

## CHAMBERS CREEK BASIN

12091300 LEACH CREEK NEAR STEILACOOM, WA

LOCATION.--Lat 47°11'54", long 122°31'17", in NW 1/4 NW 1/4 sec.26, T.20 N., R.2 E., Pierce County, Hydrologic Unit 17110019, on right bank 0.3 mi upstream from mouth, and 4.1 mi northeast of Steilacoom.

DRAINAGE AREA.--6.56 mi<sup>2</sup>, includes 0.68 mi<sup>2</sup> storm drainage from Flett Creek basin. Area used prior to July 1967, 5.88 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1957 to September 1985, October 1985 to September 1992 (seasonal records), October 1992 to current year.

REVISED RECORDS.--WSP 1932: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 140 ft above NGVD of 1929 (levels by U.S. Geological Survey National Mapping Division). Prior to June 27, 1973, water-stage recorder at site 150 ft upstream at different datum. Supplementary water-stage recorder at site 50 ft downstream at different datum used Feb. 4, 1963, to Feb. 27, 1964. June 27, 1973, to Mar. 14, 1975, nonrecording gage at site 350 ft upstream at different datum.

REMARKS.--Records fair except estimated daily discharges which are poor. Drainage basin influenced by urbanizing of area. Some pumping for community use upstream from gage. Flow can be regulated by manually operated gate in flood control dam. Beginning early 1992, during major runoff events, stormwater can be pumped from holding pond above flood control dam into Nalley Valley drainage. Low flows supplemented from well in basin beginning June 30, 1993. Chemical analyses October 1962 to September 1965, October 1975 to September 1976.

AVERAGE DISCHARGE.--38 years (water years 1958-85, 1993-2002), 10.9 ft<sup>3</sup>/s, 7,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded discharge, 378 ft<sup>3</sup>/s, Jan. 18, 1986, by culvert computation of peak flow through culvert, gage height, 5.21 ft, from outside high-water mark; minimum discharge, 2.0 ft<sup>3</sup>/s, July 3, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 224 ft<sup>3</sup>/s, Nov. 14, gage height, 4.33 ft from outside high water mark; minimum discharge, 6.5 ft<sup>3</sup>/s, Aug. 19, Sept 27-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	11	25	20	9.3	8.2	9.6	7.8	7.6	7.8	7.2	8.5
2	6.8	12	27	18	8.9	8.1	9.2	7.9	7.5	7.9	7.3	8.5
3	6.9	7.9	20	8.5	9.9	8.1	8.7	7.7	7.5	7.9	7.2	8.6
4	6.9	8.5	16	8.2	8.5	8.0	8.4	7.7	7.6	7.8	7.6	8.5
5	6.9	14	14	8.9	10	8.6	8.4	8.1	8.0	7.8	7.4	8.4
6	7.0	7.9	21	22	13	8.1	8.4	7.9	7.5	7.8	7.3	8.5
7	7.1	8.0	9.7	52	19	8.0	8.4	7.8	7.7	12	7.3	8.6
8	7.5	7.7	10	22	23	8.0	8.3	8.2	7.6	13	7.2	8.6
9	7.0	7.7	12	10	9.0	8.2	13	7.7	7.5	7.8	7.4	8.6
10	15	7.8	14	8.7	8.8	8.7	24	7.9	7.5	7.7	7.3	8.6
11	7.5	7.8	10	8.4	8.4	38	19	7.7	7.5	7.6	7.3	8.6
12	7.5	16	11	16	8.2	26	18	7.7	7.4	7.6	7.2	8.6
13	8.0	26	49	8.3	8.1	16	37	8.6	7.4	7.6	7.2	8.6
14	9.1	e119	23	7.9	8.0	9.5	40	9.3	7.3	7.6	7.2	8.5
15	7.8	e43	20	7.7	8.0	11	12	7.7	7.3	7.6	7.2	8.5
16	7.8	e16	51	7.6	10	18	11	7.7	7.3	7.7	7.2	9.7
17	7.8	e9.4	30	7.6	8.7	13	9.5	10	9.9	7.6	7.1	7.6
18	7.8	e8.0	14	8.9	9.2	14	8.6	8.8	7.8	7.5	7.1	7.4
19	8.0	e25	15	11	20	21	8.4	8.0	7.5	7.6	7.0	7.4
20	7.8	17	12	17	8.7	38	8.4	10	7.5	7.6	7.5	7.8
21	11	16	9.0	9.3	34	11	8.3	9.7	7.6	7.5	7.2	7.6
22	14	54	8.3	7.6	33	9.9	8.3	8.3	7.4	7.6	7.2	7.6
23	12	20	8.0	7.7	31	10	8.1	7.6	7.3	7.6	7.2	7.4
24	14	8.1	7.9	36	12	9.1	8.0	7.6	7.3	7.6	7.3	7.5
25	19	8.3	7.7	54	9.2	8.8	8.0	7.6	7.2	7.5	7.3	7.5
26	9.0	8.4	7.7	18	8.6	9.0	9.5	7.6	7.2	7.9	7.4	6.9
27	34	7.5	7.9	12	8.4	8.8	14	7.9	7.8	7.5	7.3	6.8
28	10	39	15	11	8.4	8.7	11	12	15	7.4	8.5	6.7
29	7.5	26	7.9	8.6	---	9.0	8.4	11	22	7.4	8.9	7.9
30	11	18	7.7	12	---	9.1	8.0	7.6	8.0	7.4	8.4	6.5
31	27	---	12	19	---	9.6	---	7.5	---	7.2	8.5	---
TOTAL	326.1	585.0	502.8	473.9	361.3	389.5	369.9	258.6	249.7	246.1	230.4	240.5
MEAN	10.5	19.5	16.2	15.3	12.9	12.6	12.3	8.34	8.32	7.94	7.43	8.02
MAX	34	119	51	54	34	38	40	12	22	13	8.9	9.7
MIN	6.8	7.5	7.7	7.6	8.0	8.0	8.0	7.5	7.2	7.2	7.0	6.5
AC-FT	647	1160	997	940	717	773	734	513	495	488	457	477

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2002, BY WATER YEAR (WY)

	9.85	14.3	15.0	16.3	14.9	12.6	10.9	9.03	8.16	7.10	7.15	7.89
MEAN	9.85	14.3	15.0	16.3	14.9	12.6	10.9	9.03	8.16	7.10	7.15	7.89
MAX	17.4	28.9	28.7	34.4	28.1	25.2	23.0	18.3	14.5	10.6	9.91	13.7
(WY)	1986	1991	1997	1990	1974	1972	1991	1984	1984	1983	2001	1997
MIN	5.96	7.30	8.64	6.87	6.66	5.12	6.36	5.78	5.23	5.04	4.40	5.19
(WY)	1988	1970	1977	1985	1973	1973	1973	1971	1969	1973	1969	1974

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1957 - 2002	
ANNUAL TOTAL	4015.6		4233.8			
ANNUAL MEAN	11.0		11.6		10.9	
HIGHEST ANNUAL MEAN					15.2	
LOWEST ANNUAL MEAN					7.50	
HIGHEST DAILY MEAN	119	Nov 14	119	Nov 14	250	Nov 24 1990
LOWEST DAILY MEAN	6.7	Sep 20	6.5	Sep 30	3.6	Aug 25 1971
ANNUAL SEVEN-DAY MINIMUM	7.0	May 21	7.0	Oct 1	3.8	Aug 24 1971
ANNUAL RUNOFF (AC-FT)	7960		8400		7870	
10 PERCENT EXCEEDS	19		20		18	
50 PERCENT EXCEEDS	7.8		8.3		8.2	
90 PERCENT EXCEEDS	7.2		7.3		5.7	

e Estimated