

Water-Data Report 2010

12091200 LEACH CREEK NEAR FIRCREST, WA

Puget Sound Basin
Puget Sound Subbasin

LOCATION.--Lat 47°13'18", long 122°30'29" referenced to North American Datum of 1927, in SE ¼ NE ¼ sec.14, T.20 N., R.2 E., Pierce County, WA, Hydrologic Unit 17110019, on left bank 1.0 mi south of Fircrest, and 2 mi upstream from mouth.

DRAINAGE AREA.--4.73 mi², includes 0.68 mi² storm drainage from Flett Creek basin.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1957 to September 1985, October 1985 to April 1988 (seasonal records), October 1988 to current year.

REVISED RECORDS.--WSP 1932: Drainage area.

GAGE.--Water-stage recorder, metal weir control, and crest-stage gage. Prior to Oct. 19, 1979, at site 20 ft downstream at same datum. Datum of gage is 222.98 ft above NGVD of 1929 (levels by U.S. Geological Survey National Mapping Division).

REMARKS.--No estimated daily discharges. Records fair except flows below 3 ft³/s, which are poor. Since Oct. 1, 1961, flow may be regulated at dam upstream from station. Storage is not retained. Since early 1992 excess stormwater runoff pumped into Nalley Valley. Since June 30, 1993, low flows supplemented from well in basin. Drainage in basin influenced by urbanization. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--50 years (water years 1958-85, 1989-2010), 4.98 ft³/s, 14.32 in/yr, 3,610 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 417 ft³/s, Oct. 20, 2003, by computation of peak flow through culvert; maximum gage height, 7.52 ft, Oct. 20, from floodmark; minimum discharge, 0.1 ft³/s, Sept. 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 96 ft³/s, Nov. 7, gage height, 2.73 ft; minimum discharge, 1.7 ft³/s, May 7, 8, 14.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.8	3.7	3.7	11	5.1	4.5	3.6	2.4	3.5	2.1	2.0	2.7
2	2.8	3.5	3.4	7.9	5.2	7.3	18	2.7	21	12	2.1	2.5
3	3.0	3.4	3.1	3.9	8.4	5.0	19	9.1	2.8	2.6	2.0	2.3
4	2.7	3.3	3.1	37	6.8	4.4	4.3	2.1	6.1	2.2	2.0	2.3
5	2.6	10	3.1	13	6.4	4.2	4.5	2.3	2.2	2.1	2.0	2.2
6	2.6	39	3.1	4.6	4.7	4.1	3.5	1.9	6.5	2.1	2.0	2.8
7	2.6	48	3.0	3.8	6.4	4.3	4.5	1.9	2.4	2.1	2.8	3.5
8	2.7	6.6	2.9	24	4.4	5.3	4.0	1.8	2.1	2.1	2.3	21
9	2.7	11	2.9	10	4.2	4.1	2.6	1.9	16	2.1	2.2	2.7
10	2.8	14	2.8	4.5	6.8	4.8	2.4	6.1	4.6	2.1	2.1	2.4
11	2.8	6.4	2.8	30	7.8	8.7	2.3	2.1	3.4	2.1	2.1	2.3
12	2.8	3.8	2.9	18	18	27	2.3	2.0	2.5	2.1	2.1	2.3
13	4.5	7.3	2.9	11	9.7	3.8	2.7	1.9	2.3	2.0	2.1	2.4
14	13	3.7	12	13	16	3.2	2.2	1.9	2.3	2.0	2.0	2.4
15	4.2	14	13	24	5.6	3.0	2.4	1.9	2.2	2.0	2.0	3.4
16	23	21	15	7.8	9.9	3.7	2.2	1.9	3.2	2.0	2.1	8.9
17	25	30	5.2	8.9	4.8	3.0	4.7	1.9	2.3	2.0	2.1	15
18	8.9	8.4	3.7	5.9	4.4	2.2	2.5	4.6	2.3	2.0	2.0	34
19	3.5	26	14	5.0	4.2	2.2	2.3	6.9	4.7	2.1	2.1	25
20	3.3	13	5.8	4.7	4.0	2.2	3.7	7.5	6.3	2.0	2.1	3.4
21	4.8	6.7	18	4.6	3.9	2.2	8.5	3.6	2.6	2.1	2.1	2.5
22	3.5	18	4.2	4.4	3.8	2.4	2.5	2.5	2.2	2.1	2.0	2.3
23	19	6.0	3.4	4.3	7.0	2.2	2.7	2.2	2.1	2.0	2.1	6.6
24	3.9	11	3.2	12	13	2.2	3.8	2.0	2.2	2.0	2.1	2.2
25	3.4	4.4	3.1	6.4	6.0	6.0	2.3	2.7	2.1	2.0	2.1	1.9
26	24	49	3.0	4.6	13	4.7	2.9	8.3	2.1	2.0	2.3	4.7
27	4.0	8.3	2.9	4.4	8.1	2.4	13	2.6	2.1	2.0	2.2	2.6
28	3.7	4.4	2.9	4.3	5.1	12	3.1	9.6	2.1	2.1	2.1	2.2
29	6.4	3.8	3.9	4.1	---	32	2.4	2.7	2.1	2.1	2.1	2.1
30	4.3	4.4	3.7	7.2	---	21	2.3	2.4	2.1	2.1	2.3	2.1
31	9.0	---	13	5.5	---	4.3	---	11	---	2.0	5.1	---
Total	204.3	392.1	169.7	309.8	202.7	198.4	137.2	114.4	120.4	74.3	68.7	172.7
Mean	6.59	13.1	5.47	9.99	7.24	6.40	4.57	3.69	4.01	2.40	2.22	5.76
Max	25	49	18	37	18	32	19	11	21	12	5.1	34
Min	2.6	3.3	2.8	3.8	3.8	2.2	2.2	1.8	2.1	2.0	2.0	1.9
Ac-ft	405	778	337	614	402	394	272	227	239	147	136	343
Cfsm	1.39	2.76	1.16	2.11	1.53	1.35	0.97	0.78	0.85	0.51	0.47	1.22
In.	1.61	3.08	1.33	2.44	1.59	1.56	1.08	0.90	0.95	0.58	0.54	1.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4.49	7.72	7.93	8.43	6.62	5.74	4.47	3.36	3.14	2.45	2.59	3.11
Max	11.3	22.0	15.5	22.3	15.1	12.4	10.3	7.32	9.09	4.58	5.21	6.92
(WY)	(2004)	(2007)	(1997)	(2006)	(1999)	(1972)	(1991)	(2006)	(2006)	(2006)	(2004)	(1978)
Min	1.57	2.53	3.54	2.80	1.72	2.22	2.09	1.72	1.40	1.33	1.12	1.24
(WY)	(1973)	(1977)	(1977)	(1962)	(1993)	(1992)	(1977)	(1965)	(1969)	(1969)	(1969)	(1989)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1957 - 2010	
Annual total	2,080.3		2,164.7			
Annual mean	5.70		5.93		4.98	
Highest annual mean					8.15	1997
Lowest annual mean					2.61	1962
Highest daily mean	94	Jan 7	49	Nov 26	166	Jan 9, 1990
Lowest daily mean	2.1	Jun 3	1.8	May 8	0.50	Sep 1, 1972
Annual seven-day minimum	2.1	Jun 9	1.9	May 11	0.71	Aug 30, 1972
Annual runoff (ac-ft)	4,130		4,290		3,610	
Annual runoff (cfs)	1.20		1.25		1.05	
Annual runoff (inches)	16.36		17.02		14.32	
10 percent exceeds	13		13		11	
50 percent exceeds	2.9		3.4		2.8	
90 percent exceeds	2.2		2.1		1.6	

