Water-Data Report 2008

12119000 CEDAR RIVER AT RENTON, WA

Puget Sound Basin
Lake Washington Subbasin

LOCATION.--Lat 47°28′58″, long 122°12′08″ referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.17, T.23 N., R.5 E., King County, WA, Hydrologic Unit 17110012, on left bank 125 ft downstream from bridge on Mill Avenue at Renton, and at mile 1.6.

DRAINAGE AREA.--184 mi^2, includes 3.67 mi^2 in vicinity of Youngs Lake in Big Soos Creek basin, excludes 1.9 mi^2 from upper Rock Creek, Cedar River basin, normally diverted into Issaquah Creek.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1901 to July 1903 (fragmentary), September 1906 to December 1907 (monthly discharge only), August 1945 to current year.

REVISED RECORDS.--WSP 1316: 1901-02. WSP 1932: Drainage area. WDR WA-75-1: 1972-74.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 15.20 ft above NGVD of 1929. Prior to Jan. 1, 1908, nonrecording gages within 1 mi of present site, at datum 10.67 ft above NGVD of 1929. Aug. 7, 1945, to Aug. 15, 1947, water-stage recorder at site 700 ft upstream at datum 20.13 ft above NGVD of 1929, and Aug. 16, 1947, to Dec. 7, 1950, at datum 19.13 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow partly regulated by Chester Morse Lake and Masonry Dam for operation of powerplant at Cedar Falls 32.1 mi upstream from gage. An average daily discharge of about 124 ft^3/s was diverted during the year at Landsburg by the City of Seattle for municipal use, computed from data furnished by Seattle Water Department. U.S. Geological Survey satellite telemeter at station. Chemical analyses July 1959 to August 1964, December 1965 to September 1971.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--63 years (water years 1946-2008), 663 ft^3/s, 480,400 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft^3/s, Nov. 24, 1990, gage height, 17.13 ft, from outside high-water mark; minimum daily discharge, 30 ft^3/s, July 1, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,980 ft^3/s, May 22, gage height, 10.92 ft; minimum discharge, 182 ft^3/s, Sept. 18, gage height, 7.46 ft.

12119000 CEDAR RIVER AT RENTON, WA—Continued

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	300	433	404	945	493	977	574	478	1,870	945	238	266
2	331	438	500	973	498	917	553	454	1,840	994	259	256
3	573	434	1,820	863	492	858	538	437	1,590	1,080	281	251
4	423	434	1,780	706	480	1,030	535	425	1,330	1,040	282	246
5	349	425	1,550	553	493	1,090	559	423	1,270	1,020	265	238
6	353	429	1,680	498	552	1,110	554	445	1,280	1,050	256	240
7	390	430	1,540	479	684	1,100	593	450	1,370	983	246	235
8	434	438	1,440	505	701	1,090	614	448	1,400	839	243	231
9	426	421	1,240	501	1,210	1,060	596	473	1,550	701	236	227
10	428	435	1,010	608	1,220	846	563	488	1,550	600	243	226
11	423	426	901	885	1,170	881	563	574	1,840	526	235	217
12	427	435	756	830	1,210	714	552	571	1,810	429	224	211
13	428	423	624	774	1,280	781	576	589	1,760	403	219	200
14	428	417	539	716	1,120	1,110	576	642	1,620	355	218	195
15	430	432	502	731	1,260	1,170	549	731	1,530	325	222	195
16	422	473	485	649	1,240	1,160	543	1,040	1,530	311	224	200
17	431	481	485	606	1,210	1,180	522	1,280	1,550	302	220	194
18	430	464	510	567	1,170	1,170	509	1,790	1,470	284	225	188
19	442	448	603	558	1,150	1,130	499	1,810	1,300	278	340	191
20	533	440	672	571	1,140	976	484	2,120	1,330	276	442	224
21	466	420	632	530	957	835	468	2,330	1,180	268	468	264
22	472	415	634	507	836	711	457	2,840	1,110	249	429	263
23	472	411	708	492	805	718	449	2,730	1,100	242	352	278
24	465	406	939	465	789	737	436	2,700	970	240	316	281
25	479	404	929	442	779	660	426	2,720	924	234	333	288
26	439	410	890	447	771	654	415	2,700	908	231	325	268
27	426	415	909	454	767	618	411	2,710	880	230	343	256
28	427	406	916	437	800	576	432	2,260	815	225	311	250
29	430	408	891	440	813	595	487	1,970	804	225	289	249
30	429	414	861	444	---	618	493	1,950	842	230	274	252
31	438	---	836	465	---	588	---	1,890	---	220	268	---
Total	13,344	12,865	28,186	18,641	26,090	27,660	15,526	42,468	40,323	15,335	8,826	7,080
Mean	430	429	909	601	900	892	518	1,370	1,344	495	285	236
Max	573	481	1,820	973	1,280	1,180	614	2,840	1,870	1,080	468	288
Min	300	404	404	437	480	576	411	423	804	220	218	188
Ac-ft	26,470	25,520	55,910	36,970	51,750	54,860	30,800	84,240	79,980	30,420	17,510	14,040
Cfsm	2.34	2.33	4.94	3.27	4.89	4.85	2.81	7.45	7.30	2.69	1.55	1.28
In.	2.70	2.60	5.70	3.77	5.27	5.59	3.14	8.59	8.15	3.10	1.78	1.43

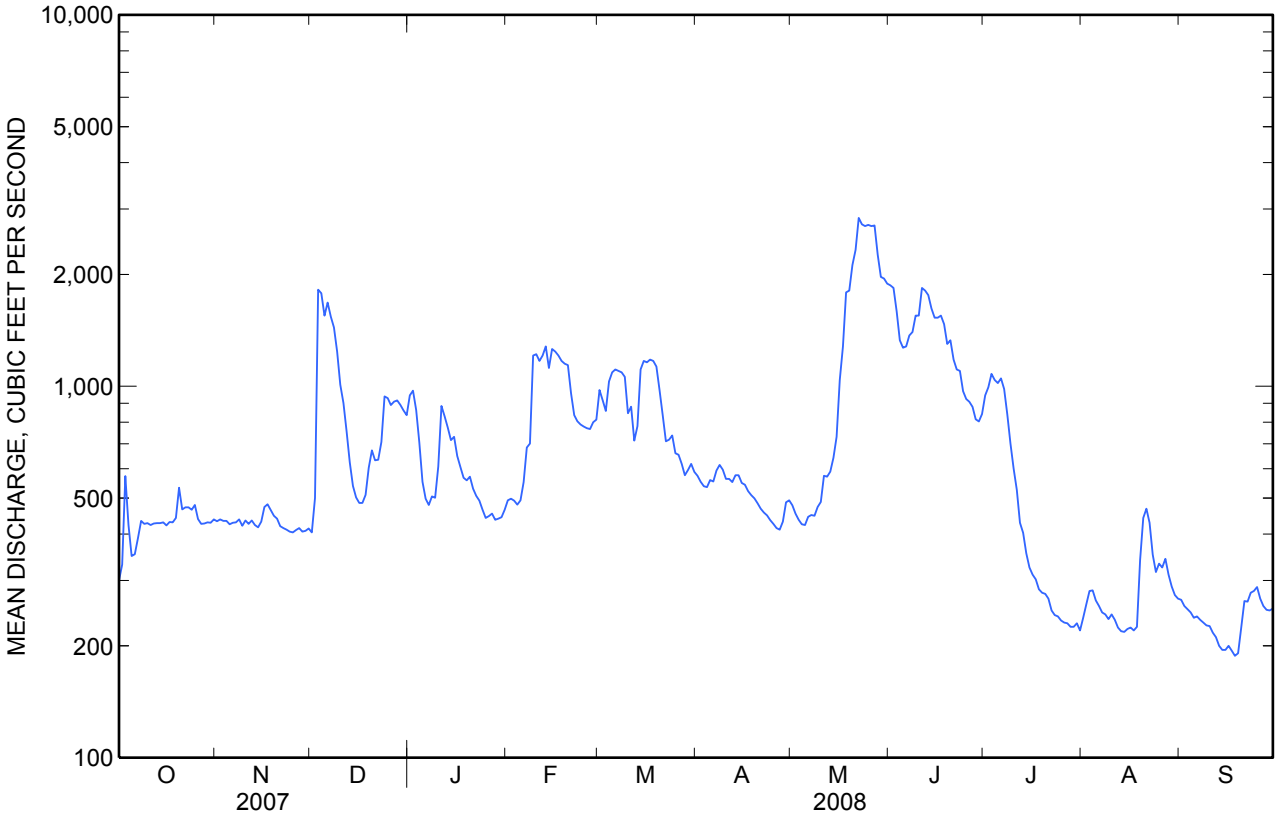
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	360	756	1,050	1,095	1,036	871	770	701	623	299	192	228
Max	864	2,673	2,845	2,385	2,374	2,577	1,290	1,370	1,757	785	582	601
(WY)	(1960)	(1991)	(1976)	(2006)	(1982)	(1972)	(2002)	(2008)	(1964)	(1955)	(1954)	(1964)
Min	76.4	61.2	91.2	283	299	374	335	274	168	44.9	41.1	52.9
(WY)	(1953)	(1953)	(1953)	(1988)	(1988)	(2005)	(1973)	(1992)	(1958)	(1958)	(1958)	(1958)

12119000 CEDAR RIVER AT RENTON, WA—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1946 - 2008	
Annual total	240,839		256,344			
Annual mean	660		700		663	
Highest annual mean					1,016	1972
Lowest annual mean					373	2001
Highest daily mean	2,920	Mar 27	2,840	May 22	8,900	Nov 25, 1990
Lowest daily mean	130	Sep 2	188	Sep 18	30	Jul 1, 1962
Annual seven-day minimum	132	Aug 28	195	Sep 13	41	Jul 9, 1958
Annual runoff (ac-ft)	477,700		508,500		480,400	
Annual runoff (cfsm)	3.59		3.81		3.60	
Annual runoff (inches)	48.69		51.83		48.96	
10 percent exceeds	1,600		1,330		1,300	
50 percent exceeds	438		502		501	
90 percent exceeds	151		243		152	



12119000 CEDAR RIVER AT RENTON, WA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-71, March 1978 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: August 1965 to February 1967, March 1978 to current year.

INSTRUMENTATION.--Temperature recorder for period of daily record, with a 15-minute logging interval since 1996.

REMARKS.--Records are excellent.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 24.0°C (rounded), Aug. 8, 1978; minimum, 0.0°C (rounded), Dec. 30, 1978, to Jan. 1, 1979, Jan. 29, 1980.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum 19.0 °C, Aug. 16; minimum 3.5°C, Jan. 22-23.

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	13.0	11.4	12.1	9.6	8.4	8.9	6.2	5.1	5.8	5.6	5.1	5.3
2	12.6	11.8	12.2	8.5	7.0	7.8	5.8	4.5	5.0	5.8	5.3	5.5
3	12.0	10.9	11.5	10.1	8.1	9.1	7.1	5.8	6.7	6.2	5.5	5.9
4	11.8	10.5	11.1	10.4	9.8	10.1	8.1	7.1	7.6	7.0	6.0	6.5
5	11.1	10.2	10.6	9.8	8.6	9.2	7.7	6.9	7.2	6.9	6.5	6.8
6	11.5	10.1	10.8	9.4	7.9	8.7	6.9	6.4	6.7	6.5	5.9	6.1
7	12.3	11.3	11.7	10.1	9.1	9.6	6.8	6.3	6.6	6.4	5.8	6.1
8	12.0	10.9	11.5	10.8	9.9	10.2	6.3	5.3	5.8	6.5	5.7	6.1
9	12.5	11.0	11.7	10.7	9.8	10.2	6.0	5.1	5.6	6.7	6.0	6.3
10	12.5	11.7	12.0	10.4	9.0	10	6.2	5.9	6.1	7.2	6.3	6.8
11	12.0	10.5	11.3	9.7	8.5	9.1	6.2	5.6	5.9	7.1	6.7	6.9
12	12.3	11.0	11.5	9.7	8.7	9.1	6.7	5.9	6.3	7.4	6.6	7.0
13	11.7	9.9	10.9	9.5	8.1	8.8	6.9	6.3	6.6	7.2	6.2	6.8
14	11.8	9.8	10.8	8.6	7.0	7.8	7.6	6.8	7.2	6.4	5.6	6.0
15	11.5	11.0	11.3	9.7	8.5	9.1	7.5	7.0	7.3	6.1	5.1	5.4
16	11.4	10.4	10.9	9.9	9.3	9.6	7.3	6.8	7.1	6.0	5.0	5.5
17	10.9	9.7	10.2	9.6	8.8	9.3	7.2	6.5	7.0	6.3	5.7	5.9
18	10.9	10.0	10.4	8.8	8.3	8.5	7.2	6.4	6.8	6.7	5.6	6.0
19	11.1	10.3	10.8	8.5	8.1	8.3	7.3	6.9	7.1	6.4	5.5	5.9
20	10.3	9.6	10	8.3	7.4	8.0	7.1	6.1	6.9	6.5	5.3	6.2
21	10.7	9.9	10.3	7.5	6.4	7.1	6.5	5.6	6.1	5.3	4.1	4.6
22	12.0	10.2	10.9	6.5	5.5	6.0	6.7	6.1	6.3	4.9	3.5	4.2
23	12.0	10.2	11.1	6.4	5.1	5.7	7.0	6.0	6.5	5.0	3.5	4.2
24	11.3	10.4	10.8	7.1	5.6	6.3	6.8	6.0	6.5	5.5	4.1	4.7
25	10.4	9.0	9.8	7.1	6.0	6.7	6.1	5.6	5.8	5.1	3.6	4.3
26	9.3	7.8	8.6	6.7	5.6	6.1	6.0	5.6	5.8	5.1	3.6	4.3
27	9.3	7.6	8.4	7.5	6.6	7.0	5.8	5.5	5.6	5.8	4.9	5.3
28	9.7	7.6	8.6	7.4	6.8	7.0	6.1	5.4	5.8	5.7	4.9	5.3
29	9.6	8.6	9.1	7.2	6.4	6.9	6.0	5.7	5.8	6.1	5.3	5.6
30	9.4	8.3	8.8	6.5	6.0	6.3	5.9	5.6	5.7	6.1	5.3	5.7
31	8.7	7.3	8.0	---	---	---	5.8	5.1	5.5	6.5	5.9	6.1
Month	13.0	7.3	10.6	10.8	5.1	8.2	8.1	4.5	6.3	7.4	3.5	5.7

12119000 CEDAR RIVER AT RENTON, 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	6.3	5.6	6.0	7.4	6.5	7.0	9.2	6.3	7.5	10.5	8.1	9.2
2	6.2	5.5	5.9	7.5	6.0	6.7	9.4	5.9	7.6	10.8	8.0	9.4
3	5.8	5.0	5.4	6.9	6.2	6.6	9.4	6.1	7.8	10.0	9.2	9.5
4	6.0	5.1	5.6	7.1	5.6	6.4	8.4	7.5	7.8	13.1	9.0	10.8
5	6.4	5.8	6.0	7.0	4.7	5.7	8.7	7.0	7.8	12.8	10.0	11.5
6	6.0	5.6	5.8	6.8	4.8	5.8	9.6	7.6	8.4	11.4	9.8	10.3
7	6.2	5.6	5.9	6.7	5.7	6.2	8.8	7.4	8.0	9.8	9.1	9.4
8	6.0	5.9	5.9	7.3	6.2	6.6	8.6	7.0	7.7	10.5	8.4	9.3
9	6.4	5.8	6.1	7.6	5.6	6.5	9.3	6.5	7.9	11.8	8.5	9.9
10	7.0	6.2	6.7	8.1	7.0	7.5	9.6	7.8	8.5	10.5	9.6	10.0
11	7.1	6.4	6.8	7.9	6.7	7.4	10.9	7.2	9.0	10.2	9.0	9.6
12	7.0	6.3	6.7	7.9	5.7	6.8	12.4	7.9	9.9	10.2	8.6	9.4
13	6.5	5.3	5.8	7.4	6.9	7.1	10.9	9.1	10	9.5	9.0	9.3
14	6.1	4.6	5.3	7.1	6.6	6.9	9.9	8.5	9.1	10.8	9.3	9.9
15	5.6	4.7	5.2	7.0	6.3	6.6	8.5	7.2	7.9	13.1	9.3	10.9
16	6.3	5.2	5.6	6.9	6.1	6.5	9.9	7.5	8.4	12.6	9.5	11.1
17	5.9	4.5	5.1	7.5	6.1	6.7	9.9	8.2	8.9	13.2	9.5	11.3
18	5.9	4.2	5.0	7.5	6.3	6.7	9.4	7.8	8.5	12.2	9.6	11.0
19	6.1	4.4	5.2	7.8	5.7	6.6	8.0	7.0	7.5	11.8	10.0	10.9
20	6.7	5.5	6.0	7.8	6.2	6.9	9.0	6.8	7.7	11.3	10.2	10.7
21	6.7	4.8	5.7	8.2	6.1	7.0	9.6	6.7	7.9	10.2	9.4	9.8
22	7.7	5.7	6.5	8.7	5.7	7.1	10.1	7.2	8.5	9.4	8.8	9.1
23	7.4	5.8	6.5	7.9	6.9	7.5	10.4	8.2	9.2	9.5	8.6	9.0
24	7.8	6.0	6.7	8.3	5.9	6.9	9.6	8.6	9.1	11.1	8.6	9.7
25	7.7	6.4	7.0	7.5	5.6	6.6	10.9	7.6	9.1	10.3	9.2	9.7
26	7.6	5.9	6.7	7.8	6.6	7.2	12.0	7.2	9.6	10.7	9.4	10.0
27	7.8	6.3	7.0	8.0	5.8	6.7	11.6	9.2	10.5	11.4	9.7	10.5
28	8.3	7.1	7.5	6.7	6.1	6.4	12.2	10.1	10.9	10.8	10.1	10.5
29	8.4	6.6	7.4	7.2	5.9	6.4	11.9	8.9	10.2	10.6	10.0	10.3
30	---	---	---	7.6	5.4	6.5	10.2	8.2	9.2	11.3	9.6	10.3
31	---	---	---	9.0	6.5	7.4	---	---	---	11.0	9.2	10.1
Month	8.4	4.2	6.1	9.0	4.7	6.7	12.4	5.9	8.7	13.2	8.0	10.1

12119000 CEDAR RIVER AT RENTON, 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	10.4	9.9	10.1	15.1	12.3	13.7	15.1	13.2	14.0	13.1	11.5	12.3
2	10.7	9.6	10.2	15.2	12.3	13.8	14.5	12.6	13.5	14.3	11.0	12.6
3	11.2	9.8	10.3	14.3	12.9	13.6	15.7	11.5	13.5	14.7	11.6	13.2
4	10.5	9.5	10	14.0	12.8	13.3	17.0	12.4	14.7	15.1	12.1	13.6
5	10.3	9.6	9.9	13.9	12.8	13.3	17.7	13.5	15.7	15.3	12.0	13.7
6	10.0	9.5	9.7	14.2	12.8	13.4	17.2	14.1	15.7	15.8	13.0	14.4
7	10.0	9.4	9.7	15.7	12.0	13.7	17.4	13.9	15.7	15.7	12.8	14.3
8	11.0	9.4	10.1	16.2	12.3	14.2	16.4	14.0	15.3	15.6	12.5	14.2
9	10.3	9.3	9.7	16.7	12.9	14.7	15.1	13.3	14.3	15.3	12.4	14.0
10	9.7	8.9	9.3	15.1	12.8	13.9	15.2	12.8	14.0	14.8	11.9	13.5
11	9.4	9.1	9.2	16.2	11.9	13.9	16.9	13.1	14.7	15.0	11.7	13.4
12	10.8	9.0	9.7	17.0	12.6	14.7	16.8	13.3	15.1	15.2	12.2	13.8
13	10.8	9.3	9.9	17.0	13.2	15.1	18.0	14.2	16.1	15.2	12.3	13.8
14	10.9	9.4	10.0	17.2	13.4	15.3	18.4	14.2	16.4	15.2	12.0	13.7
15	12.1	9.2	10.6	17.6	13.2	15.3	18.6	14.9	16.8	15.1	12.2	13.8
16	12.6	9.1	10.8	17.3	13.3	15.4	19.0	15.0	17.1	15.3	12.3	13.9
17	11.3	9.7	10.3	15.7	13.2	14.4	18.3	15.8	17.0	15.2	12.7	14.1
18	11.2	9.8	10.4	14.6	12.8	13.7	16.8	14.4	15.2	14.4	13.1	13.5
19	12.4	9.6	11.0	16.5	12.3	14.1	15.1	13.5	14.3	13.1	12.6	12.9
20	13.6	10.0	11.7	17.2	12.5	14.9	14.7	13.7	14.2	12.8	12.2	12.4
21	12.4	10.7	11.6	17.4	13.2	15.4	14.7	13.0	13.7	13.4	11.9	12.6
22	12.5	10.8	11.4	15.9	13.2	14.1	15.4	12.3	13.7	13.4	11.8	12.6
23	12.6	10.2	11.3	13.5	12.3	12.9	16.2	12.9	14.5	12.4	10.3	11.5
24	13.9	10.3	12.0	16.7	11.3	13.9	15.4	13.6	14.4	12.4	11.0	11.8
25	14.0	10.5	12.3	16.8	13.2	15.1	15.2	13.4	14.1	12.8	11.8	12.3
26	13.3	10.9	12.1	15.7	12.9	14.5	15.2	12.7	13.9	13.5	11.9	12.7
27	15.0	10.8	12.7	15.7	13.6	14.6	14.8	13.0	13.9	14.1	12.1	13.0
28	15.9	11.6	13.7	17.1	13.0	15.0	14.1	13.0	13.6	13.5	11.5	12.5
29	16.2	12.3	14.2	15.8	13.4	14.1	16.3	13.2	14.5	13.4	10.8	12.2
30	16.1	12.8	14.4	14.4	12.6	13.4	14.7	13.0	13.8	13.5	11.6	12.6
31	---	---	---	14.9	11.5	13.3	13.7	11.7	12.6	---	---	---
Month	16.2	8.9	10.9	17.6	11.3	14.2	19.0	11.5	14.7	15.8	10.3	13.2

	Max	Min	Mean
Year	19.0	3.5	9.6