12027500 CHEHALIS RIVER NEAR GRAND MOUND, WA

Washington Coastal Basin
Upper Chehalis Subbasin

LOCATION.--Lat 46°46′34″, long 123°02′04″ referenced to North American Datum of 1927, in NE ¼ NE ¼ sec.22, T.15 N., R.3 W., Thurston County, WA, Hydrologic Unit 17100103, on left bank at downstream side of highway bridge at Meadows, 1.5 mi southwest of Grand Mound, 7.0 mi downstream from Skookumchuck River, and at mile 59.9.

DRAINAGE AREA.--895 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1286: 1929-30(M), 1931, 1932-34(M).

GAGE.--Water-stage recorder. Datum of gage is 123.65 ft above NGVD of 1929. Prior to Oct. 3, 1934, nonrecording gage at present site at datum 3.0 ft higher.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Minor effect from regulation by Skookumchuck Dam since January 1971. Up to 54 ft^3/s of Skookumchuck River is consumptively used at Centralia steam generating plant. Many small diversions for irrigation and domestic use upstream from station, including about 3 ft^3/s for municipal water supply for Centralia and Chehalis. Water temperatures March 1952 to September 1974. Miscellaneous suspended sediment data published for water years 1962-64. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--85 years (water years 1929-2013), 2,820 ft^3/s, 42.81 in/yr, 2,043,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,100 ft^3/s, Dec. 4, 2007, gage height, 20.23 ft; minimum discharge, 82 ft^3/s, Aug. 30, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 21	0000	*27,000	*14.95
Dec 4	0015	23,600	14.17
Dec 21	0515	21,400	13.60

Minimum discharge, 163 ft^3/s, Oct. 12, 13, gage height, 3.64 ft.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 12027500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/12027500.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	205	8,190	12,500	4,720	6,480	5,780	2,520	1,640	2,600	763	313	379
2	188	6,270	18,000	4,300	5,360	5,950	2,370	1,540	2,160	694	296	309
3	176	4,140	22,200	3,910	4,600	5,320	2,240	1,480	1,860	647	301	291
4	196	3,200	23,300	3,660	4,060	4,670	2,170	1,370	1,620	611	315	336
5	184	2,580	22,500	3,530	3,700	4,170	e3,090	1,290	1,450	588	312	e360
6	175	2,210	16,000	3,360	4,380	4,020	e7,000	1,240	1,310	582	296	e1,300
7	172	1,910	11,400	3,570	4,890	4,640	e12,000	1,160	1,200	574	275	2,290
8	184	1,710	9,680	5,230	4,710	4,600	e14,500	1,120	1,120	559	255	1,220
9	189	1,500	7,920	8,750	4,290	4,130	10,100	1,090	1,060	546	258	782
10	183	1,320	6,660	12,000	3,890	3,710	7,290	1,050	1,000	528	260	585
11	185	1,210	5,740	9,050	3,540	3,440	6,210	1,000	971	500	264	488
12	177	1,580	5,720	6,880	3,280	3,270	4,650	977	950	485	272	433
13	187	2,830	5,340	5,560	3,160	3,310	4,140	970	959	483	269	398
14	232	2,320	5,060	4,680	3,060	3,450	4,310	1,010	981	471	261	377
15	341	2,000	4,890	4,150	2,840	e3,240	4,300	979	938	445	260	379
16	961	1,750	5,350	3,750	2,700	e3,200	3,950	940	880	419	272	385
17	913	1,660	11,000	3,440	2,640	e3,200	3,470	942	836	425	287	405
18	565	2,610	13,700	3,190	2,530	e3,300	3,070	958	808	424	282	410
19	438	10,400	10,900	3,000	2,420	e3,180	2,970	952	803	414	267	390
20	483	24,500	17,200	2,860	2,340	4,920	3,580	909	809	403	255	366
21	596	23,800	20,000	2,720	2,330	10,300	3,250	913	795	396	247	354
22	673	15,200	13,700	2,600	2,810	8,760	2,980	1,070	794	391	239	373
23	725	9,880	10,600	2,500	6,510	6,890	2,670	1,430	773	389	238	492
24	853	9,100	10,000	2,630	6,040	5,590	2,420	2,520	884	378	233	786
25	896	7,700	9,400	2,630	5,450	4,730	2,220	2,570	1,090	359	238	815
26	750	6,200	10,300	2,740	5,510	4,110	2,040	2,040	1,060	346	243	750
27	628	5,130	9,520	2,910	4,950	3,660	1,890	1,870	1,090	334	247	641
28	1,210	4,380	8,480	3,110	4,720	3,430	1,800	2,540	1,110	327	252	1,580
29	2,330	3,890	7,150	4,840	---	3,210	1,810	2,760	997	325	267	12,100
30	3,240	3,950	6,060	6,110	---	2,900	1,810	3,320	843	333	323	17,300
31	6,310	---	5,240	7,650	---	2,670	---	3,080	---	319	432	---
Total	24,545	173,120	345,510	140,030	113,190	137,750	126,820	46,730	33,751	14,458	8,529	47,074
Mean	792	5,771	11,150	4,517	4,042	4,444	4,227	1,507	1,125	466	275	1,569
Max	6,310	24,500	23,300	12,000	6,510	10,300	14,500	3,320	2,600	763	432	17,300
Min	172	1,210	4,890	2,500	2,330	2,670	1,800	909	773	319	233	291
Ac-ft	48,690	343,400	685,300	277,700	224,500	273,200	251,500	92,690	66,950	28,680	16,920	93,370
Cfsm	0.88	6.45	12.5	5.05	4.52	4.96	4.72	1.68	1.26	0.52	0.31	1.75
In.	1.02	7.20	14.36	5.82	4.70	5.73	5.27	1.94	1.40	0.60	0.35	1.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	909	3,881	6,282	6,435	5,631	4,563	3,016	1,436	848	388	246	354
Max	3,643	10,510	19,280	13,900	13,680	9,477	6,787	3,496	2,763	934	570	1,569
(WY)	(1998)	(2007)	(1934)	(1971)	(1999)	(1972)	(1937)	(1948)	(2010)	(1983)	(1968)	(2013)
Min	125	221	884	860	1,201	1,354	1,086	549	352	174	118	117
(WY)	(1953)	(1937)	(1977)	(1977)	(1977)	(1992)	(1939)	(1939)	(1992)	(1970)	(1967)	(1967)

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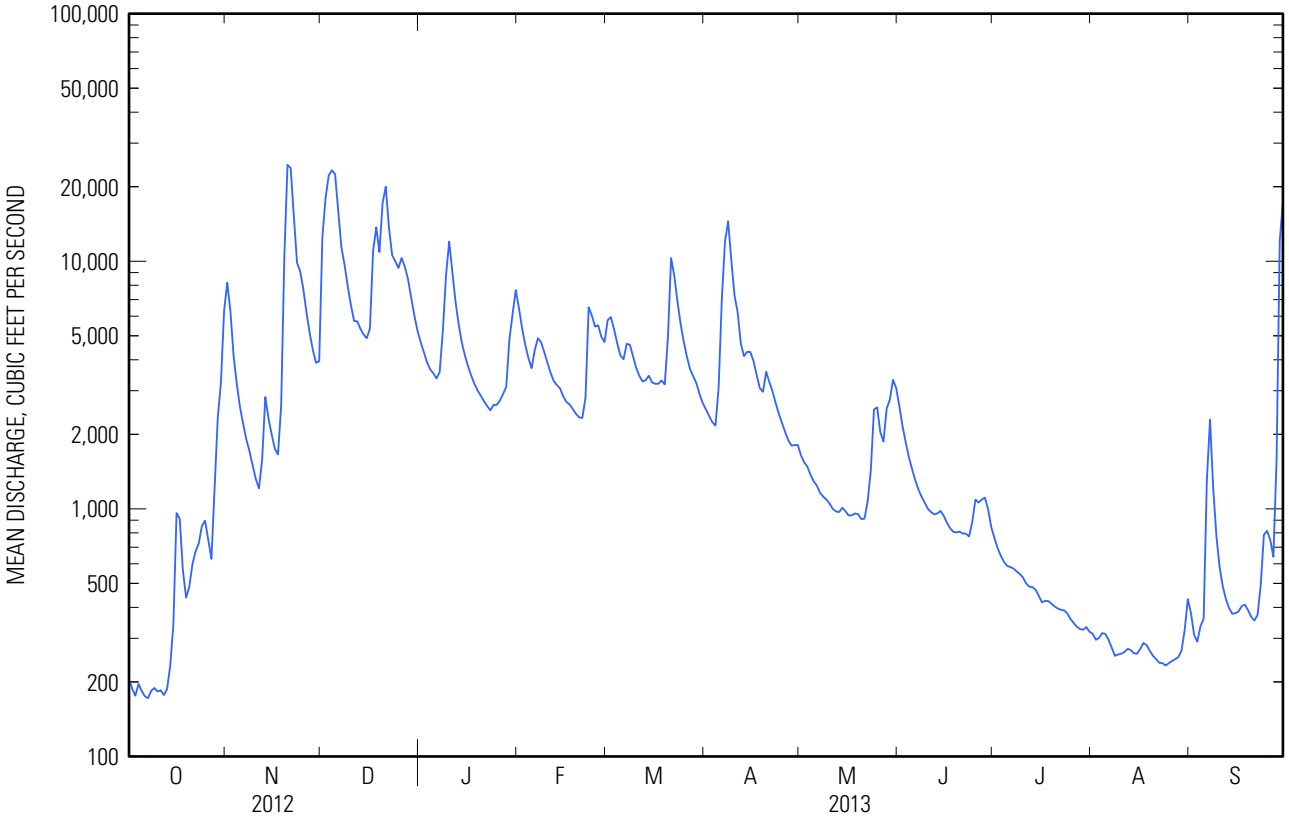
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1929 - 2013	
Annual total	1,511,377		1,211,507			
Annual mean	4,129		3,319		2,820	
Highest annual mean					4,480	1999
Lowest annual mean					1,122	1977
Highest daily mean	24,500	Nov 20	24,500	Nov 20	64,200	Feb 9, 1996
Lowest daily mean	172	Oct 7	172	Oct 7	85	Aug 30, 1967
Annual seven-day minimum	181	Oct 6	181	Oct 6	91	Aug 28, 1967
Annual runoff (ac-ft)	2,998,000		2,403,000		2,043,000	
Annual runoff (cfsm)	4.61		3.71		3.15	
Annual runoff (inches)	62.82		50.36		42.81	
10 percent exceeds	10,300		8,310		7,400	
50 percent exceeds	2,320		2,040		1,270	
90 percent exceeds	214		285		225