



Figure 13. Location of surface-water stations in the Skokomish River Basin.

## 12056500 NORTH FORK SKOKOMISH RIVER BELOW STAIRCASE RAPIDS, NEAR HOODSPORT, WA

LOCATION.--Lat 47°30'52", long 123°19'43", in NW<sup>1</sup>/<sub>4</sub>, sec.4, T.23 N., R.5 W., Mason County, Hydrologic Unit 17110017, Olympic National Park, on left bank 1.2 mi upstream from Lake Cushman, 2.8 mi upstream from Dry Creek, 11.3 mi northwest of Hoodsport, and at mile 29.2.

DRAINAGE AREA.--57.2 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1924 to current year.

REVISED RECORDS.--WSP 1286: 1932, 1935, 1937(M), 1942(M), 1947(P), 1948(M). WSP 1636: 1940(M). WSP 1736: 1927. WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 762.26 ft above NGVD of 1929. Prior to Nov. 1, 1934, water-stage recorder, and Nov. 1, 1934, to Nov. 10, 1941, nonrecording gages, on right bank at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station. Chemical analyses December 1973 to September 1985.

AVERAGE DISCHARGE.--80 years (water years 1925-2004), 511 ft<sup>3</sup>/s, 121.30 in/yr, 369,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,000 ft<sup>3</sup>/s, Nov. 5, 1934, gage height, 14.4 ft, from high-water mark, from rating curve extended above 9,800 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 12.2 ft; minimum discharge recorded, 16 ft<sup>3</sup>/s, Sept. 23, 1930, gage height, 1.12 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct 16	1745	10,100	8.85	Dec 6	0000	3,810	5.93
Oct 20	1645	*12,600	*9.75	Jan 14	0945	3,450	5.71
Nov 18	2215	8,210	8.09	Jan 30	0115	3,610	5.81

Minimum daily discharge, 44 ft<sup>3</sup>/s, Oct. 3-5.

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	e45	374	642	308	710	389	473	609	398	258	98	96
2	e45	354	943	286	603	356	426	666	387	244	96	96
3	e44	327	1,060	269	540	334	430	626	410	230	94	86
4	e44	305	811	245	509	315	453	574	471	218	97	81
5	e44	287	1,690	233	462	338	434	523	513	210	92	79
6	e46	272	2,090	235	538	309	423	455	482	214	290	76
7	e65	259	1,130	304	514	431	428	454	411	203	257	75
8	156	251	812	861	456	576	429	468	389	184	140	73
9	197	239	664	1,250	414	671	436	437	431	180	118	75
10	149	284	580	1,540	384	561	473	426	412	174	107	86
11	164	380	539	977	377	478	546	410	362	168	99	544
12	1,020	273	568	875	370	446	584	417	332	162	94	192
13	416	246	566	1,330	361	412	512	406	483	164	91	287
14	212	236	537	2,870	451	391	493	405	406	165	88	266
15	295	299	486	2,110	659	378	437	425	354	161	86	366
16	5,670	476	690	1,300	764	362	399	414	343	155	83	316
17	6,270	875	654	921	e880	365	374	419	362	148	80	355
18	2,100	5,440	536	852	e1,300	412	354	470	385	147	79	353
19	2,340	3,240	539	812	783	391	447	517	370	143	78	290
20	7,620	1,270	701	694	599	348	573	487	359	138	76	235
21	3,400	838	620	604	505	336	528	512	376	131	76	199
22	1,790	660	514	544	443	380	471	497	380	127	95	185
23	1,330	595	535	537	406	436	461	448	377	126	78	172
24	950	540	1,100	523	493	622	432	417	356	125	88	154
25	765	511	795	470	520	713	415	415	331	123	371	141
26	649	463	598	439	537	715	520	507	302	118	364	132
27	568	425	509	421	551	612	653	616	277	114	181	125
28	541	1,480	440	568	489	543	538	563	262	112	137	119
29	488	1,550	389	1,140	435	548	477	454	263	110	120	114
30	439	819	358	2,110	---	650	501	471	263	107	107	110
31	397	---	334	982	---	559	---	447	---	101	98	---
TOTAL	38,259	23,568	22,430	26,610	16,053	14,377	14,120	14,955	11,247	4,960	3,958	5,478
MEAN	1,234	786	724	858	554	464	471	482	375	160	128	183
MAX	7,620	5,440	2,090	2,870	1,300	715	653	666	513	258	371	544
MIN	44	236	334	233	361	309	354	405	262	101	76	73
AC-FT	75,890	46,750	44,490	52,780	31,840	28,520	28,010	29,660	22,310	9,840	7,850	10,870
CFSM	21.6	13.7	12.6	15.0	9.68	8.11	8.23	8.43	6.55	2.80	2.23	3.19
IN.	24.88	15.33	14.59	17.31	10.44	9.35	9.18	9.73	7.31	3.23	2.57	3.56

## 12056500 NORTH FORK SKOKOMISH RIVER BELOW STAIRCASE RAPIDS, NEAR HOODSPORT, WA—Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2004, BY WATER YEAR (WY)												
MEAN	376	714	793	710	631	508	515	654	597	337	155	144
MAX	1,234	1,762	1,778	1,915	1,465	1,325	901	1,304	1,332	1,037	551	624
(WY)	(2004)	(1984)	(1934)	(1953)	(1991)	(1972)	(1943)	(1956)	(1956)	(1999)	(1999)	(1978)
MIN	42.3	40.0	244	124	111	190	268	333	180	88.5	54.9	50.2
(WY)	(1988)	(1937)	(1979)	(1937)	(1929)	(1955)	(1975)	(1930)	(1992)	(1926)	(1926)	(1926)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1924 - 2004	
ANNUAL TOTAL	232,458		196,015			
ANNUAL MEAN	637		536		511	
HIGHEST ANNUAL MEAN					762	
LOWEST ANNUAL MEAN					256	
HIGHEST DAILY MEAN	7,620	Oct 20	7,620	Oct 20	9,980	Nov 3, 1955
LOWEST DAILY MEAN	44	Oct 3	44	Oct 3	17	Sep 23, 1930
ANNUAL SEVEN-DAY MINIMUM	45	Sep 30	48	Oct 1	20	Sep 17, 1930
ANNUAL RUNOFF (AC-FT)	461,100		388,800		369,900	
ANNUAL RUNOFF (CFSM)	11.1		9.36		8.93	
ANNUAL RUNOFF (INCHES)	151.18		127.48		121.30	
10 PERCENT EXCEEDS	1,290		865		1,020	
50 PERCENT EXCEEDS	402		414		375	
90 PERCENT EXCEEDS	62		99		92	

e Estimated

## 12056500 NORTH FORK SKOKOMISH RIVER BELOW STAIRCASE RAPIDS, NEAR HOODSPORT, WA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1973 to September 1985; September 1995 to April 1998; January 2001 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1996 to April 1998 (discontinued).

WATER TEMPERATURE: April 1965 to September 1982, June 1989 to December 1989, December 1990 to April 1991, June 1992 to April 1998, October 1999 to current year.

INSTRUMENTATION.--Temperature recorder April 1965 to September 1982, June 1989 to April 1998, October 1999 to current year. Water-quality monitor April 1996 to April 1998 (discontinued). Electronic Data Logger with 15-minute recording interval. Prior to June 13, 1997, a 60-minute recording interval.

REMARKS.--Temperature records good except for period Oct. 1-6, Jan. 7-26, which are fair, Jan. 27 to Mar. 23 and Aug. 9 to Sept. 30, which are poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 108 microsiemens, Sept. 11, 28, 1996; minimum recorded, 25 microsiemens, Mar. 18, 19, 1997.

WATER TEMPERATURE: Maximum recorded, 16.5°C (rounded), Aug. 14, 15, 1992; minimum, 0.0°C, Mar. 24, 1976, Jan. 31, 1996, Dec. 29, 1996.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.6°C, Aug. 13, 19, but may have been higher during period of missing record; minimum, 1.4°C, Jan. 6, 7.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.6	10.0	11.4	5.5	4.8	5.2	5.4	4.7	5.1	4.2	4.0	4.1
2	12.7	10.0	11.1	5.5	5.0	5.2	5.5	4.7	5.3	4.2	3.6	3.9
3	13.0	9.5	10.8	5.0	4.5	4.8	4.7	4.3	4.5	3.7	3.1	3.5
4	13.6	9.1	10.7	4.8	4.1	4.5	4.9	4.4	4.6	3.1	2.4	2.7
5	12.5	10.5	11.2	4.1	3.8	4.0	5.3	4.9	5.1	2.6	2.1	2.4
6	13.5	9.9	11.2	4.0	3.6	3.8	5.3	4.9	5.1	2.6	1.4	1.9
7	11.2	10.0	10.6	4.9	3.9	4.4	5.2	4.6	4.9	2.6	1.4	2.0
8	10.4	9.6	10.1	5.4	4.9	5.1	5.0	4.7	4.8	3.7	2.3	3.2
9	9.6	8.9	9.2	5.8	5.2	5.5	5.1	4.7	4.9	4.1	3.3	3.8
10	9.5	8.5	8.9	6.1	5.5	5.8	5.0	4.8	4.9	4.5	3.7	4.1
11	8.9	8.3	8.7	6.3	5.8	6.0	5.3	4.8	5.0	4.9	4.4	4.6
12	8.6	8.0	8.3	5.8	5.3	5.5	4.9	4.3	4.6	5.0	4.6	4.7
13	8.7	8.1	8.4	5.4	5.0	5.2	5.1	4.7	4.9	4.8	4.5	4.6
14	8.7	8.0	8.4	6.2	5.4	5.8	4.7	4.4	4.5	4.7	4.0	4.4
15	8.3	7.8	8.0	6.4	5.9	6.2	5.0	4.4	4.7	5.0	4.7	4.8
16	9.2	7.5	8.3	6.0	4.6	5.3	4.9	3.9	4.5	5.0	4.6	4.8
17	9.5	8.9	9.2	5.7	4.9	5.4	4.9	4.6	4.8	5.3	4.8	5.1
18	9.0	8.6	8.8	6.4	5.1	5.7	4.9	4.7	4.8	5.3	5.0	5.1
19	9.3	8.6	9.0	6.4	5.2	5.6	5.1	4.7	4.9	5.1	4.8	4.9
20	10.0	8.6	9.4	5.2	5.0	5.1	5.1	4.8	5.0	5.0	4.6	4.8
21	9.3	9.0	9.1	5.0	4.3	4.6	4.8	4.5	4.7	4.8	4.3	4.5
22	9.2	8.7	9.1	4.6	4.1	4.4	4.9	4.6	4.7	4.7	4.1	4.4
23	8.7	7.7	8.0	5.1	4.5	4.8	5.0	4.6	4.8	4.3	3.9	4.1
24	7.7	7.0	7.3	5.0	4.4	4.7	5.0	4.2	4.6	4.1	3.4	3.8
25	7.4	6.9	7.2	4.4	3.0	3.9	4.9	4.4	4.7	3.8	3.3	3.5
26	8.0	7.4	7.7	4.7	4.3	4.5	4.6	4.2	4.4	3.7	3.3	3.5
27	8.3	7.8	8.1	5.0	4.5	4.8	4.3	3.2	3.8	3.8	3.4	3.5
28	8.8	7.8	8.4	4.9	4.4	4.7	4.1	3.8	4.0	3.7	3.4	3.5
29	7.8	6.6	7.2	5.4	4.7	5.1	3.8	3.3	3.5	3.7	3.0	3.5
30	6.7	5.8	6.3	5.3	4.6	4.9	3.7	3.1	3.4	3.5	2.9	3.2
31	5.9	5.0	5.3	---	---	---	4.1	3.1	3.7	3.7	2.7	3.3
MONTH	13.6	5.0	8.9	6.4	3.0	5.0	5.5	3.1	4.6	5.3	1.4	3.9

## 12056500 NORTH FORK SKOKOMISH RIVER BELOW STAIRCASE RAPIDS, NEAR HOODSPORT, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.5	3.1	3.3	5.3	4.7	5.0	4.8	3.5	4.2	7.7	5.9	6.8
2	3.5	2.3	2.9	5.0	4.5	4.7	5.1	3.6	4.5	7.7	6.2	6.9
3	3.8	3.2	3.5	5.5	4.7	5.0	5.8	4.3	5.1	7.0	6.0	6.6
4	3.9	3.4	3.6	5.4	4.9	5.1	5.8	4.6	5.2	6.8	6.0	6.4
5	4.0	3.6	3.8	5.0	4.3	4.7	5.9	4.6	5.3	6.4	5.1	5.8
6	3.9	3.6	3.8	4.9	4.2	4.6	6.0	4.5	5.3	7.1	5.3	6.3
7	4.3	3.7	3.9	4.9	4.3	4.7	6.2	5.2	5.7	6.8	5.9	6.3
8	4.3	3.9	4.1	---	---	---	6.2	4.7	5.5	6.7	5.4	6.1
9	4.1	3.5	3.8	---	---	---	6.2	4.7	5.5	7.1	5.3	6.2
10	4.2	3.6	3.9	---	---	---	6.5	4.9	5.8	6.9	5.8	6.4
11	4.4	3.7	4.0	4.8	3.8	4.4	6.8	5.0	5.9	7.6	5.8	6.7
12	4.4	3.7	4.1	---	---	---	6.2	5.1	5.7	7.1	5.9	6.6
13	4.4	4.0	4.2	---	---	---	6.0	4.9	5.5	7.2	5.8	6.5
14	4.5	4.2	4.3	5.7	4.8	5.4	5.7	5.1	5.5	8.1	6.0	7.1
15	4.4	3.6	4.1	---	---	---	5.9	4.7	5.3	7.5	6.3	6.9
16	4.4	4.1	4.3	---	---	---	6.1	5.0	5.5	7.4	6.0	6.8
17	4.6	4.1	4.3	---	---	---	6.2	5.0	5.6	8.1	6.2	7.1
18	4.4	4.1	4.3	---	---	---	6.0	4.8	5.4	8.3	6.5	7.4
19	4.9	4.4	4.7	---	---	---	5.5	4.7	5.2	7.5	6.7	7.1
20	4.8	4.4	4.6	---	---	---	5.3	4.6	4.9	8.8	6.5	7.6
21	4.8	4.3	4.5	5.0	3.8	4.5	6.1	4.5	5.3	8.6	7.0	7.7
22	5.0	4.5	4.7	5.5	4.6	5.0	6.5	4.7	5.6	8.0	6.8	7.3
23	5.3	4.8	5.0	5.1	4.4	4.8	6.9	5.4	6.0	7.9	6.2	7.0
24	5.0	4.4	4.8	4.7	3.8	4.4	6.4	4.9	5.7	8.3	6.3	7.2
25	4.7	4.1	4.4	3.8	3.2	3.4	7.1	5.0	6.1	8.1	6.6	7.4
26	4.8	4.3	4.5	3.6	2.5	3.1	7.8	5.6	6.7	8.5	7.1	7.7
27	5.0	4.5	4.7	4.3	3.1	3.8	7.1	5.5	6.2	7.5	6.6	7.0
28	5.2	4.7	4.9	4.6	3.6	4.1	6.8	4.6	5.7	7.5	6.1	6.7
29	5.3	4.7	4.9	4.9	3.8	4.4	7.2	5.0	6.2	7.0	6.3	6.7
30	---	---	---	5.0	4.0	4.5	7.8	5.5	6.7	7.8	6.5	7.1
31	---	---	---	4.5	3.5	4.0	---	---	---	7.4	6.3	6.8
MONTH	5.3	2.3	4.2	---	---	---	7.8	3.5	5.6	8.8	5.1	6.8
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.1	6.3	7.0	12.4	10.3	11.3	15.1	12.2	13.5	13.5	11.4	12.3
2	8.9	6.4	7.7	11.4	10.3	10.7	14.8	12.5	13.4	12.6	10.8	11.6
3	9.6	6.9	8.3	11.6	10.0	10.7	13.9	12.4	12.9	12.8	10.7	11.6
4	9.9	7.5	8.7	12.5	10.1	11.2	13.6	12.1	12.7	13.1	10.9	11.8
5	8.8	7.5	8.0	12.4	9.9	11.2	13.8	11.7	12.5	12.8	10.4	11.4
6	7.8	7.0	7.4	12.3	10.6	11.3	11.9	11.3	11.6	12.2	10.5	11.2
7	8.0	6.9	7.4	11.8	10.0	10.6	12.5	10.9	11.6	13.4	10.5	11.3
8	9.6	7.0	8.2	11.9	9.5	10.4	14.3	10.7	12.0	12.5	10.4	11.1
9	9.3	7.9	8.7	10.9	9.9	10.3	---	---	---	12.9	10.4	11.4
10	8.8	7.7	8.3	10.4	9.2	9.9	---	---	---	12.5	10.7	11.4
11	8.0	7.1	7.6	11.2	9.1	10.1	---	---	---	12.1	11.2	11.6
12	8.1	6.9	7.5	11.9	9.4	10.6	15.4	12.5	13.6	11.8	10.7	11.3
13	8.3	7.2	7.7	13.0	10.2	11.4	15.6	12.6	13.7	11.5	10.5	10.9
14	8.2	6.8	7.5	12.8	10.8	11.7	15.2	12.7	13.6	11.0	9.7	10.5
15	9.2	6.7	8.0	13.6	11.2	12.1	15.0	12.9	13.7	10.8	9.4	10
16	9.8	7.3	8.6	13.7	10.9	12.1	14.9	12.7	13.5	10.2	9.6	9.8
17	10.7	7.9	9.3	13.6	10.9	12.1	15.4	12.6	13.7	9.7	8.6	9.2
18	10.9	8.4	9.6	14.0	11.5	12.5	15.1	12.6	13.7	---	---	---
19	10.3	8.3	9.2	12.4	11.5	11.9	15.6	12.7	13.8	---	---	---
20	11.1	8.4	9.8	14.1	11.0	12.2	15.2	12.8	13.9	9.3	8.4	8.9
21	11.7	9.1	10.4	14.2	11.1	12.4	13.6	12.5	13.2	9.9	8.7	9.3
22	11.8	9.5	10.6	14.3	11.2	12.5	14.7	12.3	13.1	10.0	9.5	9.7
23	11.3	9.7	10.5	14.8	11.5	12.9	13.6	12.3	12.9	10.7	9.5	10.1
24	11.4	9.7	10.5	15.0	11.9	13.3	13.6	12.1	12.6	10.7	9.6	10.1
25	11.8	9.8	10.6	14.3	12.4	13.2	12.1	11.4	11.7	10.9	9.6	10.2
26	10.9	9.4	10.3	14.6	12.0	13.2	12.2	10.9	11.6	11.6	10.0	10.4
27	11.4	9.2	10.3	15.0	12.1	13.3	13.0	11.3	12.0	11.0	9.7	10.3
28	11.9	9.4	10.6	15.2	12.4	13.5	13.5	11.2	12.1	11.3	9.7	10.3
29	12.1	9.6	10.9	15.2	12.5	13.6	13.9	11.5	12.4	10.7	10.0	10.3
30	12.3	10.0	11.3	15.3	12.7	13.6	14.1	12.0	12.8	10.7	9.6	10.1
31	---	---	---	15.4	12.2	13.5	14.1	11.6	12.7	---	---	---
MONTH	12.3	6.3	9.0	15.4	9.1	11.9	---	---	---	---	---	---

## 12056500 NORTH FORK SKOKOMISH RIVER BELOW STAIRCASE RAPIDS, NEAR HOODSPORT, WA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
NOV 06...	1220	269	745	12.9	100	7.5	94	.9	3.9	--	--	--	--
JAN 22...	1210	538	743	12.9	102	7.2	77	5.2	4.5	--	--	--	--
MAR 11...	1230	464	745	12.7	101	7.8	74	12.7	4.8	--	--	--	--
MAY 06...	1230	445	738	12.3	103	7.8	72	17.8	6.5	--	--	--	--
JUN 14...	1110	405	746	12.2	104	7.9	71	13.0	7.6	--	--	--	--
JUL 15...	1100	160	741	10.8	103	8.0	87	18.4	11.7	39	4	14.2	.925
SEP 09...	1240	75	741	10.7	105	8.0	97	20.0	13.0	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., mg/L (00453)	Carbonate, wat flt incm. titr., mg/L (00452)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
NOV 06...	--	--	--	--	36	44	.0	--	.94	--	--	7.1	--
JAN 22...	--	--	--	--	31	38	.0	--	.72	--	--	5.6	--
MAR 11...	--	--	--	--	30	37	.0	--	.82	--	--	5.4	--
MAY 06...	--	--	--	--	29	36	.0	--	.69	--	--	5.0	--
JUN 14...	--	--	--	--	29	36	.0	--	.59	--	--	4.7	--
JUL 15...	.18	.1	1.78	9	35	43	.0	<.02	.73	<.2	5.50	6.3	51
SEP 09...	--	--	--	--	40	49	.0	--	.90	--	--	6.7	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)
NOV 06...	--	--	<.04	E.03	<.008	--	E.003	E.003	.04	--	--	--	--
JAN 22...	--	--	<.04	<.06	<.008	--	<.006	.004	.06	--	--	--	--
MAR 11...	--	--	<.04	<.06	<.008	--	<.006	E.004	.04	--	--	--	--
MAY 06...	--	--	<.04	<.06	E.004	--	<.006	.007	.04	--	--	--	--
JUN 14...	--	--	<.04	<.06	<.008	--	<.006	E.004	<.03	--	--	--	--
JUL 15...	.08	26.4	<.04	<.06	<.008	<.02	<.006	E.002	.03	<.1	<.1	.4	<6
SEP 09...	--	--	<.04	<.06	<.008	--	E.003	<.004	.03	--	--	--	--

12056500 NORTH FORK SKOKOMISH RIVER BELOW STAIRCASE RAPIDS, NEAR HOODSPORT, WA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Mangan- ese, water, fltrd, ug/L (01056)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
NOV 06...	--	1	.73
JAN 22...	--	1	1.5
MAR 11...	--	1	1.3
MAY 06...	--	2	2.4
JUN 14...	--	1	1.1
JUL 15...	<.8	1	.43
SEP 09...	--	<.5	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Biomass peri- phyton, ashfree drymass g/m2 (49954)	Peri- phyton biomass ash weight, g/m2 (00572)	Peri- phyton biomass dry weight, g/m2 (00573)
AUG 24...	1100	14.4	150	163.0

## 12058800 NORTH FORK SKOKOMISH RIVER BELOW LOWER CUSHMAN DAM, NEAR POTLATCH, WA

LOCATION.--Lat 47°23'27", long 123°12'30", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>, sec.17, T.22 N., R.4 W., Mason County, Hydrologic Unit 17110017, on right bank 1.2 mi downstream from Lower Cushman Dam (Cushman Dam No. 2), 2.8 mi northwest of Potlatch, and at mile 16.5.

DRAINAGE AREA.--102 mi<sup>2</sup>, approximately, includes 99 mi<sup>2</sup> upstream from Cushman Dam No. 2 which is noncontributing except during spillage.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 230 ft above NGVD of 1929, from topographic map. Prior to Sept. 25, 1991, water-stage recorder at site 400 ft downstream at datum 7.66 ft lower.

REMARKS.--No estimated daily discharges. Records good. Upper portion of McTaggart Creek is diverted through Deer Meadow Creek into Cushman Reservoir No. 2. Flow regulated at Lake Cushman and at Cushman Reservoir No. 2 to supply powerplant, which discharges into Hood Canal. Entire flow of river normally diverted at Cushman Dam No. 2 except infrequent releases. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--16 years (water years 1989-2004), 56.6 ft<sup>3</sup>/s, 40,970 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,680 ft<sup>3</sup>/s, Dec. 19, 1995, gage height, 10.97 ft, from rating curve extended above 370 ft<sup>3</sup>/s; minimum discharge, 4.7 ft<sup>3</sup>/s, June 13-15, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,830 ft<sup>3</sup>/s, Oct. 21, 22, gage height, 9.21 ft; minimum discharge, 60 ft<sup>3</sup>/s, Oct. 31 to Nov. 16, Dec. 10, gage height, 4.66 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	62	62	64	65	66	64	64	63	63	63	64	66
2	62	61	64	64	67	64	64	63	62	62	64	65
3	62	61	64	63	67	64	63	63	62	63	64	66
4	62	60	64	63	66	64	63	62	63	63	64	65
5	62	60	66	63	66	64	64	62	63	63	64	66
6	62	60	69	64	66	64	63	62	63	63	65	65
7	62	61	67	65	66	65	63	63	63	63	64	65
8	62	61	66	68	66	65	63	63	62	63	64	64
9	62	60	65	67	66	64	63	63	63	64	64	64
10	62	61	62	67	65	64	63	62	63	64	64	65
11	63	60	64	66	65	64	63	63	63	64	64	64
12	63	61	65	66	65	64	63	63	63	64	64	63
13	62	60	65	66	65	64	62	62	63	63	64	63
14	62	60	66	68	66	64	63	62	63	63	65	63
15	63	61	66	68	67	64	63	62	62	63	65	64
16	70	62	67	66	67	64	63	62	63	63	64	64
17	80	63	66	66	67	64	63	62	63	63	64	64
18	67	76	65	66	66	64	64	63	63	64	64	64
19	66	73	65	66	66	64	63	62	63	64	65	65
20	93	66	65	66	66	64	63	62	63	64	65	64
21	622	64	64	65	66	64	64	62	63	63	65	64
22	1,780	63	64	66	66	63	63	62	63	63	64	64
23	1,010	63	64	66	66	63	63	62	63	64	65	64
24	68	62	66	65	65	64	63	62	63	64	66	64
25	64	63	66	65	65	65	64	62	62	63	65	64
26	62	63	66	65	65	66	62	62	63	64	66	65
27	62	62	65	64	65	66	62	63	63	64	66	65
28	62	70	64	65	65	65	63	63	63	64	65	64
29	62	69	64	67	64	63	63	63	63	64	65	64
30	62	65	64	69	---	63	63	62	64	64	66	64
31	61	---	64	67	---	64	---	62	---	64	65	---
TOTAL	5,224	1,893	2,016	2,037	1,908	1,988	1,893	1,934	1,886	1,967	2,003	1,931
MEAN	169	63.1	65.0	65.7	65.8	64.1	63.1	62.4	62.9	63.5	64.6	64.4
MAX	1,780	76	69	69	67	66	64	63	64	64	66	66
MIN	61	60	62	63	64	63	62	62	62	62	64	63
AC-FT	10,360	3,750	4,000	4,040	3,780	3,940	3,750	3,840	3,740	3,900	3,970	3,830

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2004, BY WATER YEAR (WY)

MEAN	52.0	50.7	103	63.5	57.0	47.8	61.8	45.4	46.9	45.9	50.8	50.2
MAX	169	95.4	872	309	183	69.3	232	66.9	66.1	66.0	131	99.3
(WY)	(2004)	(1991)	(1996)	(2002)	(1992)	(2003)	(1999)	(1999)	(2000)	(2002)	(1991)	(1990)
MIN	33.0	33.6	32.4	33.9	30.7	30.4	31.3	29.2	30.1	29.6	28.4	31.5
(WY)	(1990)	(1990)	(1989)	(1991)	(1993)	(1993)	(1993)	(1989)	(1989)	(1988)	(1988)	(1989)



## 12058800 NORTH FORK SKOKOMISH RIVER BELOW LOWER CUSHMAN DAM, NEAR POTLATCH, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1988 - 2004	
ANNUAL TOTAL	26,879		26,680			
ANNUAL MEAN	73.6		72.9		56.6	
HIGHEST ANNUAL MEAN					117	1996
LOWEST ANNUAL MEAN					33.1	1989
HIGHEST DAILY MEAN	1,780	Oct 22	1,780	Oct 22	3,570	Dec 19, 1995
LOWEST DAILY MEAN	60	Nov 4	60	Nov 4	4.9	Jun 14, 1988
ANNUAL SEVEN-DAY MINIMUM	60	Nov 3	60	Nov 3	5.1	Jun 8, 1988
ANNUAL RUNOFF (AC-FT)	53,310		52,920		40,970	
10 PERCENT EXCEEDS	70		66		67	
50 PERCENT EXCEEDS	63		64		39	
90 PERCENT EXCEEDS	61		62		32	

12058800 NORTH FORK SKOKOMISH RIVER BELOW LOWER CUSHMAN DAM, NEAR POTLATCH, WA—Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1989 to August 1990, December 1990 to April 1991, August 1993 to current year.

INSTRUMENTATION.--Temperature recorder.

REMARKS.--Record rated excellent.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 13.0°C (rounded), July 4, 5, Oct. 6, 8-10, 1989, June 3, 4, 2000; minimum, 3.5°C (rounded), Feb. 15, 1995.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 12.0°C, June 21, 29, July 1, 12; minimum, 4.5°C, Jan. 6.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.1	8.6	8.8	9.1	8.7	8.9	8.3	7.9	8.2	6.3	6.0	6.2
2	8.9	8.7	8.8	9.2	8.7	9.0	8.4	8.1	8.3	6.3	6.1	6.2
3	9.0	8.7	8.8	9.1	8.6	8.9	8.2	7.8	8.0	6.1	5.8	6.0
4	8.9	8.7	8.8	9.1	8.7	8.9	8.0	7.8	7.9	5.8	5.5	5.6
5	8.9	8.7	8.8	9.0	8.5	8.8	8.2	8.0	8.2	5.6	5.4	5.5
6	9.0	8.6	8.8	9.1	8.6	8.8	8.2	7.8	8.0	5.5	4.5	5.2
7	9.2	8.9	9.0	9.3	8.7	9.1	7.9	7.6	7.8	5.6	5.4	5.5
8	9.1	8.8	9.0	9.6	9.2	9.4	7.9	7.5	7.7	5.7	5.5	5.6
9	8.9	8.5	8.7	9.6	9.2	9.4	7.8	7.5	7.7	5.8	5.6	5.7
10	8.9	8.4	8.6	9.7	9.2	9.5	7.7	7.5	7.6	5.9	5.7	5.8
11	8.7	8.5	8.7	9.6	9.2	9.4	7.8	7.6	7.7	5.9	5.6	5.8
12	9.0	8.7	8.8	9.6	9.0	9.3	7.7	7.5	7.6	5.8	5.7	5.8
13	8.9	8.5	8.7	9.5	8.9	9.2	7.7	7.4	7.6	5.9	5.8	5.8
14	8.9	8.5	8.7	9.7	9.2	9.5	7.5	7.2	7.4	6.0	5.9	5.9
15	8.9	8.5	8.7	9.7	9.3	9.5	7.5	7.1	7.3	6.2	6.0	6.1
16	9.5	8.8	9.0	9.5	9.2	9.3	7.4	7.1	7.2	6.1	5.8	6.0
17	9.6	9.3	9.4	9.3	9.1	9.2	7.4	7.0	7.2	6.0	5.7	5.9
18	9.5	9.2	9.3	9.6	9.3	9.5	7.3	7.0	7.1	6.1	5.9	6.0
19	9.6	9.3	9.4	9.5	8.7	9.1	7.4	7.0	7.2	6.1	5.9	6.0
20	10.2	9.3	9.8	8.9	8.7	8.8	7.5	7.2	7.4	6.0	5.8	5.9
21	9.9	8.1	9.4	8.8	8.4	8.6	7.3	7.0	7.2	5.9	5.7	5.8
22	11.3	9.2	10.1	8.5	8.3	8.4	7.3	6.9	7.1	5.9	5.6	5.8
23	11.4	10.6	11.2	8.5	8.3	8.4	7.2	6.9	7.1	5.9	5.8	5.8
24	10.7	9.9	10.4	8.4	8.0	8.2	7.2	7.0	7.1	5.8	5.3	5.6
25	9.9	9.5	9.7	8.2	7.4	8.0	7.1	6.7	6.9	5.6	5.2	5.4
26	9.7	9.2	9.5	8.2	7.9	8.0	6.9	6.6	6.7	5.6	5.3	5.5
27	9.7	9.2	9.5	8.4	7.9	8.1	6.7	6.1	6.5	5.7	5.4	5.5
28	9.9	9.3	9.6	8.5	8.1	8.3	6.6	6.4	6.5	5.9	5.6	5.7
29	9.6	9.1	9.4	8.5	8.3	8.4	6.4	6.1	6.3	6.0	5.6	5.7
30	9.4	9.0	9.3	8.4	7.9	8.1	6.3	5.8	6.1	5.9	5.4	5.6
31	9.1	8.7	8.9	---	---	---	6.3	6.1	6.2	5.5	5.0	5.3
MONTH	11.4	8.1	9.2	9.7	7.4	8.9	8.4	5.8	7.3	6.3	4.5	5.7



## 12059500 NORTH FORK SKOKOMISH RIVER NEAR POTLATCH, WA

LOCATION.--Lat 47°19'48", long 123°14'31", in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.7, T.21 N., R.4 W., Mason County, Hydrologic Unit 17110017, on left bank 1.1 mi upstream from South Fork Skokomish River, 5.4 mi southwest of Potlatch, 7.2 mi downstream from City of Tacoma Cushman Dam No. 2, and at mile 10.1.

DRAINAGE AREA.--117 mi<sup>2</sup>, includes 99 mi<sup>2</sup> upstream from Cushman Dam No. 2, which is noncontributing except during spillage.

PERIOD OF RECORD.--March 1944 to November 1949 (destroyed by flood of Nov. 27, 1949), March 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 63.49 ft above NGVD of 1929 (levels by City of Tacoma). Prior to Nov. 27, 1949, and Mar. 18 to May 9, 1950, water-stage recorder at site 200 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Upper portion of McTaggart Creek is diverted through Deer Meadow Creek into Cushman Reservoir No. 2. Flow regulated at Lake Cushman and at Cushman Reservoir No. 2 to supply powerplant, which discharges into Hood Canal. Entire flow of river normally diverted at Cushman Dam No. 2 except infrequent releases. Water temperatures March 1965 to September 1982. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--59 years (water years 1945-49, 1951-2004), 117 ft<sup>3</sup>/s, 84,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,740 ft<sup>3</sup>/s, Nov. 4, 1955, gage height, 10.45 ft; minimum recorded discharge, 1.3 ft<sup>3</sup>/s, Sept. 5, 14, 16, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,750 ft<sup>3</sup>/s, Oct. 20, gage height, 7.37 ft; minimum discharge, 61 ft<sup>3</sup>/s, Oct. 1, 2, July 23, 24, 27, 29-31, and Aug. 1.

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	64	103	260	136	275	132	124	84	73	67	65	68
2	64	102	237	129	277	128	119	83	73	67	66	67
3	64	97	241	124	260	125	115	83	72	68	66	67
4	65	92	214	117	232	122	111	82	72	67	65	67
5	65	89	287	112	208	135	108	81	74	67	65	67
6	66	86	470	116	215	126	106	80	80	67	83	67
7	65	86	395	159	202	154	103	82	78	66	76	66
8	71	84	300	281	187	148	101	81	74	66	69	67
9	72	82	241	302	174	139	100	80	73	67	67	66
10	70	83	208	332	164	132	97	80	72	68	66	70
11	74	81	193	288	156	127	96	81	72	67	66	95
12	91	80	220	253	149	122	95	79	72	67	65	73
13	74	78	231	259	143	119	94	78	80	65	66	78
14	71	78	252	345	179	116	98	77	74	65	66	76
15	75	82	230	383	247	113	95	76	72	66	66	88
16	299	125	281	290	275	110	92	77	71	65	66	86
17	1,100	175	292	236	266	108	91	76	71	65	65	92
18	429	1,100	238	226	253	110	92	76	70	65	65	97
19	324	986	209	213	221	107	97	75	70	65	66	98
20	1,920	407	203	192	199	103	105	74	69	66	66	88
21	1,760	269	185	175	182	102	109	74	69	65	66	82
22	3,250	204	170	163	169	100	100	75	69	64	66	80
23	2,050	182	165	161	158	100	96	75	69	65	66	77
24	245	173	220	150	153	111	94	73	69	64	71	75
25	177	203	260	140	153	135	93	73	69	64	79	74
26	152	189	216	142	151	187	90	73	68	65	77	73
27	136	167	197	142	149	206	89	82	68	64	72	72
28	127	596	175	192	142	173	88	78	68	65	69	71
29	119	755	160	248	137	152	86	75	67	64	68	70
30	112	362	147	487	---	141	85	76	68	65	68	71
31	106	---	141	345	---	130	---	73	---	64	67	---
TOTAL	13,357	7,196	7,238	6,838	5,676	4,013	2,969	2,412	2,146	2,035	2,114	2,288
MEAN	431	240	233	221	196	129	99.0	77.8	71.5	65.6	68.2	76.3
MAX	3,250	1,100	470	487	277	206	124	84	80	68	83	98
MIN	64	78	141	112	137	100	85	73	67	64	65	66
AC-FT	26,490	14,270	14,360	13,560	11,260	7,960	5,890	4,780	4,260	4,040	4,190	4,540

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2004, BY WATER YEAR (WY)

MEAN	77.3	188	259	236	213	150	95.9	57.9	45.3	31.0	25.2	24.0
MAX	943	1,005	1,262	938	982	570	272	251	320	215	155	82.5
(WY)	(1952)	(1976)	(1951)	(1974)	(1951)	(1961)	(1999)	(1946)	(1946)	(1946)	(1991)	(1997)
MIN	5.37	12.6	32.9	41.3	63.6	56.2	32.7	22.2	9.99	5.30	2.83	4.52
(WY)	(1945)	(1977)	(1977)	(1979)	(1988)	(1947)	(1973)	(1947)	(1951)	(1951)	(1951)	(1944)

## 12059500 NORTH FORK SKOKOMISH RIVER NEAR POTLATCH, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1944 - 2004	
ANNUAL TOTAL	67,419		58,282			
ANNUAL MEAN	185		159		117	
HIGHEST ANNUAL MEAN					311	1951
LOWEST ANNUAL MEAN					36.6	1977
HIGHEST DAILY MEAN	3,250	Oct 22	3,250	Oct 22	6,630	Nov 4, 1955
LOWEST DAILY MEAN	62	Sep 25	64	Oct 1	1.4	Sep 14, 1951
ANNUAL SEVEN-DAY MINIMUM	63	Sep 23	64	Jul 21	1.8	Sep 12, 1951
ANNUAL RUNOFF (AC-FT)	133,700		115,600		84,660	
10 PERCENT EXCEEDS	332		260		240	
50 PERCENT EXCEEDS	108		92		60	
90 PERCENT EXCEEDS	65		66		11	

## 12060500 SOUTH FORK SKOKOMISH RIVER NEAR UNION, WA

LOCATION.--Lat 47°20'26", long 123°16'44", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ , sec.2, T.21 N., R.5 W., Mason County, Hydrologic Unit 17110017, on right bank 3.0 mi upstream from Vance Creek, 2.3 mi upstream from confluence with North Fork, and 8.5 mi west of Union.

DRAINAGE AREA.--76.3 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1931 to September 1984, October 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 103.35 ft above NGVD of 1929.

REMARKS.--Records fair, except for discharges above 2,500 ft<sup>3</sup>/s and estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--62 years (water years 1932-84, 1996-2004), 744 ft<sup>3</sup>/s, 132.52 in/yr, 539,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 24,400 ft<sup>3</sup>/s, Mar. 19, 1997, gage height, 8.98 ft, on basis of slope area measurement; maximum gage height, 11.0 ft, Jan. 22, 1935, Nov. 26, 1949; minimum discharge, 57 ft<sup>3</sup>/s, Sept. 27-30, and Oct. 1-6, 2003; minimum gage height, 0.11 ft, Aug. 5-6, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, unknown, Oct. 20; maximum gage height, 7.22 ft, Oct. 20; minimum discharge, 57 ft<sup>3</sup>/s, Oct. 1-6.

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	57	429	1,100	518	1,090	587	590	339	250	150	96	140
2	57	410	1,120	482	951	531	522	342	234	150	95	134
3	57	384	1,550	453	874	501	485	334	224	150	93	129
4	57	365	1,100	423	842	474	473	319	220	145	95	122
5	57	348	1,850	399	769	530	445	313	230	141	93	118
6	60	333	3,140	402	883	536	422	292	281	141	184	114
7	73	320	1,710	510	931	784	405	284	270	137	363	112
8	105	311	1,270	1,800	790	902	391	291	242	135	199	111
9	222	298	1,030	1,850	694	784	377	280	230	131	155	113
10	219	296	888	2,250	625	651	374	273	222	131	135	118
11	173	372	797	1,580	577	562	386	261	214	131	123	605
12	864	330	953	1,260	547	512	398	255	205	126	116	313
13	606	303	998	1,600	524	474	374	248	321	122	112	314
14	350	288	1,050	3,060	739	444	377	242	287	122	107	334
15	315	314	947	2,750	1,530	422	365	240	255	121	105	423
16	e5,270	671	1,330	1,650	1,470	395	345	238	235	117	104	447
17	e8,500	1,400	1,410	1,190	1,370	383	329	237	224	115	101	564
18	2,490	e7,340	990	1,090	1,590	412	316	236	217	114	98	537
19	1,960	e5,070	868	1,140	1,190	417	355	243	211	114	97	501
20	e8,700	1,740	1,030	998	905	379	629	236	202	114	97	411
21	e5,630	1,120	988	850	760	362	693	231	196	113	99	345
22	2,270	855	807	752	667	357	566	231	192	108	104	307
23	1,630	764	740	729	599	375	486	231	192	105	101	277
24	1,150	790	1,490	700	630	552	432	223	184	105	106	252
25	904	768	1,500	636	739	982	388	214	180	104	309	233
26	759	729	1,030	619	763	1,410	378	218	174	102	449	219
27	657	652	857	648	847	1,200	402	268	169	101	274	207
28	594	2,740	733	1,100	768	905	372	307	164	99	210	196
29	547	3,380	652	1,550	668	771	341	259	160	98	179	186
30	500	1,490	592	3,770	---	795	328	293	155	97	160	180
31	457	---	555	1,570	---	699	---	282	---	97	148	---
TOTAL	45,290	34,610	35,075	38,329	25,332	19,088	12,744	8,260	6,540	3,736	4,707	8,062
MEAN	1,461	1,154	1,131	1,236	874	616	425	266	218	121	152	269
MAX	8,700	7,340	3,140	3,770	1,590	1,410	693	342	321	150	449	605
MIN	57	288	555	399	524	357	316	214	155	97	93	111
AC-FT	89,830	68,650	69,570	76,030	50,250	37,860	25,280	16,380	12,970	7,410	9,340	15,990
CFSM	19.1	15.1	14.8	16.2	11.4	8.07	5.57	3.49	2.86	1.58	1.99	3.52
IN.	22.08	16.87	17.10	18.69	12.35	9.31	6.21	4.03	3.19	1.82	2.29	3.93

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2004, BY WATER YEAR (WY)

MEAN	546	1,168	1,490	1,344	1,194	937	747	589	381	222	141	195
MAX	1,727	2,952	3,330	4,030	2,594	2,138	1,397	1,259	909	479	294	795
(WY)	(1968)	(1984)	(1967)	(1953)	(1961)	(1972)	(1937)	(1948)	(1956)	(1974)	(2001)	(1978)
MIN	72.5	76.8	538	243	414	446	343	266	161	102	70.5	65.5
(WY)	(2003)	(1937)	(1979)	(1949)	(1956)	(1942)	(1973)	(2004)	(1934)	(2003)	(2003)	(2003)

## 12060500 SOUTH FORK SKOKOMISH RIVER NEAR UNION, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1931 - 2004	
ANNUAL TOTAL	279,337		241,773			
ANNUAL MEAN	765		661		744	
HIGHEST ANNUAL MEAN					1,058	1999
LOWEST ANNUAL MEAN					423	2001
HIGHEST DAILY MEAN	8,700	Oct 20	8,700	Oct 20	15,800	Jan 15, 1961
LOWEST DAILY MEAN	57	Sep 28	57	Oct 1	57	Sep 28, 2003
ANNUAL SEVEN-DAY MINIMUM	57	Sep 28	60	Oct 1	57	Sep 28, 2003
ANNUAL RUNOFF (AC-FT)	554,100		479,600		539,100	
ANNUAL RUNOFF (CFSM)	10.0		8.66		9.75	
ANNUAL RUNOFF (INCHES)	136.19		117.88		132.52	
10 PERCENT EXCEEDS	1,610		1,400		1,600	
50 PERCENT EXCEEDS	388		376		463	
90 PERCENT EXCEEDS	65		112		112	

e Estimated

## 12061500 SKOKOMISH RIVER NEAR POTLATCH, WA

LOCATION.--Lat 47°18'36", long 123°10'33", in SE¼NW¼, sec.15, T.21 N., R.4 W., Mason County, Hydrologic Unit 17110017, on upstream side of right pier of bridge on U.S. Highway 101, 3.7 mi downstream from confluence of North and South Forks, 4.7 mi southwest of Potlatch, and at mile 5.3.

DRAINAGE AREA.--227 mi<sup>2</sup>, includes 99 mi<sup>2</sup> upstream from Cushman Dam No. 2, which is noncontributing except during spillage.

PERIOD OF RECORD.--July 1943 to current year.

REVISED RECORDS.--WSP 1716: 1950(M), 1956. WSP 1932: Drainage area. WDR WA-72: 1968(M), 1971(M). WDR WA-75: 1974.

GAGE.--Water-stage recorder. Datum of gage is 10.67 ft above NGVD of 1929. Prior to May 27, 1964, water-stage recorders or nonrecording gage at several sites about 0.6 mi upstream at different datums. Supplementary water-stage recorder on right bank at site 0.6 mi upstream at datum 16.47 ft above NGVD of 1929 used Nov. 16 to Dec. 10, 1964, June 11 to July 7, and Nov. 2-24, 1965.

REMARKS.--Records good except for estimated daily discharges, which are fair. Above stages of about 15 ft, the river flows out of the main channel upstream from the gage into three channels that bypass the gage. Flow partly regulated at Lake Cushman and Cushman Reservoir No. 2. In normal years, practically entire flow of North Fork is diverted at Cushman Dam No. 2 and is discharged into Puget Sound through Cushman powerplant No. 2. Chemical analyses August 1960 to September 1961, October 1961 to September 1970 (partial-record station), October 1971 to September 1974. Water temperatures May 1955 to September 1962, October 1963 to September 1982. Water temperatures and specific conductance July 1996 to April 1998. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--61 years (water years 1944-2004), 1,215 ft<sup>3</sup>/s, 129.00 in/yr, 880,400 acre-ft.yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,600 ft<sup>3</sup>/s, Nov. 23, 1990, gage height, 16.80 ft (floodmark), from rating curve extended above 14,000 ft<sup>3</sup>/s; maximum gage height, 17.75 ft, Mar. 19, 1997; minimum discharge, 99 ft<sup>3</sup>/s, Oct. 27, 28, Nov. 6-9, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1933 reached an elevation of 30.8 ft NGVD of 1929 at site on left bank 150 ft upstream from old highway bridge, discharge, 18,600 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, unknown, Oct. 20, gage height, 17.59 ft; minimum discharge, 159 ft<sup>3</sup>/s, Oct. 1-6.

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	162	697	2,290	989	2,400	1,090	1,050	564	427	290	210	268
2	163	674	2,080	917	2,090	993	931	564	406	287	210	262
3	163	626	2,940	854	1,880	928	856	552	389	286	210	254
4	163	587	2,110	794	1,760	874	822	536	380	282	212	247
5	163	554	3,080	749	1,590	1,000	783	526	391	276	212	241
6	163	525	7,070	758	1,710	1,020	748	502	454	272	270	237
7	166	504	3,640	942	1,820	1,420	720	492	464	270	481	231
8	188	484	2,630	2,890	1,570	1,700	698	496	421	268	341	229
9	270	462	2,090	3,270	1,380	1,470	678	485	402	267	286	230
10	313	457	1,790	4,070	1,240	1,240	666	475	389	265	260	233
11	280	533	1,580	3,070	1,130	1,080	667	465	378	261	245	788
12	960	497	1,880	2,410	1,060	975	671	452	370	257	235	513
13	848	459	1,980	2,870	1,000	902	649	439	483	253	230	470
14	476	437	2,140	5,490	1,360	842	663	428	471	250	225	504
15	410	460	1,960	5,900	2,620	799	651	423	432	246	221	633
16	7,480	978	2,450	3,250	2,800	762	616	419	406	244	218	685
17	e18,900	2,250	2,840	2,300	2,640	735	592	416	388	241	215	874
18	8,580	e18,100	2,090	2,060	2,800	767	575	408	375	237	213	850
19	4,680	e15,500	1,780	2,080	2,230	787	602	414	365	235	212	842
20	e20,000	4,410	1,950	1,860	1,760	727	916	406	356	236	210	695
21	e17,500	2,570	1,890	1,600	1,490	694	1,070	399	347	235	213	587
22	e10,200	1,930	1,590	1,410	1,300	679	927	402	341	231	220	522
23	6,160	1,680	1,430	1,350	1,170	690	799	403	337	227	222	475
24	2,310	1,730	2,390	1,260	1,150	907	727	392	334	223	231	435
25	1,680	1,830	2,900	1,150	1,320	1,520	671	379	327	222	393	405
26	1,360	1,690	2,060	1,170	1,340	2,470	642	377	320	222	608	382
27	1,160	1,490	1,740	1,270	1,470	2,350	656	431	311	219	441	364
28	1,020	5,830	1,470	2,080	1,370	1,730	627	498	305	217	356	350
29	925	e10,600	1,280	2,700	1,220	1,430	587	439	300	215	315	335
30	830	3,300	1,140	9,350	---	1,390	563	467	294	214	292	324
31	746	---	1,070	3,530	---	1,230	---	463	---	212	277	---
TOTAL	108,419	81,844	69,330	74,393	48,670	35,201	21,823	14,112	11,363	7,660	8,484	13,465
MEAN	3,497	2,728	2,236	2,400	1,678	1,136	727	455	379	247	274	449
MAX	20,000	18,100	7,070	9,350	2,800	2,470	1,070	564	483	290	608	874
MIN	162	437	1,070	749	1,000	679	563	377	294	212	210	229
AC-FT	215,000	162,300	137,500	147,600	96,540	69,820	43,290	27,990	22,540	15,190	16,830	26,710
CFSM	27.3	21.3	17.5	18.7	13.1	8.87	5.68	3.56	2.96	1.93	2.14	3.51
IN.	31.51	23.79	20.15	21.62	14.14	10.23	6.34	4.10	3.30	2.23	2.47	3.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2004, BY WATER YEAR (WY)

MEAN	836	1,976	2,395	2,220	2,106	1,609	1,195	836	559	349	251	301
MAX	3,497	5,582	5,169	5,540	4,067	3,432	2,005	1,675	1,213	783	690	1,039
(WY)	(2004)	(1991)	(1995)	(1953)	(1995)	(1972)	(1969)	(1948)	(1956)	(1974)	(1991)	(1978)
MIN	115	286	772	524	709	704	487	455	261	189	144	147
(WY)	(1988)	(1994)	(1986)	(1949)	(1985)	(2001)	(1973)	(2004)	(1992)	(1944)	(1944)	(1987)



## 12061500 SKOKOMISH RIVER NEAR POTLATCH, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1943 - 2004	
ANNUAL TOTAL	591,198		494,764			
ANNUAL MEAN	1,620		1,352		1,215	
HIGHEST ANNUAL MEAN					1,993 1999	
LOWEST ANNUAL MEAN					635 1977	
HIGHEST DAILY MEAN	20,000	Oct 20	20,000	Oct 20	30,000	Dec 20, 1994
LOWEST DAILY MEAN	162	Oct 1	162	Oct 1	99	Nov 7, 1987
ANNUAL SEVEN-DAY MINIMUM	163	Sep 29	163	Oct 1	105	Oct 22, 1987
ANNUAL RUNOFF (AC-FT)	1,173,000		981,400		880,400	
ANNUAL RUNOFF (CFSM)	12.7		10.6		9.49	
ANNUAL RUNOFF (INCHES)	171.82		143.79		129.00	
10 PERCENT EXCEEDS	3,060		2,580		2,600	
50 PERCENT EXCEEDS	643		654		728	
90 PERCENT EXCEEDS	191		231		204	

e Estimated