12115000 CEDAR RIVER NEAR CEDAR FALLS, WA

Puget Sound Basin
Lake Washington Subbasin

LOCATION.--Lat 47°22′13″, long 121°37′26″ referenced to North American Datum of 1927, in SE ¼ SW ¼ sec.23, T.22 N., R.9 E., King County, WA, Hydrologic Unit 17110012, Snoqualmie National Forest, on left bank 1.4 mi upstream from Chester Morse Lake, 8.3 mi southeast of town of Cedar Falls, and at mile 43.5.

DRAINAGE AREA.--40.7 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1286: 1946-48, 1950(P), 1951. WSP 1516: 1946(M), 1947-48(P), 1950-51(M), 1953-54(P), 1955(M). WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,560 ft above NGVD of 1929 from topographic map. Prior to Oct. 26, 1957, at site 80 ft downstream at same datum.

REMARKS.--Records good, except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--63 years (water years 1946-2008), 256 ft^3/s, 85.56 in/yr, 185,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,490 ft^3/s, Nov. 22, 1959, gage height, 11.34 ft, from high-water mark in well, from rating curve extended above 4,300 ft^3/s, on basis of slope-area measurements at gage heights 10.16 ft and 11.34 ft; maximum gage height, 11.4 ft, Feb. 11, 1951, backwater from Chester Morse Lake; minimum discharge, 19 ft^3/s, Oct. 23-26, 29-31, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 4	1545	1,310	5.83
May 17	unknown	* unknown	unknown
May 21	1815	(a)	*8.63

Minimum discharge, 39 ft^3/s, Sept. 30, gage height, 2.47 ft

(a) Backwater from Chester Morse Lake.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	70	111	100	107	e77	363	115	330	e650	e700	112	106
2	157	102	101	104	e76	320	110	307	e590	e620	100	96
3	318	96	717	98	e74	288	108	296	e580	e650	93	89
4	189	95	1,180	101	e72	273	110	306	e670	e550	88	83
5	137	89	849	98	e75	241	109	402	e600	e460	83	78
6	115	83	551	92	e70	215	115	501	e700	e450	80	75
7	158	78	409	89	82	197	133	523	e850	e400	78	71
8	189	75	329	88	95	196	143	488	e800	e350	75	66
9	156	74	278	85	178	200	132	426	e780	e340	75	64
10	135	111	240	104	265	215	131	405	e830	e300	80	62
11	124	94	210	192	320	300	138	469	e830	e280	71	59
12	111	142	190	205	275	300	169	456	e770	e270	67	57
13	100	185	175	226	258	276	289	428	e680	e270	64	55
14	91	156	166	211	221	267	345	755	e700	e260	62	53
15	85	153	159	204	196	255	318	e1,100	e710	e250	59	51
16	81	348	150	173	187	232	281	e1,300	e700	e240	57	49
17	78	393	142	154	174	224	257	e1,900	e700	e220	55	48
18	78	407	140	140	167	231	257	e1,400	e600	e200	56	47
19	124	336	162	132	166	221	239	e1,150	e550	e190	56	46
20	175	277	174	123	165	207	216	e1,070	e590	e180	86	49
21	254	232	149	112	167	191	198	e1,000	e680	e170	108	61
22	328	199	137	e105	166	173	182	e860	e660	e160	86	62
23	332	176	167	e100	165	180	177	e750	e600	e150	70	54
24	293	159	222	e96	166	190	180	e700	e550	e140	64	48
25	262	146	181	e92	171	171	177	e820	e540	e130	65	49
26	214	133	164	e88	175	164	175	e900	e550	e125	93	50
27	185	131	147	e85	184	152	201	e950	e540	124	119	46
28	163	121	141	e82	210	143	278	e920	e660	115	115	44
29	146	112	130	e87	262	136	391	e880	e750	109	133	42
30	132	105	124	e83	---	128	368	e800	e800	119	128	40
31	120	---	114	e80	---	121	---	e720	---	101	116	---
Total	5,100	4,919	8,098	3,736	4,859	6,770	6,042	23,312	20,210	8,623	2,594	1,800
Mean	165	164	261	121	168	218	201	752	674	278	83.7	60.0
Max	332	407	1,180	226	320	363	391	1,900	850	700	133	106
Min	70	74	100	80	70	121	108	296	540	101	55	40
Ac-ft	10,120	9,760	16,060	7,410	9,640	13,430	11,980	46,240	40,090	17,100	5,150	3,570
Cfsm	4.04	4.03	6.42	2.96	4.12	5.37	4.95	18.5	16.6	6.83	2.06	1.47
In.	4.66	4.50	7.40	3.41	4.44	6.19	5.52	21.31	18.47	7.88	2.37	1.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	147	334	339	308	287	245	348	451	351	146	58.0	65.6
Max	403	1,269	780	722	692	698	580	834	874	472	150	365
(WY)	(1948)	(1991)	(1976)	(1953)	(1996)	(1972)	(1989)	(1956)	(1974)	(1955)	(1964)	(1959)
Min	20.1	27.1	63.5	91.7	81.9	99.1	160	170	62.6	46.4	27.1	25.4
(WY)	(1988)	(1953)	(1953)	(1979)	(1969)	(1955)	(1967)	(1992)	(1992)	(2003)	(2003)	(1987)

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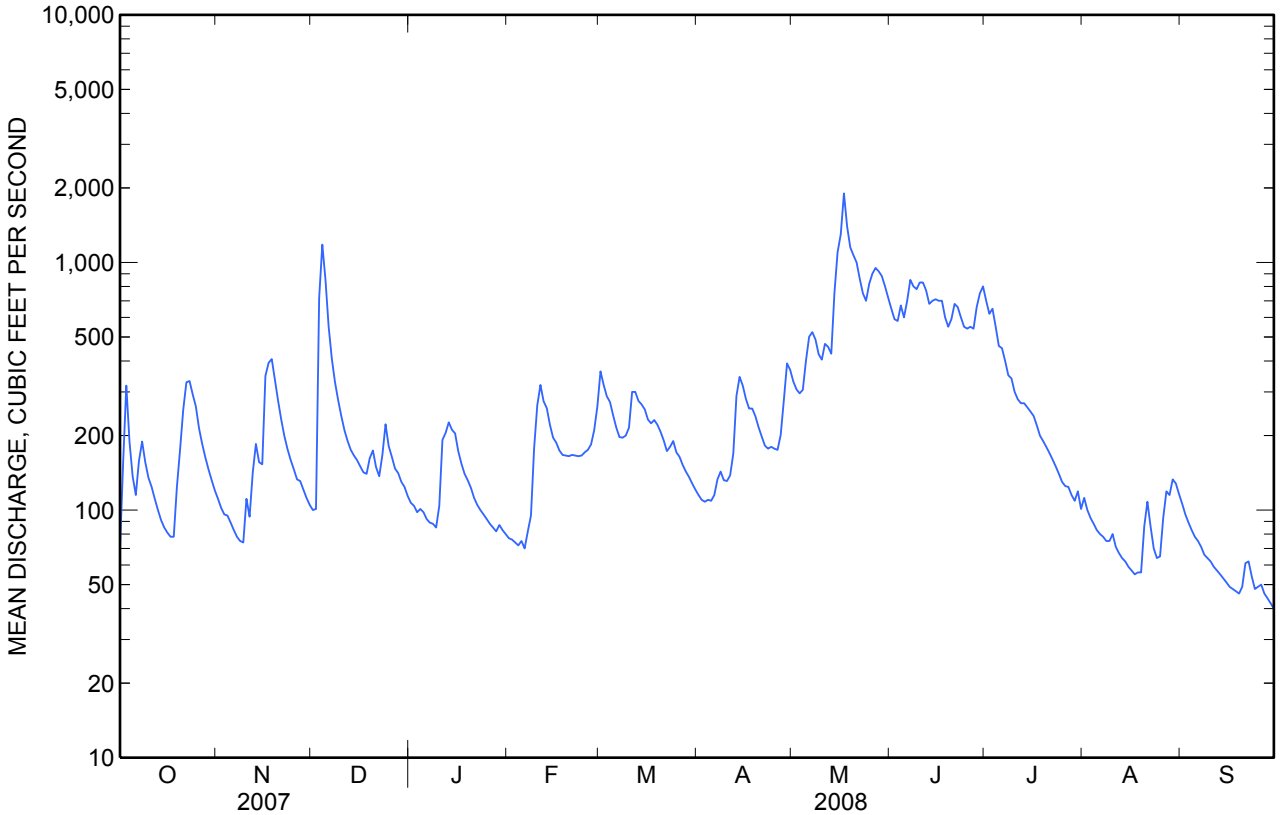
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1946 - 2008	
Annual total	86,090		96,063			
Annual mean	236		262		256	
Highest annual mean					373	1959
Lowest annual mean					157	2001
Highest daily mean	1,850	Mar 25	1,900	May 17	6,400	Nov 25, 1990
Lowest daily mean	25	Sep 26	40	Sep 30	19	Oct 23, 1987
Annual seven-day minimum	26	Sep 10	46	Sep 24	19	Oct 23, 1987
Annual runoff (ac-ft)	170,800		190,500		185,700	
Annual runoff (cfsm)	5.80		6.45		6.30	
Annual runoff (inches)	78.69		87.80		85.56	
10 percent exceeds	439		680		540	
50 percent exceeds	176		166		180	
90 percent exceeds	34		71		42	



12115000 CEDAR RIVER NEAR CEDAR FALLS, WA—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: May 1997 to current year.

INSTRUMENTATION.--Temperature recorder since May 1997, with 15-min. logging interval since May 2006.

REMARKS.--Records are excellent except for Nov. 28-Feb. 29 and June 10-Aug. 21, which are good; Mar. 1-Apr. 8, which are fair.

EXTREMES FOR PERIOD OF RECORD.--
WATER TEMPERATURE: Maximum, 16.5°C (rounded), Sept. 3, 4, 6, 14, 1998; minimum, 0.0°C, March 19, 20, 2002.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 12.0°C, Aug. 23; minimum 0.8°C, Dec. 3.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	9.3	8.9	9.0	6.4	5.2	5.8	3.2	1.3	2.7	2.4	2.3	2.3
2	9.0	8.0	8.7	5.7	4.7	5.2	2.1	0.9	1.5	2.5	1.9	2.2
3	8.0	7.5	7.8	6.3	5.3	5.8	2.9	0.8	1.8	2.9	2.5	2.7
4	8.0	7.3	7.6	7.0	6.0	6.5	3.9	2.9	3.5	3.2	2.9	3.0
5	7.9	7.3	7.5	6.6	5.5	6.0	4.1	3.8	4.0	3.2	3.1	3.1
6	7.9	7.4	7.6	6.7	5.8	6.1	4.1	3.7	3.9	3.2	3.0	3.1
7	8.1	7.6	7.8	6.7	6.1	6.4	3.9	3.5	3.8	3.1	2.8	3.0
8	8.2	7.3	7.7	7.4	6.4	6.8	3.5	2.7	3.1	3.0	2.4	2.7
9	8.7	7.6	8.1	7.3	6.6	6.9	3.1	2.5	2.8	2.9	2.6	2.7
10	8.3	7.9	8.1	6.9	5.9	6.6	3.1	2.8	3.0	2.8	2.2	2.4
11	8.4	7.4	7.9	6.4	5.8	6.0	2.9	2.8	2.8	2.5	2.3	2.4
12	8.5	7.7	8.0	6.1	5.5	5.8	3.3	2.8	3.1	2.8	2.5	2.7
13	8.6	7.4	7.9	5.8	4.7	5.3	3.3	3.0	3.2	2.9	2.8	2.8
14	8.9	7.4	8.0	5.0	4.5	4.7	3.6	3.2	3.4	3.0	2.2	2.8
15	8.4	7.9	8.1	5.6	4.8	5.2	3.4	2.9	3.1	2.5	2.1	2.3
16	8.1	7.5	7.9	5.7	5.3	5.5	3.5	3.2	3.3	2.7	2.3	2.5
17	7.8	7.2	7.5	5.8	5.3	5.5	3.4	3.0	3.2	2.8	2.4	2.6
18	7.5	7.1	7.3	5.4	4.7	5.0	3.2	3.0	3.1	2.8	2.5	2.6
19	7.4	6.4	7.1	5.1	4.7	4.8	3.3	3.2	3.2	2.7	2.4	2.5
20	6.7	6.3	6.4	5.0	4.3	4.6	3.3	2.8	3.1	2.9	2.4	2.6
21	6.7	6.2	6.4	4.3	3.7	4.1	3.4	2.9	3.2	2.6	1.7	2.0
22	7.1	6.4	6.7	3.8	3.4	3.5	3.2	2.6	3.0	1.9	1.6	1.7
23	7.7	6.5	7.0	3.6	2.8	3.2	3.3	3.0	3.1	1.7	1.4	1.5
24	7.2	6.6	6.9	3.7	2.7	3.2	3.1	2.8	3.0	1.6	1.4	1.5
25	6.8	5.7	6.4	3.9	3.1	3.6	3.2	2.5	3.0	1.8	1.4	1.6
26	6.0	5.1	5.5	3.1	2.0	2.7	2.6	2.3	2.5	1.7	1.4	1.5
27	6.3	5.4	5.8	3.3	2.0	2.8	2.8	2.5	2.7	2.2	1.6	1.9
28	6.4	5.3	5.8	3.8	3.3	3.5	2.5	2.3	2.4	2.2	1.9	2.1
29	6.3	5.7	6.0	4.0	3.3	3.6	2.8	2.4	2.6	2.0	1.4	1.6
30	6.2	5.2	5.7	3.8	3.2	3.5	2.5	2.2	2.3	1.7	1.5	1.6
31	5.9	4.8	5.4	---	---	---	2.6	2.2	2.4	1.8	1.6	1.7
Month	9.3	4.8	7.2	7.4	2.0	4.9	4.1	0.8	3.0	3.2	1.4	2.3

12115000 CEDAR RIVER NEAR CEDAR FALLS, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	1.8	1.5	1.7	3.7	2.5	3.2	4.1	2.8	3.3	5.3	3.1	4.0
2	2.2	1.8	2.0	3.3	2.5	2.9	4.4	2.9	3.6	5.1	3.4	4.2
3	2.4	2.0	2.2	3.2	2.9	3.1	4.4	3.0	3.7	4.4	3.6	4.0
4	2.5	2.1	2.3	3.3	2.6	2.9	4.0	3.4	3.6	6.9	3.8	5.0
5	2.4	2.0	2.1	3.4	2.7	3.0	4.2	3.2	3.6	6.2	3.8	4.8
6	2.3	1.9	2.1	3.7	2.8	3.2	4.1	3.5	3.8	4.4	3.9	4.1
7	2.2	1.9	2.1	3.7	3.3	3.5	3.7	3.1	3.3	4.2	3.8	4.0
8	2.2	1.8	2.0	3.9	3.4	3.6	4.4	3.1	3.5	4.4	3.6	3.9
9	1.9	1.6	1.7	4.2	3.3	3.7	5.2	3.0	3.9	5.8	3.6	4.5
10	1.6	1.3	1.5	4.3	3.8	4.0	4.8	3.3	3.9	4.7	3.9	4.3
11	1.6	1.3	1.4	4.1	3.5	3.8	6.0	3.3	4.4	4.2	3.8	4.0
12	2.2	1.6	2.0	3.9	3.2	3.5	6.6	3.4	4.7	4.6	3.6	4.0
13	2.4	2.1	2.3	3.7	3.5	3.6	5.5	3.4	4.4	4.3	3.8	4.0
14	2.6	2.1	2.4	3.7	3.4	3.6	4.4	2.9	3.7	4.1	3.9	4.0
15	2.9	2.4	2.6	3.8	3.4	3.6	3.3	2.6	3.0	5.7	3.4	4.3
16	3.1	2.7	2.9	3.7	3.4	3.5	4.7	2.7	3.6	4.9	3.5	4.0
17	3.0	2.6	2.8	3.7	3.1	3.4	5.0	3.4	4.0	5.5	3.5	4.3
18	3.2	2.6	2.9	3.7	3.5	3.6	3.8	2.6	3.3	5.6	3.6	4.3
19	3.2	2.7	3.0	4.0	3.3	3.6	4.2	2.4	3.2	4.9	3.8	4.4
20	3.4	3.0	3.2	4.0	3.3	3.6	4.3	2.8	3.4	4.6	4.4	4.5
21	3.4	2.8	3.1	3.8	3.2	3.5	4.6	2.8	3.5	4.5	4.4	4.5
22	3.5	3.1	3.3	4.0	3.1	3.5	4.9	2.9	3.8	4.5	4.5	4.5
23	3.6	3.1	3.3	3.7	3.4	3.6	5.2	3.4	4.2	4.6	4.5	4.5
24	3.8	3.2	3.4	3.7	3.0	3.3	4.5	3.6	4.0	4.9	4.6	4.6
25	3.7	3.4	3.5	3.5	2.8	3.2	5.9	3.4	4.4	5.5	4.8	5.0
26	3.8	3.1	3.4	3.5	2.8	3.2	6.6	3.0	4.6	5.9	4.2	5.0
27	3.8	3.3	3.5	3.3	2.8	3.0	6.3	4.0	4.9	6.0	4.2	4.8
28	4.0	3.5	3.7	3.0	2.6	2.8	5.1	4.1	4.5	5.9	4.2	4.8
29	4.0	3.5	3.7	2.8	2.4	2.6	4.9	3.0	4.0	5.8	4.2	4.7
30	---	---	---	3.3	2.1	2.6	5.0	2.7	3.7	6.6	4.1	5.0
31	---	---	---	3.7	2.8	3.2	---	---	---	5.9	4.0	4.9
Month	4.0	1.3	2.6	4.3	2.1	3.3	6.6	2.4	3.9	6.9	3.1	4.4

12115000 CEDAR RIVER NEAR CEDAR FALLS, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	4.8	4.4	4.6	7.2	6.4	6.8	8.5	8.1	8.3	10.4	8.4	9.3
2	5.3	4.2	4.7	7.3	6.3	6.8	8.4	8.2	8.3	10.2	8.1	9.1
3	5.0	4.3	4.6	7.2	6.7	6.9	9.2	8.0	8.5	10.8	8.2	9.3
4	4.6	4.1	4.4	7.0	6.6	6.8	9.6	8.6	9.1	10.6	8.4	9.4
5	4.6	4.1	4.4	6.8	6.5	6.7	10.0	8.9	9.4	10.2	8.4	9.2
6	4.4	4.1	4.2	6.8	6.6	6.7	10.0	9.3	9.7	10.8	8.9	9.6
7	4.4	4.1	4.3	7.6	6.5	7.0	10.3	9.4	9.8	11.0	8.8	9.7
8	5.8	4.2	4.9	7.9	6.8	7.3	10.6	9.8	10.2	11.0	8.7	9.7
9	5.0	4.2	4.6	8.3	7.2	7.7	10.3	9.8	10	11.0	8.7	9.6
10	4.3	3.4	4.0	8.1	7.4	7.7	9.9	9.7	9.8	10.8	8.4	9.4
11	4.4	4.2	4.3	8.1	7.0	7.5	10.2	9.4	9.8	10.8	8.5	9.5
12	5.6	4.2	4.7	8.5	7.3	7.9	10.3	9.5	9.9	10.9	8.7	9.6
13	6.0	4.5	5.0	8.7	7.6	8.2	10.5	9.7	10.1	10.7	8.5	9.5
14	6.8	4.8	5.6	8.8	7.9	8.4	10.6	9.8	10.2	10.8	8.3	9.5
15	7.0	4.5	5.6	9.0	8.0	8.5	10.9	10.1	10.5	10.8	8.5	9.5
16	7.2	4.4	5.7	9.1	8.1	8.6	11.1	10.4	10.7	10.6	8.5	9.5
17	5.4	4.7	5.0	9.1	8.2	8.7	10.9	10.7	10.8	10.7	8.9	9.7
18	6.6	4.7	5.4	8.8	8.3	8.5	10.8	10.6	10.7	10.2	9.3	9.6
19	7.1	4.4	5.7	8.9	8.2	8.5	10.7	10.4	10.6	10.2	9.2	9.5
20	8.1	4.8	6.2	9.1	8.1	8.6	10.8	10.3	10.5	9.3	9.1	9.2
21	5.8	5.0	5.4	9.1	8.3	8.7	10.8	10.0	10.5	9.5	9.0	9.2
22	6.3	4.9	5.3	8.9	8.1	8.4	11.6	9.5	10.4	9.7	8.7	9.1
23	6.7	4.6	5.5	8.1	7.8	7.9	12.0	9.5	10.5	9.5	7.3	8.6
24	7.6	4.7	6.0	8.3	7.6	7.9	11.2	9.9	10.4	9.7	8.4	8.9
25	7.8	4.7	6.2	8.3	7.8	8.1	10.9	9.8	10.2	9.4	8.8	9.0
26	7.5	5.2	6.2	8.2	7.7	8.0	11.1	9.7	10.2	9.8	8.5	9.0
27	8.4	5.0	6.5	8.1	7.8	7.9	10.1	9.7	9.9	9.9	8.6	9.1
28	8.9	5.5	7.0	8.4	7.7	8.1	10.0	9.5	9.8	9.9	7.6	8.8
29	8.7	5.6	6.9	8.3	7.9	8.0	10.5	9.7	10.1	10.3	8.9	9.4
30	7.8	6.0	6.8	8.2	8.0	8.1	10.4	9.1	9.8	10.3	9.0	9.4
31	---	---	---	8.5	7.6	8.0	9.8	8.8	9.1	---	---	---
Month	8.9	3.4	5.3	9.1	6.3	7.8	12.0	8.0	9.9	11.0	7.3	9.3

	Max	Min	Mean
Year	12.0	0.8	5.3