	43.1	16.4	4.89	6.02
(WY)	(1953)	(1953)	(1977)	(1977)	(1977)	(1941)	(1977)	(1966)	(1966)	(1973)	(1967)	(1967)

WILLAMETTE RIVER BASIN

14171000 MARYS RIVER NEAR PHILOMATH, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	137,341.3		131,054		451	
ANNUAL MEAN	376		358		816	
HIGHEST ANNUAL MEAN					104	
LOWEST ANNUAL MEAN					1974	
HIGHEST DAILY MEAN	3,160	Feb 1	3,680	Jan 30	11,300	Dec 22, 1964
LOWEST DAILY MEAN	8.0	Sep 5	12	Oct 1	1.4	Aug 29, 1967
ANNUAL SEVEN-DAY MINIMUM	9.6	Aug 31	15	Aug 15	2.4	Aug 26, 1967
ANNUAL RUNOFF (AC-FT)	272,400		259,900		326,500	
ANNUAL RUNOFF (CFSM)	2.37		2.25		2.83	
ANNUAL RUNOFF (INCHES)	32.13		30.66		38.51	
10 PERCENT EXCEEDS	927		1,010		1,240	
50 PERCENT EXCEEDS	149		130		156	
90 PERCENT EXCEEDS	14		22		15	

e Estimated



2004 Water Year
WILLAMETTE RIVER BASIN

14171000 MARYS RIVER NEAR PHILOMATH, OR

Latitude: 44° 31 ' 35"

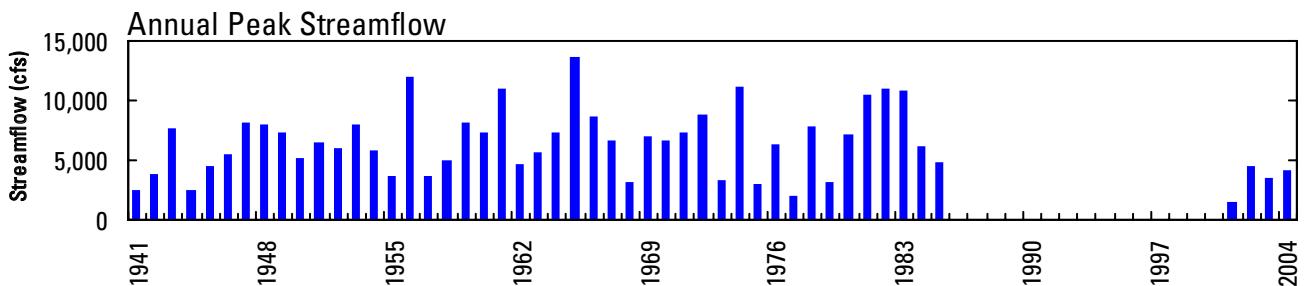
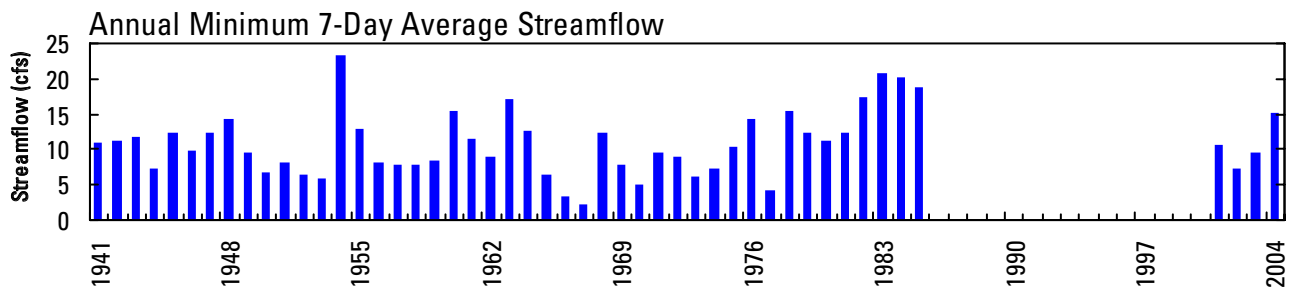
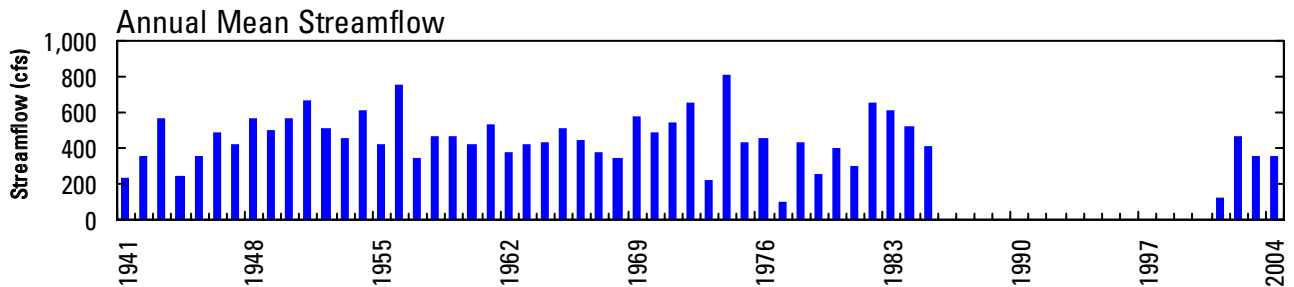
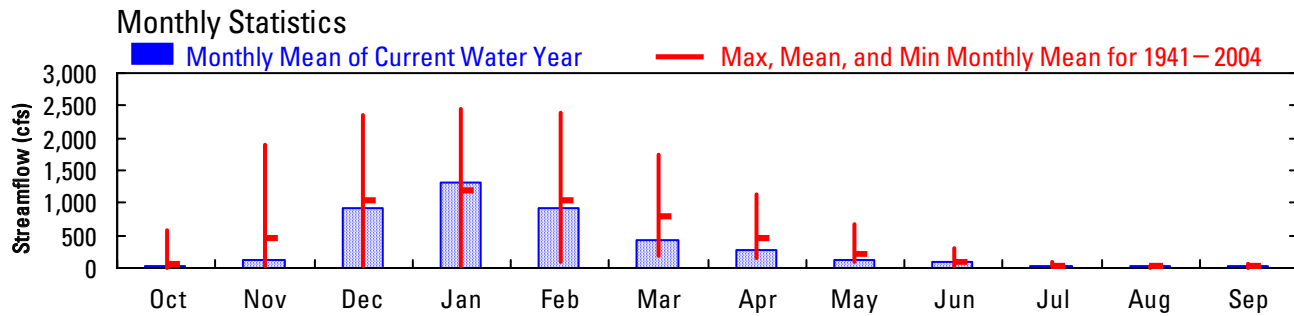
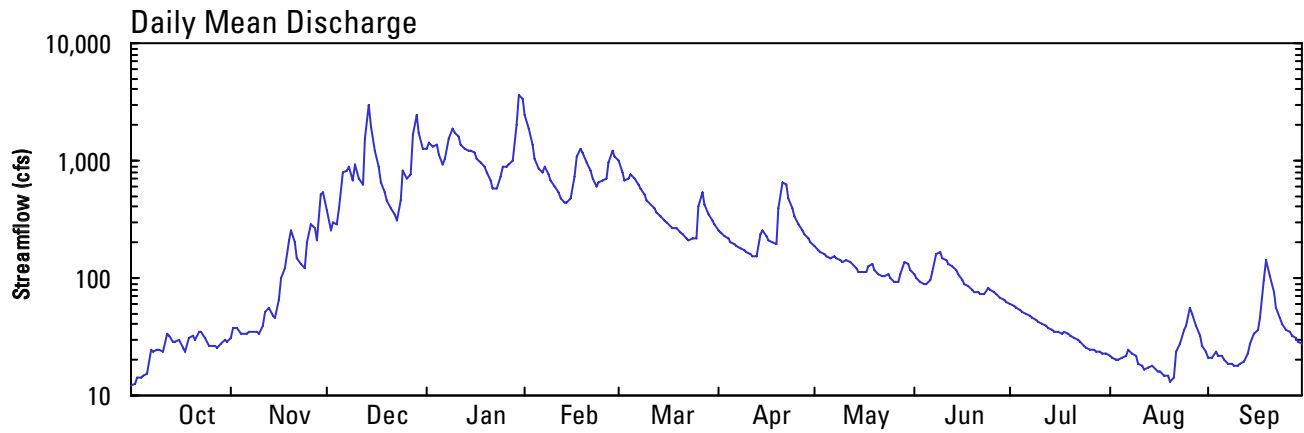
Longitude: 123° 20 ' 00"

Hydrologic Unit Code: 17090003

Benton County

Datum: 224.01 feet

Drainage Area: 159 square miles



14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1942 - 2004	
ANNUAL TOTAL	4,713,490		4,456,380		14,660	
ANNUAL MEAN	12,910		12,180		24,080	1956
HIGHEST ANNUAL MEAN					5,831	1977
LOWEST ANNUAL MEAN					210,000	Jan 2, 1943
HIGHEST DAILY MEAN	58,900	Dec 15	58,900	Dec 15	2,130	Sep 12, 1944
LOWEST DAILY MEAN	4,200	Jun 28	4,310	Nov 5	2,180	Sep 8, 1944
ANNUAL SEVEN-DAY MINIMUM	4,350	Jun 26	4,420	Nov 5	10,620,000	
ANNUAL RUNOFF (AC-FT)	9,349,000		8,839,000		3.03	
ANNUAL RUNOFF (CFSM)	2.67		2.52		41.17	
ANNUAL RUNOFF (INCHES)	36.23		34.25		33,000	
10 PERCENT EXCEEDS	28,300		28,100		9,330	
50 PERCENT EXCEEDS	8,740		8,740		4,550	
90 PERCENT EXCEEDS	4,480		4,690			

e Estimated



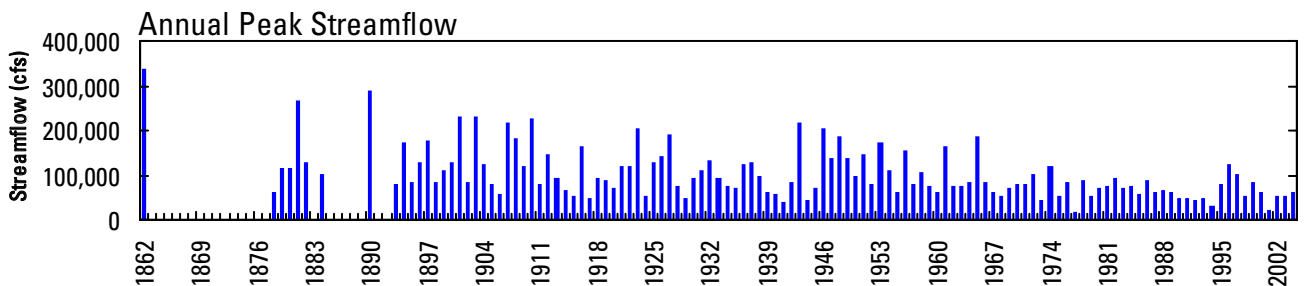
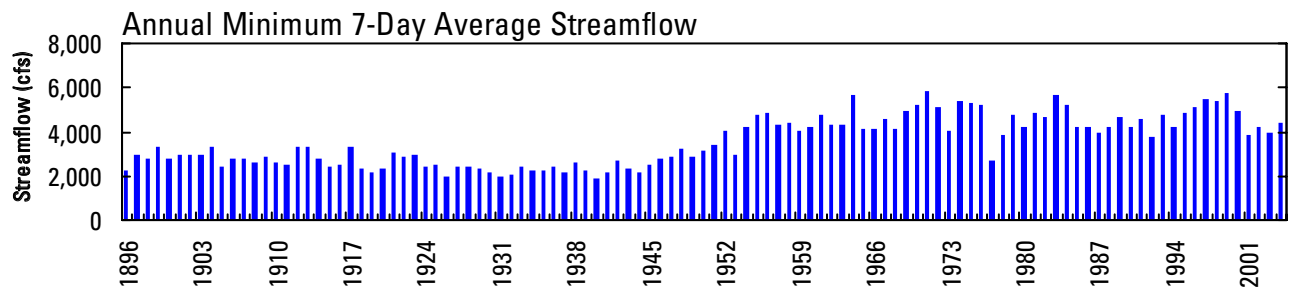
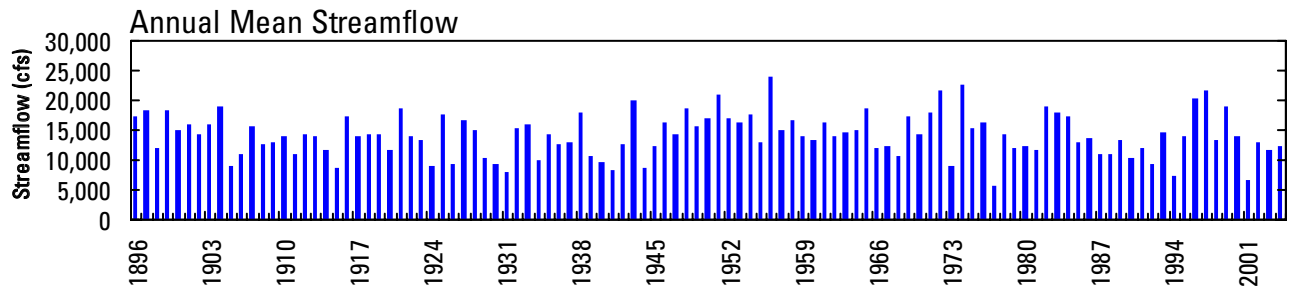
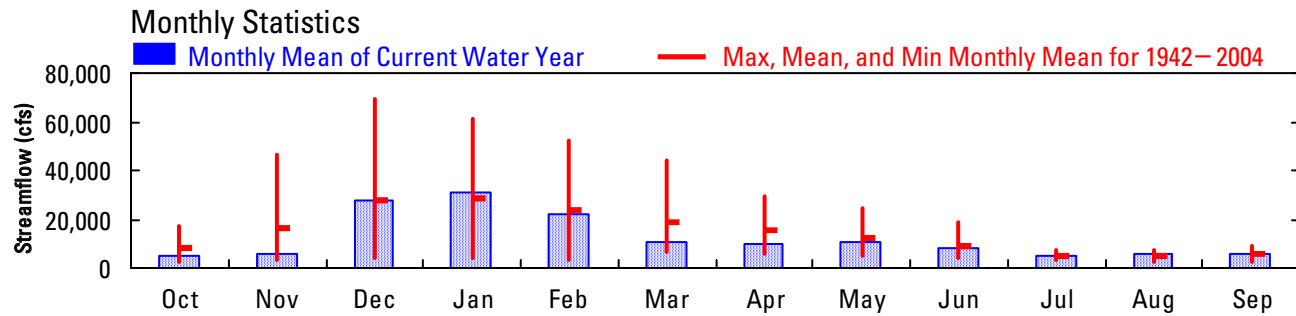
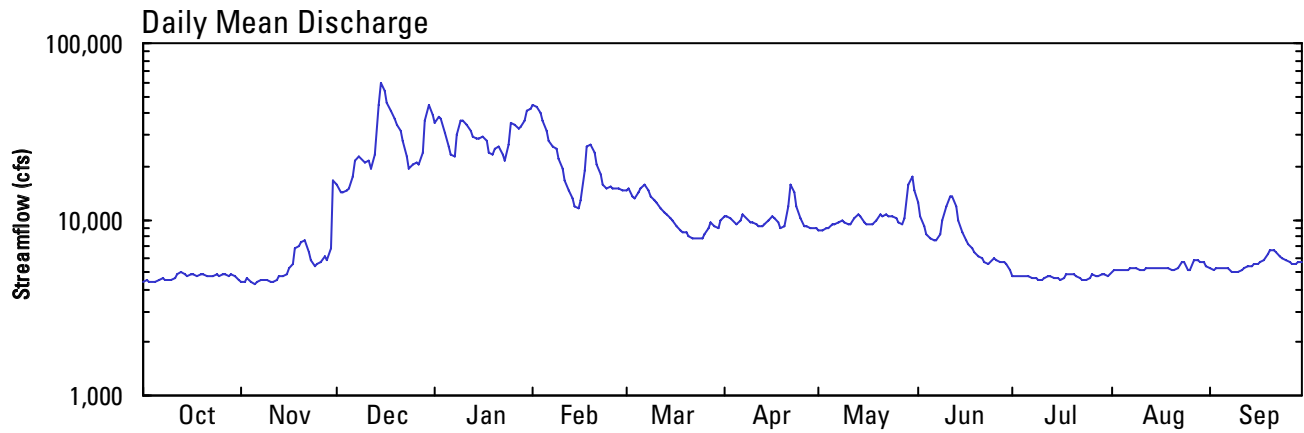
2004 Water Year
WILLAMETTE RIVER BASIN

14174000 WILLAMETTE RIVER AT ALBANY, OR

Latitude: 44° 38 ' 20"
Linn County

Longitude: 123° 06 ' 20"
Datum: 167.18 feet

Hydrologic Unit Code: 17090003
Drainage Area: 4,840 square miles



14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

WATER-QUALITY RECORDS

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

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 24.2°C July 24, 2004; minimum, 3.4°C Jan. 6, 7, 2004.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.2°C July 24; minimum, 3.4°C Jan. 6, 7.

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.7	16.7	17.2	9.5	8.4	8.8	8.7	8.3	8.5	5.8	4.5	5.3
2	17.5	17.0	17.2	8.8	8.3	8.6	9.1	8.5	8.8	4.5	3.5	3.9
3	17.1	16.8	16.9	8.5	7.9	8.3	9.2	8.8	9.0	4.7	3.6	4.2
4	17.3	16.4	16.9	8.8	8.2	8.5	8.8	8.2	8.5	5.4	4.7	5.1
5	17.1	16.5	16.9	8.7	8.3	8.5	8.8	8.2	8.4	5.2	4.4	4.9
6	17.1	16.1	16.6	8.6	8.1	8.4	9.3	8.7	9.0	4.4	3.4	3.8
7	17.9	16.9	17.4	9.3	8.6	8.9	8.8	8.1	8.5	3.9	3.4	3.6
8	17.6	16.4	17.1	9.4	8.9	9.2	8.3	8.0	8.1	4.4	3.8	4.1
9	16.4	15.2	15.8	9.4	8.9	9.2	8.1	7.8	8.0	5.6	4.4	5.1
10	15.4	14.7	15.1	9.8	9.1	9.4	7.8	7.5	7.7	6.6	5.6	6.1
11	15.1	14.3	14.7	10.7	9.8	10.2	8.3	7.8	8.1	7.0	6.6	6.8
12	14.3	13.8	14.1	10.4	9.8	10.1	8.5	8.2	8.4	6.7	6.5	6.6
13	14.0	13.6	13.8	9.8	9.0	9.3	9.0	8.4	8.8	7.0	6.4	6.7
14	14.3	13.6	13.9	10.2	9.3	9.8	8.9	6.9	7.8	7.4	6.9	7.2
15	14.2	13.8	14.1	10.2	10.0	10.1	6.9	6.5	6.6	8.0	7.3	7.7
16	14.4	13.9	14.1	10.0	9.6	9.7	7.2	6.6	6.9	8.1	7.9	8.0
17	15.9	14.4	15.1	9.8	9.5	9.6	7.7	7.2	7.5	8.0	7.8	8.0
18	16.0	15.4	15.7	10.3	9.6	9.9	7.6	7.4	7.6	8.2	7.8	8.0
19	16.0	15.5	15.7	10.3	9.5	10.0	7.4	7.1	7.2	8.9	8.2	8.5
20	16.6	15.6	15.9	9.5	8.2	8.8	7.7	7.0	7.3	8.6	8.0	8.4
21	17.3	16.2	16.7	8.2	7.2	7.6	8.2	7.7	8.0	8.0	7.2	7.5
22	17.2	16.6	16.9	7.2	6.9	7.0	8.2	7.7	8.1	7.2	7.0	7.1
23	16.6	15.3	15.9	7.2	6.6	6.9	7.7	7.4	7.5	7.7	7.0	7.3
24	15.3	14.1	14.5	7.5	7.0	7.3	7.5	7.4	7.5	8.5	7.7	8.2
25	14.1	13.4	13.7	7.6	7.1	7.4	7.4	7.0	7.3	8.0	7.0	7.4
26	13.8	13.2	13.6	7.6	7.3	7.4	7.0	6.4	6.7	7.3	7.0	7.2
27	14.1	13.2	13.7	7.3	6.8	6.9	6.5	6.3	6.4	7.7	7.2	7.4
28	14.7	14.0	14.3	7.5	6.8	7.0	6.6	6.3	6.4	8.2	7.6	8.0
29	14.5	13.5	14.0	8.2	7.5	7.9	6.6	4.3	5.4	8.9	8.2	8.6
30	13.5	11.8	12.7	8.6	7.7	8.4	4.4	4.0	4.2	8.9	7.9	8.6
31	11.8	9.5	10.4	---	---	---	5.6	4.3	5.0	7.9	7.0	7.3
MONTH	17.9	9.5	15.2	10.7	6.6	8.6	9.3	4.0	7.5	8.9	3.4	6.7

WILLAMETTE RIVER BASIN

14174000 WILLAMETTE RIVER AT ALBANY, OR—Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	7.4	7.0	7.2	9.2	8.3	8.7	11.5	9.9	10.7	16.7	14.6	15.6
2	7.8	7.3	7.5	9.5	8.5	8.9	11.7	9.8	10.7	17.1	14.8	15.9
3	8.0	7.7	7.8	8.9	8.5	8.7	12.7	10.5	11.6	17.4	15.0	16.2
4	8.2	7.9	8.0	8.5	8.1	8.3	13.2	11.5	12.3	16.7	15.4	16.0
5	8.0	7.5	7.8	8.6	8.1	8.3	12.7	11.8	12.2	15.4	14.2	14.8
6	7.8	7.4	7.6	8.6	8.0	8.3	12.0	11.3	11.7	15.3	13.8	14.5
7	8.0	7.6	7.8	10.3	8.5	9.4	12.2	11.1	11.6	15.0	13.9	14.4
8	7.7	7.4	7.6	11.4	9.9	10.6	13.0	11.2	12.0	14.6	13.5	14.1
9	7.6	6.9	7.4	11.6	10.5	11.0	13.5	11.4	12.4	15.0	13.2	14.0
10	7.0	6.4	6.7	11.0	10.1	10.5	14.2	12.2	13.2	14.4	13.4	13.9
11	7.1	6.3	6.7	11.0	9.6	10.3	14.7	12.6	13.7	14.0	12.6	13.3
12	7.2	6.2	6.7	11.1	9.6	10.4	14.2	13.0	13.7	14.0	12.7	13.2
13	6.7	6.3	6.5	11.0	9.9	10.5	13.4	12.1	12.8	15.0	12.8	13.8
14	6.7	5.9	6.3	11.4	9.8	10.6	12.9	11.8	12.4	15.4	13.7	14.4
15	8.1	6.7	7.4	11.9	10.5	11.1	12.4	11.4	11.9	15.0	14.0	14.4
16	8.5	8.0	8.3	11.9	10.4	11.2	12.1	11.0	11.6	15.1	13.3	14.1
17	8.4	8.0	8.2	11.8	10.5	11.2	12.9	11.4	12.0	16.0	13.8	14.9
18	8.7	8.1	8.5	11.5	10.8	11.0	12.5	11.4	11.8	15.7	14.5	15.0
19	8.9	8.4	8.7	11.2	10.1	10.7	11.8	11.1	11.4	14.8	13.8	14.3
20	8.5	7.7	8.2	11.1	9.8	10.5	11.3	10.6	10.9	15.8	14.0	14.8
21	8.0	7.5	7.7	11.4	10.1	10.8	11.3	10.2	10.7	15.4	---	---
22	8.5	7.7	8.1	12.6	10.7	11.6	11.7	10.3	10.8	14.8	14.2	14.4
23	9.6	8.3	8.9	13.0	11.7	12.4	12.1	10.8	11.4	15.2	13.6	14.4
24	9.7	9.1	9.3	13.1	12.3	12.6	12.4	10.8	11.5	16.0	13.8	14.9
25	9.1	8.6	8.9	12.5	10.9	11.8	14.0	11.2	12.4	17.1	14.4	15.7
26	8.9	8.5	8.7	10.9	9.8	10.2	15.5	12.7	14.0	16.7	15.8	16.2
27	8.9	8.6	8.7	10.7	9.4	10.0	16.5	14.3	15.3	16.0	14.9	15.3
28	9.1	8.6	8.8	11.5	9.6	10.5	16.1	14.2	15.2	14.9	14.0	14.5
29	8.8	8.5	8.7	12.4	10.0	11.2	15.8	13.7	14.8	14.8	12.9	13.9
30	---	---	---	12.6	11.8	12.1	16.2	13.9	15.0	13.5	12.3	12.8
31	---	---	---	11.8	10.7	11.1	---	---	---	14.6	12.8	13.6
MONTH	9.7	5.9	7.9	13.1	8.0	10.5	16.5	9.8	12.4	17.4	---	---
JUNE			JULY			AUGUST			SEPTEMBER			
1	15.9	13.7	14.7	21.6	19.8	20.7	22.4	20.9	21.7	21.1	---	---
2	16.8	14.9	15.8	21.0	19.4	20.3	22.1	20.6	21.4	---	18.3	---
3	17.8	15.5	16.6	21.1	19.9	20.5	21.7	20.3	21.0	18.7	17.5	18.1
4	18.8	16.4	17.6	21.1	19.6	20.4	21.2	20.8	21.1	18.6	17.9	18.3
5	18.3	17.1	17.7	21.2	19.3	20.3	21.0	19.5	20.1	18.9	17.4	18.3
6	17.5	15.8	16.5	22.1	20.2	21.1	20.0	19.2	19.6	---	---	---
7	16.4	14.9	15.6	21.6	20.4	20.8	20.1	19.0	19.5	19.1	---	---
8	16.1	15.1	15.6	20.7	19.4	20.1	21.0	18.9	19.9	19.1	18.0	18.6
9	15.6	13.6	14.4	20.4	19.0	19.7	22.0	20.1	21.0	18.8	18.1	18.3
10	14.1	13.2	13.6	20.1	19.0	19.5	22.4	20.8	21.6	18.4	17.4	17.9
11	13.7	13.0	13.3	20.5	18.6	19.6	22.6	21.1	21.9	18.8	18.3	18.5
12	14.4	12.9	13.7	21.5	19.4	20.4	22.7	21.1	22.0	18.6	17.8	18.0
13	15.1	13.6	14.3	22.1	20.3	21.2	22.4	20.9	21.7	17.9	---	---
14	15.7	13.7	14.6	22.1	20.6	21.4	22.4	20.9	21.7	---	---	---
15	17.3	14.5	15.8	22.3	20.4	21.4	22.3	20.7	21.5	17.8	17.0	---
16	18.4	15.6	17.0	22.6	20.9	21.8	22.1	20.6	21.4	17.8	17.2	17.5
17	19.8	17.0	18.3	22.1	21.0	21.4	21.9	20.2	21.2	17.3	16.3	16.8
18	20.7	18.2	19.4	21.7	20.4	21.1	22.2	20.5	21.4	16.3	14.8	15.4
19	21.1	18.5	19.8	22.1	20.7	21.4	22.4	20.9	21.7	15.0	14.3	14.6
20	21.5	19.0	20.2	22.1	20.9	21.4	22.4	20.9	21.7	15.5	14.1	14.8
21	21.9	19.3	20.6	22.1	20.5	21.4	22.1	21.0	21.5	16.0	14.6	15.3
22	21.1	18.8	19.6	22.8	20.9	21.8	21.5	20.1	20.6	16.0	14.7	15.4
23	18.8	17.4	17.9	23.7	21.8	22.7	20.1	18.8	19.3	17.0	15.2	---
24	18.1	16.7	17.4	24.2	22.5	23.4	18.8	---	---	17.3	15.7	16.4
25	19.4	17.1	18.1	23.6	22.4	23.0	---	---	---	17.4	16.0	16.6
26	20.2	18.1	19.1	22.8	21.4	22.0	18.8	17.7	18.1	17.0	16.0	16.4
27	20.7	18.5	19.5	22.5	20.9	21.8	19.5	18.0	18.7	16.9	15.7	16.2
28	20.9	18.8	19.9	22.9	21.4	22.1	20.0	18.0	19.0	17.3	15.6	16.4
29	21.3	19.3	20.3	23.1	21.5	22.3	20.4	18.9	19.7	17.4	16.4	16.9
30	21.4	19.5	20.5	23.0	21.6	22.4	20.7	19.3	20.0	16.9	15.4	16.0
31	---	---	---	22.7	21.2	22.0	21.2	19.7	20.5	---	---	---
MONTH	21.9	12.9	17.2	24.2	18.6	21.3	---	---	---	---	---	---