

SNOHOMISH RIVER BASIN

12149000 SNOQUALMIE RIVER NEAR CARNATION, WA

LOCATION.--Lat 47°39'58", long 121°55'27", in NW 1/4 SW 1/4 sec.9, T.25 N., R.7 E., King County, Hydrologic Unit 17110010, on left bank 40 ft downstream from highway bridge, 1.3 mi northwest of Carnation, 1.9 mi downstream from Tolt River, and at mile 23.0.

DRAINAGE AREA.--603 mi².

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October 1928 to February 1929, published in WSP 870. Prior to October 1951, published as "near Tolt."

REVISED RECORDS.--WSP 1316: 1932-33(M). WSP 1446: 1934(M). WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Dec. 20, 1933, nonrecording gage on old bridge, 100 ft upstream and Dec. 20, 1933, to Sept. 30, 1939, water-stage recorder at present site, at datum 42.96 ft higher.

REMARKS.--Records good. During the current water year, Seattle Water Department diverted an average daily discharge of 89 ft³/s upstream from station from South Fork Tolt River for municipal use. Several small diversions for irrigation and domestic use upstream from station. Low flow diverted for operation of powerplant at Snoqualmie Falls but returned to river upstream from station. Some pondage at Snoqualmie Falls and some diurnal fluctuation caused by powerplant. Chemical analyses October 1966 to June 1969. Water temperatures October 1966 to June 1969. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--73 years (water years 1930-2002), 3,738 ft³/s, 84.23 in/yr, 2,708,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,200 ft³/s Nov. 24, 1990, gage height, 60.70 ft, from inside high-water mark; minimum discharge, 239 ft³/s Aug. 21, 1945, but may have been less sometime during period of faulty intake action Sept. 13 or 14, 1949; minimum daily discharge, 341 ft³/s Sept. 15, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 15	0530	*26,000	*56.05	Jan. 08	1830	23,300	55.41
Dec. 14	0830	17,100	53.10	Feb. 22	2130	17,100	53.09
Dec. 17	1130	19,900	54.22	Apr. 14	2200	24,900	55.82

Minimum discharge, 535 ft³/s Oct. 5-8.

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	654	6940	5190	2610	3710	3420	3660	5020	6730	5190	1530	771
2	612	6280	6300	2870	3470	3120	3660	5630	6400	4480	1450	762
3	593	5290	5120	3150	3360	2890	3300	5390	6290	4010	1390	1060
4	570	3990	4350	2950	3320	2770	3110	4450	6320	3710	1310	1060
5	557	4380	3960	2770	3150	2870	3500	3960	7350	3500	1300	872
6	535	3760	3870	2900	3120	2750	4280	3810	8890	3350	1400	800
7	535	3140	4170	13000	3680	2550	6340	3440	6820	3590	1500	751
8	538	2740	3690	21800	4340	2460	5200	3100	5230	4580	1340	739
9	635	2470	4190	16600	4160	2390	4300	2920	4500	3820	1240	740
10	772	2280	3760	8120	3480	2400	6370	2810	4630	3540	1200	727
11	3370	2120	3440	5850	3630	4890	7940	2790	5700	3960	1210	716
12	2860	2040	3190	5840	3240	7870	10600	3100	6750	3780	1170	695
13	5930	2300	9440	6740	2950	5350	13100	4600	8060	3490	1090	694
14	4810	14600	15500	4980	2730	4460	20900	5850	9130	3280	1110	685
15	3960	22200	8600	4360	2570	4070	18000	5220	8230	2890	1090	667
16	2630	13100	12500	3960	2510	3770	9580	4250	7020	2570	1050	719
17	2770	7510	18700	3550	2460	3390	7000	4580	5610	2530	1010	1120
18	2300	5320	10400	3250	2730	3080	5600	5350	6570	2460	964	1060
19	4890	4520	7140	3980	3050	3210	4770	4940	7200	2370	927	862
20	6080	5550	5660	4350	3350	4610	4350	6090	5420	2220	926	811
21	3690	6430	4870	4430	5760	4000	4050	6270	5820	2100	938	793
22	5170	6720	4290	3790	14700	3510	4010	6930	6380	2080	916	740
23	7150	11100	3810	3370	14100	3270	4280	6260	6180	2080	883	706
24	6200	7850	3460	4340	9640	3140	3860	5360	5150	2040	866	682
25	7500	5570	3120	8590	6460	3180	3640	5330	e4960	1980	851	656
26	7260	4600	2910	6350	4980	3170	3570	5740	5620	1930	849	648
27	6060	4030	2750	4610	4260	3230	3570	6310	6020	1830	838	624
28	4800	3870	2750	3890	3830	3850	3380	9640	6040	1670	815	624
29	3680	4760	2820	3400	---	4270	3460	11800	10800	1680	803	677
30	3180	4870	2610	3320	---	3980	3950	10100	7430	1710	795	784
31	6130	---	2570	3680	---	3840	---	8010	---	1630	778	---
TOTAL	106421	180330	175130	173400	128740	111760	183330	169050	197250	90050	33539	23245
MEAN	3433	6011	5649	5594	4598	3605	6111	5453	6575	2905	1082	775
MAX	7500	22200	18700	21800	14700	7870	20900	11800	10800	5190	1530	1120
MIN	535	2040	2570	2610	2460	2390	3110	2790	4500	1630	778	624
AC-FT	211100	357700	347400	343900	255400	221700	363600	335300	391200	178600	66520	46110
CFSM	5.69	9.97	9.37	9.28	7.62	5.98	10.1	9.04	10.9	4.82	1.79	1.28
IN.	6.57	11.12	10.80	10.70	7.94	6.89	11.31	10.43	12.17	5.56	2.07	1.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

	2564	4896	5519	5089	4410	3804	4335	5006	4506	2335	1104	1359
MEAN	2564	4896	5519	5089	4410	3804	4335	5006	4506	2335	1104	1359
MAX	5811	12850	14530	11140	9743	9979	6797	7847	8983	5629	2992	5128
(WY)	1948	1991	1934	1953	1982	1932	1932	1936	1974	1955	1964	1959
MIN	407	619	1694	1291	1860	1933	2230	2434	1362	840	492	484
(WY)	1988	1953	1986	1937	1973	1941	1941	1992	1992	1940	1930	1998

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1929 - 2002	
ANNUAL TOTAL	1147491		1572245			
ANNUAL MEAN	3144		4308		3738	
HIGHEST ANNUAL MEAN					5439	
LOWEST ANNUAL MEAN					2314	
HIGHEST DAILY MEAN	22200	Nov 15	22200	Nov 15	54500	Nov 29 1995
LOWEST DAILY MEAN	524	Sep 25	535	Oct 6	341	Sep 15 1973
ANNUAL SEVEN-DAY MINIMUM	552	Sep 19	563	Oct 2	359	Sep 11 1973
ANNUAL RUNOFF (AC-FT)	2276000		3119000		2708000	
ANNUAL RUNOFF (CFSM)	5.21		7.14		6.20	
ANNUAL RUNOFF (INCHES)	70.79		96.99		84.23	
10 PERCENT EXCEEDS	5990		7500		7000	
50 PERCENT EXCEEDS	2640		3690		2970	
90 PERCENT EXCEEDS	758		808		839	

e Estimated