

SNOHOMISH RIVER BASIN

12150800 SNOHOMISH RIVER NEAR MONROE, WA

LOCATION.--Lat 47°49'52", long 122°02'50", in NE 1/4 NW 1/4 sec.16, T.27 N., R.6 E., Snohomish County, Hydrologic Unit 17110011, on left bank 150 ft upstream from State Highway 522 bridge, 0.1 mi downstream from confluence of Snoqualmie and Skykomish Rivers, 3.6 mi southwest of Monroe, and 6.0 mi south of Snohomish.

DRAINAGE AREA.--1,537 mi².

PERIOD OF RECORD.--February 1963 to current year. Water years 1932, 1934, 1951, 1960, 1962-63 (annual maximum stage only) published in WSP 1932. Approximate annual maximum stages for water years 1921, 1949-50, 1952-59, and 1961 are on file in Washington office.

GAGE.--Water-stage recorder. Datum of gage is 13.25 ft above NGVD of 1929. Prior to February 1963, crest-stage gage only at site about 800 ft downstream and Feb. 8, 1963, to May 27, 1964, water-stage recorder at site 100 ft upstream, at NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. Some regulation by powerplant at Snoqualmie Falls, 40 mi upstream, and by Spada Lake, 30 mi upstream. Minor diversions for irrigation returned to river upstream from gage. During the current water year, City of Seattle Water Department diverted an average daily discharge of about 89 ft³/s upstream from station from South Fork Tolt River for municipal use and the City of Everett diverted an undetermined amount of discharge upstream from the station from Sultan River for municipal use. Chemical analyses December 1974 to January 1976, July 1979 to September 1986. Unpublished records of water temperature and suspended-sediment concentration are available in the Tacoma office of the U.S. Geological Survey. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--39 years (water years 1964-2002), 9,621 ft³/s, 85.05 in/yr, 6,970,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 35.8 ft Feb. 10, 1951, datum then in use (discharge not determined); maximum discharge since February 1963, 150,000 ft³/s Nov. 25, 1990, gage height, 25.30 ft, from rating curve extended above 80,000 ft³/s; minimum discharge, 763 ft³/s Oct. 30, 31, 1987, gage height, 0.51 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of December 1921 reached a discharge of approximately 180,000 ft³/s. Floods in November or December 1897 and November 1906 are believed to be higher.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 33,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 15	0100	51,100	13.65	Jan. 08	1030	*59,300	*15.33
Dec. 14	1000	35,700	10.36	Feb. 23	0030	51,500	13.73
Dec. 17	0830	48,800	13.18	Apr. 14	1430	51,100	13.65

Minimum discharge, 1,570 ft³/s Sept. 28, 29.

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	2080	19200	14200	5930	9840	10400	9170	13600	20100	17000	4080	2030
2	1980	17400	16800	6380	9140	9400	9320	15800	19000	14800	3810	2010
3	1910	15600	14600	6950	8690	8700	8530	16400	19000	13400	3610	2470
4	1850	12400	12300	6550	8500	8180	8050	13900	19200	12600	3430	2730
5	1790	12400	11000	6230	7960	8030	8710	12200	20900	12100	3430	2340
6	1750	11300	10400	6270	7970	7880	10600	12100	24600	11600	3750	2100
7	1740	9600	10800	32400	9220	7460	14500	10800	20700	12200	3890	1970
8	1820	8430	9850	55900	10600	7280	13900	9710	16900	14900	3530	1900
9	2290	7520	10900	42000	9990	6920	11700	9010	14700	13600	3330	1870
10	2590	6790	10000	27200	8850	6990	14800	8520	14600	12500	3230	1870
11	7310	6300	9080	19600	9290	10200	18300	8220	17100	13400	3220	1860
12	7910	5990	8360	17300	8390	18200	23500	8860	19800	12900	3160	1820
13	13000	6560	18500	18500	7480	14400	30800	12200	23500	12100	3040	1790
14	12600	30900	33500	15000	6770	12500	46100	16100	26500	11500	2990	1760
15	11100	45300	23600	12700	6190	11700	38100	15600	25800	10200	2940	1750
16	7370	35200	26800	11200	5880	10800	28200	13400	23000	9160	2870	1810
17	6830	24200	44500	10200	5740	10100	21500	13600	18900	8910	2750	2600
18	5860	17800	30500	9400	6180	9260	17600	15300	19000	8540	2650	2680
19	9770	14700	21400	10000	7140	9120	14900	14600	20300	7910	2550	2290
20	15200	16800	16700	11100	8080	11300	13500	17000	17000	7090	2470	2140
21	10100	18200	13700	11700	10900	10500	12500	18200	17600	6600	2460	2090
22	13100	18100	11600	10400	38900	9270	12000	18500	19900	6440	2420	1960
23	19800	25100	10200	9590	43000	8700	12800	17500	19900	6380	2350	1850
24	17900	21600	9160	11400	28300	8370	11900	15300	17400	6280	2310	1740
25	18500	16500	8100	20100	20100	8200	10700	14900	16600	5990	2290	1680
26	18900	13800	7460	17600	15600	7910	10100	15800	18100	5740	2280	1640
27	16900	12100	6970	13100	13200	8080	9950	17100	19400	5450	2240	1610
28	14700	11400	6830	11000	11600	9360	9660	23300	18300	4910	2200	1590
29	11700	13100	6780	9620	---	10800	9920	30000	27200	4720	2160	1650
30	10100	13900	6280	9050	---	9940	11000	28900	23000	4690	2120	2030
31	15800	---	5990	9550	---	9510	---	23700	---	4500	2090	---
TOTAL	284250	488190	446860	463920	343500	299460	472310	480120	598000	298110	89650	59630
MEAN	9169	16270	14410	14970	12270	9660	15740	15490	19930	9616	2892	1988
MAX	19800	45300	44500	55900	43000	18200	46100	30000	27200	17000	4080	2730
MIN	1740	5990	5990	5930	5740	6920	8050	8220	14600	4500	2090	1590
AC-FT	563800	968300	886300	920200	681300	594000	936800	952300	1186000	591300	177800	118300
CFSM	5.97	10.6	9.38	9.74	7.98	6.28	10.2	10.1	13.0	6.26	1.88	1.29
IN.	6.88	11.82	10.82	11.23	8.31	7.25	11.43	11.62	14.47	7.22	2.17	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2002, BY WATER YEAR (WY)

	MEAN	6097	12500	13460	12970	11120	9289	10430	13200	12760	7006	3074	3386
MAX	13340	34800	29580	22000	24300	25700	16050	20450	24730	15290	7885	7646	
(WY)	1996	1991	1976	1984	1982	1972	1989	1972	1974	1964	1964	1978	
MIN	894	2624	3966	4401	4606	4859	5340	7743	4070	2683	1413	1133	
(WY)	1988	1988	1986	1979	1973	1985	1975	1992	1992	1987	1987	1987	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1963 - 2002

ANNUAL TOTAL		2994880		4324000								
ANNUAL MEAN		8205		11850						9621		
HIGHEST ANNUAL MEAN										13670		
LOWEST ANNUAL MEAN										6308		2001
HIGHEST DAILY MEAN				45300	Nov 15		55900	Jan 8		132000	Nov 25	1990
LOWEST DAILY MEAN				1670	Sep 25		1590	Sep 28		777	Oct 30	1987
ANNUAL SEVEN-DAY MINIMUM				1750	Sep 19		1680	Sep 23		796	Oct 25	1987
ANNUAL RUNOFF (AC-FT)				5940000			8577000			6970000		
ANNUAL RUNOFF (CFSM)				5.34			7.71			6.26		
ANNUAL RUNOFF (INCHES)				72.49			104.65			85.05		
10 PERCENT EXCEEDS				16600			21100			18300		
50 PERCENT EXCEEDS				6780			10200			7670		
90 PERCENT EXCEEDS				2140			2220			2300		