

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 NGVD of 1929, from river-profile map.

REMARKS.--Records good except for discharges above 1,300 ft³/s, which are fair. 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.--72 years (water years 1931-2002), 618 ft³/s, 80.01 in/yr, 447,900 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)
Nov. 15	1715	3,270	7.68	May 29	0900	2,540	7.34
Jan. 08	0030	*5,760	*9.70	June 29	0945	4,140	8.85

Minimum discharge, 128 ft³/s Feb. 15-19.

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	372	402	267	167	169	297	186	717	1450	1600	1010	1110
2	331	385	270	169	164	274	188	858	1470	1300	883	1070
3	288	348	244	166	161	261	186	758	1600	1180	758	1120
4	259	315	229	162	155	247	192	634	1630	1140	719	735
5	231	383	219	159	154	241	218	551	1910	1010	682	571
6	217	314	215	179	151	226	277	475	1900	1030	703	476
7	194	270	212	2540	150	212	322	418	1270	1370	660	442
8	191	245	219	3410	148	205	313	376	963	2080	706	386
9	181	229	216	1450	143	198	307	348	813	1640	836	415
10	197	218	202	908	143	190	336	329	932	1860	1040	504
11	251	217	193	684	142	235	373	335	1300	2400	1020	567
12	236	248	185	598	135	257	498	396	1720	2300	986	636
13	398	394	225	520	134	240	894	579	2090	2200	1140	626
14	278	2300	316	444	131	227	1870	665	2520	2340	1320	617
15	228	2820	275	389	128	214	1220	601	2540	1940	1310	607
16	223	1660	504	349	128	206	898	585	2340	1830	1110	770
17	236	940	881	319	128	192	745	704	1850	1900	870	725
18	195	661	554	293	128	184	623	769	1750	1850	781	495
19	274	673	420	274	135	181	534	755	1430	1780	763	573
20	252	858	352	265	138	174	499	1050	1370	1580	727	609
21	207	658	311	265	261	169	491	1240	1640	1490	739	437
22	293	536	278	245	1960	164	471	1050	1960	1600	822	411
23	381	459	249	230	1410	164	443	855	1980	1860	985	448
24	305	397	229	260	790	163	407	794	1830	1980	1190	436
25	264	361	220	325	557	167	381	834	1870	1990	1200	387
26	265	331	215	243	450	176	364	949	2370	1900	1090	350
27	454	308	202	211	381	178	356	1080	2650	1590	1060	331
28	330	292	190	195	332	178	355	1580	2540	1450	1200	318
29	270	292	184	180	---	176	387	2350	3530	1550	1210	369
30	266	274	178	179	---	175	510	2050	2250	1580	1130	313
31	525	---	172	175	---	178	---	1700	---	1270	1020	---
TOTAL	8592	17788	8626	15953	9006	6349	14844	26385	55468	52590	29670	16854
MEAN	277	593	278	515	322	205	495	851	1849	1696	957	562
MAX	525	2820	881	3410	1960	297	1870	2350	3530	2400	1320	1120
MIN	181	217	172	159	128	163	186	329	813	1010	660	313
AC-FT	17040	35280	17110	31640	17860	12590	29440	52330	110000	104300	58850	33430
CFSM	2.64	5.65	2.65	4.90	3.06	1.95	4.71	8.11	17.6	16.2	9.12	5.35
IN.	3.04	6.30	3.06	5.65	3.19	2.25	5.26	9.35	19.65	18.63	10.51	5.97

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002, BY WATER YEAR (WY)

	441	404	315	259	233	217	384	886	1319	1326	990	620
MEAN	441	404	315	259	233	217	384	886	1319	1326	990	620
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

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1931 - 2002

ANNUAL TOTAL		192767		262125								
ANNUAL MEAN		528		718						618		
HIGHEST ANNUAL MEAN										863		1934
LOWEST ANNUAL MEAN										452		1944
HIGHEST DAILY MEAN			2820		Nov 15		3530		Jun 29	8950		Dec 26 1980
LOWEST DAILY MEAN			79		Mar 4		128		Feb 15	50		Feb 7 1936
ANNUAL SEVEN-DAY MINIMUM			80		Feb 28		130		Feb 12	52		Feb 15 1936
ANNUAL RUNOFF (AC-FT)		382400		519900						447900		
ANNUAL RUNOFF (CFSM)		5.03		6.84						5.89		
ANNUAL RUNOFF (INCHES)		68.29		92.87						80.01		
10 PERCENT EXCEEDS		1170		1840						1360		
50 PERCENT EXCEEDS		352		411						421		
90 PERCENT EXCEEDS		107		177						135		