

SNOHOMISH RIVER BASIN

12148500 TOLT RIVER NEAR CARNATION, WA

LOCATION.--Lat 47°41'45", long 121°49'22", in SE 1/4 NE 1/4 sec.31, T.26 N., R.8 E., King County, Hydrologic Unit 17110010, on right bank 500 ft downstream from the forks, 0.4 mi upstream from Stossel Creek, 5.5 mi northeast of Carnation, and at mile 8.7.

DRAINAGE AREA.--81.4 mi².

PERIOD OF RECORD.--August 1928 to January 1932, September 1937 to current year. Prior to October 1951, published as "near Tolt."

REVISED RECORDS.--WSP 1286: 1929(M), 1930, 1938(M), 1939, 1943(M), 1945(M), 1951(M). WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 348 ft above NGVD of 1929 (river-profile survey). Prior to Oct. 31, 1928, nonrecording gage, and Oct. 31, 1928, to Jan. 3, 1932, water-stage recorder at site 350 ft upstream at datum 7.1 ft higher (river-profile survey). Sept. 1 to Oct. 6, 1937, nonrecording gage at present site at datum 1.64 ft higher.

REMARKS.--No estimated daily discharges. Records good. Some regulation by South Fork Reservoir, capacity, 57,830 acre-ft, and by Seattle City Light hydroelectric project, upstream from station. During the current water year City of Seattle Water Department diverted an average daily discharge of about 89 ft³/s upstream from station for municipal use. Chemical analyses July 1960 to September 1970. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--68 years (water years 1929-31, 1938-2002), 577 ft³/s, 418,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,400 ft³/s Dec. 15, 1959, gage height, 13.04 ft; minimum discharge, 53 ft³/s Sept. 22, 23, 1951, gage height, 3.84 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 14	1345	*5,340	*9.24	Jan. 07	2345	4,090	8.67
Dec. 13	1145	3,670	8.45	Feb. 21	1745	3,840	8.54
Dec. 16	1130	3,580	8.40	Feb. 22	1015	4,460	8.85
Jan. 07	0800	3,750	8.49	Apr. 14	0430	3,670	8.45

Minimum discharge, 126 ft³/s Sept. 27-95.

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	142	671	799	610	648	704	785	882	849	766	200	146
2	138	797	881	764	619	670	705	909	839	602	195	154
3	136	564	619	650	632	645	642	929	819	555	190	210
4	134	499	535	611	618	673	583	760	831	519	189	167
5	133	619	512	569	587	716	620	718	1160	488	189	150
6	133	480	530	737	527	600	782	694	1110	446	201	143
7	134	419	529	3050	638	583	935	647	809	449	203	141
8	146	379	550	2540	612	583	669	622	743	558	188	140
9	167	349	629	1360	589	581	703	608	704	391	183	140
10	199	327	522	928	587	572	1260	599	756	383	181	139
11	677	309	508	789	593	1230	1340	607	819	368	179	136
12	451	309	525	1030	574	1030	1940	706	904	342	176	136
13	567	408	2690	912	523	812	2250	803	987	327	174	135
14	790	3570	1810	784	472	743	2430	1010	951	309	173	132
15	414	1710	1070	844	444	726	1250	711	834	285	171	132
16	312	1120	2740	798	436	696	1110	590	753	273	168	195
17	338	729	2090	763	439	648	929	803	674	270	165	213
18	274	563	1210	718	563	617	800	748	888	269	163	161
19	1370	588	984	743	608	642	723	669	705	258	162	147
20	695	756	855	751	578	678	674	834	608	244	162	146
21	512	758	891	724	1880	635	635	757	670	237	161	142
22	845	900	853	693	3360	628	695	1070	665	238	157	136
23	677	1480	799	662	1670	620	764	834	618	235	157	133
24	690	912	743	1070	1100	622	675	710	548	229	155	131
25	1330	664	630	1390	815	643	735	721	484	223	155	128
26	894	569	603	921	758	656	723	748	521	220	153	128
27	846	516	585	756	737	673	702	805	498	216	153	127
28	614	507	675	676	716	968	674	1390	719	207	151	126
29	506	694	642	627	---	886	705	1650	1520	216	150	157
30	517	648	589	622	---	865	791	1120	760	219	148	165
31	860	---	612	663	---	791	---	948	---	212	147	---
TOTAL	15641	22814	28210	28755	22323	22136	28229	25602	23746	10554	5299	4436
MEAN	505	760	910	928	797	714	941	826	792	340	171	148
MAX	1370	3570	2740	3050	3360	1230	2430	1650	1520	766	203	213
MIN	133	309	508	569	436	572	583	590	484	207	147	126
AC-FT	31020	45250	55950	57040	44280	43910	55990	50780	47100	20930	10510	8800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2002, BY WATER YEAR (WY)

	441	785	886	852	737	604	669	682	555	299	181	244
MEAN	441	785	886	852	737	604	669	682	555	299	181	244
MAX	933	1965	1897	2058	1634	1472	1275	1208	1204	802	485	954
(WY)	1960	1996	1976	1953	1982	1972	1959	1948	1964	1955	1964	1959
MIN	79.5	123	305	246	163	267	289	310	205	120	74.9	72.9
(WY)	1988	1953	1986	1929	1929	1992	1941	1992	1992	1958	1958	1940

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1928 - 2002

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1928 - 2002
ANNUAL TOTAL	169331	237745	
ANNUAL MEAN	464	651	577
HIGHEST ANNUAL MEAN			922
LOWEST ANNUAL MEAN			365
HIGHEST DAILY MEAN	3570	3570	11400
LOWEST DAILY MEAN	133	126	53
ANNUAL SEVEN-DAY MINIMUM	136	130	56
ANNUAL RUNOFF (AC-FT)	335900	471600	418300
10 PERCENT EXCEEDS	783	1050	1110
50 PERCENT EXCEEDS	386	627	448
90 PERCENT EXCEEDS	160	154	142