Water-Data Report 2008

12116500 CEDAR RIVER AT CEDAR FALLS, WA

Puget Sound Basin
Lake Washington Subbasin

LOCATION.--Lat 47°25′02″, long 121°47′27″ referenced to North American Datum of 1927, in SW ¼ SE ¼ sec.4, T.22 N., R.8 E., King County, WA, Hydrologic Unit 17110012, Snoqualmie National Forest, on right bank 0.5 mi downstream from Seattle municipal powerplant at town of Cedar Falls, 4.0 mi downstream from Chester Morse Lake, and at mile 33.2.

DRAINAGE AREA.--84.2 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1914 to current year.

REVISED RECORDS.--WSP 722: 1930. WSP 1286: 1934(M), drainage area. WDR-WA-96-1: 1991(M).

GAGE.--Water-stage recorder. Datum of gage is 902.1 ft above NGVD of 1929.

REMARKS.--Records good. All diversions are returned to river upstream from station. Flow regulated by Chester Morse Lake (station 12115900) and Cedar Lake (station 12116060). U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--94 years (water years 1915-2008), 318 ft^3/s, 230,300 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,120 ft^3/s, Nov. 24, 1990, gage height, 14.00 ft, from flood mark, from rating curve extended above 5,000 ft^3/s; no flow part or all of each day Nov. 25, 1917, Aug. 18, 1923, Sept. 30 to Oct. 5, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft^3/s, May 21, gage height, 8.80 ft; minimum discharge, 82 ft^3/s, Oct. 20, Aug. 4, 6, 8, 11-14, 24, Sept. 8-10, 18, 19, gage height, 5.46 ft.

12116500 CEDAR RIVER AT CEDAR FALLS, WA—Continued

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	147	241	380	590	144	415	145	151	1,410	702	88	91
2	133	248	241	556	180	409	144	151	1,290	766	89	88
3	116	248	196	432	178	425	146	140	980	819	90	91
4	105	249	240	248	179	653	151	140	822	801	89	88
5	127	256	580	130	199	691	153	165	807	800	89	118
6	184	273	816	124	231	718	152	181	795	804	90	91
7	210	276	851	124	233	716	154	181	800	784	88	90
8	210	276	775	124	239	714	155	182	893	586	88	89
9	210	278	660	124	142	624	150	179	877	459	88	88
10	202	279	547	131	127	486	149	178	1,000	362	88	89
11	177	279	500	145	198	462	152	182	1,070	247	88	89
12	147	279	372	141	394	298	152	198	1,040	172	87	88
13	147	276	267	139	499	329	159	204	1,030	150	87	88
14	e147	267	206	140	570	570	160	222	1,020	103	89	86
15	e147	235	208	138	686	584	156	345	1,080	101	93	101
16	e147	207	208	135	684	583	153	753	1,080	100	92	97
17	151	197	209	131	677	612	146	1,080	1,010	99	92	93
18	153	173	211	132	671	657	146	1,440	830	99	92	86
19	161	152	219	135	667	611	144	1,490	739	97	91	89
20	88	151	228	130	639	471	137	1,640	786	96	92	95
21	87	163	227	131	446	377	133	1,890	760	95	92	96
22	87	175	227	130	396	276	133	2,090	766	93	91	98
23	88	179	235	131	397	274	127	2,020	746	92	89	100
24	88	197	312	131	393	272	131	2,010	724	93	88	99
25	115	197	402	129	392	224	131	2,000	716	92	89	99
26	145	194	413	129	392	224	132	1,960	e660	92	102	99
27	150	198	479	128	392	154	132	1,820	e600	91	102	99
28	172	229	477	127	398	147	144	1,490	578	91	98	103
29	188	310	474	129	399	143	159	1,420	583	89	96	123
30	211	385	469	127	---	143	159	1,400	641	88	93	124
31	225	---	511	131	---	145	---	1,400	---	88	94	---
Total	4,665	7,067	12,140	5,372	11,142	13,407	4,385	28,702	26,133	9,151	2,824	2,875
Mean	150	236	392	173	384	432	146	926	871	295	91.1	95.8
Max	225	385	851	590	686	718	160	2,090	1,410	819	102	124
Min	87	151	196	124	127	143	127	140	578	88	87	86
Ac-ft	9,250	14,020	24,080	10,660	22,100	26,590	8,700	56,930	51,830	18,150	5,600	5,700

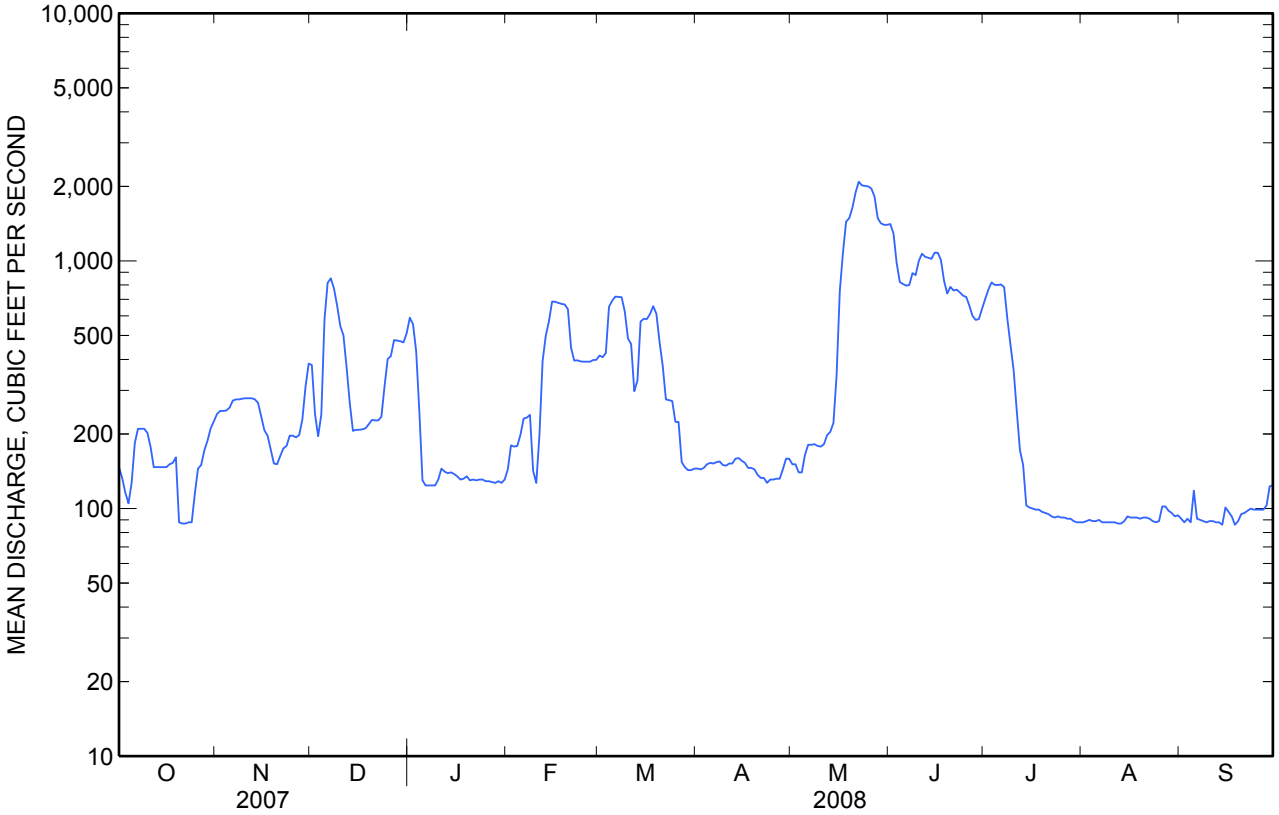
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	167	360	518	492	421	358	353	385	379	184	109	102
Max	547	1,780	2,197	1,393	1,256	1,324	767	926	1,419	814	424	324
(WY)	(1960)	(1991)	(1918)	(1918)	(1982)	(1972)	(2002)	(2008)	(1917)	(1917)	(1954)	(1959)
Min	34.7	24.9	47.7	133	95.0	89.0	46.5	59.5	46.3	24.5	20.2	28.3
(WY)	(1953)	(1953)	(1953)	(1952)	(1988)	(1941)	(2005)	(1992)	(1963)	(1926)	(2001)	(1957)

12116500 CEDAR RIVER AT CEDAR FALLS, WA—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1914 - 2008	
Annual total	98,321		127,863			
Annual mean	269		349		318	
Highest annual mean					567	1918
Lowest annual mean					93.0	1941
Highest daily mean	1,420	Mar 27	2,090	May 22	7,440	Nov 25, 1990
Lowest daily mean	35	Aug 27	86	Sep 14	0.00	Sep 30, 1987
Annual seven-day minimum	35	Aug 26	88	Aug 7	0.04	Sep 29, 1987
Annual runoff (ac-ft)	195,000		253,600		230,300	
10 percent exceeds	776		800		696	
50 percent exceeds	147		179		222	
90 percent exceeds	39		90		60	



12116500 CEDAR RIVER AT CEDAR FALLS, WA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1999 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: March 1999 to current year.

INSTRUMENTATION.--Temperature recorder with 15-minute logging interval (since 2006).

REMARKS.--Records are excellent.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 21.6°C, Aug. 4, 2003; minimum, 0.5°C, Jan. 7, 2004.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 17.5°C, Aug. 16, 23; minimum, 0.9°C, Feb. 4.

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	13.7	12.9	13.3	8.8	8.4	8.6	4.7	3.9	4.5	2.9	2.7	2.8
2	13.4	12.5	13.1	8.4	8.2	8.3	4.1	3.5	3.8	2.7	2.5	2.6
3	12.5	12.0	12.2	8.6	8.3	8.5	5.7	4.1	4.9	2.8	2.6	2.6
4	12.4	11.9	12.1	8.6	8.4	8.5	6.1	4.7	5.6	3.3	2.6	3.0
5	12.3	11.9	12.1	8.5	8.2	8.3	5.3	4.7	5.0	3.4	3.1	3.3
6	12.4	12.2	12.3	8.5	8.2	8.4	5.3	5.1	5.2	3.2	2.9	3.1
7	12.4	12.1	12.3	8.7	8.5	8.6	5.2	5.1	5.2	3.2	2.7	3.0
8	12.1	11.8	11.9	8.9	8.6	8.7	5.2	4.9	5.0	2.9	2.5	2.7
9	12.3	11.9	12.1	8.8	8.7	8.8	5.0	4.8	4.9	3.0	2.3	2.8
10	12.2	11.9	12.0	8.8	8.4	8.7	4.8	4.5	4.7	3.1	2.4	2.8
11	12.0	11.7	11.8	8.6	8.4	8.5	4.6	4.4	4.5	3.4	3.1	3.3
12	12.0	11.7	11.8	8.5	8.3	8.3	4.5	4.4	4.4	3.4	3.1	3.3
13	11.9	11.5	11.7	8.3	7.8	8.1	4.4	4.4	4.4	3.3	2.9	3.1
14	---	---	---	7.8	7.3	7.5	4.6	4.4	4.4	3.4	1.6	2.9
15	---	---	---	7.5	7.3	7.4	4.5	4.4	4.4	2.9	2.5	2.7
16	---	---	---	7.6	7.4	7.5	4.4	4.3	4.4	2.8	2.6	2.7
17	11.7	11.2	11.3	7.6	7.4	7.5	4.3	4.1	4.2	2.8	2.6	2.7
18	11.2	10.8	11.0	7.4	7.2	7.2	4.2	4.1	4.1	2.7	2.4	2.6
19	11.2	10.5	11.0	7.2	7.1	7.2	4.2	4.2	4.2	2.8	2.3	2.6
20	10.5	10.1	10.2	7.2	6.9	7.0	4.3	3.6	4.1	2.8	2.4	2.6
21	10.2	10.0	10.1	6.9	6.5	6.7	4.0	3.7	3.9	2.4	2.1	2.2
22	10.6	10.0	10.3	6.5	6.1	6.2	3.8	3.7	3.8	2.2	2.0	2.1
23	11.0	10.2	10.5	6.1	5.6	5.9	4.1	3.8	3.9	2.2	1.8	2.0
24	10.7	9.9	10.4	5.6	5.4	5.5	4.0	3.6	3.8	2.1	1.7	1.9
25	10.0	9.6	9.8	5.6	5.2	5.5	3.6	3.3	3.5	1.7	1.5	1.6
26	9.7	9.3	9.5	5.2	4.9	5.1	3.6	3.2	3.4	1.8	1.5	1.6
27	9.6	9.1	9.4	5.1	4.4	4.9	3.4	3.1	3.3	1.8	1.6	1.7
28	9.5	9.1	9.3	5.0	4.8	5.0	3.2	3.0	3.1	1.7	1.4	1.5
29	9.3	9.1	9.2	4.9	4.7	4.9	3.2	3.0	3.1	1.6	1.3	1.5
30	9.2	8.8	8.9	4.8	4.7	4.8	3.1	3.0	3.0	1.7	1.4	1.6
31	8.9	8.6	8.7	---	---	---	3.1	2.8	3.0	1.7	1.3	1.6
Month	---	---	---	8.9	4.4	7.2	6.1	2.8	4.2	3.4	1.3	2.5

12116500 CEDAR RIVER AT 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	1.7	1.3	1.5	3.5	3.2	3.4	4.1	3.3	3.6	7.3	6.3	6.7
2	1.4	1.3	1.3	3.6	3.3	3.4	4.2	3.4	3.7	7.7	6.4	7.1
3	1.4	1.2	1.3	3.4	3.2	3.3	4.4	3.5	3.9	7.4	7.0	7.1
4	1.3	0.9	1.2	3.2	3.0	3.1	4.3	3.9	4.1	8.4	7.0	7.5
5	1.4	1.2	1.2	3.1	2.8	3.0	4.8	4.2	4.5	8.3	7.1	7.5
6	1.3	1.2	1.2	3.3	2.9	3.1	5.0	4.6	4.7	7.4	7.2	7.3
7	1.4	1.2	1.3	3.4	3.2	3.3	4.9	4.6	4.7	7.4	7.1	7.2
8	1.6	1.2	1.3	3.5	3.3	3.4	5.1	4.6	4.8	7.7	6.9	7.2
9	3.1	1.6	2.6	3.6	3.3	3.5	5.2	4.5	4.8	8.1	7.0	7.4
10	3.1	2.7	2.9	3.9	3.6	3.7	5.2	4.8	5.0	7.8	7.3	7.6
11	3.0	1.7	2.4	3.9	3.8	3.9	5.9	4.9	5.3	7.6	7.1	7.3
12	2.0	1.6	1.7	4.0	3.6	3.8	6.8	5.5	6.1	7.7	7.1	7.4
13	1.8	1.6	1.6	3.9	3.7	3.8	6.7	6.0	6.3	7.6	7.3	7.5
14	1.8	1.6	1.7	3.8	3.6	3.7	6.5	5.5	6.0	7.7	7.2	7.5
15	1.9	1.7	1.8	3.7	3.6	3.7	6.0	5.2	5.7	8.7	7.1	7.6
16	2.0	1.8	1.8	3.7	3.5	3.6	6.2	5.5	5.8	9.4	7.7	8.4
17	2.0	1.8	1.9	3.7	3.4	3.6	6.1	5.7	5.9	9.2	8.6	8.9
18	2.1	1.8	2.0	3.8	3.6	3.7	5.8	5.4	5.5	9.6	9.0	9.3
19	2.3	1.9	2.1	3.9	3.6	3.7	5.8	5.1	5.4	9.8	9.4	9.7
20	2.5	2.1	2.3	4.0	3.7	3.9	5.9	5.0	5.3	9.9	9.6	9.7
21	2.7	2.2	2.4	4.0	3.8	3.9	6.0	4.3	5.3	9.6	8.3	8.9
22	2.6	2.4	2.5	4.3	3.6	4.0	6.2	5.2	5.6	8.3	7.7	8.0
23	2.6	2.4	2.5	4.2	3.9	4.0	6.1	5.6	5.9	7.8	7.6	7.7
24	2.8	2.5	2.6	4.2	3.7	3.9	6.2	5.7	5.9	8.3	7.7	7.9
25	2.9	2.6	2.7	4.0	3.6	3.8	6.5	5.6	5.9	8.7	8.2	8.4
26	3.0	2.7	2.8	3.9	3.4	3.7	7.1	5.5	6.3	9.3	8.7	8.8
27	3.0	2.8	2.9	4.1	3.6	3.8	7.4	6.5	6.9	9.5	9.2	9.4
28	3.3	3.0	3.1	3.7	3.3	3.5	7.2	6.7	6.9	9.8	9.5	9.6
29	3.5	3.1	3.3	3.7	3.1	3.4	7.2	6.0	6.6	9.7	9.1	9.3
30	---	---	---	3.8	2.7	3.3	7.0	5.9	6.4	9.1	8.8	8.9
31	---	---	---	4.0	2.8	3.5	---	---	---	9.4	9.0	9.2
Month	3.5	0.9	2.1	4.3	2.7	3.6	7.4	3.3	5.4	9.9	6.3	8.1

12116500 CEDAR RIVER AT 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	9.5	9.1	9.3	12.5	11.9	12.2	14.3	13.8	13.9	15.3	14.7	14.9
2	9.2	9.0	9.1	13.0	12.2	12.5	14.1	13.7	13.9	15.7	14.5	14.9
3	9.3	8.9	9.2	13.3	12.9	13.0	14.9	13.8	14.2	15.5	14.5	14.9
4	9.2	8.9	9.1	13.2	12.9	13.0	15.8	13.9	14.6	15.8	14.6	15.0
5	9.2	9.0	9.1	13.4	13.0	13.2	16.1	14.2	14.9	15.8	14.6	15.1
6	9.2	9.1	9.1	13.4	12.8	13.2	16.0	14.5	15.0	16.1	15.0	15.3
7	9.1	9.0	9.0	13.1	12.6	12.9	16.1	14.6	15.2	15.9	14.9	15.3
8	9.2	8.8	9.0	13.2	12.8	13.0	15.8	14.8	15.1	16.1	14.9	15.4
9	8.9	8.1	8.6	13.5	12.8	13.1	16.0	14.7	15.0	16.0	14.8	15.3
10	8.8	8.4	8.6	13.2	12.5	12.9	15.2	14.7	14.9	15.9	14.8	15.2
11	8.6	8.2	8.4	13.3	12.4	12.7	16.5	14.9	15.4	16.0	14.9	15.4
12	8.4	8.2	8.3	13.6	12.2	12.7	16.3	14.9	15.5	16.2	15.1	15.5
13	8.5	8.3	8.4	13.6	12.3	12.7	16.8	15.2	15.8	16.1	15.0	15.5
14	8.7	8.4	8.5	13.5	12.0	12.6	17.0	15.4	16.0	16.2	15.1	15.5
15	8.6	8.4	8.5	13.9	12.2	12.8	17.2	15.7	16.3	16.4	15.1	15.6
16	9.1	8.5	8.8	13.9	12.1	12.8	17.5	15.9	16.5	16.4	15.4	15.8
17	9.3	8.9	9.1	13.8	12.2	12.8	16.9	16.2	16.5	16.4	15.5	15.9
18	9.5	9.2	9.3	13.2	12.3	12.6	16.4	16.1	16.2	15.8	15.6	15.7
19	9.7	9.3	9.4	13.7	12.4	12.8	16.9	16.0	16.3	15.8	15.6	15.7
20	9.8	9.3	9.6	14.3	12.3	13.0	16.5	15.9	16.2	15.7	15.4	15.5
21	9.9	9.7	9.8	14.4	12.5	13.2	16.5	15.7	16.0	15.6	15.3	15.4
22	10.2	9.8	10.0	12.9	12.6	12.8	17.0	15.8	16.3	15.6	14.9	15.2
23	10.4	10.0	10.2	13.0	12.5	12.7	17.5	16.0	16.6	15.2	14.5	14.7
24	10.6	10.2	10.4	14.5	12.7	13.3	17.2	16.5	16.8	14.9	14.3	14.6
25	10.8	10.3	10.5	14.3	12.9	13.4	17.2	16.1	16.5	14.8	14.4	14.6
26	---	---	---	14.2	12.9	13.4	16.3	15.0	15.7	14.9	14.2	14.6
27	---	---	---	13.8	13.3	13.6	15.8	14.9	15.4	15.1	14.3	14.6
28	11.4	10.6	11.0	14.9	13.2	13.8	15.8	15.3	15.6	14.8	13.7	14.3
29	11.7	11.0	11.4	14.0	13.3	13.6	16.7	15.8	16.1	15.2	14.4	14.7
30	12.0	11.3	11.8	13.8	13.4	13.6	15.9	15.3	15.6	15.2	14.4	14.7
31	---	---	---	14.7	13.2	13.8	15.3	14.9	15.1	---	---	---
Month	---	---	---	14.9	11.9	13.0	17.5	13.7	15.6	16.4	13.7	15.2