

## NOOKSACK RIVER BASIN

## 12213100 NOOKSACK RIVER AT FERNDAL, WA

LOCATION.--Lat 48°50'42", long 122°35'17", in NE 1/4 NW 1/4 sec.29, T.39 N., R.2 E., Whatcom County, Hydrologic Unit 17110004, on right bank 300 ft downstream from Main Street bridge at Ferndale, and at mile 5.8.

DRAINAGE AREA.--786 mi<sup>2</sup>, of which 48.9 mi<sup>2</sup> is in Canada.

PERIOD OF RECORD.--Annual maximum stage only, water years 1918, 1922, 1932, 1935. Annual maximum, water years 1946, 1950-66. October 1966 to current year.

REVISED RECORDS.--WDR WA-83-1: 1971(M), 1976(M), WDR WA-94-1: 1976(M), 1980(M), 1984(M), 1990(M), 1991, 1991(M).

GAGE.--Water-stage recorder. Datum of gage is 4.61 ft above NGVD of 1929. Prior to July 18, 1968, at site 220 ft upstream at datum 4.21 ft higher.

REMARKS.--No estimated daily discharges. Records good. City of Bellingham diverts up to about 100 ft<sup>3</sup>/s at times from Middle Fork Nooksack River for municipal use. Cities of Ferndale and Lynden divert about 10 ft<sup>3</sup>/s for municipal use. Numerous small diversions located upstream for irrigation. Chemical analyses October 1961 to September 1970. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--36 years (water years 1967-2002), 3,821 ft<sup>3</sup>/s, 66.05 in/yr, 2,768,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded discharge, 57,000 ft<sup>3</sup>/s Nov. 10, 1990, gage height, 23.56 ft; minimum discharge, 463 ft<sup>3</sup>/s Oct. 26, Nov. 9, 10, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 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)
Nov. 15	0915	19,800	15.63	Feb. 23	1045	*30,300	*18.94
Dec. 14	1230	17,200	14.41	Apr. 14	1515	19,600	15.53
Dec. 17	0945	21,700	16.37	Jun. 29	1445	16,500	14.07
Jan. 09	0315	28,100	18.40				

Minimum discharge, 712 ft<sup>3</sup>/s Oct. 8.

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	993	7060	4480	2560	3210	4160	3560	4280	6300	6800	2370	1650
2	947	5510	7210	4220	3180	3760	3550	4910	6040	5570	2180	1630
3	875	4640	5410	5390	3350	3460	3060	4420	6150	4830	2050	2230
4	821	3970	4380	4190	3680	3250	2880	3750	6070	4490	1950	1740
5	785	5690	3990	3520	3300	3140	3030	3540	6660	4150	2280	1430
6	752	4270	3840	3630	3580	2930	3750	3400	7600	3910	2250	1310
7	743	3470	4070	11600	4260	2760	5930	3060	5820	4200	2080	1220
8	719	3000	3900	24100	3840	2650	4490	2800	4790	5420	1940	1160
9	725	2670	6200	23300	3530	2570	3700	2630	4280	5730	1920	1170
10	755	2420	4670	12100	3260	2540	6230	2530	4830	4840	2020	1250
11	1480	2290	4020	8520	3360	3060	5870	2500	5490	5410	2070	1320
12	1340	2390	3550	7640	3080	5760	6930	2710	6360	5450	2000	1310
13	2560	3550	6210	8330	2900	4090	9470	3720	7500	5140	2090	1310
14	1940	11100	14900	6340	2720	3690	15700	4650	8450	4920	2200	1280
15	1970	17700	9150	5300	2590	3420	11500	4280	8510	4370	2250	1320
16	1470	14600	12900	4680	2520	3320	8120	3600	7800	4040	2100	1320
17	1770	8780	19300	4240	2470	2990	6500	4540	6470	4110	1850	2490
18	1550	6120	10800	3870	2620	2790	5420	5190	8300	3970	1720	1680
19	4020	5530	7790	3860	2850	2810	4790	4440	7480	3830	1700	1370
20	3600	12200	6180	3980	3210	2920	4490	4890	5730	3520	1640	1660
21	2300	9510	5170	3830	4130	2660	4220	5810	5860	3300	1560	1410
22	3240	7890	4490	3550	20500	2680	4090	5030	6510	3370	1560	1210
23	8290	8790	3960	3410	27500	2850	4030	4740	6500	3590	1640	1170
24	6130	7160	3560	3860	15300	2950	3620	4330	5800	3720	1840	1160
25	5110	5450	3250	7570	8790	3040	3330	4430	5570	3660	1970	1120
26	4710	4630	2990	6170	6730	3200	3190	4890	6130	3580	1840	1050
27	8790	4140	2800	4820	5550	3230	3070	5330	6710	3260	1750	1010
28	5830	3990	2730	4050	4760	3340	3020	7060	7070	2860	1810	980
29	4100	4670	2780	3600	---	3380	3080	9850	13100	2950	1850	981
30	3370	4620	2620	3360	---	3170	3410	9860	9710	2830	1800	1030
31	7080	---	2520	3250	---	3050	---	7690	---	2620	1720	---
TOTAL	88765	187810	179820	198840	156770	99620	154030	144860	203590	130440	60000	40971
MEAN	2863	6260	5801	6414	5599	3214	5134	4673	6786	4208	1935	1366
MAX	8790	17700	19300	24100	27500	5760	15700	9860	13100	6800	2370	2490
MIN	719	2290	2520	2560	2470	2540	2880	2500	4280	2620	1560	980
AC-FT	176100	372500	356700	394400	311000	197600	305500	287300	403800	258700	119000	81270
CFSM	3.64	7.96	7.38	8.16	7.12	4.09	6.53	5.95	8.63	5.35	2.46	1.74
IN.	4.20	8.89	8.51	9.41	7.42	4.71	7.29	6.86	9.64	6.17	2.84	1.94

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY)

	MEAN	2642	4964	5202	4770	4322	3715	3696	4567	4905	3533	2109	1830
MAX	6815	13980	9992	8720	8197	9339	5723	6526	8285	6218	4006	4074	
(WY)	1968	1991	1976	1984	1982	1972	1988	1969	1974	1999	1999	1978	
MIN	629	1276	1539	1149	1719	1864	1746	2998	2411	1988	1338	917	
(WY)	1988	1988	1986	1979	2001	1985	1975	1978	1992	1977	1987	1989	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1967 - 2002
ANNUAL TOTAL	1177878	1645516	
ANNUAL MEAN	3227	4508	
HIGHEST ANNUAL MEAN			5152 1991
LOWEST ANNUAL MEAN			2536 2001
HIGHEST DAILY MEAN	19300	Dec 17 27500	Feb 23 48200 Nov 11 1990
LOWEST DAILY MEAN	719	Oct 8 719	Oct 8 466 Nov 9 1987
ANNUAL SEVEN-DAY MINIMUM	757	Oct 4 757	Oct 4 483 Oct 23 1987
ANNUAL RUNOFF (AC-FT)	2336000	3264000	2768000
ANNUAL RUNOFF (CFSM)	4.11	5.74	4.86
ANNUAL RUNOFF (INCHES)	55.75	77.88	66.05
10 PERCENT EXCEEDS	5870	7840	6770
50 PERCENT EXCEEDS	2500	3680	3100
90 PERCENT EXCEEDS	1280	1520	1380