12043000 CALAWAH RIVER NEAR FORKS, WA

Washington Coastal Basin
Hoh-Quillayute Subbasin

LOCATION.--Lat 47°57′37″, long 124°23′30″ referenced to North American Datum of 1927, in NW ¼ SW ¼ sec.4, T.28 N., R.13 W., Clallam County, WA, Hydrologic Unit 17100101, on left bank 30 ft downstream from U.S. Highway 101 bridge, 0.8 mi northwest of Forks, and at mile 6.6.

DRAINAGE AREA.--129 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--November 1897 to December 1901, October to December 1975 (discharge measurements and peak discharges), January 1976 to September 1980, March 1984 to current year. Monthly and peak discharge only, November 1897 and August 1898, published in WSP 1316. Published as Calowa River at Forks, November 1897 to December 1899; as Calowa River near Forks, 1900; and as Kalawa River near Forks, 1901.

REVISED RECORDS.--WSP 1316: 1898-1902. WSP 1736: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 201.58 ft above NGVD of 1929. November 1897 to December 1901, nonrecording gage at same site but at different datum; October to December 1975, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. Chemical analyses October 1976 to September 1978. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--36 years (water years 1899-1901, 1977-80, 1985-2013), 1,056 ft^3/s, 111.23 in/yr, 765,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft^3/s, Nov. 6, 2006, gage height, 21.41 ft, from rating curve extended above 10,000 ft^3/s on basis of step-backwater analysis; minimum discharge, 15 ft^3/s, Sept. 28, 1899.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan 9	0100	*16,300	*14.73
No other peaks greater than base discharge.			

Minimum discharge, 50 ft^3/s, Oct. 10-12, gage height, 2.43 ft.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	54	3,850	5,740	943	1,320	4,380	708	647	927	382	111	148
2	54	2,100	6,070	842	1,080	4,740	637	578	764	342	109	125
3	54	1,560	4,430	800	942	3,350	577	532	644	313	107	117
4	54	1,620	5,070	955	834	2,080	586	497	555	293	106	107
5	53	2,010	3,710	1,030	929	1,600	1,900	468	492	277	104	100
6	53	1,390	2,940	1,070	1,460	1,320	3,910	446	447	259	100	94
7	52	1,180	2,900	1,950	1,800	1,140	2,370	421	413	245	98	90
8	52	983	2,260	4,400	1,420	991	1,680	393	381	235	95	87
9	51	823	1,720	8,940	1,120	878	1,300	370	357	225	93	84
10	51	704	1,500	3,200	931	797	2,180	353	335	215	91	82
11	51	733	1,420	2,030	808	737	1,990	342	323	207	90	79
12	54	1,200	1,550	1,500	746	3,050	1,530	493	377	200	89	77
13	151	1,590	1,350	1,190	831	6,270	1,530	687	353	192	87	76
14	1,620	1,590	1,220	995	762	3,760	1,610	889	302	188	85	75
15	1,190	1,160	1,230	856	702	2,790	1,420	626	286	181	90	75
16	1,450	924	1,410	756	741	2,410	1,180	562	272	175	90	87
17	637	1,270	2,700	690	836	2,230	998	617	261	172	86	92
18	543	2,380	2,000	659	759	1,980	897	566	270	168	86	80
19	1,850	5,870	2,570	634	721	1,690	1,170	522	255	161	83	75
20	1,270	4,280	3,200	682	655	4,200	1,160	475	253	156	81	85
21	977	3,870	2,300	728	724	3,270	1,080	495	329	150	77	180
22	723	2,810	1,830	685	2,050	2,050	968	550	278	146	75	469
23	576	3,510	2,290	727	2,130	1,530	837	637	267	143	74	694
24	477	2,560	1,880	749	1,600	1,240	743	719	396	138	79	557
25	400	1,730	1,750	733	2,530	1,040	671	650	406	134	82	462
26	358	1,320	1,970	721	1,900	914	617	631	601	130	74	325
27	461	1,060	2,050	753	1,530	871	598	735	692	126	96	281
28	876	912	1,630	880	1,420	855	657	982	603	123	186	1,610
29	1,330	1,230	1,380	1,410	---	807	929	1,100	500	120	253	6,020
30	2,940	2,810	1,210	1,690	---	748	744	1,210	430	117	538	4,610
31	7,060	---	1,080	1,520	---	729	---	1,140	---	114	211	---
Total	25,522	59,029	74,360	44,718	33,281	64,447	37,177	19,333	12,769	6,027	3,626	17,043
Mean	823	1,968	2,399	1,443	1,189	2,079	1,239	624	426	194	117	568
Max	7,060	5,870	6,070	8,940	2,530	6,270	3,910	1,210	927	382	538	6,020
Min	51	704	1,080	634	655	729	577	342	253	114	74	75
Ac-ft	50,620	117,100	147,500	88,700	66,010	127,800	73,740	38,350	25,330	11,950	7,190	33,800
Cfsm	6.38	15.3	18.6	11.2	9.21	16.1	9.61	4.83	3.30	1.51	0.91	4.40
In.	7.36	17.02	21.44	12.90	9.60	18.58	10.72	5.58	3.68	1.74	1.05	4.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	766	2,009	2,113	2,032	1,652	1,510	1,032	645	413	215	146	211
Max	2,544	4,706	4,395	4,025	3,782	3,583	1,591	1,161	1,128	788	766	812
(WY)	(2004)	(1991)	(1980)	(2006)	(1999)	(1997)	(2011)	(1984)	(1900)	(1997)	(1991)	(1978)
Min	49.3	439	585	476	405	419	389	190	124	91.0	62.9	59.0
(WY)	(1988)	(1994)	(1986)	(1979)	(1993)	(1992)	(2004)	(2004)	(1995)	(2009)	(2003)	(1998)

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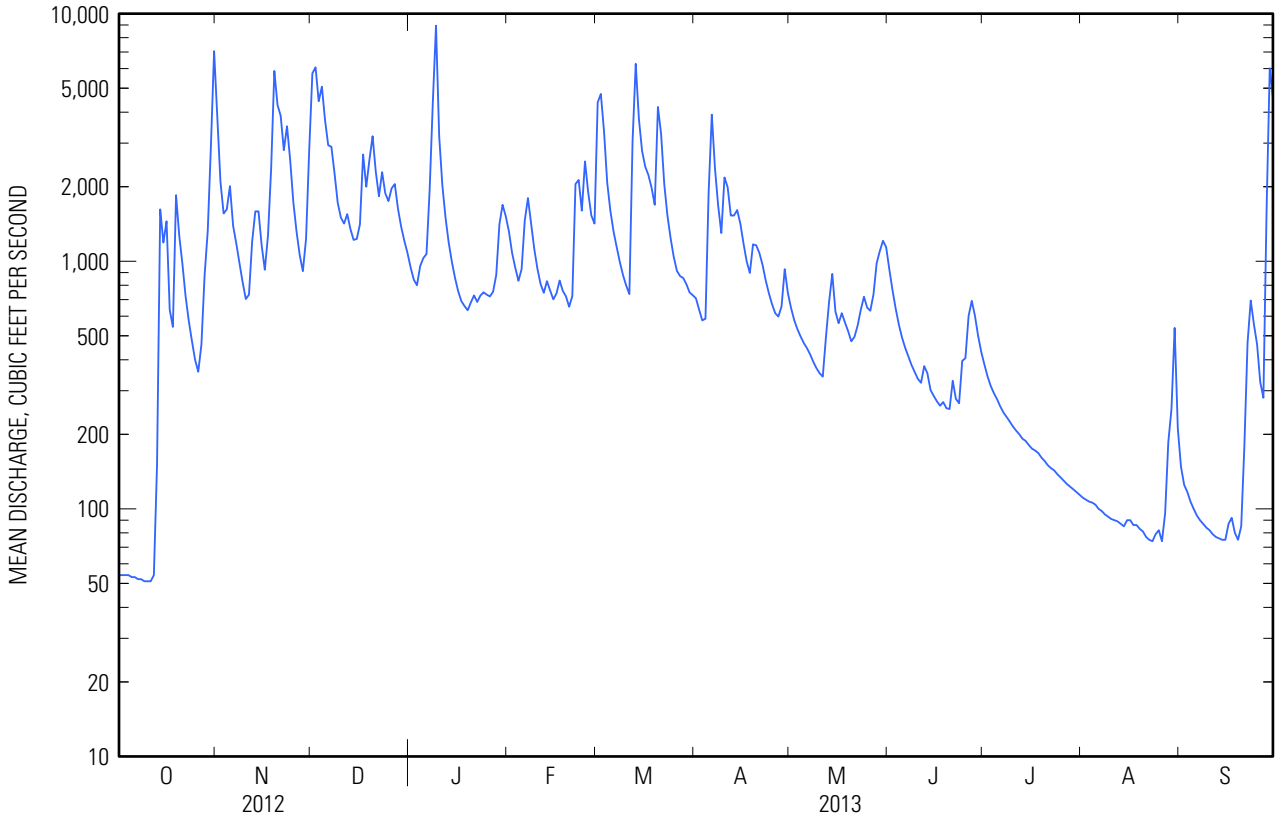
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1898 - 2013	
Annual total	436,393		397,332			
Annual mean	1,192		1,089		1,056	
Highest annual mean					1,555	1999
Lowest annual mean					665	1977
Highest daily mean	7,060	Oct 31	8,940	Jan 9	27,300	Jan 7, 2009
Lowest daily mean	51	Oct 9	51	Oct 9	15	Sep 28, 1899
Annual seven-day minimum	52	Oct 5	52	Oct 5	26	Sep 22, 1899
Annual runoff (ac-ft)	865,600		788,100		765,000	
Annual runoff (cfsm)	9.24		8.44		8.19	
Annual runoff (inches)	125.84		114.58		111.23	
10 percent exceeds	2,790		2,460		2,450	
50 percent exceeds	836		727		568	
90 percent exceeds	76		88		93