

QUILLAYUTE RIVER BASIN

12043000 CALAWAH RIVER NEAR FORKS, WA

LOCATION.--Lat 47°57'37", long 124°23'30", in NW 1/4 SW 1/4 sec.4, T.28 N., R.13 W., Clallam County, 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 mi².

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.--Records fair except estimated daily discharges, which are poor. No regulation or diversion upstream from station. Chemical analyses October 1976 to September 1978.

AVERAGE DISCHARGE.--25 years (water years 1899-1901, 1977-80, 1985-2002), 1,047 ft³/s, 110.22 in/yr, 758,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,100 ft³/s Dec. 15, 1999, gage height, 20.74 ft, from rating curve extended above 10,000 ft³/s on basis of step-backwater analysis; minimum discharge, 15 ft³/s Sept. 28, 1899.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 15	1100	12,400	13.18	Jan. 07		(a)	*18.55
Dec. 13	2100	12,400	13.20	Jan. 25	0000	10,300	12.21
Dec. 16	1900	23,800	17.48	Feb. 22	0100	18,000	15.46
Jan. 07	1600	*24,100	17.56				

Minimum discharge, 50 ft³/s Aug 29-31.

(a) from crest-stage gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	2040	5310	1420	1440	970	1160	559	496	410	e105	e51
2	194	1730	4490	2130	1320	866	1050	530	449	350	e100	e66
3	184	1330	2500	2190	2260	791	919	488	414	314	e95	e80
4	175	1220	1900	1750	1980	737	864	471	390	296	e112	e74
5	168	1130	1550	1450	1980	703	938	587	398	274	e133	e64
6	163	970	1990	3520	3180	655	1010	564	389	251	e101	e58
7	160	846	1980	14600	3230	624	1110	533	363	237	e94	e55
8	166	741	2870	8680	2500	589	895	493	343	276	e91	e62
9	166	660	2850	4130	2060	585	1030	468	320	239	e88	e85
10	205	598	2130	2510	1750	817	1550	463	307	217	e84	e72
11	319	555	1790	1860	1570	4790	1400	440	292	204	e82	e62
12	695	711	1840	2810	1350	3480	1750	432	279	195	e79	e55
13	757	1310	6780	2450	1180	3160	3850	465	266	187	e76	e52
14	771	4060	5950	1830	1040	2700	5240	519	258	182	e72	e51
15	609	7590	3430	1480	943	2050	3190	450	251	173	e70	e56
16	536	3710	15300	1260	950	1620	2810	421	241	168	e66	e210
17	478	2180	7720	1100	1040	1310	2290	447	257	164	e64	e150
18	459	1520	3950	1000	1220	1160	1730	409	312	161	e61	e110
19	1040	2380	3170	1170	2300	1270	1460	392	263	158	e60	e119
20	889	4920	2280	1630	2060	1330	1240	430	240	151	e60	e150
21	793	5390	1770	1680	9930	1180	1070	409	226	145	e58	e120
22	1440	3550	1480	1440	13000	1220	954	383	217	139	e57	e98
23	2430	2760	1280	1340	4840	1280	848	367	213	e137	e56	e87
24	1900	2130	1130	5940	2890	1290	759	351	209	e130	e53	e74
25	2550	1690	1020	5980	2020	1200	690	353	199	e128	e53	e66
26	2470	1450	943	2820	1580	1170	664	353	192	e127	e53	e62
27	2450	1290	893	1970	1300	1160	633	348	192	e120	e52	e60
28	1520	1930	1010	1510	1110	1400	579	492	374	e117	e51	58
29	1130	2600	921	1260	---	1320	551	893	1040	e120	e50	61
30	987	2280	849	1350	---	1230	546	680	526	e115	e50	59
31	2320	---	969	1680	---	1130	---	564	---	e110	e50	---
TOTAL	28334	65271	92045	85940	72023	43787	42780	14754	9916	5995	2276	2427
MEAN	914	2176	2969	2772	2572	1412	1426	476	331	193	73.4	80.9
MAX	2550	7590	15300	14600	13000	4790	5240	893	1040	410	133	210
MIN	160	555	849	1000	943	585	546	348	192	110	50	51
AC-FT	56200	129500	182600	170500	142900	86850	84850	29260	19670	11890	4510	4810
CFSM	7.09	16.9	23.0	21.5	19.9	10.9	11.1	3.69	2.56	1.50	0.57	0.63
IN.	8.17	18.82	26.54	24.78	20.77	12.63	12.34	4.25	2.86	1.73	0.66	0.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2002, BY WATER YEAR (WY)

	MEAN	720	1954	2187	1881	1833	1428	1000	658	431	219	164	206
MAX	1977	4706	4395	3428	3782	3583	1532	1161	1128	788	766	812	
(WY)	1998	1991	1980	1997	1999	1997	1984	1900	1997	1991	1991	1978	
MIN	49.3	439	585	476	405	419	451	258	124	95.9	63.9	59.0	
(WY)	1988	1994	1986	1979	1993	1992	1998	1995	1995	1995	1992	1998	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1898 - 2002

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1898 - 2002
ANNUAL TOTAL	374952	465548	
ANNUAL MEAN	1027	1275	1047
HIGHEST ANNUAL MEAN			1555
LOWEST ANNUAL MEAN			665
HIGHEST DAILY MEAN	15300	Dec 16	22900
LOWEST DAILY MEAN	127	Aug 1	15
ANNUAL SEVEN-DAY MINIMUM	140	Jul 21	26
ANNUAL RUNOFF (AC-FT)	743700	923400	758100
ANNUAL RUNOFF (CFSM)	7.96	9.89	8.11
ANNUAL RUNOFF (INCHES)	108.13	134.25	110.22
10 PERCENT EXCEEDS	2150	2810	2430
50 PERCENT EXCEEDS	630	737	560
90 PERCENT EXCEEDS	181	73	97

e Estimated