

SKAGIT RIVER BASIN

12178000 SKAGIT RIVER AT NEWHALEM, WA

LOCATION.--Lat 48°40'19", long 121°14'48", in SW 1/4 SE 1/4 sec.21, T.37 N., R.12 E., Whatcom County, Hydrologic Unit 17110005, Ross Lake National Recreation Area, on right bank 0.4 mi upstream from Newhalem Creek, 0.5 mi downstream from City of Seattle powerplant at Newhalem, 10.8 mi upstream from Bacon Creek, and at mile 93.7.

DRAINAGE AREA.--1,175 mi², of which 400 mi² is in Canada.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1908 to May 1914, October 1920 to current year. June 1914 to September 1920 (monthly discharge only), in State Water-Supply Bulletin 6. Published as "near Marblemount" 1908-14, 1920-31.

REVISED RECORDS.--WSP 512: 1909-14. WSP 1012: 1929. WSP 1316: 1914(M). WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 401.5 ft above NGVD of 1929 (river-profile survey). Prior to May 24, 1914, nonrecording gages at site 0.5 mi upstream at datum 91 ft higher. Nov. 15, 1920, to June 4, 1923, nonrecording gage at site about 500 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Water is diverted 2.9 mi upstream from station and is returned to river at City of Seattle powerplant 0.5 mi upstream from station. Flow regulated by Gorge powerplant since August 1924 and by Ross Reservoir (station 12175000) since March 1940, Diablo Reservoir (station 12176500) since October 1929, and Gorge Reservoir (station 12177700) since June 1960, having a combined total capacity of 1,533,000 acre-ft. U.S. Geological Survey satellite telemeter at station. Chemical analyses October 1973 to September 1974.

AVERAGE DISCHARGE.--94 years (water years 1909-2002), 4,411 ft³/s, 3,196,000 acre-ft/yr, adjusted.
42 years (water years 1961-2002), 4,467 ft³/s, 3,236,000 acre-ft/yr, regulated.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,500 ft³/s Nov. 29, 1909, gage height, 22.0 ft from floodmark, site and datum then in use; minimum discharge, 54 ft³/s Nov. 1, 1943, gage height, 78.15 ft; minimum daily discharge, 136 ft³/s Aug. 24, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1815 reached a stage of approximately 20.5 ft, discharge about 115,000 ft³/s. Records for other floods, prior to establishment of station, are given in WSP 1527.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,700 ft³/s July 12, gage height, 87.53 ft; minimum discharge, 1,630 ft³/s Oct 1, gage height, 81.62 ft, result of regulation; minimum daily discharge, 1,760 ft³/s Oct. 7, Sept. 29-30.

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	2980	2840	3060	2700	7120	6940	5030	6440	3560	11200	4150	3300
2	2930	3030	3330	2630	7020	6910	4980	6600	3740	10400	4620	4100
3	2610	2380	3560	5760	6990	6940	4950	4450	4030	8300	3960	3580
4	2330	2030	3620	5900	7010	6940	4980	3840	4460	7310	3510	3300
5	2390	3290	3910	6260	6950	6900	4980	3920	4700	7310	3420	2960
6	1780	3260	3010	5930	6970	6960	4970	6320	4710	7380	3460	2570
7	1760	2150	3320	7050	6090	7160	4930	6600	5260	7320	3300	2000
8	3000	3080	2880	9460	5620	6870	5090	6450	4420	7290	3120	2680
9	2590	2220	3910	6020	5660	7090	5070	4800	4650	7200	3670	2990
10	2780	2480	3970	6090	5620	7020	5410	6900	4640	7110	3660	3150
11	2810	1870	3720	6270	5560	6970	4710	6920	6070	12600	3310	3180
12	2690	2780	4150	6290	5490	7010	3030	6780	6000	14400	3990	3190
13	2370	3080	4070	6310	5570	6980	3170	6810	6390	14300	4050	3140
14	1800	5510	3700	6190	5570	6970	4810	6860	6420	12900	4350	2870
15	2620	6050	3730	7100	5520	6510	4170	7000	6400	11700	3960	2710
16	1990	3780	3480	7040	5470	6460	3170	6600	6920	9880	3580	3090
17	2300	2220	4140	6990	5560	6400	3200	6650	6680	7880	3560	2900
18	2260	1900	3710	6940	5620	6450	3310	6440	6910	7110	3460	2490
19	2180	1880	3070	6960	5590	6510	4800	6060	6780	7440	3830	2060
20	2220	2980	2860	6920	5800	6490	5040	6580	7540	7370	3370	1820
21	2000	2800	2360	6940	5490	6450	5120	6510	7870	7380	3000	1830
22	2620	2510	2690	6920	7410	5680	5150	6260	7930	7390	2740	1830
23	3120	2500	2500	7120	6750	5480	4760	6140	7960	7210	2710	1870
24	3020	2300	2700	7160	5610	5520	4870	5820	7820	7290	2930	1880
25	2940	2030	2440	6970	6490	5550	5740	5410	7950	7170	3150	1870
26	3030	3280	3130	7130	6970	6060	6060	5610	8110	7380	3240	1880
27	2990	3280	3020	7140	6940	6650	5960	5430	8170	7300	3220	2790
28	2930	3440	2400	7000	6860	6190	5920	5510	8200	7250	3770	1770
29	3090	3480	2400	7020	---	5690	5840	5750	8770	6920	3630	1760
30	3050	3330	2350	7020	---	5520	5830	5640	9870	4510	3050	1760
31	3030	---	2450	7090	---	5040	---	4990	---	3530	2610	---
TOTAL	80210	87760	99640	202320	173320	200310	145050	186090	192930	259730	108380	77320
MEAN	2587	2925	3214	6526	6190	6462	4835	6003	6431	8378	3496	2577
MAX	3120	6050	4150	9460	7410	7160	6060	7000	9870	14400	4620	4100
MIN	1760	1870	2350	2630	5470	5040	3030	3840	3560	3530	2610	1760
AC-FT	159100	174100	197600	401300	343800	397300	287700	369100	382700	515200	215000	153400
MEAN†	1433	4228	2507	4818	2982	2182	5263	9341	16270	8976	3278	1800
CFSM†	1.22	3.60	2.13	4.10	2.54	1.86	4.48	7.94	13.85	7.64	2.79	1.53
IN. †	1.41	4.01	2.46	4.73	2.64	2.14	5.00	9.17	15.44	8.81	3.22	1.71
AC-FT†	88150	251500	154200	296300	165600	134200	313100	574500	967600	552000	201600	107100

CAL YR 2001 TOTAL 958750 MEAN 2627 MAX 6050 MIN 1600 AC-FT 1902000 MEAN† 2863 CFSM† 2.44 IN.† 33.08 AC-FT† 2073000
WTR YR 2002 TOTAL 1813060 MEAN 4967 MAX 14400 MIN 1760 AC-FT 3596000 MEAN† 5256 CFSM† 4.47 IN.† 60.73 AC-FT† 3806000

† Adjusted for change in contents in Ross, Diablo and Gorge Reservoirs.