

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR

Willamette Basin
South Santiam Subbasin

LOCATION.--Lat 44°32'25", long 122°26'05" referenced to North American Datum of 1927, in NW ¼ sec.10, T.12 S., R.3 E., Linn County, OR, Hydrologic Unit 17090006, Bureau of Land Management land, on right bank, 80 ft downstream from Panther Creek, 10 mi north of Cascadia and at mile 6.6.

DRAINAGE AREA.--99.20 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 1963 to November 1964 (destroyed by flood of December 1964), October 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,050 ft above NGVD of 1929, from topographic map. Aug. 13, 1963 to Dec. 22, 1964, water-stage recorder on left bank at present datum.

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

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--47 years (water years 1964, 1966-2011), 652 ft³/s, 89.37 in/yr, 472,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s Feb. 7, 1996, gage height, 20.54 ft, from rating curve extended above 8,000 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 14 ft³/s Aug. 19-23, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 36,500 ft³/s Dec. 22, 1964, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 18	0230	4,580	9.86
Dec 9	2330	4,670	9.93
Dec 13	0515	6,710	11.37
Dec 28	1900	4,970	10.16
Jan 13	2000	4,560	9.84
Jan 16	1530	*10,500	*13.66

Minimum discharge, 33 ft³/s, Sept. 22, 23, 24, 25.

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	41	611	3,610	713	333	825	2,640	835	1,100	181	60	40
2	40	1,070	2,430	585	305	876	2,460	861	1,010	165	59	39
3	39	719	1,520	499	282	828	1,540	818	909	155	57	39
4	38	489	1,050	441	268	646	1,240	771	880	144	57	38
5	37	374	809	400	352	1,050	2,640	890	913	134	56	38
6	36	309	766	369	424	942	1,670	911	902	126	55	37
7	35	894	880	369	464	708	1,210	1,080	762	121	54	37
8	34	979	1,530	431	454	732	932	1,210	627	115	53	37
9	109	960	3,090	402	386	1,520	774	1,050	531	107	53	36
10	272	1,570	3,420	354	343	3,260	686	929	535	102	52	36
11	232	958	3,390	325	319	2,100	998	1,040	518	97	51	35
12	126	739	4,660	1,410	311	1,290	863	1,200	476	100	50	35
13	93	596	5,500	3,630	465	1,280	734	1,000	529	103	49	35
14	76	847	4,620	3,430	475	1,750	775	973	486	93	49	35
15	66	962	2,490	3,210	614	2,210	1,860	908	437	88	48	35
16	60	1,310	1,500	8,540	558	2,350	4,080	988	381	94	48	36
17	56	1,210	1,060	5,120	465	1,470	2,930	866	352	107	47	35
18	53	2,970	859	2,710	410	1,130	1,650	810	360	96	46	35
19	50	1,450	729	2,410	368	942	1,130	787	404	103	45	35
20	47	1,030	674	1,500	334	803	897	785	364	107	45	35
21	45	794	636	1,130	307	808	759	809	354	92	44	34
22	50	679	573	981	307	795	646	709	342	86	44	34
23	75	555	515	799	293	688	609	640	314	81	44	33
24	923	e447	461	679	273	666	718	613	260	76	44	33
25	1,930	392	480	597	243	654	1,610	701	229	73	43	35
26	1,280	592	552	527	e230	842	1,900	752	212	71	43	38
27	758	1,380	615	486	224	1,040	1,450	1,300	203	69	42	40
28	539	898	3,190	463	457	1,000	1,200	1,340	227	67	41	41
29	580	679	2,840	432	---	1,420	1,040	999	206	64	41	37
30	501	1,600	1,370	398	---	3,300	947	869	205	63	40	35
31	783	---	919	364	---	3,180	---	1,080	---	61	40	---
Total	9,004	28,063	56,738	43,704	10,264	41,105	42,588	28,524	15,028	3,141	1,500	1,088
Mean	290	935	1,830	1,410	367	1,326	1,420	920	501	101	48.4	36.3
Max	1,930	2,970	5,500	8,540	614	3,300	4,080	1,340	1,100	181	60	41
Min	34	309	461	325	224	646	609	613	203	61	40	33
Ac-ft	17,860	55,660	112,500	86,690	20,360	81,530	84,470	56,580	29,810	6,230	2,980	2,160
Cfsm	2.93	9.43	18.5	14.2	3.70	13.4	14.3	9.28	5.05	1.02	0.49	0.37
In.	3.38	10.52	21.28	16.39	3.85	15.41	15.97	10.70	5.64	1.18	0.56	0.41

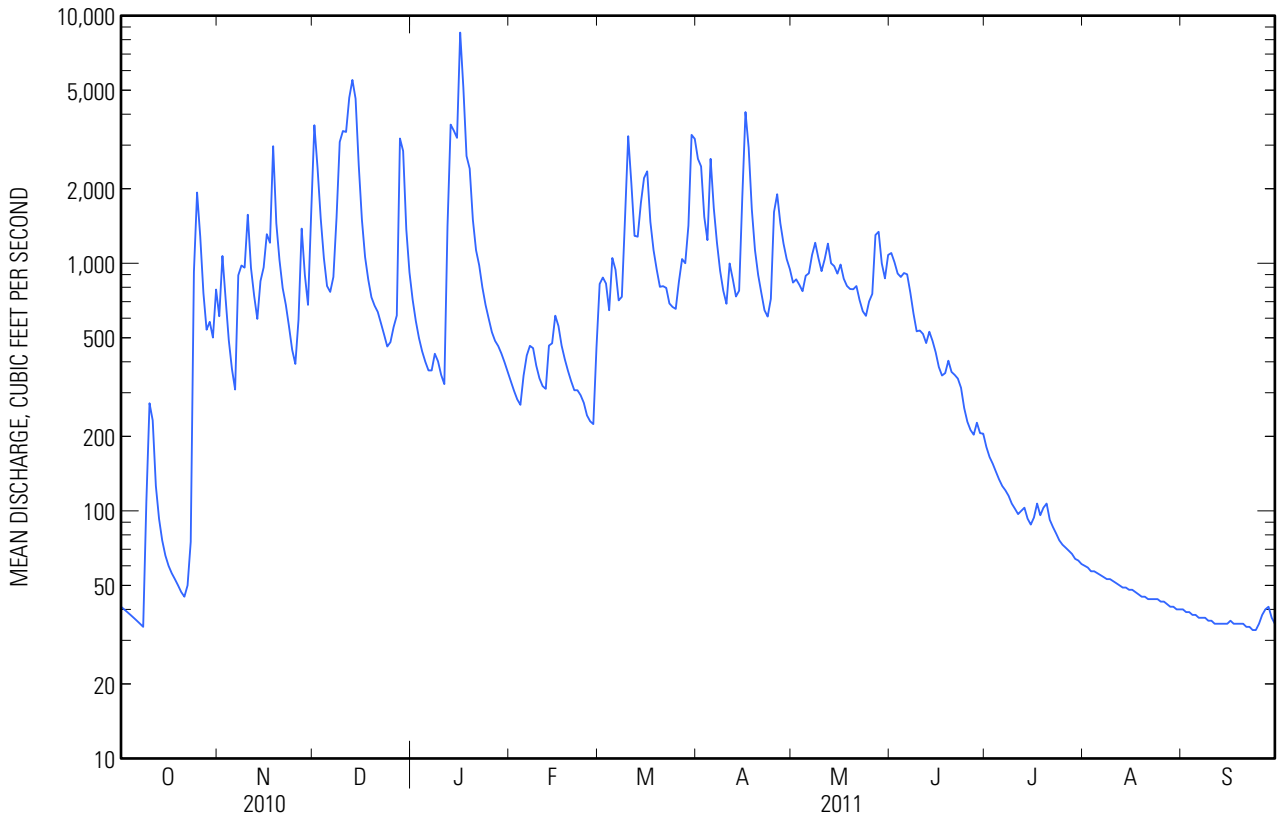
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	242	967	1,282	1,280	1,035	964	869	635	341	96.8	56.4	79.0
Max	786	2,224	2,897	2,450	2,441	2,018	1,600	1,615	945	336	240	268
(WY)	(1998)	(1974)	(1974)	(1970)	(1982)	(1972)	(1993)	(2008)	(2008)	(1983)	(1968)	(1971)
Min	20.8	57.6	110	157	208	204	382	182	63.1	36.8	20.9	20.4
(WY)	(1988)	(1994)	(1977)	(1977)	(1977)	(1992)	(1968)	(1992)	(1992)	(1992)	(1992)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1964 - 2011	
Annual total	261,133		280,747			
Annual mean	715		769		652	
Highest annual mean					1,113	1974
Lowest annual mean					311	1977
Highest daily mean	5,500	Dec 13	8,540	Jan 16	16,000	Feb 7, 1996
Lowest daily mean	32	Aug 28	33	Sep 23	14	Aug 19, 1973
Annual seven-day minimum	33	Aug 23	34	Sep 18	14	Aug 17, 1973
Annual runoff (ac-ft)	518,000		556,900		472,700	
Annual runoff (cfsm)	7.21		7.75		6.58	
Annual runoff (inches)	97.92		105.28		89.37	
10 percent exceeds	1,490		1,630		1,510	
50 percent exceeds	534		518		371	
90 percent exceeds	41		40		38	



14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--

WATER TEMPERATURE: August 1963 to November 1964, October 1965 to September 1987, October 2008 to current year.

INSTRUMENTATION.--Temperature probe and data logger.

REMARKS.--

WATER TEMPERATURE: Records excellent.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 25.5°C Aug. 10, 11, 1971; minimum, 0.0°C on many days most during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 21.3°C Aug. 26; minimum, 0.0°C Feb. 26.

**TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	15.0	13.6	14.4	9.1	8.4	8.7	6.5	6.0	6.3	4.3	3.4	3.9
2	14.9	13.9	14.5	9.7	9.1	9.4	6.4	6.1	6.3	4.2	3.8	4.0
3	14.6	14.0	14.3	9.6	8.9	9.2	6.1	5.4	5.7	3.8	3.2	3.4
4	14.2	13.1	13.8	9.5	8.7	9.1	6.1	5.4	5.7	3.9	3.1	3.5
5	13.1	11.9	12.6	9.6	8.8	9.3	6.1	5.6	5.8	4.5	3.9	4.2
6	13.0	11.3	12.2	9.7	9.3	9.5	6.5	5.6	6.0	4.3	3.8	4.1
7	13.1	12.1	12.6	9.7	8.2	9.0	6.4	5.9	6.2	4.2	3.5	3.9
8	13.5	12.3	12.8	8.2	7.4	7.7	6.8	6.2	6.5	4.5	4.0	4.3
9	13.2	12.5	12.9	7.4	7.0	7.2	7.0	6.5	6.8	4.0	3.2	3.5
10	12.5	11.5	12.3	7.9	7.2	7.5	6.8	6.4	6.5	3.4	2.6	3.1
11	11.5	10.4	10.8	7.5	6.5	7.1	7.3	6.4	6.6	3.3	2.3	2.7
12	10.4	9.1	9.9	7.5	6.4	7.1	7.5	7.2	7.4	5.1	3.3	4.1
13	10.4	9.3	9.9	7.2	6.2	6.6	7.6	7.2	7.4	6.0	5.1	5.6
14	10.3	9.2	9.8	8.1	7.2	7.7	7.6	6.2	6.6	6.3	6.0	6.2
15	10.2	9.4	9.9	8.7	8.1	8.4	6.4	6.1	6.3	6.7	6.1	6.3
16	10.0	9.0	9.6	8.6	7.8	8.2	6.1	5.3	5.6	6.9	6.4	6.7
17	9.7	8.6	9.2	7.8	7.3	7.4	5.3	4.8	5.0	6.9	6.5	6.8
18	9.1	8.0	8.6	7.7	5.9	6.5	5.3	4.9	5.1	6.5	6.3	6.3
19	9.0	8.0	8.6	6.3	5.9	6.1	5.3	4.8	5.1	6.3	5.5	5.9
20	9.2	8.2	8.8	6.4	5.7	6.0	5.4	5.0	5.2	5.8	4.9	5.3
21	9.2	8.2	8.8	5.8	4.4	5.3	5.7	5.1	5.4	6.4	5.7	6.0
22	9.9	9.0	9.4	4.6	3.3	4.1	6.1	5.5	5.7	6.3	5.4	5.9
23	9.9	9.3	9.6	3.3	2.9	3.0	5.5	4.9	5.2	6.2	5.0	5.6
24	9.6	8.5	9.2	3.4	2.4	2.9	6.0	5.2	5.6	6.5	5.8	6.1
25	8.5	7.9	8.2	4.1	3.4	3.8	6.1	5.6	5.9	6.0	5.4	5.7
26	7.9	7.2	7.5	4.7	4.0	4.3	5.9	4.8	5.4	6.1	4.9	5.5
27	7.7	7.0	7.4	5.7	4.7	5.2	5.1	4.7	4.9	5.8	5.1	5.5
28	8.4	7.6	8.0	5.4	5.0	5.2	6.0	5.1	5.7	5.9	4.8	5.4
29	8.5	8.0	8.2	5.5	4.9	5.2	6.0	4.6	5.1	6.6	5.9	6.2
30	8.2	7.7	7.9	6.0	5.0	5.3	4.9	4.0	4.7	6.5	5.8	6.2
31	8.5	8.1	8.3	---	---	---	4.0	2.9	3.4	6.6	5.9	6.2
Month	15.0	7.0	10.3	9.7	2.4	6.7	7.6	2.9	5.8	6.9	2.3	5.1

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	6.2	3.8	4.8	4.7	3.2	4.1	7.4	5.5	6.2	8.4	4.4	6.3
2	3.9	3.1	3.5	4.8	4.2	4.5	6.1	4.7	5.3	7.1	5.8	6.2
3	4.9	3.3	4.1	4.9	4.2	4.5	6.1	4.6	5.2	8.2	5.5	6.6
4	6.0	4.7	5.2	5.2	4.4	4.8	6.2	5.2	5.6	9.0	4.8	6.8
5	6.5	6.0	6.3	5.8	4.4	5.0	5.9	5.1	5.5	7.4	5.9	6.6
6	7.0	6.3	6.6	5.8	4.5	5.1	5.4	4.2	4.7	6.9	6.1	6.5
7	6.6	5.3	6.1	5.5	4.5	5.0	5.9	4.2	4.9	6.7	5.7	6.2
8	5.3	4.4	4.9	5.6	4.3	4.9	6.3	4.0	5.0	6.5	5.3	5.9
9	4.4	3.5	3.9	5.6	5.0	5.3	6.5	4.6	5.4	7.0	5.4	6.1
10	4.0	3.0	3.5	5.3	4.9	5.1	7.1	5.3	6.1	9.4	5.9	7.4
11	5.1	3.5	4.3	6.2	5.0	5.4	6.5	5.3	5.8	7.7	6.3	7.0
12	5.7	4.5	5.1	5.6	4.7	5.2	7.1	4.5	5.7	8.1	5.6	6.7
13	6.4	5.5	5.9	5.9	5.2	5.5	6.0	5.2	5.6	9.1	5.2	7.0
14	6.0	4.4	5.6	6.4	5.2	5.7	5.4	4.2	4.8	7.7	6.4	6.8
15	4.4	2.1	2.8	5.9	4.8	5.5	5.9	5.0	5.5	7.0	6.2	6.5
16	4.0	3.1	3.6	4.8	4.1	4.5	6.0	5.4	5.7	7.7	5.6	6.6
17	4.5	3.6	4.0	5.6	4.6	5.0	6.6	5.3	5.8	7.3	5.5	6.4
18	4.3	3.7	4.0	5.4	5.0	5.1	6.4	4.8	5.5	8.7	6.2	7.3
19	4.3	3.5	3.9	6.0	4.7	5.2	6.9	4.5	5.6	9.5	5.8	7.5
20	4.2	3.6	3.9	5.9	4.6	5.2	6.6	4.6	5.6	9.7	5.8	7.7
21	4.5	3.4	4.0	6.0	5.2	5.5	6.5	5.0	5.7	8.5	7.0	7.4
22	4.2	3.3	3.6	6.4	4.7	5.4	7.7	4.4	5.9	7.5	6.6	7.1
23	3.3	1.7	2.6	6.2	4.4	5.2	8.3	4.6	6.4	8.0	6.5	7.1
24	2.0	1.4	1.8	5.5	5.0	5.3	7.1	5.9	6.4	10.0	6.6	8.1
25	1.9	0.8	1.3	5.5	4.6	5.0	6.1	5.1	5.7	8.9	6.8	7.6
26	1.3	0.0	0.6	5.6	4.7	5.1	6.1	4.7	5.3	6.8	5.9	6.4
27	2.0	1.0	1.4	5.3	4.8	5.0	7.1	5.3	6.0	7.0	6.1	6.5
28	3.2	2.0	2.5	6.3	4.5	5.4	6.0	4.4	5.2	7.0	5.6	6.3
29	---	---	---	5.8	5.1	5.5	6.7	3.8	5.1	6.5	5.9	6.2
30	---	---	---	6.1	5.5	5.8	7.4	5.1	6.0	8.3	6.2	7.1
31	---	---	---	6.4	5.7	6.0	---	---	---	8.3	6.5	7.3
Month	7.0	0.0	3.9	6.4	3.2	5.2	8.3	3.8	5.6	10.0	4.4	6.8

14185900 QUARTZVILLE CREEK NEAR CASCADIA, OR—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	7.2	6.4	6.8	14.7	10.3	12.5	20.6	16.5	18.5	16.7	13.6	15.2
2	7.9	6.3	7.0	16.1	12.2	14.2	20.5	16.7	18.5	17.0	14.1	15.6
3	10.0	6.2	7.9	16.3	12.8	14.7	20.2	16.2	18.2	17.1	14.1	15.6
4	10.5	7.2	8.8	16.7	13.0	14.9	20.2	16.4	18.3	17.4	14.5	15.9
5	9.3	7.9	8.7	17.1	13.2	15.2	20.4	17.1	18.6	17.9	15.0	16.4
6	9.5	7.7	8.4	18.0	14.2	16.0	20.2	16.3	18.3	18.0	15.2	16.6
7	8.7	7.7	8.2	16.5	14.8	15.6	20.2	16.4	18.3	18.3	15.7	17.0
8	8.3	7.3	7.8	16.9	13.4	15.0	19.2	16.6	18.0	19.1	16.7	17.9
9	11.3	6.8	8.7	17.0	13.4	15.1	19.9	16.7	18.1	19.4	16.8	18.1
10	11.3	8.6	9.8	17.4	13.6	15.4	19.1	15.6	17.4	19.3	16.8	18.1
11	10.6	8.7	9.6	16.6	14.3	15.4	18.8	15.1	17.0	19.1	16.7	17.9
12	9.8	8.0	9.0	15.3	14.1	14.6	19.1	15.4	17.4	18.8	16.7	17.8
13	10.6	8.6	9.5	15.7	13.2	14.3	18.7	15.9	17.3	18.5	16.5	17.4
14	12.1	8.6	10.2	16.6	13.5	14.9	19.3	16.5	17.8	17.6	16.7	17.0
15	10.9	9.0	9.8	17.4	13.7	15.5	19.4	15.9	17.6	16.7	15.6	16.2
16	11.9	7.8	9.8	16.0	15.0	15.4	18.7	15.0	17.0	16.0	14.4	15.2
17	12.5	8.4	10.3	15.0	13.7	14.2	18.8	15.4	17.2	15.3	13.8	14.7
18	11.3	9.4	9.8	15.1	13.1	14.0	18.2	14.9	16.7	16.5	14.3	15.3
19	11.4	8.9	9.9	14.5	13.4	14.0	18.6	15.1	17.0	17.5	15.4	16.2
20	13.8	9.7	11.4	15.1	12.6	13.9	19.3	15.7	17.6	17.0	14.8	15.8
21	13.4	10.2	11.9	15.5	13.8	14.5	20.1	16.8	18.5	16.5	14.2	15.3
22	14.2	10.7	12.4	17.7	13.9	15.5	19.9	17.2	18.6	16.2	14.1	15.1
23	12.8	10.9	11.4	18.4	13.8	16.0	20.0	16.8	18.5	16.2	13.9	15.0
24	11.4	9.8	10.7	19.6	15.3	17.2	20.4	17.4	18.9	16.5	14.4	15.4
25	13.5	9.3	11.3	17.8	16.2	16.9	21.2	18.1	19.6	15.9	14.6	15.1
26	13.2	10.1	11.8	18.1	14.5	16.2	21.3	18.6	19.9	15.0	13.7	14.4
27	14.0	11.3	12.7	18.5	14.5	16.3	21.1	18.3	19.8	14.9	14.2	14.5
28	13.6	12.2	12.9	19.1	14.5	16.6	20.6	18.2	19.4	14.3	12.7	13.6
29	13.4	11.9	12.6	19.6	15.1	17.3	19.4	17.6	18.4	14.3	12.4	13.4
30	12.8	11.4	12.1	20.1	15.8	17.9	18.1	16.6	17.2	14.8	13.1	13.9
31	---	---	---	20.3	16.1	18.1	16.9	15.4	16.0	---	---	---
Month	14.2	6.2	10.0	20.3	10.3	15.4	21.3	14.9	18.1	19.4	12.4	15.9

	Max	Min	Mean
Year	21.3	0.0	9.1