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^2, includes 0.68 mi^2 storm drainage from Flett Creek basin. Area used prior to July 1967, 5.88 mi^2.

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 sea level (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.--No estimated daily discharges. Records fair except those below 10 ft^3/s, 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. Low flows supplemented from well in basin beginning June 30, 1993. Storage is not retained and observed annual runoff closely represents natural runoff of basin. Chemical analyses October 1962 to September 1965, October 1975 to September 1976.

AVERAGE DISCHARGE.--36 years (water years 1958-85, 1993-2000), 10.9 ft^3/s, 7,870 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded discharge, 378 ft^3/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^3/s, July 3, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 108 ft^3/s, Dec. 15, gage height, 3.51 ft; maximum gage height, 3.57 ft, Dec. 15, from crest-stage gage; minimum discharge, 6.8 ft^3/s, Aug. 20-Sept. 4, Sept. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	8.5	16	19	61	14	8.7	8.3	7.7	7.5	7.7	7.2
2	8.7	8.2	22	8.3	20	26	8.6	11	7.7	7.3	7.7	8.2
3	8.7	8.4	8.4	14	9.2	16	8.6	12	7.7	11	7.7	7.4
4	8.7	8.9	7.8	26	8.5	47	8.4	11	7.7	7.8	7.7	7.3
5	8.7	8.8	13	8.8	8.3	13	8.4	17	9.0	7.6	7.7	7.3
6	8.7	22	17	8.4	9.4	10	11	8.2	11	7.7	7.7	7.4
7	13	8.5	8.2	8.3	17	9.4	8.2	7.7	11	7.5	7.8	7.3
8	27	13	11	14	41	9.3	8.2	12	7.8	7.5	7.7	9.1
9	8.2	30	18	23	12	13	8.2	27	8.8	7.3	7.9	7.3
10	7.7	45	9.8	18	8.8	8.7	8.1	14	8.4	7.4	7.9	9.5
11	8.0	39	9.2	13	8.6	9.1	8.0	8.9	18	7.4	7.6	7.5
12	9.2	71	38	15	8.4	9.0	7.9	8.0	32	7.4	7.5	7.3
13	8.0	51	14	17	8.3	13	14	7.7	8.3	7.3	7.5	7.3
14	7.7	14	34	25	26	23	18	7.7	7.8	7.3	7.5	7.3
15	7.7	9.5	53	13	13	9.3	16	7.7	7.7	7.5	7.4	7.3
16	7.7	12	32	17	8.6	22	8.3	7.7	7.7	7.7	7.3	7.3
17	7.7	28	23	15	8.2	11	8.2	7.7	7.7	7.6	7.3	7.3
18	7.7	12	20	8.7	8.2	26	8.0	9.9	7.7	7.6	11	7.3
19	7.7	13	9.4	8.7	8.1	14	7.7	17	7.7	7.6	7.7	7.4
20	7.7	26	8.7	18	8.1	9.4	7.7	7.7	7.6	7.6	7.2	7.6
21	7.7	38	8.7	11	12	8.9	8.0	11	7.7	7.6	7.2	7.5
22	7.7	17	8.3	9.2	25	26	10	10	7.6	7.7	7.2	7.3
23	7.8	10	8.2	8.6	15	10	9.3	7.7	7.6	7.7	7.2	7.3
24	8.1	31	8.2	8.4	8.7	8.9	8.0	7.7	8.0	7.7	7.2	7.4
25	11	54	8.2	11	15	8.7	16	7.7	7.7	7.7	7.2	7.5
26	8.3	36	8.1	8.3	15	8.7	8.2	9.6	7.7	7.7	7.2	7.4
27	14	16	7.8	8.2	23	12	8.2	8.6	7.6	7.7	7.1	7.4
28	20	16	7.7	8.2	9.5	9.4	8.3	8.3	7.5	7.7	7.0	7.5
29	11	11	7.7	8.0	48	8.7	7.8	8.0	7.5	7.7	7.2	7.8
30	11	26	7.7	8.1	---	8.6	7.8	7.7	7.5	7.7	7.3	16
31	28	---	9.9	11	---	8.5	---	7.8	---	7.7	7.3	---
TOTAL	321.7	691.8	463.0	398.2	471.9	430.6	281.8	312.3	275.4	238.2	234.6	234.7
MEAN	10.4	23.1	14.9	12.8	16.3	13.9	9.39	10.1	9.18	7.68	7.57	7.82
MAX	28	71	53	26	61	47	18	27	32	11	11	16
MIN	7.7	8.2	7.7	8.0	8.1	8.5	7.7	7.7	7.5	7.3	7.0	7.2
AC-FT	638	1370	918	790	936	854	559	619	546	472	465	466

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2000, BY WATER YEAR (WY)

MEAN	9.79	14.3	15.1	16.4	15.0	12.7	10.9	9.04	8.10	7.07	7.06	7.89
MAX	17.4	28.9	28.7	34.4	28.1	25.2	23.0	18.3	14.5	10.6	9.88	13.7
(WY)	1986	1991	1997	1990	1974	1972	1991	1984	1984	1983	1957	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

12091300 LEACH CREEK NEAR STEILACOOM, WA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1957 - 2000	
ANNUAL TOTAL	5100.5		4354.2			
ANNUAL MEAN	14.0		11.9		10.9	
HIGHEST ANNUAL MEAN					15.2	1997
LOWEST ANNUAL MEAN					7.50	1962
HIGHEST DAILY MEAN	71	Nov 12	71	Nov 12	250	Nov 24 1990
LOWEST DAILY MEAN	7.7	Oct 10	7.0	Aug 28	3.6	Aug 25 1971
ANNUAL SEVEN-DAY MINIMUM	7.7	Oct 14	7.2	Aug 22	3.8	Aug 24 1971
ANNUAL RUNOFF (AC-FT)	10120		8640		7870	
10 PERCENT EXCEEDS	28		22		20	
50 PERCENT EXCEEDS	9.6		8.3		8.3	
90 PERCENT EXCEEDS	8.2		7.4		5.8	