

SKAGIT RIVER BASIN

12175500 THUNDER CREEK NEAR NEWHALEM, WA

LOCATION.--Lat 48°40'22", long 121°04'18", in SE 1/4 sec.23, T.37 N., R.13 E., (unsurveyed), Whatcom County, Hydrologic Unit 17110005, Ross Lake National Recreation Area, on right bank 0.4 mi upstream from high-water line of Diablo Reservoir, 9.0 mi east of Newhalem, and at mile 3.4.

DRAINAGE AREA.--105 mi².

PERIOD OF RECORD.--October 1930 to current year. Published as "above Colonial Creek, near Marblemount" 1930-31.

REVISED RECORDS.--WSP 1012: 1943. WSP 1286: 1931(M), 1932, 1933(M), 1935(M), 1938-39(M), 1941-42(M), 1944-46(M), 1950(M), 1952 (annual runoff in acre-ft). WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,220 ft above sea level, from river-profile map.

REMARKS.--Records good. No regulation or diversion upstream from station. Large diurnal fluctuations caused by snowmelt during summer months. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--71 years (water years 1931-2001), 617 ft³/s, 79.83 in/yr, 446,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,500 ft³/s Dec. 26, 1980, gage height, 14.5 ft, from rating curve extended above 3,500 ft³/s; minimum discharge not determined, probably less than 50 ft³/s during period of ice effect or no gage-height record in February 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Records for floods, prior to establishment of station, are given in WSP 1527.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 20	1145	2,700	7.11	Aug. 23	0245	2,620	7.03
May 23	2330	*2,870	*7.29				

Minimum discharge, 79 ft³/s Mar. 4-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1580	207	116	143	106	81	219	476	1330	1130	671	1190
2	889	196	117	139	115	82	203	399	1160	1060	752	850
3	587	187	115	141	114	81	192	361	766	1130	945	701
4	443	338	111	149	117	79	181	344	638	1460	932	569
5	364	266	109	477	123	79	176	373	659	1450	787	474
6	313	226	108	480	110	79	172	349	649	1140	1120	410
7	281	203	108	358	100	83	166	341	666	1060	1160	378
8	270	201	106	309	102	90	160	415	777	1210	1020	385
9	291	190	107	267	101	105	153	459	1250	1410	986	447
10	315	178	104	239	99	107	151	453	946	1440	1120	493
11	267	166	103	214	96	106	147	488	725	1460	1220	555
12	251	159	102	201	95	105	141	793	609	1410	1360	652
13	238	152	102	185	93	112	137	1240	528	1330	1440	748
14	240	147	102	176	89	118	133	1140	570	1180	1340	834
15	215	139	102	165	87	115	129	971	558	975	1340	849
16	221	135	112	149	87	112	130	783	591	755	1390	818
17	463	131	147	146	86	110	156	618	561	682	1340	690
18	710	132	143	144	85	114	167	517	605	624	1050	533
19	390	129	118	145	83	249	165	512	735	589	762	462
20	1630	127	109	138	82	226	168	473	1000	659	635	390
21	882	124	104	138	82	192	181	505	1290	837	656	395
22	517	122	102	133	82	177	190	1110	1370	917	1670	514
23	433	123	101	127	84	167	195	2170	1130	1050	1850	684
24	388	125	100	124	88	169	210	2350	854	1220	1060	735
25	329	121	98	122	89	206	354	2000	778	1080	798	657
26	291	125	111	116	85	240	659	1810	719	1000	851	951
27	266	129	237	110	84	223	861	1700	902	948	881	624
28	296	122	195	110	82	214	887	1370	1260	1330	912	406
29	267	118	165	110	---	202	703	924	1070	967	1020	342
30	237	119	152	106	---	195	534	712	1050	774	1110	351
31	220	---	147	106	---	194	---	757	---	705	1110	---
TOTAL	14084	4837	3753	5667	2646	4412	8020	26913	25746	32982	33288	18087
MEAN	454	161	121	183	94.5	142	267	868	858	1064	1074	603
MAX	1630	338	237	480	123	249	887	2350	1370	1460	1850	1190
MIN	215	118	98	106	82	79	129	341	528	589	635	342
AC-FT	27940	9590	7440	11240	5250	8750	15910	53380	51070	65420	66030	35880
CFSM	4.33	1.54	1.15	1.74	.90	1.36	2.55	8.27	8.17	10.1	10.2	5.74
IN.	4.99	1.71	1.33	2.01	.94	1.56	2.84	9.53	9.12	11.69	11.79	6.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2001, BY WATER YEAR (WY)

	443	402	315	255	232	217	382	886	1312	1320	991	621
MEAN	443	402	315	255	232	217	382	886	1312	1320	991	621
MAX	917	1652	1023	842	683	663	1057	1601	2072	1935	1502	906
(WY)	1934	1996	1981	1984	1991	1972	1934	1993	1948	1975	1999	1997
MIN	200	110	95.2	78.4	57.3	91.1	172	432	837	784	704	367
(WY)	1978	1936	1931	1979	1936	1956	1975	1977	1981	1993	1993	1985

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12175500 THUNDER CREEK NEAR NEWHALEM, WA--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1931 - 2001	
ANNUAL TOTAL	229118		180435		617	
ANNUAL MEAN	626		494		863	
HIGHEST ANNUAL MEAN					1934	
LOWEST ANNUAL MEAN					452	
HIGHEST DAILY MEAN	3040	Sep 30	2350	May 24	8950	Dec 26 1980
LOWEST DAILY MEAN	98	Dec 25	79	Mar 4	50	Feb 7 1936
ANNUAL SEVEN-DAY MINIMUM	103	Dec 9	80	Feb 28	52	Feb 15 1936
ANNUAL RUNOFF (AC-FT)	454500		357900		446900	
ANNUAL RUNOFF (CFSM)	5.96		4.71		5.88	
ANNUAL RUNOFF (INCHES)	81.17		63.93		79.83	
10 PERCENT EXCEEDS	1610		1160		1350	
50 PERCENT EXCEEDS	379		291		421	
90 PERCENT EXCEEDS	124		102		134	