

Water-Data Report 2011

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.--Records fair except for estimated daily discharges and 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.--51 years (water years 1958-85, 1989-2011), 5.00 ft³/s, 14.36 in/yr, 3,620 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, 2003 from floodmark; minimum discharge, 0.1 ft³/s, Sept. 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 103 ft³/s, Dec. 12 and Mar. 10, gage height, 2.83 ft; minimum discharge, 1.5 ft³/s, Aug. 2, gage
height, 0.16 ft.

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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	2.0	38	4.7	2.6	2.7	12	26	2.7	7.2	2.1	2.4	2.1
2	2.0	7.2	3.1	2.5	2.7	6.2	13	5.5	4.0	2.1	2.0	2.1
3	2.0	3.3	2.8	2.4	2.6	6.0	4.4	3.0	e2.3	2.1	2.0	2.1
4	2.1	2.7	2.6	2.4	3.1	5.6	11	2.8	2.2	2.0	2.0	2.1
5	2.1	4.7	2.5	3.8	2.7	4.2	6.7	3.4	2.2	2.0	2.1	2.2
6	2.2	17	2.3	6.2	3.5	3.0	9.9	4.6	2.3	2.0	2.0	2.1
7	2.1	13	7.9	12	4.9	2.8	4.1	4.6	3.5	2.1	2.0	2.1
8	2.1	3.1	23	2.9	3.4	5.3	3.4	2.9	2.4	2.1	2.0	2.2
9	25	11	39	2.6	2.6	30	3.1	2.7	2.2	2.0	2.1	2.1
10	35	3.8	11	2.4	2.6	38	3.5	2.6	2.4	2.1	2.2	2.1
11	3.5	3.6	35	2.4	2.6	6.0	5.9	17	2.2	2.1	2.2	2.1
12	2.6	2.6	61	23	14	15	3.0	3.7	2.1	2.5	2.1	2.9
13	2.3	2.7	19	40	6.7	12	4.1	2.9	2.4	2.2	2.1	2.7
14	2.5	4.8	24	15	18	12	7.0	11	2.1	2.2	2.1	2.2
15	2.1	8.0	7.3	18	5.9	9.1	3.7	46	2.6	2.2	2.1	2.1
16	2.2	4.2	5.4	31	4.2	11	3.9	4.1	2.2	8.3	2.1	2.1
17	2.2	9.8	3.5	16	3.7	4.4	2.9	2.9	2.1	2.9	2.1	3.4
18	2.2	11	6.6	4.9	2.8	14	3.2	2.6	4.6	2.3	2.1	5.9
19	2.2	3.4	5.5	3.8	2.6	4.7	3.0	2.6	2.6	2.2	2.1	2.1
20	2.5	3.0	4.9	3.4	2.6	3.4	2.7	2.4	2.1	2.1	2.1	2.1
21	2.4	3.1	3.0	8.4	2.6	3.4	2.9	2.8	2.1	2.1	2.0	2.1
22	4.2	4.0	2.8	3.3	2.6	2.9	2.6	2.4	2.1	2.1	4.1	2.1
23	6.1	3.4	6.1	3.1	5.1	2.8	3.0	2.4	2.1	2.1	2.5	2.2
24	39	2.1	6.8	7.4	5.0	3.1	4.1	2.4	2.5	2.1	2.1	2.2
25	31	2.1	8.4	3.5	3.5	4.8	16	4.6	2.7	2.7	2.1	4.2
26	14	4.0	6.0	3.0	2.8	6.5	3.6	2.5	2.5	2.1	2.0	13
27	3.9	7.2	14	2.9	8.0	6.8	17	3.8	2.2	2.1	2.0	3.3
28	4.1	4.7	4.1	3.1	28	4.3	6.0	2.4	2.1	2.0	2.0	3.7
29	2.8	2.3	5.7	7.9	---	6.6	3.2	2.3	2.1	2.0	2.1	2.1
30	7.6	13	3.0	3.3	---	13	2.9	2.2	2.1	1.9	2.1	2.1
31	10	---	2.7	2.8	---	16	---	2.9	---	1.9	2.1	---
Total	226.0	202.8	333.7	246.0	151.5	274.9	185.8	160.7	78.2	72.7	67.0	85.8
Mean	7.29	6.76	10.8	7.94	5.41	8.87	6.19	5.18	2.61	2.35	2.16	2.86
Max	39	38	61	40	28	38	26	46	7.2	8.3	4.1	13
Min	2.0	2.1	2.3	2.4	2.6	2.8	2.6	2.2	2.1	1.9	2.0	2.1
Ac-ft	448	402	662	488	301	545	369	319	155	144	133	170
Cfsm	1.54	1.43	2.28	1.68	1.14	1.87	1.31	1.10	0.55	0.50	0.46	0.60
In.	1.78	1.59	2.62	1.93	1.19	2.16	1.46	1.26	0.62	0.57	0.53	0.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	4.54	7.70	7.99	8.42	6.60	5.80	4.50	3.39	3.13	2.45	2.59	3.10
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)

12091200 LEACH CREEK NEAR FIRCREST, WA—Continued**SUMMARY STATISTICS**

	Calendar Year 2010	Water Year 2011	Water Years 1957 - 2011	
Annual total	2,161.1	2,085.1		
Annual mean	5.92	5.71	5.00	
Highest annual mean			8.15	1997
Lowest annual mean			2.61	1962
Highest daily mean	61 Dec 12	61 Dec 12	166 Jan 9, 1990	
Lowest daily mean	1.8 May 8	1.9 Jul 30	0.50 Sep 1, 1972	
Annual seven-day minimum	1.9 May 11	2.0 Aug 2	0.71 Aug 30, 1972	
Annual runoff (ac-ft)	4,290	4,140	3,620	
Annual runoff (cfsm)	1.25	1.21	1.06	
Annual runoff (inches)	17.00	16.40	14.36	
10 percent exceeds	13	13	11	
50 percent exceeds	3.1	2.9	2.8	
90 percent exceeds	2.0	2.1	1.6	

