

14243000 COWLITZ RIVER AT CASTLE ROCK, WA

LOCATION.--Lat 46°16'30", long 122°54'48", in SW ¼ SE ¼ sec.10, T.9 N., R.2 W., Cowlitz County, Hydrologic Unit 17080005, on left bank 40 ft downstream from Arkansas Valley Road bridge in Castle Rock, 2.7 mi downstream from Toutle River, and at mile 17.3.

DRAINAGE AREA.--2,238 mi². A large debris avalanche generated by the eruption of Mount St. Helens on May 18, 1980 blocked tributaries in the upper North Fork Toutle River valley. As a result, from May 19, 1980 to July 7, 1981, approximately 40 mi² was noncontributing. From July 7, 1981 to October 1981, the Coldwater Lake release, approximately 21 mi², was noncontributing. From October 1981 to November 1982, the Castle Lake release, approximately 19.7 mi², was noncontributing. Since November 1982, all areas, including the Spirit Lake release, are effectively contributing.

PERIOD OF RECORD.--December 1926 to current year; October 1985 to April 2000 (seasonal records).

REVISED RECORDS.--WSP 1218: Drainage area. WSP 1638: 1947(P), 1951.

GAGE.--Water-stage recorder. Datum of gage is NAVD of 1988. Prior to Dec. 18, 1933, nonrecording gage at site 2 mi upstream at datum 38.58 ft higher. Dec. 18, 1933, to June 13, 1934, nonrecording gage, and June 14 to Sept. 30, 1934, water-stage recorder, at present site at datum 28.65 ft higher. Oct. 1, 1934, to May 21, 1980, water-stage recorder, on right bank at datum 23.65 ft higher. May 23, 1980, to July 29, 1997, water-stage recorder at present site at datum 23.65 ft higher.

REMARKS.--Records good. Flow regulated by Riffe Lake (station 14234800) at mile 65.5, and Mayfield Reservoir (station 14237800) at mile 52.0. Minor diversions for domestic and farm use upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--62 years (water years 1928-85, 2001-04), 9,163 ft³/s, 55.60 in/yr, 6,639,000 acre-ft/yr, adjusted for storage in Mayfield Reservoir since April 1962, and Riffe Lake since April 1968.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 139,000 ft³/s Dec. 23, 1933, gage height, 55.25 ft present datum, from rating curve extended above 80,000 ft³/s; maximum gage height, 55.76 ft Feb. 8, 1996; minimum discharge, 998 ft³/s Nov. 7, 8, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,100 ft³/s, Jan. 30, gage height, 41.89 ft; minimum discharge, 3,020 ft³/s, Aug. 9, gage height, 31.16 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,730	5,210	12,300	7,840	22,200	8,700	7,420	5,500	6,460	5,860	3,390	5,480
2	3,750	5,180	12,600	7,600	20,100	9,230	7,170	5,580	6,180	5,550	3,370	5,480
3	3,760	4,180	14,500	7,440	18,600	9,100	7,060	5,630	5,950	4,270	3,330	5,440
4	3,760	4,360	14,300	7,850	17,400	9,390	7,050	5,970	5,470	3,770	3,190	5,260
5	3,760	5,120	e15,000	12,100	16,600	9,730	7,030	6,030	5,400	3,700	3,090	4,630
6	3,780	5,110	e16,000	14,600	16,100	9,630	7,400	5,570	5,960	3,760	3,140	4,210
7	3,840	5,130	e15,000	15,700	12,400	8,920	7,280	5,480	6,610	4,290	3,290	5,020
8	3,890	4,750	e14,000	15,300	11,800	10,100	6,810	5,160	6,330	4,270	3,150	6,650
9	4,020	3,960	13,300	16,100	11,700	11,600	6,760	5,050	6,690	4,210	3,110	6,680
10	3,950	3,960	13,100	14,100	11,700	10,200	6,740	4,880	6,310	3,970	4,190	6,440
11	3,930	4,900	13,200	13,000	11,000	9,340	6,770	5,340	6,190	3,640	5,240	5,830
12	4,200	5,940	13,100	12,100	10,600	8,420	7,380	5,380	6,000	3,600	5,270	5,770
13	4,530	5,610	13,200	11,100	10,300	7,550	7,260	4,910	5,920	3,570	5,030	6,280
14	4,250	5,480	16,800	11,000	8,190	8,280	6,980	4,820	5,810	4,020	3,760	7,880
15	4,120	5,170	17,100	11,600	7,990	9,610	7,030	4,760	6,140	4,220	3,390	8,240
16	4,500	4,590	16,100	11,300	9,000	10,500	6,840	4,770	7,340	4,340	3,380	7,930
17	5,330	6,220	14,600	9,950	11,800	10,900	6,790	4,750	7,240	3,720	3,370	6,850
18	4,300	10,300	12,800	9,410	11,900	11,500	6,750	5,000	6,840	3,450	3,380	7,400
19	4,120	14,600	10,500	9,430	10,800	9,460	6,730	5,030	5,450	3,640	3,860	8,310
20	4,240	14,000	8,850	9,070	9,310	8,530	7,520	4,710	4,890	4,970	3,850	7,730
21	5,240	12,800	8,870	8,480	8,500	8,330	7,620	4,680	4,990	5,000	3,930	7,450
22	5,650	11,600	8,550	8,080	8,140	8,890	7,060	4,760	5,120	4,990	5,150	6,640
23	5,650	11,200	8,260	8,890	7,840	9,840	6,870	5,480	4,750	4,890	4,740	5,900
24	5,510	11,700	8,390	11,500	8,800	10,400	6,230	5,240	4,730	4,010	4,000	4,930
25	4,600	13,200	9,530	12,500	10,000	11,100	5,700	5,220	4,690	3,900	5,280	4,760
26	4,130	13,800	9,130	12,000	10,100	9,990	5,640	5,490	4,620	3,890	7,440	4,640
27	4,070	9,730	8,920	14,300	10,800	9,080	6,090	6,870	4,550	3,910	7,540	4,880
28	4,050	9,210	10,000	16,800	9,230	8,250	6,070	8,880	4,550	4,050	5,740	5,600
29	4,270	13,100	9,100	28,000	8,370	8,140	5,600	8,450	5,830	4,890	5,110	5,590
30	4,310	13,400	8,520	34,600	---	8,930	5,520	7,550	5,900	4,600	4,790	5,720
31	4,470	---	8,850	25,700	---	8,140	---	7,110	---	3,540	4,660	---
TOTAL	133,710	243,510	374,470	407,440	341,270	291,780	203,170	174,050	172,910	130,490	132,160	183,620
MEAN	4,313	8,117	12,080	13,140	11,770	9,412	6,772	5,615	5,764	4,209	4,263	6,121
MAX	5,650	14,600	17,100	34,600	22,200	11,600	7,620	8,880	7,340	5,860	7,540	8,310
MIN	3,730	3,960	8,260	7,440	7,840	7,550	5,520	4,680	4,550	3,450	3,090	4,210
AC-FT	265,200	483,000	742,800	808,200	676,900	578,700	403,000	345,200	343,000	258,800	262,100	364,200
MEAN†	3,220	7,072	11,730	14,580	10,680	8,732	7,764	9,420	8,547	3,249	3,503	4,848
CFSM†	1.44	3.16	5.24	6.51	4.77	3.90	3.47	4.21	3.82	1.45	1.57	2.17
IN.†	1.66	3.53	6.04	7.51	5.15	4.50	3.87	4.85	4.26	1.67	1.81	2.42
AC-FT†	198,000	420,800	721,200	896,800	614,500	536,900	462,000	579,200	508,600	199,800	215,400	288,500
CAL YR	2003	TOTAL 3,067,390	MEAN 8,404	MAX 47,800	MIN 2,820	AC-FT 608,4000	MEAN† 8,482	CFSM† 3.79	IN.† 51.46	AC-FT† 6,141,000		
WTR YR	2004	TOTAL 2,788,580	MEAN 7,619	MAX 34,600	MIN 3,090	AC-FT 553,1000	MEAN† 7,770	CFSM† 3.47	IN.† 47.27	AC-FT† 5,641,000		

† Adjusted for change in contents in Riffe Lake and Mayfield Reservoir.

e Estimated