Water-Data Report 2007

12061500 SKOKOMISH RIVER NEAR POTLATCH, WA

Puget Sound Basin
Skokomish Subbasin

LOCATION.--Lat 47°18′36″, long 123°10′33″ referenced to North American Datum of 1927, in SE ¼ NW ¼ sec.15, T.21 N., R.4 W., Mason County, WA, 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^2 of which 99 mi^2 probably is noncontributing, includes 99 mi^2 upstream from Cushman Dam No. 2, which is noncontributing except during spillage.

SURFACE-WATER RECORDS

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 FOR PERIOD OF RECORD.--64 years (water years 1944-2007), 1,224 ft^3/s, 129.93 in/yr, 886,800 acre-ft/yr.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,500 ft^3/s, Nov. 6, gage height, 17.24 ft; minimum discharge, 159 ft^3/s, Oct. 11-15, 26-31, Nov. 1, 2.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	171	159	995	1,320	695	1,020	989	877	545	373	393	230
2	169	210	921	e12,200	659	941	923	908	545	353	385	225
3	168	1,850	859	e11,300	632	909	871	979	545	337	380	224
4	168	6,760	846	4,190	614	957	832	923	543	329	370	230
5	166	5,480	891	3,470	640	1,080	794	853	523	324	362	226
6	167	e18,400	899	7,390	700	1,220	777	795	496	319	353	222
7	167	e16,800	937	8,690	739	1,740	824	768	473	315	342	217
8	166	5,140	1,010	6,340	884	2,050	889	778	456	310	339	215
9	164	2,670	1,200	4,100	912	3,260	1,220	768	466	307	328	211
10	163	4,890	1,610	3,630	957	3,240	1,140	721	503	302	321	206
11	163	5,220	6,490	2,510	1,090	e11,400	965	688	485	296	318	202
12	162	6,510	9,040	1,920	1,610	e15,500	893	667	453	293	311	199
13	162	e10,400	e10,400	1,590	1,330	5,550	870	652	430	287	303	195
14	160	4,050	8,720	1,360	1,100	3,110	1,040	623	421	279	295	191
15	177	8,170	e15,700	1,200	1,500	2,290	991	602	409	275	286	192
16	184	e13,800	5,340	1,090	1,810	1,890	921	612	396	272	287	193
17	179	4,220	2,970	982	1,350	1,680	893	605	386	280	289	197
18	173	3,260	2,190	956	1,290	1,610	845	585	382	277	293	198
19	176	3,920	1,860	975	1,530	1,680	806	571	376	279	299	194
20	175	3,800	1,930	984	3,940	2,210	766	715	368	299	292	194
21	174	7,290	4,380	913	2,250	1,730	747	867	371	568	285	183
22	169	5,720	3,090	975	1,640	1,450	890	686	369	4,220	279	181
23	167	4,220	2,380	1,740	1,340	1,500	849	630	363	1,730	273	181
24	164	3,040	2,680	1,510	1,270	4,890	825	601	367	971	266	178
25	163	2,220	6,500	1,230	1,630	4,390	838	589	377	742	261	178
26	163	1,920	3,380	1,050	1,810	2,480	909	586	360	625	258	175
27	161	1,580	2,970	942	1,480	1,910	1,230	577	351	551	253	173
28	163	1,300	2,170	874	1,210	1,530	1,500	554	353	503	250	177
29	162	1,130	1,760	814	---	1,310	1,150	529	405	466	245	176
30	160	1,130	1,480	772	---	1,160	963	516	402	434	238	947
31	159	---	1,270	732	---	1,070	---	534	---	411	233	---
Total	5,185	155,259	106,868	87,749	36,612	86,757	28,150	21,359	12,919	17,327	9,387	6,710
Mean	167	5,175	3,447	2,831	1,308	2,799	938	689	431	559	303	224
Max	184	18,400	15,700	12,200	3,940	15,500	1,500	979	545	4,220	393	947
Min	159	159	846	732	614	909	747	516	351	272	233	173
Ac-ft	10,280	308,000	212,000	174,100	72,620	172,100	55,840	42,370	25,620	34,370	18,620	13,310
Cfsm	1.31	40.4	26.9	22.1	10.2	21.9	7.33	5.38	3.36	4.37	2.37	1.75
In.	1.51	45.12	31.06	25.50	10.64	25.21	8.18	6.21	3.75	5.04	2.73	1.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	819	2,000	2,441	2,304	2,074	1,614	1,195	833	555	351	251	296
Max	3,497	5,582	5,169	7,040	4,067	3,432	2,005	1,675	1,213	783	690	1,039
(WY)	(2004)	(1991)	(1995)	(2006)	(1995)	(1972)	(1969)	(1948)	(1956)	(1974)	(1991)	(1978)
Min	115	286	772	524	665	704	487	455	261	189	144	147
(WY)	(1988)	(1994)	(1986)	(1949)	(2005)	(2001)	(1973)	(2004)	(1992)	(1944)	(1944)	(1987)

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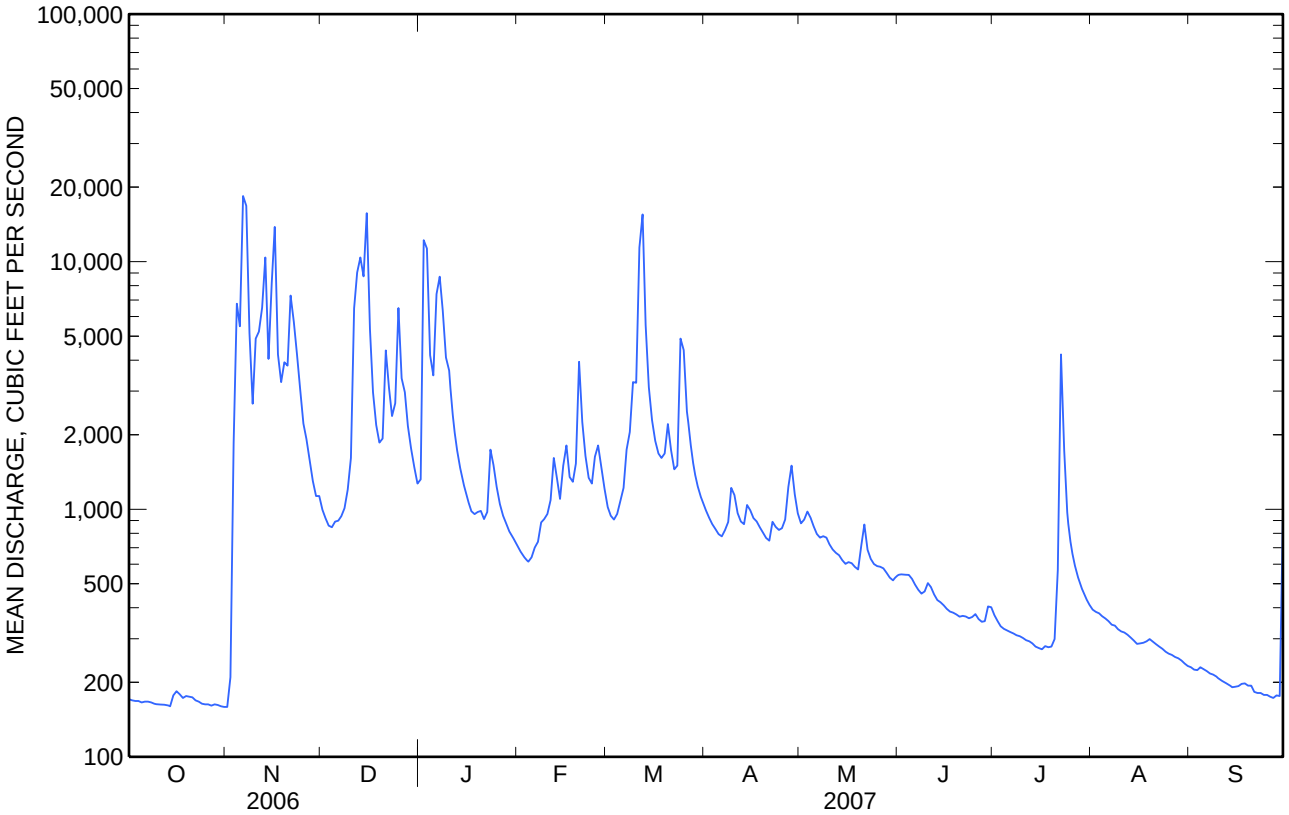
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1943 - 2007	
Annual total	678,395		574,282			
Annual mean	1,859		1,573		1,224	
Highest annual mean					1,993	1999
Lowest annual mean					635	1977
Highest daily mean	18,400	Nov 6	18,400	Nov 6	30,000	Dec 20, 1994
Lowest daily mean	159	Oct 31	159	Oct 31	99	Nov 7, 1987
Annual seven-day minimum	161	Oct 26	161	Oct 26	105	Oct 22, 1987
Annual runoff (ac-ft)	1,346,000		1,139,000		886,800	
Annual runoff (cfsm)	14.5		12.3		9.56	
Annual runoff (inches)	197.16		166.90		129.93	
10 percent exceeds	5,400		4,070		2,600	
50 percent exceeds	745		768		724	
90 percent exceeds	178		179		204