

Water-Data Report 2006

**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 mi<sup>2</sup>, includes 0.68 mi<sup>2</sup> 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 for flows below 3 ft<sup>3</sup>/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.--46 years (water years 1958-85, 1989-2006), 4.89 ft<sup>3</sup>/s, 14.05 in/yr, 3,540 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 417 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Sept. 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 121 ft<sup>3</sup>/s, Jan 30, Jun 2, gage height, 3.02 ft; minimum discharge, 0.90 ft<sup>3</sup>/s, Aug. 5-8, 14-18, gage height, 0.19 ft.

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3.2	42	8.1	6.4	14	4.4	19	5.4	42	5.0	3.8	3.0
2	7.0	6.2	13	9.9	34	4.0	5.2	5.2	41	5.0	3.2	3.0
3	3.1	9.6	5.9	8.4	9.2	3.5	5.9	5.1	9.2	5.1	3.4	3.1
4	2.5	19	3.5	4.7	33	3.4	5.0	5.2	34	5.1	2.0	3.1
5	2.8	39	3.1	52	5.8	4.9	4.9	5.2	9.0	5.2	1.1	3.1
6	5.4	9.4	2.9	22	4.8	5.1	4.7	5.2	7.8	5.2	1.1	3.2
7	4.0	9.2	2.7	24	4.2	4.1	4.8	6.1	7.1	5.1	1.1	3.1
8	3.4	3.8	2.6	7.5	5.6	23	15	5.6	6.5	5.1	1.1	3.1
9	3.1	3.3	2.6	38	3.9	11	5.1	5.7	6.6	5.0	1.7	3.2
10	3.5	3.3	2.5	79	3.6	6.8	4.7	5.7	6.4	4.9	2.5	3.2
11	3.1	9.6	2.5	49	3.1	5.0	5.0	5.6	6.3	5.0	2.5	3.2
12	3.2	3.7	2.6	37	3.0	4.5	5.2	5.4	6.8	5.8	3.0	3.1
13	3.8	22	2.6	40	5.6	4.3	23	5.5	6.1	5.1	3.0	3.1
14	5.1	4.5	2.5	15	3.5	6.1	25	5.3	5.0	4.7	1.8	3.1
15	7.7	2.9	2.4	6.9	3.1	8.1	18	5.2	2.9	4.7	1.4	5.3
16	3.0	3.2	2.5	27	2.9	6.1	8.9	5.2	3.6	4.7	1.7	3.7
17	3.0	3.2	2.4	19	2.8	5.9	6.1	5.2	2.7	4.6	1.0	3.6
18	3.1	3.3	2.3	7.1	2.7	5.1	5.7	5.2	2.6	4.4	1.6	17
19	6.8	3.1	8.3	7.5	2.7	4.7	5.9	5.3	4.1	4.4	2.8	2.5
20	3.0	3.0	9.5	30	2.7	4.5	6.2	5.1	6.2	4.2	2.9	2.7
21	2.9	3.0	16	8.6	2.8	4.5	6.9	5.3	6.2	4.2	2.9	11
22	2.9	3.2	19	4.4	2.6	4.6	5.6	16	6.1	4.2	3.0	2.6
23	4.2	3.1	28	3.9	5.0	5.0	5.6	15	6.0	4.2	3.1	2.1
24	3.1	3.3	31	3.6	3.0	17	5.8	18	5.8	4.2	3.1	2.1
25	3.9	29	35	4.4	2.8	5.3	5.4	25	5.5	4.2	3.1	2.1
26	3.2	4.3	17	5.2	3.5	5.0	5.3	7.8	5.6	3.9	3.0	1.8
27	3.1	3.5	19	15	13	4.6	5.2	6.9	5.5	3.8	3.1	1.9
28	8.6	3.6	19	33	24	6.7	5.1	6.3	5.5	3.8	3.1	2.2
29	7.5	21	12	43	---	5.3	20	6.2	5.4	3.7	2.9	2.3
30	6.2	4.0	44	56	---	4.9	6.4	6.4	5.1	3.8	3.1	2.3
31	52	---	16	23	---	8.1	---	6.5	---	3.8	3.0	---
<b>Total</b>	177.4	281.3	340.5	690.5	206.9	195.5	254.6	226.8	272.6	142.1	76.1	108.8
<b>Mean</b>	5.72	9.38	11.0	22.3	7.39	6.31	8.49	7.32	9.09	4.58	2.45	3.63
<b>Max</b>	52	42	44	79	34	23	25	25	42	5.8	3.8	17
<b>Min</b>	2.5	2.9	2.3	3.6	2.6	3.4	4.7	5.1	2.6	3.7	1.0	1.8
<b>Ac-ft</b>	352	558	675	1,370	410	388	505	450	541	282	151	216
<b>Cfsm</b>	1.21	1.98	2.32	4.71	1.56	1.33	1.79	1.55	1.92	0.97	0.52	0.77
<b>In.</b>	1.40	2.21	2.68	5.43	1.63	1.54	2.00	1.78	2.14	1.12	0.60	0.86

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2006, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	4.39	7.31	7.83	8.28	6.66	5.62	4.46	3.31	3.13	2.46	2.57	2.99
<b>Max</b>	11.3	16.8	15.5	22.3	15.1	12.4	10.3	7.32	9.09	4.58	5.21	6.92
<b>(WY)</b>	(2004)	(1991)	(1997)	(2006)	(1999)	(1972)	(1991)	(2006)	(2006)	(2006)	(2004)	(1978)
<b>Min</b>	1.57	2.53	3.54	2.80	1.72	2.22	2.09	1.72	1.40	1.33	1.12	1.24
<b>(WY)</b>	(1973)	(1977)	(1977)	(1962)	(1993)	(1992)	(1977)	(1965)	(1969)	(1969)	(1969)	(1989)

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SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1957 - 2006	
<b>Annual total</b>	2,020.8		2,973.1			
<b>Annual mean</b>	5.54		8.15		4.89	
<b>Highest annual mean</b>					8.15	1997
<b>Lowest annual mean</b>					2.61	1962
<b>Highest daily mean</b>	52	Jan 17	79	Jan 10	166	Jan 9, 1990
<b>Lowest daily mean</b>	1.1	Jun 15	1.0	Aug 17	0.50	Sep 1, 1972
<b>Annual seven-day minimum</b>	1.9	Sep 17	1.5	Aug 4	0.71	Aug 30, 1972
<b>Annual runoff (ac-ft)</b>	4,010		5,900		3,540	
<b>Annual runoff (cfsm)</b>	1.17		1.72		1.03	
<b>Annual runoff (inches)</b>	15.89		23.38		14.05	
<b>10 percent exceeds</b>	11		19		11	
<b>50 percent exceeds</b>	3.0		5.0		2.8	
<b>90 percent exceeds</b>	2.4		2.6		1.6	

