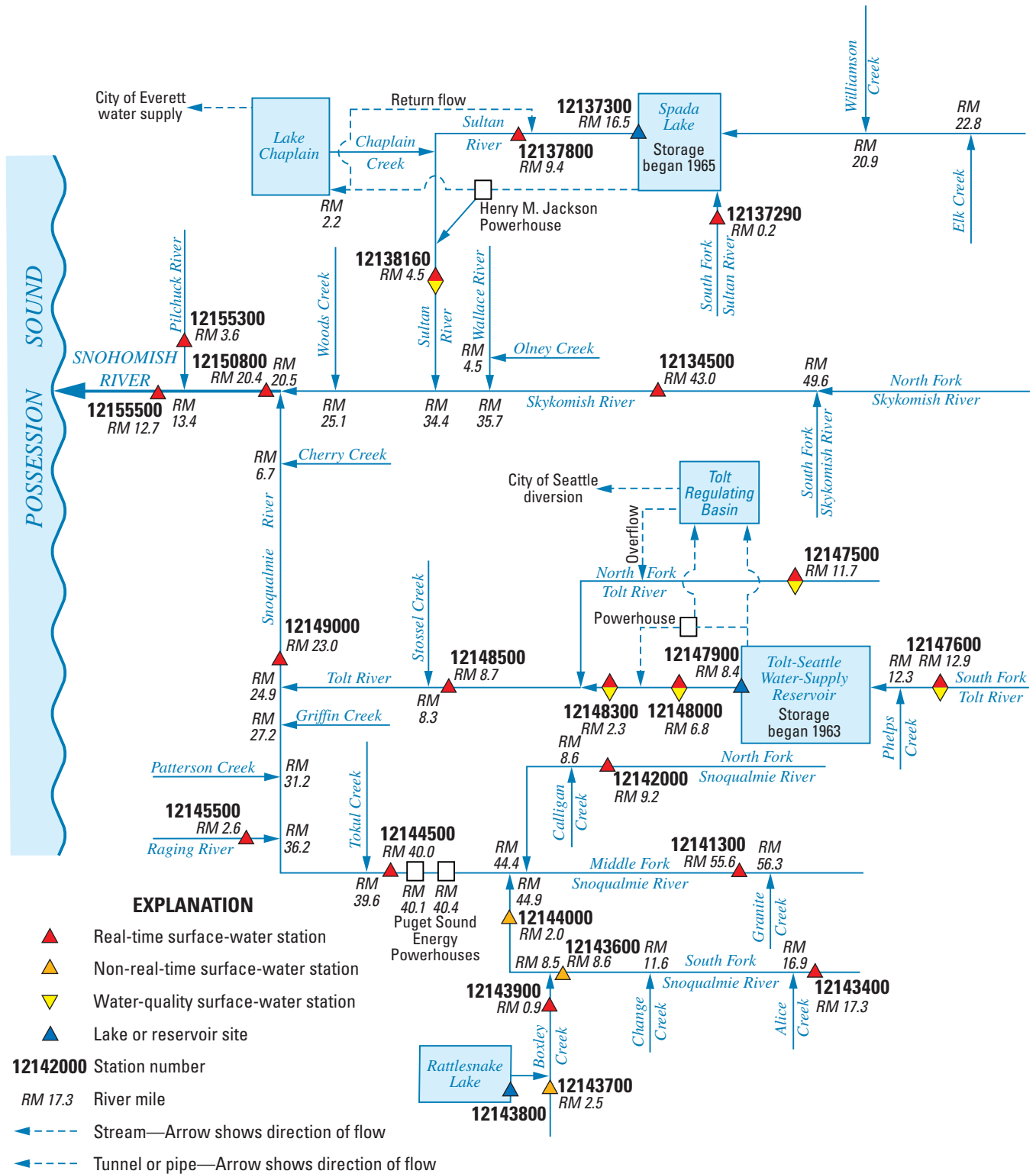


Figure 34. Location of surface-water stations in the Snohomish River Basin.



**Figure 35.** Schematic diagram showing surface-water stations in the Snohomish River Basin.

## 12134500 SKYKOMISH RIVER NEAR GOLD BAR, WA

LOCATION.--Lat 47°50'15", long 121°39'56", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.9, T.27 N., R.9 E., Snohomish County, Hydrologic Unit 17110009, on right bank 2.0 mi southeast of Gold Bar, 7.3 mi upstream from Wallace River, and at mile 43.0.

DRAINAGE AREA.--535 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 1316: 1932-35(M), 1944(M).

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 209.26 ft above NGVD of 1929. Prior to Oct. 1, 1996, at site 275 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges and for the periods Dec. 3-6, Dec. 10-Jan. 31, which are fair. No regulation. Several small diversions upstream from station. Chemical analyses July 1959 to September 1970, October 1977 to June 1980. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--77 years (water years 1929-2005), 3,948 ft<sup>3</sup>/s, 100.27 in/yr, 2,860,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,000 ft<sup>3</sup>/s, Nov. 24, 1990, gage height, 22.49 ft, from rating curve extended above 53,000 ft<sup>3</sup>/s; minimum discharge, 298 ft<sup>3</sup>/s, Oct. 30, 1987; minimum gage height, 2.73 ft, Dec. 1, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 19,000 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 2	1045	41,600	15.47	Dec 11	0230	65,200	18.51
Nov 25	0500	42,700	15.63	Jan 18	1515	*74,600	*19.55

Minimum discharge, 306 ft<sup>3</sup>/s, Sept. 27, gage height, 3.19 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,300	4,100	3,560	2,180	3,420	1,480	4,140	3,620	3,960	1,280	686	487
2	1,200	29,000	3,170	2,040	3,020	1,450	4,200	3,500	3,330	1,240	680	457
3	1,130	13,300	2,850	1,890	2,790	1,420	3,570	3,440	2,870	1,220	653	434
4	1,070	7,720	2,890	1,770	3,570	1,360	3,280	3,310	2,580	1,140	629	447
5	1,030	5,730	2,870	1,680	4,030	1,320	2,840	3,290	2,390	1,080	610	436
6	1,180	4,620	2,640	1,650	3,300	1,310	2,600	3,470	2,360	1,640	599	434
7	1,280	4,080	2,440	1,610	2,900	1,450	3,160	3,230	2,190	1,660	599	417
8	1,220	3,960	3,200	1,550	2,630	1,710	3,680	2,760	2,350	1,700	582	407
9	2,740	3,620	3,780	1,480	2,440	e1,810	3,050	2,720	2,200	3,540	566	447
10	3,760	3,270	33,800	1,420	2,270	e2,100	2,650	4,130	2,010	2,350	556	611
11	2,490	3,010	40,200	1,350	2,140	e2,020	2,710	3,880	2,000	1,890	551	607
12	1,940	2,760	12,900	1,470	2,110	1,990	2,540	3,440	2,220	1,640	544	508
13	1,660	2,600	7,840	1,430	2,150	e1,780	2,340	3,160	2,230	1,500	534	453
14	1,480	2,500	9,060	1,330	2,060	1,600	2,310	3,190	2,170	1,370	519	417
15	1,360	2,650	9,950	1,230	1,870	1,510	2,200	3,660	2,110	1,270	505	392
16	2,210	3,110	6,700	1,300	1,770	e1,480	3,430	4,700	1,960	1,270	489	388
17	3,830	2,950	5,440	7,660	1,700	e1,550	3,900	3,770	2,000	1,220	512	406
18	4,700	3,000	5,080	60,900	1,640	1,390	3,520	3,320	1,950	1,140	551	426
19	3,460	3,530	6,010	37,600	1,580	1,300	3,130	4,020	1,800	1,080	508	429
20	2,770	2,980	5,680	17,000	1,510	1,580	3,220	4,020	1,690	1,020	491	428
21	3,250	2,630	4,670	15,400	1,450	2,070	3,650	4,070	1,650	965	485	411
22	3,540	2,620	4,060	11,400	1,400	1,710	4,490	3,920	1,800	960	497	399
23	5,130	2,910	3,630	12,600	1,370	1,520	5,350	3,720	1,820	1,030	483	384
24	4,700	14,800	3,300	9,130	1,340	1,380	5,990	3,170	1,620	917	465	342
25	3,900	28,700	3,300	7,200	1,320	1,300	6,090	2,850	1,490	863	452	337
26	3,230	11,200	3,360	6,040	1,300	2,040	6,270	2,740	1,420	829	436	326
27	2,770	7,250	2,970	5,440	1,300	5,240	6,210	2,790	1,420	797	417	320
28	2,500	5,490	2,750	4,720	1,330	5,580	5,430	2,840	1,520	767	451	320
29	2,310	4,540	2,640	4,060	---	4,680	4,630	2,890	1,430	740	479	3,030
30	3,160	4,040	2,540	3,690	---	4,360	3,940	2,730	1,360	719	589	11,200
31	4,000	---	2,350	3,580	---	3,480	---	2,650	---	698	518	---
TOTAL	80,300	192,670	205,630	231,800	59,710	64,970	114,520	105,000	61,900	39,535	16,636	26,100
MEAN	2,590	6,422	6,633	7,477	2,132	2,096	3,817	3,387	2,063	1,275	537	870
MAX	5,130	29,000	40,200	60,900	4,030	5,580	6,270	4,700	3,960	3,540	686	11,200
MIN	1,030	2,500	2,350	1,230	1,300	1,300	2,200	2,650	1,360	698	417	320
AC-FT	159,300	382,200	407,900	459,800	118,400	128,900	227,200	208,300	122,800	78,420	33,000	51,770
CFSM	4.84	12.0	12.4	14.0	3.99	3.92	7.14	6.33	3.86	2.38	1.00	1.63
IN.	5.58	13.40	14.30	16.12	4.15	4.52	7.96	7.30	4.30	2.75	1.16	1.81

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	2,762	4,840	4,794	4,177	3,627	3,262	4,456	6,675	6,634	3,470	1,352	1,347
MAX	6,658	16,370	14,490	11,030	8,940	9,565	7,553	10,860	13,610	8,413	3,606	4,942
(WY)	(1934)	(1991)	(1934)	(1953)	(1996)	(1972)	(1959)	(1972)	(1974)	(1974)	(1964)	(1959)
MIN	346	534	1,231	945	791	1,469	1,908	3,387	1,955	971	535	465
(WY)	(1988)	(1937)	(1986)	(1937)	(1929)	(1955)	(1975)	(2005)	(1992)	(1941)	(2003)	(1998)

## SNOHOMISH RIVER BASIN

12134500 SKYKOMISH RIVER NEAR GOLD BAR, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	1,483,718		1,198,771			
ANNUAL MEAN	4,054		3,284		3,948	
HIGHEST ANNUAL MEAN					5,884 1972	
LOWEST ANNUAL MEAN					2,210 1941	
HIGHEST DAILY MEAN	40,200	Dec 11	60,900	Jan 18	88,400	Nov 24, 1990
LOWEST DAILY MEAN	556	Aug 21	320	Sep 27	303	Oct 29, 1987
ANNUAL SEVEN-DAY MINIMUM	594	Aug 15	347	Sep 22	310	Oct 25, 1987
ANNUAL RUNOFF (AC-FT)	2,943,000		2,378,000		2,860,000	
ANNUAL RUNOFF (CFSM)	7.58		6.14		7.38	
ANNUAL RUNOFF (INCHES)	103.17		83.35		100.27	
10 PERCENT EXCEEDS	7,190		5,430		8,150	
50 PERCENT EXCEEDS	3,270		2,210		2,800	
90 PERCENT EXCEEDS	1,150		502		850	

e Estimated

## 12137290 SOUTH FORK SULTAN RIVER NEAR SULTAN, WA

LOCATION.--Lat 47°56'51", long 121°37'32", in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.3, T.28 N., R.9 E., Snohomish County, Hydrologic Unit 17110009, on left bank, 0.3 mi downstream from bridge, 14 mi northeast of Sultan, and 0.2 mi upstream from mouth.

DRAINAGE AREA.--11.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1991 to current year.

REVISED RECORDS.--WDR WA-98-1: Maximum discharge outside period of record.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,450.53 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records fair except flows below 15 ft<sup>3</sup>/s and above 2,500 ft<sup>3</sup>/s, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--14 years (water years 1992-2005), 121 ft<sup>3</sup>/s, 141.15 in/yr, 87,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,910 ft<sup>3</sup>/s, Oct. 20, 2003, gage height, 12.95 ft; maximum gage height, 13.56 ft, Oct. 20, 2003, from crest-stage gage; minimum discharge, 4.6 ft<sup>3</sup>/s, Oct. 9, 1991.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 24, 1990, reached a stage of 13.6 ft, from floodmark, discharge, 7,000 ft<sup>3</sup>/s, from slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 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 2	0500	1,440	10.73	Dec 14	1615	1,460	10.75
Nov 24	2200	3,490	12.02	Jan 18	1015	2,780	11.66
Dec 11	0015	*3,620	*12.08	Sep 29	2345	1,940	11.13

Minimum discharge, 9.0 ft<sup>3</sup>/s, Aug. 28, gage height, 7.19 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	241	68	e44	70	71	271	85	272	36	e17	14
2	26	815	60	e41	59	62	154	86	123	39	e17	13
3	25	234	56	e37	53	56	125	83	100	e38	e17	12
4	23	132	65	35	148	49	116	76	81	32	e16	11
5	23	97	72	33	107	47	93	79	87	29	e15	11
6	47	80	58	32	78	46	99	73	102	117	e15	11
7	34	78	56	32	66	71	169	61	92	57	e14	10
8	82	69	126	30	59	64	152	53	138	175	e13	10
9	231	58	117	29	55	86	107	67	93	163	13	25
10	156	52	1,530	27	52	69	90	131	74	78	12	33
11	74	46	976	26	50	60	114	85	98	65	12	22
12	56	41	237	27	65	57	91	69	103	58	12	17
13	47	41	159	25	65	45	78	62	86	52	12	15
14	41	41	741	24	56	39	77	74	71	46	12	14
15	39	91	431	23	51	36	86	174	62	42	11	13
16	309	81	198	49	48	42	335	186	54	45	e11	13
17	272	74	145	822	47	45	195	134	64	40	14	16
18	226	110	137	1,720	45	44	154	138	60	35	12	14
19	124	100	191	615	43	51	127	205	52	32	11	13
20	88	71	125	424	41	153	126	172	46	e30	11	12
21	197	60	93	394	39	121	139	131	e47	27	11	12
22	200	79	79	347	39	79	183	135	e52	29	11	11
23	187	150	68	317	39	65	194	104	63	27	10	11
24	122	1,520	62	169	39	56	181	81	48	25	10	10
25	92	1,070	e72	122	38	52	165	72	42	23	10	10
26	75	256	e87	104	37	224	148	68	38	22	9.8	10
27	63	159	e68	109	38	532	144	63	47	21	9.6	9.9
28	56	114	e60	82	49	267	116	58	51	20	9.6	9.7
29	54	91	e57	68	---	192	89	52	47	19	32	535
30	116	78	e52	68	---	142	89	47	40	e18	26	514
31	85	---	e49	79	---	109	---	87	---	e17	17	---
TOTAL	3,198	6,129	6,295	5,954	1,576	3,032	4,207	2,991	2,333	1,457	423.0	1,431.6
MEAN	103	204	203	192	56.3	97.8	140	96.5	77.8	47.0	13.6	47.7
MAX	309	1,520	1,530	1,720	148	532	335	205	272	175	32	535
MIN	23	41	49	23	37	36	77	47	38	17	9.6	9.7
AC-FT	6,340	12,160	12,490	11,810	3,130	6,010	8,340	5,930	4,630	2,890	839	2,840
CFSM	8.89	17.6	17.5	16.6	4.85	8.43	12.1	8.32	6.70	4.05	1.18	4.11
IN.	10.26	19.66	20.19	19.09	5.05	9.72	13.49	9.59	7.48	4.67	1.36	4.59

## 12137290 SOUTH FORK SULTAN RIVER NEAR SULTAN, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2005, BY WATER YEAR (WY)												
MEAN	120	183	153	173	113	121	142	165	135	62.8	28.7	49.1
MAX	245	394	274	254	255	224	226	274	285	157	65.3	121
(WY)	(1996)	(1996)	(2000)	(1997)	(1996)	(1997)	(2002)	(1997)	(2002)	(1999)	(1995)	(2004)
MIN	17.1	60.1	64.6	65.5	41.2	43.8	82.2	90.4	34.6	15.6	6.48	7.83
(WY)	(1992)	(1994)	(1993)	(2000)	(2001)	(1992)	(1995)	(1992)	(1992)	(2003)	(2003)	(1998)
SUMMARY STATISTICS												
	FOR 2004 CALENDAR YEAR				FOR 2005 WATER YEAR				WATER YEARS 1991 - 2005			
ANNUAL TOTAL	47,130				39,026.6							
ANNUAL MEAN	129				107				121			
HIGHEST ANNUAL MEAN									176			
LOWEST ANNUAL MEAN									81.2			
HIGHEST DAILY MEAN	1,530				1,720				2,190			
LOWEST DAILY MEAN	10				9.6				5.0			
ANNUAL SEVEN-DAY MINIMUM	11				10				5.1			
ANNUAL RUNOFF (AC-FT)	93,480				77,410				87,300			
ANNUAL RUNOFF (CFSM)	11.1				9.22				10.4			
ANNUAL RUNOFF (INCHES)	151.14				125.15				141.15			
10 PERCENT EXCEEDS	245				193				256			
50 PERCENT EXCEEDS	88				61				76			
90 PERCENT EXCEEDS	23				13				16			

e Estimated

## 12137300 SPADA LAKE NEAR STARTUP, WA

LOCATION.--Lat 47°58'28", long 121°41'10", in NW<sup>1</sup>/<sub>4</sub> sec.29, T.29 N., R.9 E., Snohomish County, Hydrologic Unit 17110009, on left bank at Culmback Dam on Sultan River, 1.7 mi downstream from South Fork, 7.8 mi north of Startup, and at mile 16.5.

DRAINAGE AREA.--68.3 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1965 to current year.

REVISED RECORDS.--WDR WA-79-1: 1975-76(M). WA-95-1: 1994.

GAGE.--Nonrecording gage. Datum of gage is NGVD of 1929 (levels by Snohomish County P.U.D. No. 1).

REMARKS.--Reservoir is formed by earthfill dam originally completed to elevation 1,408 ft in 1965. Storage began April 5, 1965, for water supply for the City of Everett. During 1983 the dam was raised to elevation 1,470 ft with storage beginning November 1983. Capacity was increased to 153,260 acre-ft at elevation 1,450 ft, crest of spillway. Normal operating pool is between elevations 1,420 ft and 1,450 ft. Figures given herein represent total contents. Spada Lake is used to provide water for the City of Everett, and since June 1, 1984, power generation for Snohomish County Public Utility District No. 1.

COOPERATION.--Elevation at 1200 and 2400 hours and capacity table furnished by Snohomish County Public Utility District No. 1.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 164,599 acre-ft, Nov. 23, 1990, elevation, 1,455.8 ft; minimum contents observed since reservoir was first filled, 4,250 acre-ft, Sept. 30, 1967, elevation, 1,301.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 144,874 acre-ft, June 12-14, elevation, 1,445.4 ft; minimum contents observed, 89,789 acre-ft, Sept. 28, elevation, 1,411.4 ft.

MONTH-END ELEVATION AND CONTENTS AT 2400  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
September 30	1,438.9	133,159	+10,379
October 31	1,423.6	107,909	-25,250
November 30	1,431.9	121,248	+13,339
December 31	1,430.1	118,185	-3,063
Calendar Year 2004	--	--	+11,855
January 31	1,435.3	127,034	+8,849
February 28	1,424.8	109,804	-17,230
March 31	1,427.4	113,910	+4,106
April 30	1,441.9	138,494	+24,584
May 31	1,443.2	140,864	+2,370
June 30	1,443.1	140,681	-183
July 31	1,438.2	131,968	-8,713
August 31	1,425.6	110,067	-21,901
September 30	1,415.9	96,296	-13,771
Water Year 2005	--	--	-36,863

## 12137800 SULTAN RIVER BELOW DIVERSION DAM, NEAR SULTAN, WA

LOCATION.--Lat 47°57'34", long 121°47'46", in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.32, T.29 N., R.8 E., Snohomish County, Hydrologic Unit 17110009, on right bank 50 ft upstream from City of Everett diversion dam on Sultan River, 6.8 mi north of Sultan, and at mile 9.4.

DRAINAGE AREA.--77.1 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1983 to current year.

GAGE.--Water-stage recorder and square notch sharp-crested weir in gate of dam. Datum of gage is 600.00 ft above NGVD of 1929 (City of Everett). Prior to Oct. 1, 1989, recording gage at site 350 ft downstream at different datum, Mar. 16 to Sept. 21, 1993, Jan. 7-10, 1994, Feb. 18 to Sept. 21, 1995, Dec. 3-7, 1995, Mar. 14 to Sept. 3, 1996, Mar. 13 to June 24, 1997, recording gage at site 1,200 ft downstream, at different datum.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated at Spada Lake (station 12137300) since Apr. 5, 1965. Since May 1984, water is diverted at Spada Lake through a 10-ft diameter pipeline for power generation at the Jackson Project, and for municipal water supply at Lake Chaplain. Since July 1984, undetermined flows are returned to river at diversion dam by pipeline from Lake Chaplain for maintenance of instream flow requirements. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--22 years (water years 1984-2005), 203 ft<sup>3</sup>/s, 146,900 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft<sup>3</sup>/s, Nov. 24, 1990, gage height, 63.79 ft, from rating curve extended above 3,200 ft<sup>3</sup>/s; minimum recorded discharge, 23 ft<sup>3</sup>/s, Oct. 30, 1988, result of regulation, but may have been lower Dec. 13, 14, 2001; minimum daily discharge, 35 ft<sup>3</sup>/s, Aug. 23-25, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft<sup>3</sup>/s, Nov. 25, gage height, 56.44 ft; minimum discharge, 68 ft<sup>3</sup>/s, Nov. 24.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	125	100	100	161	217	200	198	180	105	105	99
2	167	342	100	100	162	201	196	198	179	105	105	99
3	167	103	100	100	162	198	199	202	179	105	105	99
4	167	100	100	100	162	198	198	204	180	105	105	99
5	167	100	106	100	161	199	197	205	180	105	105	99
6	167	100	100	100	161	198	197	204	180	105	105	99
7	167	100	101	100	161	199	199	204	180	105	105	99
8	167	100	123	100	162	198	196	205	180	106	105	100
9	167	100	111	100	162	198	197	205	179	105	105	99
10	166	100	503	100	162	198	197	206	180	105	106	99
11	166	100	484	100	161	198	199	204	180	105	105	99
12	167	100	101	100	162	198	199	204	179	105	105	99
13	167	100	100	100	161	198	198	205	180	105	105	99
14	167	100	122	100	161	198	199	205	179	105	105	122
15	167	100	142	118	161	198	199	205	180	105	105	150
16	167	100	100	162	162	199	228	204	135	105	105	151
17	167	100	100	307	162	199	198	203	105	105	105	150
18	166	101	100	539	162	198	198	206	105	105	105	150
19	166	100	100	193	162	199	198	196	105	105	105	150
20	167	100	100	161	162	200	198	181	105	105	105	150
21	167	100	100	161	162	196	199	180	106	105	105	154
22	167	101	100	162	162	198	198	181	106	106	106	160
23	166	101	100	161	162	198	198	181	106	105	105	160
24	166	523	100	161	162	198	199	185	107	105	107	160
25	166	579	101	161	162	198	199	179	107	105	105	160
26	166	154	100	161	162	201	198	180	107	105	99	159
27	167	100	100	162	162	209	199	180	106	105	99	160
28	167	100	100	161	170	197	198	180	106	105	99	160
29	167	100	100	161	---	200	198	180	105	105	99	193
30	167	100	100	162	---	196	198	180	105	106	99	231
31	167	---	100	162	---	197	---	180	---	105	99	---
TOTAL	5,169	4,229	3,994	4,655	4,536	6,177	5,974	6,030	4,311	3,258	3,223	4,008
MEAN	167	141	129	150	162	199	199	195	144	105	104	134
MAX	167	579	503	539	170	217	228	206	180	106	107	231
MIN	166	100	100	100	161	196	196	179	105	105	99	99
AC-FT	10,250	8,390	7,920	9,230	9,000	12,250	11,850	11,960	8,550	6,460	6,390	7,950

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2005, BY WATER YEAR (WY)

MEAN	224	375	170	214	224	233	221	239	181	161	118	164
MAX	726	1,606	306	898	715	610	484	675	652	983	162	448
(WY)	(1986)	(1996)	(1996)	(1984)	(1984)	(1984)	(1984)	(1984)	(1983)	(1983)	(1985)	(1983)
MIN	159	91.9	93.8	117	155	176	179	175	118	101	60.6	127
(WY)	(1988)	(1988)	(1988)	(1988)	(2003)	(2002)	(1987)	(2002)	(1996)	(2004)	(1983)	(2003)



## 12137800 SULTAN RIVER BELOW DIVERSION DAM, NEAR SULTAN, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1983 - 2005	
ANNUAL TOTAL	55,983		55,564			
ANNUAL MEAN	153		152		203	
HIGHEST ANNUAL MEAN					433	
LOWEST ANNUAL MEAN					144	
HIGHEST DAILY MEAN	740	Jan 29	579	Nov 25	16,600	Nov 24, 1990
LOWEST DAILY MEAN	100	Jun 17	99	Aug 26	35	Aug 23, 1983
ANNUAL SEVEN-DAY MINIMUM	100	Jun 17	99	Aug 26	42	Aug 5, 1983
ANNUAL RUNOFF (AC-FT)	111,000		110,200		146,900	
10 PERCENT EXCEEDS	191		199		243	
50 PERCENT EXCEEDS	158		161		173	
90 PERCENT EXCEEDS	100		100		106	

## 12138160 SULTAN RIVER BELOW POWERPLANT, NEAR SULTAN, WA

LOCATION.--Lat 47°54'27", long 121°48'51", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.17, T.28 N., R.8 E., Snohomish County, Hydrologic Unit 17110009, on left bank, just downstream from Henry M. Jackson powerplant, 3.2 mi north of Sultan, and at mile 4.5.

DRAINAGE AREA.--94.2 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 267.0 ft above NGVD of 1929 (levels by Snohomish County Public Utility District). Prior to Oct. 1, 1991, at site on right bank, 100 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated at Spada Lake (station 12137300) since April 5, 1965. Since May 1984, water is diverted from Spada Lake through a 14 ft diameter, 4 mile long tunnel and a 10 ft diameter, 4 mi long pipeline for power production and returned to the river upstream from the station, at the powerplant. Since July 1984, an undetermined flow was returned to river at upstream diversion dam by pipeline from Lake Chaplain for instream flow requirement. Some flows diverted into Lake Chaplain from municipal use by City of Everett. U.S. Geological survey satellite telemeter at station.

AVERAGE DISCHARGE.--22 years (water years 1984-2005), 735 ft<sup>3</sup>/s, 532,600 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,300 ft<sup>3</sup>/s, Nov. 24, 1990, gage height, 15.03 ft, from rating curve extended above 4,500 ft<sup>3</sup>/s; minimum discharge, 124 ft<sup>3</sup>/s, July 14, 15, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,680 ft<sup>3</sup>/s, Dec. 11, gage height, 8.25 ft; minimum discharge, 167 ft<sup>3</sup>/s, Aug. 15, 16.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	555	1,280	1,540	672	1,420	391	393	464	393	323	286	413
2	555	1,670	1,250	676	1,280	364	373	463	377	299	285	412
3	553	1,420	971	673	1,030	362	369	465	368	298	300	409
4	552	1,320	963	672	807	376	346	465	364	296	310	408
5	552	1,290	1,000	672	721	376	317	443	367	296	299	408
6	554	1,270	990	631	705	370	312	400	375	297	285	410
7	550	1,270	1,310	499	796	374	319	384	368	294	285	410
8	569	1,260	1,570	414	834	361	338	380	413	301	284	395
9	597	1,250	1,520	415	842	360	320	383	439	292	284	390
10	602	1,040	1,900	414	835	359	312	412	423	283	282	405
11	586	875	2,160	566	614	361	319	404	433	282	282	393
12	572	873	1,540	735	509	359	311	401	433	281	283	389
13	574	874	1,530	657	520	361	309	399	424	283	284	342
14	575	869	1,600	409	456	365	312	385	452	280	237	288
15	570	726	1,660	368	403	363	311	391	477	278	172	295
16	592	600	1,580	442	398	365	420	449	392	284	171	289
17	645	590	1,550	650	374	371	432	467	335	283	174	288
18	1,250	567	1,530	1,810	359	367	444	470	329	287	208	288
19	1,590	559	1,520	1,740	359	368	406	498	323	291	232	288
20	1,610	560	1,530	1,610	360	383	415	486	319	292	231	288
21	1,580	551	1,510	1,600	366	391	446	456	315	290	231	290
22	1,470	550	1,430	1,590	362	373	456	447	328	291	231	305
23	1,490	500	1,400	1,590	361	360	448	461	336	290	236	311
24	1,460	1,130	1,390	1,580	357	350	444	437	330	288	362	311
25	1,450	1,440	1,390	1,570	358	348	417	415	327	288	378	311
26	1,440	896	1,400	1,560	354	360	397	411	325	288	320	319
27	1,420	811	1,470	1,550	354	438	433	485	329	288	337	324
28	1,400	786	1,510	1,540	354	451	471	365	330	288	374	324
29	1,340	1,080	1,240	1,540	---	428	466	353	332	287	337	350
30	1,300	1,440	838	1,540	---	424	465	352	329	288	301	488
31	1,310	---	682	1,470	---	377	---	362	---	287	362	---
TOTAL	29,863	29,347	43,474	31,855	16,488	11,656	11,521	13,153	11,085	8,993	8,643	10,541
MEAN	963	978	1,402	1,028	589	376	384	424	370	290	279	351
MAX	1,610	1,670	2,160	1,810	1,420	451	471	498	477	323	378	488
MIN	550	500	682	368	354	348	309	352	315	278	171	288
AC-FT	59,230	58,210	86,230	63,180	32,700	23,120	22,850	26,090	21,990	17,840	17,140	20,910

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2005, BY WATER YEAR (WY)

MEAN	640	1,296	1,075	1,023	881	733	720	752	693	416	265	345
MAX	1,630	3,080	1,787	1,766	1,586	1,223	1,284	1,257	1,314	925	833	635
(WY)	(1998)	(1991)	(1996)	(1999)	(1996)	(1997)	(1988)	(1984)	(1999)	(1997)	(1999)	(1995)
MIN	227	246	261	396	310	335	276	305	256	198	167	203
(WY)	(1984)	(1988)	(1986)	(2001)	(1985)	(2001)	(1992)	(1995)	(1992)	(1987)	(1985)	(1985)

## 12138160 SULTAN RIVER BELOW POWERPLANT, NEAR SULTAN, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1984 - 2005	
ANNUAL TOTAL	261,371		226,619			
ANNUAL MEAN	714		621		735	
HIGHEST ANNUAL MEAN					1,065	1997
LOWEST ANNUAL MEAN					464	2001
HIGHEST DAILY MEAN	2,680	Jan 29	2,160	Dec 11	20,100	Nov 24, 1990
LOWEST DAILY MEAN	233	Aug 3	171	Aug 16	157	Aug 24, 1985
ANNUAL SEVEN-DAY MINIMUM	237	Aug 12	203	Aug 15	157	Aug 23, 1985
ANNUAL RUNOFF (AC-FT)	518,400		449,500		532,600	
10 PERCENT EXCEEDS	1,510		1,470		1,550	
50 PERCENT EXCEEDS	552		410		500	
90 PERCENT EXCEEDS	258		288		215	





12141300 MIDDLE FORK SNOQUALMIE RIVER NEAR TANNER, WA

LOCATION.--Lat 47°29'10", long 121°38'48", in SW¼SE¼ sec.10, T.23 N., R.9 E., King County, Hydrologic Unit 17110010, on left bank 0.7 mi downstream from Granite Creek, 6.4 mi east of North Bend, and at mile 55.6.

DRAINAGE AREA.--154 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1961 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 780 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station. Water temperatures June 1979 to September 1980. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--44 years (water years 1962-2005), 1,223 ft<sup>3</sup>/s, 107.91 in/yr, 886,100 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,200 ft<sup>3</sup>/s, Dec. 2, 1977, gage height, 14.93 ft; minimum gage height, 14.97 ft, Nov. 24, 1990; minimum discharge, 91 ft<sup>3</sup>/s, Oct. 29-31, 1987, gage height, 0.61 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 23, 1959, reached a stage of 18.7 ft from floodmarks, discharge, 49,000 ft<sup>3</sup>/s, by slope-area measurement at site 6 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 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 2	1030	11,300	9.80	Jan 18	0515	*22,200	*13.07
Nov 25	0430	14,000	10.72	Sep 30	0300	17,400	11.76
Dec 11	0400	18,000	11.92				

Minimum discharge, 116 ft<sup>3</sup>/s, Sept. 28, gage height, 0.76 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	366	1,150	879	501	730	411	1,650	958	1,870	459	222	154
2	340	7,660	770	466	643	388	1,480	963	1,350	439	218	148
3	320	3,160	698	435	588	380	1,180	993	1,180	424	207	144
4	303	1,740	671	407	821	352	1,090	949	990	385	199	145
5	288	1,270	694	383	1,040	340	899	973	859	364	193	156
6	384	1,010	626	382	785	335	885	972	836	541	191	145
7	403	865	661	384	669	377	1,280	878	791	519	190	138
8	415	807	1,350	365	601	440	1,340	751	856	556	186	134
9	1,050	733	1,360	350	559	459	991	801	765	1,310	183	163
10	1,470	657	10,600	332	525	491	811	1,500	671	794	180	368
11	912	603	10,600	314	503	465	941	1,300	720	619	179	295
12	660	556	3,250	331	515	464	843	1,050	954	547	175	216
13	550	545	1,910	332	558	422	729	895	975	511	171	183
14	481	525	2,950	306	513	372	705	925	887	467	167	165
15	441	564	3,140	286	466	339	672	1,300	872	431	163	157
16	1,360	729	1,810	368	440	387	1,360	1,860	758	442	160	157
17	2,380	689	1,420	3,130	421	479	1,350	1,300	829	428	180	162
18	2,300	751	1,350	17,800	403	440	1,160	1,160	758	390	178	155
19	1,480	803	1,540	7,410	387	401	992	1,440	665	367	162	149
20	1,100	650	1,350	3,630	367	574	1,020	1,330	611	342	156	144
21	1,040	569	1,070	3,340	350	736	1,170	1,520	589	323	153	139
22	1,120	645	903	2,310	339	534	1,480	1,400	643	338	152	135
23	1,310	833	788	2,660	333	459	1,760	1,210	704	356	150	131
24	1,270	6,730	714	1,780	329	412	2,020	972	594	310	148	129
25	1,060	9,330	718	1,350	328	409	1,930	839	532	287	144	126
26	867	3,250	778	1,140	324	1,150	1,930	794	507	274	140	124
27	743	1,950	659	1,080	325	2,690	1,800	827	522	261	139	122
28	670	1,390	594	927	353	2,270	1,580	822	551	251	138	121
29	622	1,090	599	797	---	1,880	1,220	806	524	246	158	2,960
30	775	1,000	594	781	---	1,850	1,020	743	490	237	218	8,300
31	938	---	544	785	---	1,240	---	842	---	227	168	---
TOTAL	27,418	52,254	55,590	54,862	14,215	21,946	37,288	33,073	23,853	13,445	5,368	15,765
MEAN	884	1,742	1,793	1,770	508	708	1,243	1,067	795	434	173	526
MAX	2,380	9,330	10,600	17,800	1,040	2,690	2,020	1,860	1,870	1,310	222	8,300
MIN	288	525	544	286	324	335	672	743	490	227	138	121
AC-FT	54,380	103,600	110,300	108,800	28,200	43,530	73,960	65,600	47,310	26,670	10,650	31,270
CFSM	5.74	11.3	11.6	11.5	3.30	4.60	8.07	6.93	5.16	2.82	1.12	3.41
IN.	6.62	12.62	13.43	13.25	3.43	5.30	9.01	7.99	5.76	3.25	1.30	3.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005, BY WATER YEAR (WY)

MEAN	865	1,641	1,586	1,556	1,279	1,048	1,328	1,782	1,783	941	414	494
MAX	1,978	4,534	3,997	3,070	2,941	2,836	2,231	3,060	4,012	2,370	1,218	1,241
(WY)	(1991)	(1996)	(1976)	(1984)	(1982)	(1972)	(1989)	(1972)	(1974)	(1974)	(1964)	(1968)
MIN	105	298	441	427	387	549	601	996	553	342	152	135
(WY)	(1988)	(1980)	(1986)	(1979)	(1969)	(1962)	(1967)	(1992)	(1992)	(2003)	(2003)	(1998)

## 12141300 MIDDLE FORK SNOQUALMIE RIVER NEAR TANNER, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1961 - 2005	
ANNUAL TOTAL	436,524		355,077		1,223	
ANNUAL MEAN	1,193		973		1,832	
HIGHEST ANNUAL MEAN					1972	
LOWEST ANNUAL MEAN					2001	
HIGHEST DAILY MEAN	10,600	Dec 10	17,800	Jan 18	23,100	Nov 24, 1990
LOWEST DAILY MEAN	173	Aug 20	121	Sep 28	91	Oct 29, 1987
ANNUAL SEVEN-DAY MINIMUM	183	Aug 15	127	Sep 22	92	Oct 24, 1987
ANNUAL RUNOFF (AC-FT)	865,800		704,300		886,100	
ANNUAL RUNOFF (CFSM)	7.74		6.32		7.94	
ANNUAL RUNOFF (INCHES)	105.45		85.77		107.91	
10 PERCENT EXCEEDS	2,040		1,750		2,420	
50 PERCENT EXCEEDS	898		643		865	
90 PERCENT EXCEEDS	341		164		268	

12142000 NORTH FORK SNOQUALMIE RIVER NEAR SNOQUALMIE FALLS, WA

LOCATION.--Lat 47°36'54", long 121°42'44", in NW¼NW¼ sec.31, T.25 N., R.9 E., King County, Hydrologic Unit 17110010, on left bank 0.6 mi upstream from Calligan Creek, 7.0 mi northeast of town of Snoqualmie Falls, and at mile 9.2.

DRAINAGE AREA.--64.0 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1929 to October 1949, water years 1950-54, 56-57, 59-60 (annual maximum), February 1961 to current year.

REVISED RECORDS.--WSP 1346: 1930-31(M), 1932, 1935, 1936-37(M), 1938, 1939-42(M), 1944, 1945-46(P), 1947, 1948(P), 1949(M). WSP 1736: 1932-34(M), 1935, 1938(M), 1943-45(M), 1947(M), drainage area. WSP 1932: 1950-54(M), 1956-57(M), 1959(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,130 ft above NGVD of 1929, from topographic map. Prior to Oct. 19, 1949, water-stage recorder, and October 1949 to February 1961, crest-stage gage, at site 1,500 ft downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Daily water temperatures June 1979 to August 1980. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--64 years (water years 1930-49, 1962-2005), 501 ft<sup>3</sup>/s, 106.28 in/yr, 362,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft<sup>3</sup>/s, Feb. 26, 1932, gage height, 17.5 ft, site and datum then in use, from rating curve extended above 2,200 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 16.47 ft; minimum discharge observed, 30 ft<sup>3</sup>/s, Sept. 17-19, 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 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 2	1015	5,910	8.64	Jan 18	0445	*9,850	*10.65
Nov 25	0315	7,030	9.27	Sep 30	0300	6,520	8.99
Dec 11	0415	8,430	9.99				

Minimum daily discharge, 37 ft<sup>3</sup>/s, Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	667	396	241	334	208	857	359	906	179	86	53
2	146	3,680	349	220	282	210	689	353	646	175	82	49
3	137	1,270	317	203	254	216	526	377	620	174	78	46
4	129	746	309	189	440	187	502	338	504	158	74	45
5	124	559	344	174	592	173	407	360	431	146	70	46
6	164	453	304	170	408	167	390	345	435	374	66	45
7	167	402	306	168	336	193	582	295	429	322	64	43
8	193	387	738	159	293	234	600	251	486	326	61	e40
9	697	344	699	152	268	245	419	256	419	869	59	e50
10	678	305	4,790	143	248	265	342	545	344	461	56	204
11	363	279	4,520	134	238	218	433	437	350	351	56	150
12	266	255	1,280	143	248	203	394	347	456	304	55	98
13	222	262	812	140	292	174	333	300	480	280	53	83
14	195	263	1,480	129	258	151	349	332	425	244	52	75
15	178	311	1,440	122	225	137	342	594	377	218	50	70
16	787	451	815	195	209	143	910	891	327	204	49	71
17	1,280	385	652	1,790	198	175	804	589	355	193	56	79
18	1,130	423	623	8,140	189	171	595	545	319	175	58	73
19	682	470	771	3,180	181	156	497	642	278	162	53	65
20	478	364	642	1,650	170	356	487	611	247	150	50	60
21	429	303	486	1,650	161	499	523	738	227	139	48	55
22	518	361	413	1,130	154	283	651	641	251	140	47	51
23	862	466	360	1,330	150	225	700	573	296	142	46	48
24	880	3,200	325	803	149	193	754	428	242	126	45	46
25	677	4,220	336	607	148	180	675	358	208	117	44	44
26	516	1,310	425	511	145	567	649	327	192	110	41	42
27	441	834	333	502	146	1,590	605	309	211	104	e38	e38
28	385	613	289	426	161	1,130	534	292	238	98	e38	e37
29	354	488	286	352	---	755	421	279	227	95	44	1,380
30	449	447	292	352	---	679	374	253	200	90	76	3,180
31	572	---	267	362	---	520	---	309	---	87	59	---
TOTAL	14,255	24,518	25,399	25,467	6,877	10,603	16,344	13,274	11,126	6,713	1,754	6,366
MEAN	460	817	819	822	246	342	545	428	371	217	56.6	212
MAX	1,280	4,220	4,790	8,140	592	1,590	910	891	906	869	86	3,180
MIN	124	255	267	122	145	137	333	251	192	87	38	37
AC-FT	28,270	48,630	50,380	50,510	13,640	21,030	32,420	26,330	22,070	13,320	3,480	12,630
CFSM	7.18	12.8	12.8	12.8	3.84	5.34	8.51	6.69	5.79	3.38	0.88	3.32
IN.	8.29	14.25	14.76	14.80	4.00	6.16	9.50	7.72	6.47	3.90	1.02	3.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)

MEAN	395	683	706	658	520	477	588	710	630	299	132	211
MAX	906	1,894	1,856	1,310	1,295	1,250	968	1,248	1,338	733	439	575
(WY)	(1935)	(1991)	(1934)	(1934)	(1982)	(1972)	(2002)	(1936)	(1974)	(1972)	(1964)	(2004)
MIN	38.3	85.4	209	124	201	225	279	327	145	70.3	41.5	44.2
(WY)	(1988)	(1937)	(1986)	(1937)	(1938)	(1992)	(1975)	(1992)	(1934)	(1940)	(2003)	(1938)



## 12142000 NORTH FORK SNOQUALMIE RIVER NEAR SNOQUALMIE FALLS, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005	
ANNUAL TOTAL	198,306		162,696			
ANNUAL MEAN	542		446		501	
HIGHEST ANNUAL MEAN					736	1972
LOWEST ANNUAL MEAN					335	1930
HIGHEST DAILY MEAN	4,790	Dec 10	8,140	Jan 18	9,580	Oct 25, 1934
LOWEST DAILY MEAN	48	Aug 20	37	Sep 28	31	Sep 16, 1998
ANNUAL SEVEN-DAY MINIMUM	52	Aug 15	42	Aug 23	32	Sep 11, 1998
ANNUAL RUNOFF (AC-FT)	393,300		322,700		362,700	
ANNUAL RUNOFF (CFSM)	8.47		6.96		7.82	
ANNUAL RUNOFF (INCHES)	115.27		94.57		106.28	
10 PERCENT EXCEEDS	912		777		1,000	
50 PERCENT EXCEEDS	408		296		355	
90 PERCENT EXCEEDS	122		57		91	

e Estimated

12143400 SOUTH FORK SNOQUALMIE RIVER ABOVE ALICE CREEK, NEAR GARCIA, WA

LOCATION.--Lat 47°24'55", long 121°35'10", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.6, T.22 N., R.10 E., King County, Hydrologic Unit 17110010, Snoqualmie National Forest, on left bank, 50 ft downstream from bridge, 0.4 mi upstream from Alice Creek, 1.5 mi southeast of Garcia, 11 mi southeast of North Bend, and at mile 17.3.

DRAINAGE AREA.--41.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1960 to current year.

REVISED RECORDS.--WDR WA-80-1: 1978.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,437.67 ft above Washington Highway Department datum (now Dept. of Transportation). Oct. 1, 1960, to Sept. 30, 1987, recording gage at same site at datum 10.00 ft higher.

REMARKS.--Records good except estimated daily discharges, which are fair. No regulation or diversion upstream from station. Chemical analyses October to November 1971. Water temperatures May 1979 to September 1980. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--45 years (water years 1961-2005), 299 ft<sup>3</sup>/s, 97.53 in/yr, 216,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,450 ft<sup>3</sup>/s, Nov. 23, 1986, gage height, 8.33 ft, datum then in use; minimum discharge, 18 ft<sup>3</sup>/s, Sept. 3-7, 2003, Aug. 18-19, 2004.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in November and December 1959 reached stages of 14.7 ft and 13.4 ft, respectively, from floodmarks, discharges not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 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 2	1000	2,440	14.15	Jan 18	0345	4,460	15.85
Nov 25	0430	2,820	14.50	Sep 30	0300	2,300	14.01
Dec 11	0315	*4,540	*15.91				

Minimum discharge, 25 ft<sup>3</sup>/s, Sept. 26-29, minimum gage height, 9.54 ft, Sept. 27-29.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	301	238	178	e191	101	339	270	308	95	51	33
2	93	1,640	206	168	195	98	324	268	221	92	50	32
3	88	752	187	158	184	96	281	258	196	88	48	31
4	83	489	180	149	237	93	265	248	175	83	46	32
5	77	379	173	141	237	93	230	254	163	79	44	41
6	137	312	154	143	198	94	240	242	160	113	43	33
7	108	272	154	138	177	112	320	213	149	97	43	30
8	114	245	299	132	162	122	335	185	157	120	43	29
9	248	220	343	128	152	133	271	207	144	215	42	43
10	297	197	2,770	122	143	131	232	365	133	145	42	86
11	200	178	2,680	117	136	124	270	283	141	122	42	71
12	155	163	982	118	140	124	239	237	194	110	41	49
13	131	157	641	113	142	107	209	207	206	101	39	40
14	118	144	697	103	131	95	195	224	188	93	38	36
15	109	159	736	92	119	88	185	259	189	91	36	34
16	306	187	529	105	113	104	286	309	163	96	36	33
17	525	181	438	574	109	114	288	304	186	91	42	33
18	531	193	418	3,790	105	103	261	281	163	85	40	32
19	406	203	477	1,930	101	97	254	323	145	80	36	30
20	317	170	427	1,020	97	114	280	284	135	76	35	29
21	317	152	362	886	93	135	333	321	129	72	34	28
22	340	174	318	629	90	112	419	315	134	82	34	28
23	336	211	284	628	88	103	494	275	138	78	33	27
24	345	1,410	262	476	86	95	573	237	121	70	33	27
25	293	1,860	264	390	85	91	562	213	112	66	31	26
26	247	780	254	333	84	187	527	199	107	63	30	26
27	217	523	231	311	84	431	482	187	111	60	30	25
28	198	386	215	e247	93	434	405	175	111	58	29	26
29	183	307	212	e198	---	384	323	166	108	55	42	354
30	236	271	202	e200	---	356	278	154	101	53	49	1,180
31	220	---	189	e207	---	275	---	177	---	51	37	---
TOTAL	7,078	12,616	15,522	13,924	3,772	4,746	9,700	7,640	4,688	2,780	1,219	2,524
MEAN	228	421	501	449	135	153	323	246	156	89.7	39.3	84.1
MAX	531	1,860	2,770	3,790	237	434	573	365	308	215	51	1,180
MIN	77	144	154	92	84	88	185	154	101	51	29	25
AC-FT	14,040	25,020	30,790	27,620	7,480	9,410	19,240	15,150	9,300	5,510	2,420	5,010
CFSM	5.49	10.1	12.0	10.8	3.24	3.68	7.77	5.92	3.76	2.16	0.95	2.02
IN.	6.33	11.28	13.88	12.45	3.37	4.24	8.67	6.83	4.19	2.49	1.09	2.26

## 12143400 SOUTH FORK SNOQUALMIE RIVER ABOVE ALICE CREEK, NEAR GARCIA, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2005, BY WATER YEAR (WY)												
MEAN	180	387	372	357	312	274	387	529	444	185	71.7	90.0
MAX	420	1,271	1,115	743	764	715	660	858	1,208	615	212	287
(WY)	(1998)	(1991)	(1976)	(1984)	(1982)	(1972)	(1990)	(1997)	(1974)	(1974)	(1964)	(2004)
MIN	21.2	61.3	77.7	87.7	77.0	125	171	246	95.6	56.5	27.5	26.0
(WY)	(1988)	(1988)	(1986)	(1979)	(1969)	(1962)	(1967)	(2005)	(1992)	(2003)	(2003)	(1998)
SUMMARY STATISTICS												
	FOR 2004 CALENDAR YEAR				FOR 2005 WATER YEAR				WATER YEARS 1961 - 2005			
ANNUAL TOTAL	109,945				86,209							
ANNUAL MEAN	300				236				299			
HIGHEST ANNUAL MEAN									430			
LOWEST ANNUAL MEAN									189			
HIGHEST DAILY MEAN	2,770				Dec 10				3,790			
LOWEST DAILY MEAN	19				Aug 19				25			
ANNUAL SEVEN-DAY MINIMUM	21				Aug 15				26			
ANNUAL RUNOFF (AC-FT)	218,100				171,000				216,300			
ANNUAL RUNOFF (CFSM)	7.22				5.68				7.18			
ANNUAL RUNOFF (INCHES)	98.32				77.09				97.53			
10 PERCENT EXCEEDS	583				418				640			
50 PERCENT EXCEEDS	234				158				204			
90 PERCENT EXCEEDS	67				39				50			

e Estimated

12143600 SOUTH FORK SNOQUALMIE RIVER AT EDGEWICK, WA

LOCATION.--Lat 47°27'10", long 121°43'00", in NE¼NE¼ sec.25, T.23 N., R.8 E., King County, Hydrologic Unit 17110010, on right bank at upstream side of highway bridge in Edgewick, 3 mi downstream from Change Creek, and at mile 8.6.

DRAINAGE AREA.--65.9 mi<sup>2</sup>.

PERIOD OF RECORD.--July to September 1962, March 1963 to September 1965, October 1983 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 571.24 ft above NGVD of 1929. Prior to August 3, 1983, gage at site 45 ft downstream at datum 5.90 ft higher. Prior to Mar. 17, 2004, gage at site on left bank at same datum.

REMARKS.--No estimated daily discharges. Records good. Minor regulation at Twin Falls and Weeks hydroelectric project, upstream from station. No diversions.

AVERAGE DISCHARGE.--24 years (water years 1964-65, 1984-2005), 431 ft<sup>3</sup>/s, 88.96 in/yr, 312,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft<sup>3</sup>/s, Nov. 24, 1990, gage height, 13.85 ft; minimum discharge, 23 ft<sup>3</sup>/s, Sept. 28, 2001, result of regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,150 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 2	1200	3,170	10.61	Jan 18	0600	*7,420	*12.62
Nov 25	0715	3,610	10.87	Sep 30	0415	3,460	10.78
Dec 11	0345	7,130	12.51				

Minimum discharge, 54 ft<sup>3</sup>/s, Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	300	364	223	303	147	557	360	420	152	86	64
2	135	2,010	324	211	275	144	548	358	318	148	86	62
3	128	1,020	298	200	259	142	452	346	293	141	84	62
4	120	612	288	189	312	138	419	328	264	133	81	63
5	116	471	284	178	327	137	361	337	247	128	79	74
6	172	385	262	183	278	138	358	319	244	167	78	65
7	152	332	273	179	251	150	464	288	228	151	78	61
8	156	301	511	172	232	167	514	253	238	166	79	60
9	281	272	527	165	218	172	410	271	222	310	77	69
10	353	243	3,910	159	207	174	347	498	208	228	74	134
11	252	221	4,180	152	199	164	402	393	220	195	73	117
12	202	206	1,370	153	200	164	366	328	295	177	73	88
13	176	198	853	148	205	148	321	290	316	165	71	76
14	158	187	870	141	192	136	296	301	296	154	70	70
15	147	195	954	127	177	127	279	349	299	147	68	67
16	318	226	677	139	170	151	459	467	261	145	67	66
17	646	224	546	615	163	164	482	462	288	138	72	65
18	691	244	505	6,340	159	150	413	417	257	129	73	62
19	520	254	558	3,070	155	146	382	462	231	123	68	62
20	400	219	509	1,530	149	174	402	416	213	116	66	60
21	377	200	436	1,360	144	206	460	465	203	114	64	59
22	378	217	384	954	140	172	577	457	207	122	63	57
23	386	248	344	933	137	158	699	405	219	118	63	57
24	394	1,540	319	704	135	147	830	349	197	109	62	56
25	350	2,390	319	563	132	140	795	311	184	106	62	55
26	300	1,100	314	472	131	328	744	287	175	107	61	55
27	265	724	283	440	130	810	674	270	180	98	60	55
28	242	541	265	389	138	808	572	252	174	94	60	54
29	225	443	264	344	---	673	441	238	172	93	76	300
30	275	401	252	327	---	611	377	224	160	90	81	1,790
31	262	---	236	326	---	442	---	241	---	87	70	---
TOTAL	8,718	15,924	21,479	21,086	5,518	7,528	14,401	10,742	7,229	4,351	2,225	3,985
MEAN	281	531	693	680	197	243	480	347	241	140	71.8	133
MAX	691	2,390	4,180	6,340	327	810	830	498	420	310	86	1,790
MIN	116	187	236	127	130	127	279	224	160	87	60	54
AC-FT	17,290	31,590	42,600	41,820	10,940	14,930	28,560	21,310	14,340	8,630	4,410	7,900
CFSM	4.27	8.05	10.5	10.3	2.99	3.68	7.28	5.26	3.66	2.13	1.09	2.02
IN.	4.92	8.99	12.12	11.90	3.11	4.25	8.13	6.06	4.08	2.46	1.26	2.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2005, BY WATER YEAR (WY)

MEAN	276	662	492	559	469	432	596	684	538	222	106	118
MAX	610	1,792	986	1,137	1,149	829	921	1,196	1,254	653	282	356
(WY)	(1986)	(1991)	(2000)	(1984)	(1996)	(1997)	(1989)	(1997)	(1964)	(1964)	(1964)	(2004)
MIN	44.1	99.2	138	180	179	243	357	321	132	89.2	53.2	50.9
(WY)	(1988)	(1988)	(1986)	(1985)	(2001)	(2005)	(1986)	(1992)	(1992)	(2003)	(2003)	(1998)

## 12143600 SOUTH FORK SNOQUALMIE RIVER AT EDGEWICK, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1962 - 2005	
ANNUAL TOTAL	151,440		123,186			
ANNUAL MEAN	414		337		431	
HIGHEST ANNUAL MEAN					614	
LOWEST ANNUAL MEAN					276	
HIGHEST DAILY MEAN	4,180	Dec 11	6,340	Jan 18	9,520	Nov 24, 1990
LOWEST DAILY MEAN	52	Aug 20	54	Sep 28	42	Oct 21, 1987
ANNUAL SEVEN-DAY MINIMUM	55	Aug 15	56	Sep 22	42	Oct 21, 1987
ANNUAL RUNOFF (AC-FT)	300,400		244,300		312,600	
ANNUAL RUNOFF (CFSM)	6.28		5.12		6.55	
ANNUAL RUNOFF (INCHES)	85.49		69.54		88.96	
10 PERCENT EXCEEDS	724		567		887	
50 PERCENT EXCEEDS	322		223		302	
90 PERCENT EXCEEDS	105		70		75	

## 12143700 BOXLEY CREEK NEAR CEDAR FALLS, WA

LOCATION.--Lat 47°25'58", long 121°45'04", in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.35, T.23 N., R.8 E., King County, Hydrologic Unit 17110012, on left bank 1.7 mi northeast of town of Cedar Falls, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--1.57 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1945 to current year. Prior to October 1960 published in WSP 1932.

GAGE.--Water-stage recorder. Elevation of gage is 1,220 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. Flow is mostly seepage from Chester Morse Lake.

AVERAGE DISCHARGE.--60 years (water years 1946-2005), 23.7 ft<sup>3</sup>/s, 17,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 189 ft<sup>3</sup>/s, Dec. 19, 1977, gage height, 2.88 ft; maximum gage height, 3.52 ft, June 22, 2004; no flow at times during water years 1967, 1968, and 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 57 ft<sup>3</sup>/s, May 30, gage height, 3.14 ft; minimum discharge, 6.5 ft<sup>3</sup>/s, Apr. 9-15.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	7.2	8.3	16	17	18	8.7	22	53	45	34	20
2	21	7.5	8.3	16	18	17	8.3	24	53	45	34	20
3	21	7.2	8.3	16	18	16	8.3	26	53	45	33	19
4	21	7.2	8.3	16	19	16	7.9	28	53	44	33	19
5	21	7.2	8.3	16	20	15	7.6	31	53	44	32	19
6	20	7.2	8.3	16	21	15	7.3	33	53	44	31	18
7	20	7.2	8.5	16	21	15	7.1	35	52	44	31	18
8	19	7.2	9.0	15	21	14	6.8	37	51	44	30	18
9	19	7.2	8.9	15	21	14	6.6	40	51	43	30	18
10	18	7.2	9.9	15	22	13	6.5	42	51	42	29	18
11	17	7.2	11	15	22	13	6.5	43	50	42	28	18
12	16	7.2	11	14	22	13	6.5	44	50	41	28	17
13	15	7.2	11	14	21	13	6.5	45	49	41	27	17
14	15	7.2	10	13	21	13	6.5	45	49	41	27	16
15	15	7.4	10	13	21	12	6.7	46	49	41	26	16
16	14	7.6	10	13	21	12	7.2	46	49	40	26	15
17	14	7.6	10	14	21	12	7.4	47	48	40	26	15
18	13	7.9	10	16	21	12	8.0	47	47	40	25	14
19	12	7.9	11	14	20	11	8.3	47	46	39	25	14
20	11	7.9	11	13	20	11	8.6	48	46	39	25	13
21	11	7.9	12	13	19	11	9.3	49	46	38	24	13
22	10	7.9	12	12	19	11	10	49	46	38	24	13
23	9.8	8.0	13	12	19	11	11	50	45	38	24	13
24	9.5	8.4	13	12	19	10	12	50	45	37	23	12
25	9.1	8.6	14	12	19	10	13	51	45	37	23	12
26	8.5	8.3	14	12	18	10	14	52	45	37	22	11
27	8.3	8.3	15	12	18	10	15	54	45	36	22	11
28	8.1	8.3	15	13	18	10	17	55	45	35	22	11
29	7.8	8.3	16	13	---	9.8	18	56	45	35	22	10
30	7.6	8.3	16	15	---	9.3	20	56	45	34	21	11
31	7.4	---	16	16	---	8.8	---	53	---	34	20	---
TOTAL	441.1	229.7	347.1	438	557	385.9	286.6	1,351	1,458	1,243	827	459
MEAN	14.2	7.66	11.2	14.1	19.9	12.4	9.55	43.6	48.6	40.1	26.7	15.3
MAX	22	8.6	16	16	22	18	20	56	53	45	34	20
MIN	7.4	7.2	8.3	12	17	8.8	6.5	22	45	34	20	10
AC-FT	875	456	688	869	1,100	765	568	2,680	2,890	2,470	1,640	910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2005, BY WATER YEAR (WY)

	4.33	7.75	22.7	24.8	25.5	21.2	18.3	31.6	49.9	43.1	25.2	10.5
MEAN												
MAX	34.5	78.4	94.5	79.1	103	79.5	68.3	82.2	129	93.0	74.8	40.3
(WY)	(1960)	(1948)	(1991)	(1950)	(1953)	(1950)	(1950)	(1993)	(1946)	(1993)	(1955)	(1955)
MIN	0.09	0.01	0.11	0.25	0.34	0.16	1.21	3.37	7.58	11.0	2.18	0.29
(WY)	(1988)	(1988)	(1988)	(2003)	(2001)	(2001)	(1962)	(1999)	(1963)	(1978)	(1992)	(1987)

SUMMARY STATISTICS

	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1945 - 2005	
ANNUAL TOTAL	9,140.4		8,023.4			
ANNUAL MEAN	25.0		22.0		23.7	
HIGHEST ANNUAL MEAN					51.9	
LOWEST ANNUAL MEAN					6.75	
HIGHEST DAILY MEAN	120	Jun 21	56	May 29	177	Dec 1, 1990
LOWEST DAILY MEAN	5.2	Feb 5	6.5	Apr 10	0.00	Oct 31, 1966
ANNUAL SEVEN-DAY MINIMUM	5.5	Feb 2	6.5	Apr 9	0.00	Oct 31, 1966
ANNUAL RUNOFF (AC-FT)	18,130		15,910		17,200	
10 PERCENT EXCEEDS	60		46		59	
50 PERCENT EXCEEDS	15		16		16	
90 PERCENT EXCEEDS	7.4		7.9		1.3	

## 12143800 RATTLESNAKE LAKE AT CEDAR FALLS, WA

LOCATION.--Lat 47°25'39", long 121°46'29", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.34, T.23 N., R.8 E., King County, Hydrologic Unit 17110012, on southeast shore, and 0.6 mi northeast of town of Cedar Falls.

DRAINAGE AREA.--1.86 mi<sup>2</sup>.

PERIOD OF RECORD.--November to December 1945 (fragmentary), January 1953 to current year. Extremes prior to October 1960 published in WSP 1932 and daily gage heights are available in files of the U.S. Geological Survey.

GAGE.--Nonrecording gage. Datum of gage is 7.25 ft above NGVD of 1929 (levels by City of Seattle).

REMARKS.--No diversions. Inflow is mostly seepage from Chester Morse Lake. Most outflow from lake is seepage; however, when the lake level exceeds 906 ft gage height, surface-water discharge flows through Rattlesnake Ditch toward Boxley Creek.

COOPERATION.--Gage readings furnished by City of Seattle Water Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 911.80 ft, Nov. 25, 26, 1959; minimum observed, 852.80 ft, Jan. 9, 1953, but may have been less during Dec. 13, 1965, to Jan. 3, 1966, and Nov. 10 to Dec. 23, 1970, when water was below gage.

EXTREMES FOR CURRENT YEAR.--Maximum gage height observed, 903.46 ft, Jan. 28; minimum observed, 895.42 ft, Apr. 28.

GAGE HEIGHT, FEET  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	902.45	899.50	898.08	901.24	903.00	901.67	898.10	895.54	901.20	902.31	901.60	899.64
2	902.43	899.36	898.14	901.16	902.90	901.58	898.10	895.62	901.36	902.27	901.56	899.56
3	902.40	899.20	898.20	901.12	902.82	901.48	898.03	895.73	901.44	902.25	901.50	899.46
4	902.36	899.02	898.26	901.08	902.74	901.36	897.96	895.84	901.54	902.23	901.45	899.38
5	902.31	898.85	898.31	901.00	902.74	901.24	897.85	895.98	901.64	902.18	901.41	899.34
6	902.28	898.70	898.33	900.97	902.64	901.12	897.75	896.14	901.74	902.25	901.35	899.28
7	902.23	898.59	898.39	900.95	902.60	901.00	897.56	896.28	901.82	902.21	901.30	899.18
8	902.20	898.50	898.50	900.93	902.54	900.88	897.44	896.45	901.90	902.20	901.24	899.08
9	902.18	898.40	898.55	900.87	902.48	900.75	897.26	896.64	901.99	902.26	901.18	899.00
10	902.11	898.20	898.74	900.82	902.44	900.60	897.08	896.91	902.04	902.24	901.12	898.98
11	902.02	898.02	899.15	900.72	902.40	900.48	896.96	897.10	902.14	902.24	901.06	898.94
12	901.94	897.86	899.50	900.70	902.38	900.34	896.78	897.32	902.21	902.25	901.02	898.90
13	901.85	897.70	900.02	900.63	902.34	900.17	896.61	897.54	902.26	902.25	900.97	898.76
14	901.74	897.65	900.48	900.60	902.33	900.01	896.46	897.72	902.31	902.24	900.89	898.56
15	901.68	897.40	900.76	900.57	902.31	899.85	896.28	898.00	902.36	902.24	900.82	898.54
16	901.60	897.30	900.94	900.48	902.27	899.69	896.14	898.28	902.40	902.22	900.76	898.48
17	901.67	897.15	901.10	900.44	902.22	899.62	896.04	898.52	902.44	902.21	900.68	898.37
18	901.64	897.07	901.25	900.86	902.18	899.45	895.94	898.78	902.47	902.19	900.63	898.32
19	901.58	896.97	901.38	901.47	902.16	899.27	895.84	899.00	902.48	902.16	900.56	898.20
20	901.54	896.83	901.50	902.02	902.14	899.16	895.76	899.26	902.48	902.12	900.48	898.04
21	901.46	896.72	901.58	902.49	902.12	899.04	895.68	899.49	902.46	902.09	900.41	897.92
22	901.38	896.65	901.62	902.78	902.08	898.90	895.61	899.70	902.45	902.04	900.34	897.80
23	901.24	896.58	901.65	903.00	902.02	898.73	895.54	899.90	902.47	902.02	900.28	897.68
24	901.11	896.65	901.64	903.20	901.98	898.56	895.54	900.07	902.44	901.98	900.19	897.56
25	900.98	896.85	901.60	903.34	901.93	898.38	895.49	900.25	902.43	901.94	900.12	897.45
26	900.77	897.05	901.56	903.36	901.88	898.34	895.45	900.35	902.40	901.90	900.04	897.34
27	900.58	897.35	901.48	903.44	901.80	898.34	895.44	900.50	902.40	901.87	899.96	897.25
28	900.37	897.61	901.42	903.46	901.72	898.27	895.42	900.67	902.38	901.81	899.90	897.10
29	900.16	897.80	901.36	903.33	---	898.25	895.44	900.80	902.36	901.76	899.84	897.02
30	899.98	897.96	901.34	903.20	---	898.20	895.50	900.96	902.34	901.71	899.80	897.24
31	899.72	---	901.27	903.12	---	898.15	---	901.10	---	901.66	899.72	---
MAX	902.45	899.50	901.65	903.46	903.00	901.67	898.10	901.10	902.48	902.31	901.60	899.64
MIN	899.72	896.58	898.08	900.44	901.72	898.15	895.42	895.54	901.20	901.66	899.72	897.02
CAL YR	2004	MAX 905.37	MIN 895.25									
WTR YR	2005	MAX 903.46	MIN 895.42									

## 12143900 BOXLEY CREEK NEAR EDGEWICK, WA

LOCATION.--Lat 47°26'56", long 121°43'50", in SW¼SE¼NW¼, sec.25, T.23 N., R.8 E., King County, Hydrologic Unit 17110010, on right bank 4.0 mi southeast of North Bend, and at mile 0.9.

DRAINAGE AREA.--3.64 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1981 to current year.

REVISED RECORDS.--WDR WA-90-1: 1982 (M), 1988 (M).

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Many small diversions for domestic use upstream from station. No regulation; flow is mostly seepage from Chester Morse Lake. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--24 years (water years 1982-2005), 41.2 ft<sup>3</sup>/s, 29,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 256 ft<sup>3</sup>/s, Dec. 3, 1995, gage height, 5.20 ft; minimum discharge, 8.3 ft<sup>3</sup>/s, Nov. 10, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 111 ft<sup>3</sup>/s, May 31, gage height, 4.63 ft; minimum discharge, 23 ft<sup>3</sup>/s, Nov. 24, gage height, 4.11 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	27	29	31	e35	35	35	37	78	68	45	31
2	33	31	29	31	e35	35	35	43	79	67	45	31
3	33	28	29	31	39	35	35	49	78	65	45	31
4	34	28	28	31	42	35	34	51	78	63	45	32
5	36	27	29	32	43	35	33	48	78	61	45	31
6	36	27	28	31	44	35	32	46	78	68	45	31
7	35	27	30	31	43	35	32	46	77	61	46	31
8	35	27	32	31	43	35	31	47	77	65	46	31
9	32	27	32	32	43	35	30	51	76	62	46	31
10	34	26	38	32	42	35	30	58	75	58	47	33
11	34	26	45	31	43	35	32	58	75	56	47	31
12	34	26	34	31	43	35	31	63	75	56	47	32
13	35	26	32	31	42	35	30	66	75	55	47	32
14	35	27	32	31	44	35	30	68	74	54	46	32
15	35	27	32	32	47	35	30	69	73	54	45	32
16	34	27	32	31	45	35	34	67	72	53	45	32
17	34	27	32	38	43	35	33	67	74	53	45	32
18	34	29	31	54	43	34	33	67	72	52	43	32
19	34	28	31	49	42	34	33	67	71	52	42	32
20	34	28	31	45	40	34	33	67	71	52	41	31
21	33	28	31	40	39	34	34	67	71	51	39	31
22	32	28	31	35	38	33	35	67	71	51	39	30
23	31	27	32	33	38	32	35	67	70	51	38	30
24	31	25	32	34	36	32	35	67	70	50	37	29
25	29	26	32	35	36	31	35	68	69	e50	36	29
26	28	27	31	35	35	34	35	68	69	e48	35	29
27	28	28	31	35	35	35	35	68	70	e46	34	28
28	28	28	31	34	35	35	35	69	69	46	34	28
29	27	28	30	34	---	35	34	71	69	46	35	32
30	27	29	30	33	---	35	34	72	68	46	32	33
31	26	---	30	34	---	35	---	75	---	45	31	---
TOTAL	1,005	820	977	1,068	1,133	1,068	993	1,894	2,202	1,705	1,293	930
MEAN	32.4	27.3	31.5	34.5	40.5	34.5	33.1	61.1	73.4	55.0	41.7	31.0
MAX	36	31	45	54	47	35	35	75	79	68	47	33
MIN	26	25	28	31	35	31	30	37	68	45	31	28
AC-FT	1,990	1,630	1,940	2,120	2,250	2,120	1,970	3,760	4,370	3,380	2,560	1,840
CFSM	8.91	7.51	8.66	9.46	11.1	9.46	9.09	16.8	20.2	15.1	11.5	8.52
IN.	10.27	8.38	9.98	10.91	11.58	10.91	10.15	19.36	22.50	17.42	13.21	9.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

MEAN	21.1	24.2	35.2	36.8	42.9	43.1	42.8	53.4	67.5	59.2	40.8	27.8
MAX	33.9	62.4	121	65.0	93.1	114	85.7	113	106	108	76.9	42.0
(WY)	(1991)	(1991)	(1991)	(1991)	(1996)	(1982)	(1988)	(1988)	(1993)	(1993)	(1993)	(1997)
MIN	11.0	11.9	12.9	11.4	15.0	13.0	13.6	20.9	29.8	22.9	16.4	12.2
(WY)	(1988)	(1988)	(1988)	(1988)	(1988)	(2001)	(2001)	(1999)	(1992)	(1992)	(1992)	(1987)



## 12143900 BOXLEY CREEK NEAR EDGEWICK, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	15,610		15,088		41.2	
ANNUAL MEAN	42.7		41.3		66.6	
HIGHEST ANNUAL MEAN					1991	
LOWEST ANNUAL MEAN					1992	
HIGHEST DAILY MEAN	130	Jun 20	79	Jun 2	247	Dec 4, 1995
LOWEST DAILY MEAN	23	Jan 22	25	Nov 24	8.6	Nov 10, 1986
ANNUAL SEVEN-DAY MINIMUM	25	Jan 17	26	Nov 7	10	Jan 2, 1988
ANNUAL RUNOFF (AC-FT)	30,960		29,930		29,860	
ANNUAL RUNOFF (CFSM)	11.7		11.4		11.3	
ANNUAL RUNOFF (INCHES)	159.53		154.20		153.85	
10 PERCENT EXCEEDS	78		68		73	
50 PERCENT EXCEEDS	32		35		35	
90 PERCENT EXCEEDS	27		28		17	

e Estimated

12144000 SOUTH FORK SNOQUALMIE RIVER AT NORTH BEND, WA

LOCATION.--Lat 47°29'35", long 121°47'20", in SW¼NE¼ sec.9, T.23 N., R.8 E., King County, Hydrologic Unit 17110010, on right bank on upstream side of Bendigo Street crossing at North Bend, and at mile 2.0.

DRAINAGE AREA.--81.7 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1907 to September 1926, February 1929 to September 1938, June 1945 to April 1950, October 1960 to August 1974, February 1984 to current year. Monthly and yearly discharge only for water years 1908, 1910 and 1913, published in WSP 1316.

REVISED RECORDS.--WSP 1316: 1918-19(M). WSP 1932: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 423.01 ft above NGVD of 1929 (February 1984 through September 1996 incorrectly published as 439.33 ft). Prior to Apr. 11, 1950, nonrecording gage or water-stage recorder at several sites within 0.5 mi upstream from present site at various datums. Oct. 1, 1960, to Mar. 10, 1965, at site 0.46 mi upstream at datum 1.86 ft lower. Mar. 10, 1965, to Aug. 31, 1974, at site 0.46 mi upstream at datum 6.86 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. City of North Bend diverts about 0.8 ft<sup>3</sup>/s daily from Clough Creek for municipal use. Minor regulation at Twin Falls and Weeks Falls projects upstream from station.

AVERAGE DISCHARGE.--66 years (water years 1908-26, 1930-38, 1946-49, 1961-73, 1985-2005), 546 ft<sup>3</sup>/s, 90.87 in/yr, 395,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 10,900 ft<sup>3</sup>/s, Nov. 24, 1990, gage height, 19.09 ft, from rating curve extended above 3,900 ft<sup>3</sup>/s; minimum discharge, 63 ft<sup>3</sup>/s, Oct. 22, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 22, 1959, reached a stage of 14.49 ft, site and datum then in use, from floodmarks, discharge, 13,000 ft<sup>3</sup>/s, slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 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 2	1245	2,850	11.43	Jan 18	1430	*6,940	*15.45
Nov 25	0800	3,460	12.06	Sep 30	0515	3,070	11.93
Dec 11	0515	6,700	15.23				

Minimum discharge, 107 ft<sup>3</sup>/s, Sept. 26-29, gage height 7.68 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e230	329	440	360	425	232	696	454	547	253	167	128
2	e225	1,860	e400	347	392	228	712	454	447	248	165	124
3	e220	1,130	380	335	375	224	599	442	418	240	160	123
4	e213	716	371	322	432	217	556	420	387	231	158	126
5	e213	554	371	309	460	215	484	433	368	226	155	137
6	246	462	346	316	399	214	461	416	365	275	153	128
7	239	410	359	311	372	224	570	388	348	256	152	122
8	237	379	603	300	351	240	635	356	356	264	152	120
9	333	351	625	293	333	244	523	368	339	412	150	127
10	399	326	3,520	284	319	249	449	600	322	338	148	199
11	326	306	4,470	277	309	238	511	507	332	302	148	185
12	281	289	1,760	276	310	236	474	436	408	281	147	154
13	256	280	1,180	270	316	222	421	395	431	266	142	140
14	240	269	1,150	261	302	209	392	400	414	253	139	133
15	229	273	1,260	246	283	198	374	446	414	241	138	129
16	344	303	963	257	275	226	556	598	377	238	138	126
17	669	302	808	611	265	245	613	589	405	232	141	124
18	744	324	736	6,130	258	226	533	540	377	223	141	122
19	579	330	782	3,400	254	215	488	584	349	214	137	120
20	464	301	742	1,730	246	248	503	546	327	208	134	118
21	432	282	642	1,560	239	284	558	596	316	204	133	116
22	426	291	571	1,150	234	249	663	590	320	210	132	115
23	440	314	517	1,120	229	232	794	539	331	208	130	114
24	441	1,480	479	898	226	219	919	473	309	196	130	113
25	406	2,410	471	744	223	211	890	432	292	192	127	112
26	364	1,270	470	638	218	385	848	401	283	192	125	111
27	332	867	432	594	216	903	778	386	287	183	123	108
28	312	646	410	533	222	958	686	369	283	177	123	107
29	297	e535	408	477	---	844	551	355	275	174	144	244
30	329	487	398	455	---	800	476	341	261	171	146	1,800
31	322	---	376	451	---	604	---	350	---	169	134	---
TOTAL	10,788	18,076	26,440	25,255	8,483	10,239	17,713	14,204	10,688	7,277	4,412	5,625
MEAN	348	603	853	815	303	330	590	458	356	235	142	188
MAX	744	2,410	4,470	6,130	460	958	919	600	547	412	167	1,800
MIN	213	269	346	246	216	198	374	341	261	169	123	107
AC-FT	21,400	35,850	52,440	50,090	16,830	20,310	35,130	28,170	21,200	14,430	8,750	11,160
CFSM	4.26	7.37	10.4	9.97	3.71	4.04	7.23	5.61	4.36	2.87	1.74	2.29
IN.	4.91	8.23	12.04	11.50	3.86	4.66	8.07	6.47	4.87	3.31	2.01	2.56

## 12144000 SOUTH FORK SNOQUALMIE RIVER AT NORTH BEND, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 2005, BY WATER YEAR (WY)												
MEAN	333	646	694	714	621	596	698	844	735	352	173	175
MAX	843	2,164	2,267	1,579	1,398	1,516	1,171	1,313	1,763	940	405	438
(WY)	(1934)	(1991)	(1934)	(1934)	(1996)	(1972)	(1932)	(1997)	(1974)	(1974)	(1964)	(2004)
MIN	76.5	92.4	213	218	178	190	352	354	210	100	84.8	76.8
(WY)	(1988)	(1930)	(1931)	(1937)	(1922)	(1922)	(1967)	(1915)	(1992)	(1926)	(1910)	(1910)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1907 - 2005	
ANNUAL TOTAL	188,390		159,200			
ANNUAL MEAN	515		436		546	
HIGHEST ANNUAL MEAN					809	
LOWEST ANNUAL MEAN					334	
HIGHEST DAILY MEAN	4,470	Dec 11	6,130	Jan 18	10,100	Nov 24, 1990
LOWEST DAILY MEAN	132	Aug 19	107	Sep 28	65	Oct 22, 1925
ANNUAL SEVEN-DAY MINIMUM	135	Aug 15	111	Sep 22	66	Oct 17, 1925
ANNUAL RUNOFF (AC-FT)	373,700		315,800		395,900	
ANNUAL RUNOFF (CFSM)	6.30		5.34		6.69	
ANNUAL RUNOFF (INCHES)	85.78		72.49		90.87	
10 PERCENT EXCEEDS	829		724		1,040	
50 PERCENT EXCEEDS	426		324		432	
90 PERCENT EXCEEDS	206		138		132	

e Estimated

## 12144500 SNOQUALMIE RIVER NEAR SNOQUALMIE, WA

LOCATION.--Lat 47°32'43", long 121°50'28", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.19, T.24 N., R.8 E., King County, Hydrologic Unit 17110010, on right bank 0.3 mi downstream from Snoqualmie Falls, 0.4 mi upstream from Tokul Creek, 1.5 mi northwest of Snoqualmie, and at mile 40.0.

DRAINAGE AREA.--375 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1898 to July 1899; August to September 1899 (monthly discharge only); January to July 1900, September 1902 to July 1904; August to September 1904 (monthly discharge only); October 1904 to September 1905 and November to December 1906 (gage heights only); August 1907 to May 1926 (monthly discharge only); June 1926 to September 1927; October 1927 to September 1932 (monthly discharge only); August 1958 to current year. Published as "near Snoqualmie Falls" 1904-06.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 120 ft above NGVD of 1929, from river-profile map. Prior to Nov. 3, 1902, and Nov. 1 to Dec. 31, 1906, nonrecording gages upstream and downstream from Snoqualmie Falls at different datum. Nov. 3, 1902, to Sept. 30, 1905, nonrecording gage at site 4 mi upstream and 300 ft downstream from South Fork, at different datum. Prior to Sept. 9, 1999, at site on opposite bank, at same datum.

REMARKS.--No estimated daily discharges. Records good. Medium and low flows affected by powerplant 0.1 mi upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--75 years (water years 1899, 1903-04, 1908-32, 1959-2005), 2,588 ft<sup>3</sup>/s, 93.72 in/yr, 1,875,000 acre-ft/yr, includes monthly discharge figures, see PERIOD OF RECORD. 47 years (water years 1959-2005), 2,672 ft<sup>3</sup>/s, 96.81 in/yr, 1,936,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,800 ft<sup>3</sup>/s, Nov. 24, 1990, gage height, 21.55 ft, from inside high-water mark; minimum discharge, 9.7 ft<sup>3</sup>/s, Aug. 14, 27, 1958, gage height, -0.53 ft; minimum daily discharge, 88 ft<sup>3</sup>/s, Aug. 8, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 37,100 ft<sup>3</sup>/s, Jan. 18, gage height, 17.33 ft; minimum discharge, 325 ft<sup>3</sup>/s, Sept. 29, gage height, 2.33 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	929	1,860	2,310	1,440	1,910	1,030	3,600	2,190	3,600	1,190	619	428
2	857	12,300	2,050	1,320	1,700	1,010	3,610	2,160	3,030	1,110	607	408
3	806	6,570	1,880	1,230	1,560	1,000	2,930	2,220	2,780	1,100	586	390
4	763	3,820	1,820	1,160	1,820	941	2,740	2,090	2,460	1,020	568	391
5	730	2,910	1,890	1,080	2,590	898	2,360	2,160	2,140	972	548	439
6	860	2,410	1,740	1,100	2,020	878	2,190	2,110	2,100	1,360	532	409
7	982	2,110	1,780	1,100	1,760	918	2,760	1,940	2,010	1,470	532	379
8	920	1,960	3,210	1,030	1,580	1,080	3,140	1,720	2,120	1,290	524	365
9	2,080	1,780	3,520	983	1,480	1,100	2,470	1,740	1,980	2,900	510	397
10	3,020	1,650	15,900	940	1,390	1,210	2,100	2,870	1,750	2,100	502	851
11	2,000	1,510	23,500	906	1,320	1,100	2,330	2,710	1,750	1,670	501	931
12	1,490	1,390	8,020	896	1,310	1,070	2,240	2,300	2,190	1,470	495	655
13	1,250	1,380	4,770	917	1,450	999	1,970	2,000	2,280	1,400	473	557
14	1,110	1,330	5,660	859	1,350	898	1,870	1,990	2,170	1,270	467	501
15	1,030	1,290	6,830	792	1,240	826	1,810	2,490	2,060	1,180	459	470
16	2,180	1,760	4,390	906	1,170	887	3,060	4,050	1,860	1,140	444	461
17	4,740	1,720	3,570	3,450	1,120	1,120	3,480	3,080	1,960	1,130	480	468
18	4,800	1,800	3,290	31,100	1,070	1,040	2,900	2,710	1,870	1,040	495	456
19	3,300	1,950	3,550	18,000	1,040	954	2,530	3,080	1,660	974	456	429
20	2,490	1,670	3,370	8,030	993	1,280	2,480	3,010	1,530	923	434	412
21	2,260	1,460	2,760	7,610	950	1,870	2,660	3,380	1,450	874	427	395
22	2,320	1,540	2,430	5,200	919	1,390	3,100	3,170	1,510	872	424	382
23	2,950	1,910	2,150	5,780	894	1,170	3,620	2,900	1,690	922	414	370
24	2,910	9,800	1,970	4,220	879	1,040	4,060	2,410	1,490	828	404	361
25	2,510	16,700	1,950	3,360	869	1,000	3,850	2,110	1,350	787	402	354
26	2,060	7,200	2,160	2,840	857	1,890	3,820	1,950	1,280	748	384	346
27	1,800	4,530	1,890	2,680	852	5,490	3,600	1,910	1,310	712	371	340
28	1,630	3,420	1,700	2,410	879	5,190	3,270	1,850	1,390	687	376	335
29	1,530	2,750	1,680	2,100	---	4,100	2,670	1,800	1,350	665	434	1,930
30	1,690	2,540	1,710	2,030	---	4,220	2,330	1,690	1,250	643	534	14,200
31	2,080	---	1,580	2,000	---	3,110	---	1,680	---	628	479	---
TOTAL	60,077	105,020	125,030	117,469	36,972	50,709	85,550	73,470	57,370	35,075	14,881	28,810
MEAN	1,938	3,501	4,033	3,789	1,320	1,636	2,852	2,370	1,912	1,131	480	960
MAX	4,800	16,700	23,500	31,100	2,590	5,490	4,060	4,050	3,600	2,900	619	14,200
MIN	730	1,290	1,580	792	852	826	1,810	1,680	1,250	628	371	335
AC-FT	119,200	208,300	248,000	233,000	73,330	100,600	169,700	145,700	113,800	69,570	29,520	57,140
CFSM	5.17	9.34	10.8	10.1	3.52	4.36	7.60	6.32	5.10	3.02	1.28	2.56
IN.	5.96	10.42	12.40	11.65	3.67	5.03	8.49	7.29	5.69	3.48	1.48	2.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2005, BY WATER YEAR (WY)

MEAN	1,844	3,603	3,628	3,568	2,986	2,526	3,037	3,717	3,453	1,795	856	1,094
MAX	3,931	10,100	8,886	6,414	6,676	6,735	4,696	6,055	7,568	4,393	2,263	3,937
(WY)	(1960)	(1991)	(1976)	(1984)	(1982)	(1972)	(1989)	(1972)	(1974)	(1974)	(1964)	(1959)
MIN	348	716	1,211	1,162	1,215	1,367	1,478	1,895	1,077	731	392	342
(WY)	(1988)	(1980)	(2001)	(1979)	(1969)	(1962)	(1967)	(1992)	(1992)	(2003)	(2003)	(1998)

## 12144500 SNOQUALMIE RIVER NEAR SNOQUALMIE, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1959 - 2005	
ANNUAL TOTAL	941,852		790,433			
ANNUAL MEAN	2,573		2,166		2,672	
HIGHEST ANNUAL MEAN					3,939	
LOWEST ANNUAL MEAN					1,739	
HIGHEST DAILY MEAN	23,500	Dec 11	31,100	Jan 18	54,700	Nov 24, 1990
LOWEST DAILY MEAN	375	Aug 20	335	Sep 28	88	Aug 8, 1960
ANNUAL SEVEN-DAY MINIMUM	403	Aug 15	355	Sep 22	274	Oct 9, 1991
ANNUAL RUNOFF (AC-FT)	1,868,000		1,568,000		1,936,000	
ANNUAL RUNOFF (CFSM)	6.86		5.77		7.13	
ANNUAL RUNOFF (INCHES)	93.43		78.41		96.81	
10 PERCENT EXCEEDS	4,520		3,600		5,020	
50 PERCENT EXCEEDS	2,110		1,660		2,070	
90 PERCENT EXCEEDS	783		469		620	

12145500 RAGING RIVER NEAR FALL CITY, WA

LOCATION.--Lat 47°32'24", long 121°54'28", on west line, sec.27, T.24 N., R.7 E., King County, Hydrologic Unit 17110010, on right bank at highway bridge 2.0 mi southwest of Fall City, and 2.6 mi upstream from mouth.

DRAINAGE AREA.--30.6 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1945 to September 1950, water years 1951, and 1953-63 (annual maximum), December 1963 to June 1973, October 1973 to April 1974, October 1974 to current year.

REVISED RECORDS.--WSP 1316: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1950, water-stage recorder on left bank at present site and datum. August 1951 and January 1953 to February 1963, crest-stage gage only on left bank at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Some small diversions for irrigation and domestic use upstream from station. No regulation. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--44 years (water years 1946-50, 1965-72, 1975-2005), 130 ft<sup>3</sup>/s, 57.72 in/yr, 94,170 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,220 ft<sup>3</sup>/s, Nov. 24, 1990, gage height, 6.56 ft; maximum gage height, 6.75 ft, Feb. 9, 1951; minimum daily discharge, 4.4 ft<sup>3</sup>/s, Aug. 21, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 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)
Dec 11	0400	2,170	5.12	Jan 18	0615	*2,480	*5.37

Minimum discharge, 11 ft<sup>3</sup>/s, Aug. 26-28.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	41	176	64	80	42	258	61	73	30	16	13
2	28	254	148	59	73	37	235	56	80	33	16	12
3	28	194	129	56	67	35	212	56	70	32	16	12
4	28	133	119	54	119	33	201	54	61	28	15	13
5	28	103	146	52	109	32	161	55	57	26	15	18
6	32	85	134	55	98	31	135	48	57	91	14	14
7	30	72	196	65	93	31	125	43	55	54	14	13
8	59	63	544	56	83	30	120	41	60	59	14	12
9	103	56	446	51	77	29	99	45	52	96	14	13
10	69	52	901	48	71	29	91	121	47	68	14	53
11	54	48	1,350	45	68	28	166	78	47	57	14	28
12	47	45	544	43	70	27	148	66	75	52	14	18
13	42	43	337	43	70	26	127	58	65	47	14	15
14	40	41	383	41	64	25	109	59	58	42	13	14
15	39	50	311	39	59	25	107	115	53	38	13	14
16	112	70	240	57	56	39	416	212	47	38	13	15
17	246	62	193	384	53	45	355	171	73	34	14	15
18	198	128	160	1,700	51	35	251	143	56	30	14	14
19	139	97	139	774	48	34	189	137	48	27	13	13
20	101	80	121	447	46	46	152	155	43	26	13	13
21	82	69	107	354	44	62	125	223	39	25	12	13
22	71	64	95	271	42	47	106	204	43	27	12	13
23	64	63	83	231	40	39	96	172	50	27	12	13
24	58	349	76	178	38	35	112	134	40	23	12	13
25	53	846	77	147	37	33	89	107	36	21	12	12
26	48	459	84	125	36	164	79	87	35	20	12	12
27	44	320	71	117	35	526	72	72	39	19	11	12
28	41	246	65	102	36	429	65	62	40	18	12	12
29	40	193	75	95	---	506	66	56	38	18	17	25
30	41	194	82	88	---	395	71	54	33	17	18	268
31	38	---	72	90	---	250	---	55	---	17	14	---
TOTAL	2,032	4,520	7,604	5,931	1,763	3,145	4,538	3,000	1,570	1,140	427	725
MEAN	65.5	151	245	191	63.0	101	151	96.8	52.3	36.8	13.8	24.2
MAX	246	846	1,350	1,700	119	526	416	223	80	96	18	268
MIN	28	41	65	39	35	25	65	41	33	17	11	12
AC-FT	4,030	8,970	15,080	11,760	3,500	6,240	9,000	5,950	3,110	2,260	847	1,440
CFSM	2.14	4.92	8.02	6.25	2.06	3.32	4.94	3.16	1.71	1.20	0.45	0.79
IN.	2.47	5.49	9.24	7.21	2.14	3.82	5.52	3.65	1.91	1.39	0.52	0.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2005, BY WATER YEAR (WY)

MEAN	71.7	213	253	263	219	181	147	86.9	64.0	31.8	19.4	31.6
MAX	266	602	472	458	476	389	255	168	158	106	51.2	96.7
(WY)	(1948)	(1991)	(1976)	(1971)	(1972)	(1950)	(1950)	(1997)	(1964)	(1997)	(1976)	(1964)
MIN	7.77	23.7	90.1	94.7	53.7	58.4	42.5	38.0	19.0	11.8	7.04	9.71
(WY)	(1988)	(1988)	(2003)	(1985)	(1977)	(1992)	(2004)	(1947)	(1992)	(2003)	(1967)	(1987)

## 12145500 RAGING RIVER NEAR FALL CITY, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1945 - 2005	
ANNUAL TOTAL	38,615.1		36,395		130	
ANNUAL MEAN	106		99.7		206	
HIGHEST ANNUAL MEAN					1972	
LOWEST ANNUAL MEAN					77.8	
HIGHEST DAILY MEAN	1,810	Jan 29	1,700	Jan 18	3,340	Nov 24, 1990
LOWEST DAILY MEAN	9.5	Aug 20	11	Aug 27	4.4	Aug 21, 1967
ANNUAL SEVEN-DAY MINIMUM	9.7	Aug 15	12	Aug 21	4.9	Aug 15, 1967
ANNUAL RUNOFF (AC-FT)	76,590		72,190		94,170	
ANNUAL RUNOFF (CFSM)	3.45		3.26		4.25	
ANNUAL RUNOFF (INCHES)	46.94		44.24		57.72	
10 PERCENT EXCEEDS	237		212		293	
50 PERCENT EXCEEDS	64		55		75	
90 PERCENT EXCEEDS	18		14		14	

12147500 NORTH FORK TOLT RIVER NEAR CARNATION, WA

LOCATION.--Lat 47°42'45", long 121°47'15", in SW¼NE¼ sec.28, T.26 N., R.8 E., King County, Hydrologic Unit 17110010, on right bank 2.9 mi upstream from confluence with South Fork, 7.4 mi northeast of Carnation, and at mile 11.7.

DRAINAGE AREA.--39.9 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to December 1963, November 1967 to current year.

REVISED RECORDS.--WSP 1566: 1957. WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 600 ft above NGVD of 1929, from river-profile map.

REMARKS.--Records good except for estimated discharges, which are fair. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--48 years (water years 1953-63, 1969-2005), 353 ft<sup>3</sup>/s, 120.16 in/yr, 255,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,560 ft<sup>3</sup>/s, Dec. 15, 1959, gage height, 13.15 ft, from rating curve extended above 2,800 ft<sup>3</sup>/s; minimum discharge, 31 ft<sup>3</sup>/s, Sept. 22, 23, 1986.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 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 2	0700	3,410	9.04	Dec 11	0215	5,790	10.89
Nov 25	0345	*6,480	*11.35	Jan 18	1015	5,240	10.50

Minimum discharge, 45 ft<sup>3</sup>/s, Sept. 27-29, minimum gage height, 3.02 ft, Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	433	325	256	271	212	498	205	585	156	93	e55
2	158	1,840	305	242	248	191	388	202	356	157	91	e52
3	153	597	294	231	234	183	330	211	314	155	89	e52
4	147	397	307	221	446	168	315	196	272	144	86	e53
5	145	335	332	211	417	161	275	199	262	135	84	e54
6	163	300	296	208	314	157	266	188	266	335	83	e51
7	159	282	304	205	277	166	391	173	255	231	81	e50
8	216	278	544	197	257	173	409	163	320	345	79	e49
9	437	261	467	190	243	178	291	162	266	484	77	e66
10	361	244	2,950	183	232	178	255	275	226	270	77	156
11	247	232	2,360	178	224	160	305	221	216	221	75	106
12	203	221	706	183	262	151	277	193	246	199	75	75
13	183	221	529	177	282	142	250	176	248	185	73	65
14	171	220	1,080	168	240	134	263	179	228	170	70	60
15	164	267	906	165	219	130	272	300	254	160	69	57
16	547	316	557	232	209	e140	706	387	218	164	69	60
17	601	299	465	1,390	203	155	488	292	260	155	75	62
18	510	340	435	3,730	196	155	475	277	222	143	71	59
19	336	342	508	1,320	191	150	373	344	197	135	68	56
20	268	282	437	843	183	238	343	337	181	129	65	53
21	259	250	376	812	178	254	341	341	173	124	63	51
22	404	276	345	587	172	194	373	303	217	126	62	51
23	591	381	325	599	170	171	370	273	240	123	61	49
24	451	2,070	310	426	169	157	377	233	193	115	e60	47
25	360	2,640	323	364	169	150	326	209	174	112	e59	47
26	302	692	361	332	166	500	305	195	166	108	e58	46
27	269	504	310	325	165	1,080	289	186	177	104	e58	46
28	253	411	287	299	177	616	266	176	194	102	e57	45
29	251	363	289	276	---	454	230	169	183	99	e61	529
30	332	347	298	280	---	397	213	163	167	96	e60	1,060
31	397	---	275	290	---	327	---	216	---	93	e57	---
TOTAL	9,201	15,641	17,606	15,120	6,514	7,622	10,260	7,144	7,276	5,275	2,206	3,262
MEAN	297	521	568	488	233	246	342	230	243	170	71.2	109
MAX	601	2,640	2,950	3,730	446	1,080	706	387	585	484	93	1,060
MIN	145	220	275	165	165	130	213	162	166	93	57	45
AC-FT	18,250	31,020	34,920	29,990	12,920	15,120	20,350	14,170	14,430	10,460	4,380	6,470
CFSM	7.44	13.1	14.2	12.2	5.83	6.16	8.57	5.78	6.08	4.26	1.78	2.73
IN.	8.58	14.58	16.41	14.10	6.07	7.11	9.57	6.66	6.78	4.92	2.06	3.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2005, BY WATER YEAR (WY)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	259	488	527	527	441	372	426	414	339	193	113	154																																									
MAX	536	1,145	1,065	1,160	1,008	898	709	646	731	496	222	563																																									
(WY)	(1960)	(1991)	(1976)	(1953)	(1982)	(1972)	(1959)	(1972)	(1955)	(1955)	(1955)	(1959)																																									
MIN	38.5	69.0	192	222	166	172	249	214	136	67.8	43.3	49.6																																									
(WY)	(1988)	(1953)	(1986)	(1957)	(1969)	(1992)	(1992)	(1992)	(1992)	(2003)	(2003)	(1998)																																									



## 12147500 NORTH FORK TOLT RIVER NEAR CARNATION, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1953 - 2005	
ANNUAL TOTAL	129,536		107,127			
ANNUAL MEAN	354		293		353	
HIGHEST ANNUAL MEAN					526	
LOWEST ANNUAL MEAN					247	
HIGHEST DAILY MEAN	3,370	Jan 29	3,730	Jan 18	5,560	Dec 15, 1959
LOWEST DAILY MEAN	55	Aug 20	45	Sep 28	31	Sep 22, 1986
ANNUAL SEVEN-DAY MINIMUM	59	Aug 15	47	Sep 22	34	Sep 16, 1986
ANNUAL RUNOFF (AC-FT)	256,900		212,500		255,600	
ANNUAL RUNOFF (CFSM)	8.87		7.36		8.84	
ANNUAL RUNOFF (INCHES)	120.77		99.88		120.16	
10 PERCENT EXCEEDS	578		479		651	
50 PERCENT EXCEEDS	291		221		275	
90 PERCENT EXCEEDS	118		66		84	

e Estimated

12147500 NORTH FORK TOLT RIVER NEAR CARNATION, WA—Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: February 1995 to current year.

INSTRUMENTATION.--Temperature recorder since February 1995.

REMARKS.--Record excellent.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 16.0°C (rounded), July 18, 19, 1995, July 26-28, 1998; minimum, 2.0°C (rounded), Dec. 29, 1996.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.1°C, July 18; minimum, 2.2°C, Jan. 17.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.4	8.6	9.4	6.6	6.0	6.3	6.3	5.8	6.0	5.9	5.5	5.7
2	10.4	8.4	9.3	6.9	6.5	6.6	6.3	5.7	6.0	5.5	4.6	5.0
3	10.4	8.5	9.3	7.1	6.0	6.6	6.4	6.1	6.2	4.7	4.2	4.4
4	10.2	8.3	9.2	6.7	5.6	6.1	6.5	6.2	6.3	4.5	3.8	4.1
5	10.0	8.2	9.0	6.8	5.6	6.1	6.2	5.2	5.6	4.3	3.6	3.9
6	10.1	9.4	9.7	7.2	5.8	6.6	5.8	5.4	5.5	4.7	3.8	4.3
7	10.2	8.9	9.5	7.7	6.9	7.3	5.6	5.4	5.6	5.1	4.7	4.9
8	9.8	9.0	9.4	7.3	6.3	6.8	5.6	5.2	5.4	5.2	4.7	4.9
9	9.8	9.4	9.6	7.6	6.7	7.0	6.1	5.4	5.7	5.3	4.4	4.8
10	10.2	9.3	9.6	7.4	6.4	6.8	6.2	4.7	5.7	5.0	4.3	4.7
11	10.3	8.8	9.4	6.9	5.9	6.3	6.2	5.4	5.7	4.7	3.6	4.1
12	10.4	9.0	9.5	7.2	5.9	6.5	6.0	5.1	5.5	5.0	4.2	4.7
13	10.2	8.6	9.3	7.6	7.0	7.3	6.7	6.0	6.4	4.9	4.1	4.5
14	10.2	8.6	9.3	7.5	7.0	7.2	6.6	6.0	6.2	4.8	3.7	4.3
15	9.6	9.3	9.5	7.5	7.2	7.4	6.1	5.8	6.0	4.5	3.4	3.9
16	10.2	9.4	9.8	7.5	7.0	7.2	6.4	5.5	6.0	4.6	4.3	4.5
17	9.9	9.0	9.6	7.0	6.0	6.4	6.4	6.0	6.2	4.4	2.2	3.7
18	9.0	8.6	8.7	6.6	6.3	6.5	7.1	6.4	6.8	5.4	3.7	4.6
19	9.1	8.4	8.7	6.6	5.6	6.2	6.9	6.2	6.6	6.3	5.4	5.9
20	8.8	7.6	8.2	5.9	5.2	5.5	6.3	5.6	6.0	6.2	5.9	6.0
21	8.5	8.1	8.3	6.3	5.2	5.7	5.8	5.6	5.7	6.7	6.0	6.3
22	8.1	7.8	8.0	6.8	6.2	6.5	6.2	5.6	5.9	6.8	6.4	6.6
23	7.9	7.1	7.6	6.8	6.5	6.6	5.7	5.2	5.4	7.0	6.6	6.8
24	7.8	6.9	7.3	7.3	6.5	6.9	6.0	5.1	5.5	7.1	6.3	6.7
25	8.0	6.8	7.3	7.4	6.4	7.0	6.3	5.9	6.2	7.0	6.1	6.5
26	8.3	7.2	7.6	6.6	6.0	6.3	6.3	5.7	6.0	7.1	6.7	6.9
27	7.8	6.4	7.0	6.2	5.6	6.0	5.8	5.2	5.5	7.3	6.4	6.9
28	7.4	6.3	6.9	5.9	5.2	5.5	5.6	5.0	5.3	7.1	6.1	6.6
29	7.9	7.3	7.5	5.8	5.0	5.4	6.0	5.5	5.8	7.0	6.5	6.7
30	7.6	5.9	7.2	6.1	5.3	5.7	5.8	5.3	5.6	7.2	6.6	6.8
31	6.8	5.8	6.2	---	---	---	5.7	5.1	5.4	7.1	6.4	6.9
MONTH	10.4	5.8	8.6	7.7	5.0	6.5	7.1	4.7	5.9	7.3	2.2	5.4



12147600 SOUTH FORK TOLT RIVER NEAR INDEX, WA

LOCATION.--Lat 47°42'25", long 121°35'56", in NE¼SW¼ sec.25, T.26 N., R.9 E., King County, Hydrologic Unit 17110010, on left bank 0.6 mi upstream from Phelps Creek, 8.1 mi south of Index, and at mile 12.9.

DRAINAGE AREA.--5.34 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1959 to December 1963, November 1967 to current year.

REVISED RECORDS.--WDR WA-02-1: 1999-2000(P).

GAGE.--Water-stage recorder. Elevation of gage is 1,850 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1961, at datum 0.85 ft higher. Oct. 1, 1961, to Sept. 30, 1992, at datum 1.00 ft higher.

REMARKS.--Records fair except for estimated daily discharges and those above 900 ft<sup>3</sup>/s and below 15 ft<sup>3</sup>/s, which are poor. No regulation or diversion upstream from station. A portion of flow is within the gravel streambed and is unmeasurable. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--40 years (water years 1961-63, 1969-2005), 54.7 ft<sup>3</sup>/s, 139.24 in/yr, 39,650 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,240 ft<sup>3</sup>/s, Dec. 15, 1999; gage height, 4.54 ft, possible result from debris dam break up; maximum gage height, 8.13 ft, present datum, Dec. 14, 1959; minimum discharge, 2.2 ft<sup>3</sup>/s, Oct. 9, 10, 1989, Sept. 9, 10, 1997, Sept. 14-17, 1998.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 550 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 2	0700	1,120	3.76	Jan 18	0030	*1,960	*4.38
Nov 25	0200	1,940	4.37	Sep 30	0145	869	3.51
Dec 11	0000	1,890	4.34				

Minimum discharge, 2.7 ft<sup>3</sup>/s, Sept. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	123	21	14	27	15	90	28	101	17	5.6	3.6
2	11	598	18	12	21	14	56	29	68	19	5.6	3.4
3	10	124	16	11	18	14	41	30	72	19	5.5	3.2
4	10	66	20	9.5	69	11	37	29	53	15	5.1	3.3
5	9.9	47	25	8.8	54	10	27	30	45	13	4.8	3.6
6	17	38	18	8.7	33	10	31	28	41	89	4.7	3.3
7	16	37	17	8.7	25	14	65	22	39	46	4.7	3.1
8	26	41	60	8.1	21	17	62	19	55	80	4.6	3.0
9	106	38	68	7.4	18	23	37	20	41	117	4.3	4.2
10	79	34	1,300	7.0	16	22	28	48	30	54	4.2	19
11	38	32	583	6.5	15	17	42	36	29	38	4.2	10
12	25	28	82	6.8	19	15	32	27	40	31	4.2	6.1
13	20	31	49	7.2	21	12	26	22	42	27	4.0	4.8
14	17	31	215	e6.1	17	9.3	27	27	35	22	3.9	4.2
15	17	53	149	e5.5	14	8.2	29	70	41	19	3.7	4.1
16	143	73	64	e25	12	11	90	79	30	18	3.6	5.0
17	169	61	46	500	11	12	66	55	33	16	4.3	6.2
18	140	65	46	1,500	10	12	52	45	26	14	4.3	5.1
19	66	64	81	359	9.7	14	44	55	21	12	3.9	4.4
20	42	44	56	210	8.9	32	46	60	18	11	3.6	4.0
21	40	35	38	192	8.4	33	57	63	16	10	3.5	3.7
22	88	53	30	120	8.2	19	78	57	22	11	3.4	3.5
23	133	91	25	114	8.0	15	82	47	26	10	3.3	3.4
24	90	755	23	63	8.0	12	87	33	19	8.7	3.2	3.2
25	62	682	33	45	7.9	11	73	26	16	8.0	3.1	3.2
26	45	97	40	38	7.8	123	66	23	14	7.5	3.1	3.1
27	38	54	27	37	8.1	265	61	21	22	7.0	3.0	3.0
28	35	36	22	30	9.8	110	50	19	27	6.7	3.0	3.0
29	35	27	20	24	---	72	36	18	25	6.2	5.5	243
30	83	24	19	26	---	51	31	16	20	5.9	6.2	310
31	86	---	16	32	---	37	---	35	---	5.7	4.2	---
TOTAL	1,708.9	3,482	3,227	3,442.3	505.8	1,040.5	1,549	1,117	1,067	763.7	130.3	682.7
MEAN	55.1	116	104	111	18.1	33.6	51.6	36.0	35.6	24.6	4.20	22.8
MAX	169	755	1,300	1,500	69	265	90	79	101	117	6.2	310
MIN	9.9	24	16	5.5	7.8	8.2	26	16	14	5.7	3.0	3.0
AC-FT	3,390	6,910	6,400	6,830	1,000	2,060	3,070	2,220	2,120	1,510	258	1,350
CFSM	10.3	21.7	19.5	20.8	3.38	6.29	9.67	6.75	6.66	4.61	0.79	4.26
IN.	11.90	24.26	22.48	23.98	3.52	7.25	10.79	7.78	7.43	5.32	0.91	4.76

## 12147600 SOUTH FORK TOLT RIVER NEAR INDEX, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2005, BY WATER YEAR (WY)												
MEAN	45.4	80.7	74.1	74.6	59.9	47.8	63.6	78.7	66.7	30.6	13.8	25.2
MAX	107	181	165	154	150	109	116	140	160	81.3	37.4	73.0
(WY)	(1986)	(1991)	(1976)	(1990)	(1982)	(2003)	(1988)	(1972)	(1974)	(1974)	(1975)	(2004)
MIN	6.24	14.0	20.0	19.8	9.41	18.6	28.6	26.0	13.1	7.32	3.83	3.56
(WY)	(1988)	(1980)	(1986)	(1981)	(1969)	(1962)	(1975)	(1992)	(1992)	(2003)	(2003)	(1998)

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1960 - 2005	
ANNUAL TOTAL	23,569.4		18,716.2			
ANNUAL MEAN	64.4		51.3		54.7	
HIGHEST ANNUAL MEAN					77.8	
LOWEST ANNUAL MEAN					34.3	
HIGHEST DAILY MEAN	1,300	Dec 10	1,500	Jan 18	1,500	Jan 18, 2005
LOWEST DAILY MEAN	3.9	Aug 20	3.0	Aug 27	2.2	Sep 9, 1997
ANNUAL SEVEN-DAY MINIMUM	4.2	Aug 15	3.2	Aug 22	2.2	Sep 11, 1998
ANNUAL RUNOFF (AC-FT)	46,750		37,120		39,650	
ANNUAL RUNOFF (CFSM)	12.1		9.60		10.2	
ANNUAL RUNOFF (INCHES)	164.19		130.38		139.24	
10 PERCENT EXCEEDS	125		86		114	
50 PERCENT EXCEEDS	40		24		33	
90 PERCENT EXCEEDS	8.5		4.2		7.6	

e Estimated

12147600 SOUTH FORK TOLT RIVER NEAR INDEX, WA—Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1994 to current year.

INSTRUMENTATION.--Temperature recorder since October 1994.

REMARKS.--Records excellent.

## EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 18.0°C (rounded), July 27-29, 1998; minimum recorded, 0.0°C, at times during most winter periods.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 16.1°C, Aug. 15; minimum, 0.0°C, Jan. 12-17.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.9	8.6	9.1	5.1	4.2	4.6	3.8	3.4	3.5	3.0	2.9	3.0
2	9.7	8.2	8.9	5.6	4.9	5.2	3.8	3.4	3.6	2.9	2.0	2.4
3	9.7	8.2	8.9	5.4	4.5	5.0	3.8	3.6	3.7	2.0	1.2	1.7
4	9.4	8.0	8.6	4.8	4.2	4.5	4.0	3.6	3.8	1.3	0.8	1.1
5	9.5	8.0	8.7	4.8	4.1	4.4	3.8	2.5	3.1	1.2	0.8	1.0
6	9.8	9.1	9.5	5.4	4.1	4.8	3.2	2.8	3.0	1.2	0.6	0.9
7	9.8	8.7	9.2	5.9	5.1	5.4	2.9	1.8	2.3	1.2	0.6	0.9
8	9.4	8.8	9.1	5.6	4.9	5.3	3.5	2.6	3.1	1.4	1.0	1.2
9	8.9	8.3	8.5	5.6	4.8	5.2	3.9	3.0	3.6	1.6	0.9	1.2
10	9.0	8.2	8.5	5.6	4.7	5.2	4.9	2.1	4.0	1.0	0.7	0.8
11	9.0	7.9	8.4	5.1	4.6	4.9	4.8	3.7	4.1	1.1	0.1	0.6
12	9.2	8.2	8.6	5.6	4.6	5.1	3.7	3.2	3.4	1.4	0.0	0.7
13	9.2	8.0	8.5	6.1	5.3	5.6	3.8	3.5	3.7	1.1	0.0	0.6
14	9.2	8.0	8.6	5.4	5.1	5.3	4.3	3.8	4.1	1.1	0.0	0.1
15	9.2	8.9	9.1	5.7	5.2	5.4	4.3	3.9	4.1	0.0	0.0	0.0
16	9.2	8.6	9.0	5.6	5.1	5.3	4.5	4.0	4.2	0.3	0.0	0.0
17	8.7	7.8	8.5	5.1	4.3	4.5	4.5	3.9	4.2	2.1	0.0	0.7
18	7.8	7.3	7.6	4.7	4.4	4.6	5.1	4.5	4.8	4.2	2.1	3.3
19	7.8	7.2	7.4	4.7	3.9	4.3	5.3	4.0	4.6	4.6	4.1	4.3
20	7.5	6.6	7.1	4.0	3.5	3.7	4.0	3.4	3.7	4.5	4.0	4.2
21	7.4	6.8	7.1	4.2	3.3	3.8	3.5	2.8	3.2	4.9	4.2	4.6
22	7.0	6.4	6.7	4.7	4.1	4.4	3.5	3.1	3.3	4.9	4.7	4.8
23	6.4	5.7	6.1	5.1	4.5	4.8	3.1	2.8	3.0	5.2	4.7	5.0
24	6.0	4.6	5.5	6.0	5.0	5.7	3.5	2.8	3.2	5.1	4.5	4.8
25	6.0	5.4	5.7	6.1	4.7	5.4	3.8	3.4	3.7	5.5	4.7	5.0
26	6.4	5.5	5.9	4.8	4.2	4.5	4.0	3.5	3.7	5.3	4.9	5.1
27	5.7	5.0	5.3	4.2	3.6	3.8	3.8	3.3	3.5	5.2	4.5	4.9
28	5.6	4.7	5.2	3.6	3.0	3.4	3.8	3.5	3.6	4.9	4.1	4.5
29	6.2	5.5	5.8	3.5	2.8	3.1	3.9	3.3	3.7	4.9	4.4	4.6
30	5.9	3.4	5.0	3.5	2.7	3.2	3.6	3.2	3.3	5.0	4.5	4.7
31	5.3	4.2	4.8	---	---	---	3.2	2.9	3.1	4.9	4.3	4.7
MONTH	9.9	3.4	7.6	6.1	2.7	4.7	5.3	1.8	3.6	5.5	0.0	2.6



12147900 SOUTH FORK TOLT RESERVOIR NEAR CARNATION, WA

LOCATION.--Lat 47°41'38", long 121°41'16", in NW¼SW¼ sec.32, T.26 N., R.9 E., King County, Hydrologic Unit 17110010, on top and near the center of the dam, 11.4 mi northeast of Carnation, and at mile 8.4.

DRAINAGE AREA.--18.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1991 to current year.

REVISED RECORDS.--WA-98-1: 1997.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (Seattle Water Department benchmark).

REMARKS.--Reservoir is formed by earthfill dam, with a concrete glory hole spillway, completed in 1962. Water used for municipal water supply by Seattle Water Department. Usable capacity, 15,600 acre-ft between elevations 1,749 ft (minimum pool) and 1,765 ft (maximum normal pool). Top of dam is at 1,775 ft with top of spillway at 1,757 ft. Flood control between elevations 1,749 and 1,757 ft. U.S. Geological Survey satellite telemeter at station.

COOPERATION.--Capacity table furnished by Seattle Water Department.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 59,500 acre-ft, July 9, 1997, elevation, 1,766.53 ft; minimum contents observed, 16,280 acre-ft, Oct. 12, 2003, elevation, 1,711.77 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 54,900 acre-ft, Jan. 23, elevation, 1,761.99 ft; minimum contents observed, 30,930 acre-ft, Sept. 29, elevation, 1,735.44 ft.

CAPACITY TABLE

Elevation (feet)	Contents (acre-feet)	Elevation (feet)	Contents (acre-feet)	Elevation (feet)	Contents (acre-feet)
1,690	8,100	1,730	26,800	1,760	52,900
1,700	11,300	1,740	34,400	1,765	57,900
1,710	15,400	1,750	43,200	1,780	73,600
1,720	20,400				

ELEVATION ABOVE NGVD 1929, FEET  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,748.77	1,751.76	1,758.17	1,754.88	1,760.10	1,758.05	1,758.40	1,760.70	1,759.82	1,757.65	1,752.68	1,742.56
2	1,748.61	1,753.85	1,757.37	1,754.77	1,760.01	1,757.96	1,758.62	1,760.63	1,759.92	1,757.45	1,752.36	1,742.26
3	1,748.42	1,754.33	1,756.69	1,754.73	1,759.86	1,757.83	1,758.76	1,760.53	1,760.02	1,757.37	1,752.04	1,741.97
4	1,748.19	1,754.53	1,756.16	1,754.52	1,760.18	1,757.70	1,758.75	1,760.44	1,760.00	1,757.16	1,751.66	1,741.72
5	1,748.03	1,754.61	1,755.67	1,754.33	1,760.27	1,757.56	1,758.76	1,760.36	1,760.01	1,756.94	1,751.27	1,741.43
6	1,747.87	1,754.70	1,755.04	1,754.27	1,760.25	1,757.43	1,758.76	1,760.28	1,760.01	1,757.18	1,750.90	1,741.18
7	1,747.72	1,754.72	1,754.48	1,754.11	1,760.20	1,757.29	1,758.94	1,760.15	1,759.97	1,757.11	1,750.52	1,740.85
8	1,747.73	1,754.71	1,754.55	1,754.01	1,760.14	1,757.19	1,759.08	1,760.03	1,760.06	1,757.36	1,750.13	1,740.56
9	1,748.01	1,754.70	1,754.63	1,753.82	1,760.07	1,757.08	1,759.11	1,759.95	1,760.03	1,757.62	1,749.78	1,740.36
10	1,748.11	1,754.66	1,758.25	1,753.63	1,760.00	1,756.95	1,759.09	1,759.98	1,759.91	1,757.62	1,749.43	1,740.36
11	1,748.02	1,754.60	1,760.22	1,753.46	1,759.91	1,756.84	1,759.18	1,759.91	1,759.85	1,757.59	1,749.14	1,740.21
12	1,747.91	1,754.54	1,760.24	1,753.44	1,759.93	1,756.69	1,759.18	1,759.81	1,759.86	1,757.49	1,748.83	1,739.91
13	1,747.77	1,754.55	1,759.99	1,753.35	1,759.91	1,756.52	1,759.18	1,759.69	1,759.81	1,757.37	1,748.52	1,739.67
14	1,747.61	1,754.45	1,760.62	1,753.22	1,759.83	1,756.37	1,759.18	1,759.62	1,759.78	1,757.25	1,748.18	1,739.36
15	1,747.48	1,754.51	1,760.77	1,753.11	1,759.71	1,756.21	1,759.19	1,759.87	1,759.77	1,757.09	1,747.85	1,739.14
16	1,748.06	1,754.57	1,760.33	1,753.07	1,759.57	1,756.09	1,759.65	1,760.03	1,759.62	1,757.03	1,747.48	1,738.88
17	1,748.66	1,754.60	1,759.70	1,754.96	1,759.47	1,756.01	1,759.87	1,760.08	1,759.57	1,756.80	1,747.22	1,738.66
18	1,749.08	1,754.74	1,759.09	1,760.04	1,759.34	1,755.86	1,760.01	1,760.19	1,759.44	1,756.62	1,746.94	1,738.41
19	1,749.19	1,754.86	1,758.69	1,761.14	1,759.27	1,755.83	1,760.12	1,760.30	1,759.32	1,756.34	1,746.62	1,738.21
20	1,749.21	1,754.88	1,758.12	1,761.56	1,759.15	1,755.82	1,760.20	1,760.40	1,759.14	1,756.11	1,746.35	1,737.86
21	1,749.24	1,754.83	1,757.44	1,761.84	1,759.05	1,755.78	1,760.29	1,760.58	1,758.99	1,755.89	1,746.00	1,737.63
22	1,749.52	1,754.85	1,756.79	1,761.93	1,758.90	1,755.59	1,760.43	1,760.64	1,758.87	1,755.69	1,745.63	1,737.33
23	1,750.11	1,754.96	1,756.36	1,761.94	1,758.83	1,755.54	1,760.58	1,760.65	1,758.76	1,755.47	1,745.32	1,736.98
24	1,750.55	1,757.50	1,756.00	1,761.67	1,758.67	1,755.39	1,760.75	1,760.60	1,758.59	1,755.25	1,744.99	1,736.69
25	1,750.76	1,759.89	1,755.76	1,761.14	1,758.56	1,755.21	1,760.84	1,760.48	1,758.46	1,754.97	1,744.68	1,736.41
26	1,750.79	1,760.06	1,755.49	1,760.68	1,758.47	1,755.75	1,760.90	1,760.32	1,758.30	1,754.61	1,744.31	1,736.09
27	1,750.83	1,759.98	1,755.20	1,760.47	1,758.34	1,756.90	1,760.95	1,760.14	1,758.18	1,754.29	1,743.96	1,735.76
28	1,750.85	1,759.79	1,755.02	1,760.33	1,758.20	1,757.35	1,760.88	1,759.95	1,758.11	1,754.02	1,743.70	1,735.49
29	1,750.88	1,759.46	1,755.04	1,760.24	---	1,757.77	1,760.85	1,759.76	1,757.99	1,753.67	1,743.42	1,736.64
30	1,751.11	1,758.86	1,755.00	1,760.22	---	1,757.94	1,760.78	1,759.59	1,757.83	1,753.30	1,743.15	1,737.91
31	1,751.28	---	1,754.96	1,760.19	---	1,758.02	---	1,759.56	---	1,752.94	1,742.88	---
MEAN	1,749.04	1,755.63	1,757.16	1,757.13	1,759.51	1,756.73	1,759.71	1,760.17	1,759.33	1,756.23	1,747.61	1,739.02
MAX	1,751.28	1,760.06	1,760.77	1,761.94	1,760.27	1,758.05	1,760.95	1,760.70	1,760.06	1,757.65	1,752.68	1,742.56
MIN	1,747.48	1,751.76	1,754.48	1,753.07	1,758.20	1,755.21	1,758.40	1,759.56	1,757.83	1,752.94	1,742.88	1,735.49
†	44,440	51,790	48,010	53,090	51,150	50,980	53,680	52,470	50,790	46,050	36,930	32,810
‡	+2,150	+7,350	-3,780	+5,080	-1,940	-170	+2,700	-1,210	-1,680	-4,740	-9,120	-4,120
CAL YR	2004	MEAN 1,753.20	MAX 1,760.77	MIN 1,740.05	AC-FT‡ +7,540							
WTR YR	2005	MEAN 1,754.75	MAX 1,761.94	MIN 1,735.49	AC-FT‡ -9,480							

† Contents, in acre-feet, at 2400, on last day of month.

‡ Change in contents, in acre-feet.



## 12148000 SOUTH FORK TOLT RIVER NEAR CARNATION, WA

LOCATION.--Lat 47°41'22", long 121°42'44", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.31, T.26 N., R.9 E., King County, Hydrologic Unit 17110010, on left bank 0.1 mi upstream from private road bridge, 1.6 mi downstream from South Fork Tolt Reservoir, 9.8 mi northeast of Carnation, and at mile 6.8.

DRAINAGE AREA.--19.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to December 1963, June 1969 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,300 ft above NGVD of 1929, from river-profile map.

REMARKS.--No estimated daily discharges. Records good. Regulation by South Fork Tolt Reservoir since September 1963. During the current water year the Seattle Water Department diverted an average daily discharge of about 77 ft<sup>3</sup>/s upstream from the station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--11 years (water years 1953-63), 198 ft<sup>3</sup>/s, 143,300 acre-ft/yr (unregulated). 36 years (water years 1970-2005), 101 ft<sup>3</sup>/s, 73,500 acre-ft/yr (regulated).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft<sup>3</sup>/s, Dec. 15, 1959, gage height, 7.45 ft, from rating curve extended above 2,700 ft<sup>3</sup>/s; maximum gage height, 7.62 ft, Nov. 20, 1958, backwater from debris; minimum discharge, 8.4 ft<sup>3</sup>/s, Sept. 12, 1963, minimum gage height, 0.81 ft, Aug. 23-27, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 303 ft<sup>3</sup>/s, Dec. 15, 19, gage height, 3.16 ft; minimum discharge, 58 ft<sup>3</sup>/s, Nov. 12-15, 17, Apr. 30, minimum gage height, 1.94 ft, Nov. 12-15, 17.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	63	225	72	80	65	65	59	67	68	68	65
2	64	81	267	74	80	64	63	61	62	68	68	63
3	63	67	227	73	80	65	62	61	65	68	68	63
4	63	63	155	71	84	64	62	61	62	68	68	63
5	63	61	155	70	83	64	60	61	61	68	68	63
6	63	60	194	70	81	64	60	61	62	72	68	62
7	63	59	235	70	80	64	63	61	61	68	68	62
8	67	59	79	70	80	63	62	62	62	72	68	63
9	69	60	69	70	80	64	61	63	60	72	68	64
10	66	59	101	70	79	63	60	64	60	69	68	66
11	65	59	107	69	78	63	63	62	60	68	68	63
12	64	59	110	70	81	63	62	62	60	68	68	62
13	63	58	165	69	81	63	60	62	60	68	68	62
14	63	58	82	68	80	63	61	62	64	68	68	62
15	63	60	156	71	80	63	61	70	68	68	68	62
16	71	59	297	72	80	65	72	68	68	68	68	62
17	74	58	295	95	80	65	67	66	71	68	68	64
18	72	62	291	154	78	64	65	67	68	68	68	64
19	69	61	292	102	63	65	64	67	68	68	68	64
20	66	59	289	94	63	66	63	67	68	68	68	63
21	66	59	288	91	63	65	62	67	68	68	68	63
22	69	59	268	88	62	64	62	67	69	68	68	63
23	76	61	132	85	62	64	62	65	68	68	68	63
24	79	87	71	111	62	64	62	64	68	68	68	63
25	72	108	66	212	62	64	60	64	68	68	68	63
26	71	75	67	157	61	72	60	64	68	68	68	63
27	69	71	68	81	61	85	60	64	68	68	68	62
28	68	67	71	80	63	69	60	64	68	68	68	62
29	66	101	73	77	---	68	60	63	67	68	68	69
30	64	207	72	75	---	65	59	63	67	68	68	73
31	64	---	72	78	---	63	---	68	---	68	68	---
TOTAL	2,080	2,120	5,039	2,709	2,067	2,023	1,863	1,980	1,956	2,121	2,108	1,906
MEAN	67.1	70.7	163	87.4	73.8	65.3	62.1	63.9	65.2	68.4	68.0	63.5
MAX	79	207	297	212	84	85	72	70	71	72	68	73
MIN	63	58	66	68	61	63	59	60	60	68	68	62
AC-FT	4,130	4,210	9,990	5,370	4,100	4,010	3,700	3,930	3,880	4,210	4,180	3,780

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2005, BY WATER YEAR (WY)

MEAN	68.8	135	157	170	130	95.2	93.6	105	93.0	63.7	51.8	62.2
MAX	161	499	481	436	468	326	247	235	282	176	150	196
(WY)	(1972)	(1991)	(1976)	(1984)	(1982)	(1972)	(1989)	(1974)	(1974)	(1969)	(1969)	(1972)
MIN	32.9	35.1	43.7	42.3	34.9	33.5	31.1	47.3	37.8	29.7	29.5	33.0
(WY)	(1988)	(1988)	(1988)	(1988)	(1977)	(1978)	(1978)	(1978)	(1973)	(1982)	(1977)	(1987)

## SNOHOMISH RIVER BASIN

12148000 SOUTH FORK TOLT RIVER NEAR CARNATION, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1969 - 2005	
ANNUAL TOTAL	28,228		27,972			
ANNUAL MEAN	77.1		76.6		101	
HIGHEST ANNUAL MEAN					195	
LOWEST ANNUAL MEAN					52.3	
HIGHEST DAILY MEAN	297	Dec 16	297	Dec 16	3,500	Nov 24, 1990
LOWEST DAILY MEAN	45	Jan 4	58	Nov 13	21	Sep 1, 1977
ANNUAL SEVEN-DAY MINIMUM	47	Jan 1	59	Nov 11	25	Aug 27, 1977
ANNUAL RUNOFF (AC-FT)	55,990		55,480		73,500	
10 PERCENT EXCEEDS	88		83		177	
50 PERCENT EXCEEDS	67		68		64	
90 PERCENT EXCEEDS	58		61		40	

## 12148000 SOUTH FORK TOLT RIVER NEAR CARNATION, WA—Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1994 to current year.

INSTRUMENTATION.--Temperature recorder since October 1994.

REMARKS.--Record excellent except Oct. 1 to Mar. 31, which are good, and Sept. 13 to 28, which are poor.

## EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum recorded, 18.1°C, Sept. 5, 2003; minimum, 1.0°C (rounded), Feb. 3, 1996, Dec. 29, 1996, Jan. 27, 1997.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 15.9°C, Aug. 3; minimum, 1.6°C, Jan. 15.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.0	9.9	10.4	9.1	8.2	8.4	7.0	6.7	6.8	5.3	5.0	5.2
2	11.2	10.1	10.5	9.2	7.8	8.3	6.9	6.7	6.8	5.1	4.5	4.7
3	11.2	10.2	10.5	8.2	7.3	7.8	6.9	6.7	6.8	4.8	4.3	4.6
4	11.2	10.1	10.5	8.0	7.2	7.5	6.9	6.7	6.8	4.5	4.1	4.3
5	11.1	10.2	10.6	8.2	7.4	7.6	6.8	6.0	6.4	4.3	3.9	4.1
6	11.0	10.6	10.8	8.6	7.4	8.0	6.6	6.3	6.4	4.6	4.0	4.3
7	11.4	10.3	10.8	8.8	8.0	8.3	6.5	6.1	6.3	4.3	3.9	4.1
8	11.2	10.6	10.9	8.5	7.8	8.1	6.3	6.1	6.2	4.1	3.6	3.9
9	10.8	10.4	10.5	8.6	7.8	8.1	6.8	6.1	6.3	4.2	3.5	3.8
10	11.4	10.4	10.8	8.3	7.7	7.9	7.3	6.8	7.2	3.9	3.3	3.6
11	11.3	10.4	10.7	8.2	7.5	7.8	7.3	5.7	6.1	3.9	3.1	3.4
12	11.5	10.6	10.9	8.5	7.7	8.0	6.1	5.5	5.8	4.0	2.1	3.5
13	11.6	10.6	10.9	8.6	7.9	8.3	6.1	5.8	5.9	3.9	3.3	3.7
14	11.6	10.7	11.1	8.1	7.8	8.0	6.5	6.0	6.4	3.7	2.4	2.9
15	11.2	11.0	11.1	8.2	7.9	8.0	6.4	5.8	6.0	2.7	1.6	2.3
16	11.1	10.7	10.9	8.2	7.7	7.9	6.0	5.7	5.9	3.2	2.4	3.0
17	10.9	10.1	10.6	7.7	7.1	7.3	6.0	5.7	5.9	3.8	2.9	3.3
18	10.3	9.9	10.1	7.6	7.1	7.4	6.2	6.0	6.1	5.1	3.5	4.5
19	10.9	10.1	10.5	7.5	6.7	7.2	6.1	5.8	5.9	5.3	4.7	4.9
20	10.8	10.0	10.4	7.0	6.5	6.8	5.9	5.5	5.7	5.3	4.7	5.0
21	10.6	10.0	10.2	7.4	6.6	7.0	5.7	5.6	5.6	5.6	5.0	5.2
22	10.3	9.7	10.1	7.8	7.2	7.5	5.8	5.5	5.7	5.4	4.9	5.1
23	9.9	8.9	9.5	7.8	7.4	7.6	5.6	5.4	5.5	5.4	5.0	5.2
24	9.7	8.1	9.0	7.9	7.5	7.8	6.3	5.3	5.8	5.2	3.8	4.7
25	9.6	8.9	9.2	7.8	6.8	7.2	6.3	6.0	6.1	4.2	3.8	3.9
26	9.8	9.0	9.4	6.9	6.5	6.8	6.2	5.6	5.9	4.8	3.8	4.2
27	9.6	8.8	9.1	6.7	6.2	6.5	5.6	5.3	5.4	5.2	4.5	4.8
28	9.3	8.7	9.0	6.4	6.0	6.2	5.8	5.4	5.7	5.0	4.5	4.7
29	9.6	9.1	9.2	7.0	6.0	6.4	5.9	5.5	5.7	5.0	4.6	4.8
30	9.2	8.0	8.9	7.2	6.8	7.0	5.7	5.3	5.5	5.2	4.8	4.9
31	8.9	8.3	8.5	---	---	---	5.6	5.1	5.3	5.3	4.5	4.9
MONTH	11.6	8.0	10.2	9.2	6.0	7.6	7.3	5.1	6.1	5.6	1.6	4.2



## 12148300 SOUTH FORK TOLT RIVER BELOW REGULATING BASIN, NEAR CARNATION, WA

LOCATION.--Lat 47°41'49", long 121°47'10", in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.33, T.26 N., R.8 E., King County, Hydrologic Unit 17110010, on right bank 2.3 mi upstream from mouth and 6.5 mi northeast of Carnation.

DRAINAGE AREA.--29.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1982 to current year. Published as "South Fork Tolt River below regulating pond, near Carnation" March 1982 through September 1983.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 670 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by South Fork Tolt Reservoir 6.1 mi upstream since September 1963. Gage is located below City of Seattle Powerhouse discharge return. During the current water year the Seattle Water Department diverted an average daily discharge of 77 ft<sup>3</sup>/s. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--23 years (water years 1983-2005), 143 ft<sup>3</sup>/s, 104,000 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, Nov. 24, 1990; maximum daily discharge, 3,700 ft<sup>3</sup>/s, Nov. 24, 1990; minimum discharge, 36 ft<sup>3</sup>/s on many days during July and August 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 779 ft<sup>3</sup>/s, Dec. 11, gage height, 5.52 ft; minimum discharge, 67 ft<sup>3</sup>/s, Sept. 7, gage height, 3.09 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	92	484	98	105	79	116	82	104	83	76	71
2	73	185	536	98	102	77	108	83	93	84	76	69
3	72	147	485	96	100	77	105	83	101	83	75	69
4	71	120	391	91	117	76	102	83	96	82	76	69
5	70	105	396	89	122	75	98	82	94	81	76	69
6	71	96	424	89	113	75	95	82	97	92	76	69
7	70	90	473	89	109	75	97	81	97	84	76	68
8	79	85	296	87	106	74	97	81	98	90	76	69
9	91	83	277	86	104	74	93	82	93	96	76	72
10	82	80	418	85	102	73	91	91	89	89	76	81
11	78	77	595	84	99	73	98	84	87	87	76	72
12	75	75	462	86	102	72	94	83	89	87	76	70
13	74	76	503	85	104	72	92	82	86	85	75	69
14	72	73	390	83	103	71	96	82	87	84	75	69
15	71	78	448	85	100	71	95	97	95	83	74	69
16	94	78	628	90	98	74	125	103	90	84	74	69
17	111	75	610	145	97	76	122	100	99	83	76	70
18	109	85	599	487	95	73	117	102	92	82	75	70
19	98	87	600	397	82	74	109	106	90	81	76	70
20	90	82	589	442	80	78	105	107	88	80	75	69
21	87	80	585	408	79	79	101	107	87	80	75	69
22	92	113	560	381	78	75	98	105	92	80	75	69
23	126	161	388	365	77	74	95	100	90	79	75	69
24	149	268	289	370	77	74	95	96	87	79	74	69
25	124	561	279	504	76	74	91	93	86	79	74	69
26	110	388	280	438	75	89	88	90	85	79	74	69
27	101	327	250	260	75	138	87	88	87	78	74	68
28	95	289	156	174	77	133	84	86	86	78	74	68
29	92	311	101	107	---	128	83	85	84	77	75	79
30	90	480	101	104	---	121	83	84	83	77	74	112
31	92	---	99	106	---	110	---	93	---	76	73	---
TOTAL	2,784	4,847	12,692	6,109	2,654	2,584	2,960	2,803	2,732	2,562	2,328	2,144
MEAN	89.8	162	409	197	94.8	83.4	98.7	90.4	91.1	82.6	75.1	71.5
MAX	149	561	628	504	122	138	125	107	104	96	76	112
MIN	70	73	99	83	75	71	83	81	83	76	73	68
AC-FT	5,520	9,610	25,170	12,120	5,260	5,130	5,870	5,560	5,420	5,080	4,620	4,250

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

MEAN	86.1	200	221	254	171	149	143	157	125	80.5	63.9	69.9
MAX	147	597	598	579	389	320	380	307	241	187	77.7	115
(WY)	(1986)	(1991)	(2000)	(1984)	(1996)	(2002)	(1989)	(1984)	(1990)	(1997)	(2004)	(2004)
MIN	41.2	43.5	70.2	66.3	83.8	73.2	73.1	68.0	53.7	41.9	38.5	42.4
(WY)	(1988)	(1988)	(1988)	(1988)	(2001)	(1992)	(1992)	(1992)	(1992)	(1982)	(1982)	(1987)

## 12148300 SOUTH FORK TOLT RIVER BELOW REGULATING BASIN, NEAR CARNATION, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	50,995		47,199			
ANNUAL MEAN	139		129		143	
HIGHEST ANNUAL MEAN					225	
LOWEST ANNUAL MEAN					84.7	
HIGHEST DAILY MEAN	628	Dec 16	628	Dec 16	3,700	Nov 24, 1990
LOWEST DAILY MEAN	66	Jan 5	68	Sep 7	36	Jul 27, 1982
ANNUAL SEVEN-DAY MINIMUM	68	Aug 15	69	Sep 22	36	Aug 6, 1982
ANNUAL RUNOFF (AC-FT)	101,100		93,620		104,000	
10 PERCENT EXCEEDS	298		292		310	
50 PERCENT EXCEEDS	92		87		89	
90 PERCENT EXCEEDS	70		72		63	

## 12148300 SOUTH FORK TOLT RIVER BELOW REGULATING BASIN, NEAR CARNATION, WA—Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1994 to current year.

INSTRUMENTATION.--Temperature recorder since October 1994.

REMARKS.--Records excellent except for Apr. 22 to July 3, which are good.

## EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum recorded, 17.9°C, Sept. 4, 2003; minimum, 0.5°C (rounded), Feb. 3, 1996, Dec. 29, 1996.

## EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 16.8°C, July 31, Aug. 4; minimum, 2.1°C, Jan. 15.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.4	9.8	10.6	8.4	7.1	7.5	7.0	6.7	6.9	5.7	5.1	5.5
2	11.4	9.4	10.3	8.8	7.3	8.1	7.0	6.6	6.8	5.2	4.0	4.6
3	11.4	9.4	10.4	7.7	6.5	7.3	7.0	6.8	6.9	4.2	3.5	3.9
4	11.3	9.3	10.3	7.2	5.9	6.5	7.0	6.8	6.9	4.0	3.4	3.7
5	11.3	9.1	10.2	7.3	6.0	6.5	6.9	6.2	6.5	3.8	2.9	3.3
6	11.5	10.6	11.1	8.1	6.2	7.3	6.6	6.3	6.4	4.4	3.1	3.7
7	11.5	10.0	10.7	8.7	7.6	8.2	6.5	6.2	6.4	4.4	3.9	4.2
8	11.2	10.3	10.8	8.1	6.7	7.4	6.4	6.2	6.3	4.4	3.8	4.1
9	10.8	10.3	10.5	8.5	7.3	7.9	6.5	6.0	6.3	4.6	3.6	4.0
10	11.5	10.3	10.7	8.1	6.9	7.5	7.2	6.5	7.0	4.1	3.3	3.7
11	11.3	9.7	10.5	7.4	6.3	6.8	7.3	5.8	6.5	3.8	2.4	3.1
12	11.6	10.2	10.8	8.0	6.3	7.1	6.1	5.5	5.8	4.3	2.7	3.6
13	11.5	9.7	10.6	8.6	7.7	8.1	6.3	6.0	6.2	4.2	3.0	3.6
14	11.6	9.8	10.7	8.2	7.7	7.9	6.5	6.2	6.3	3.9	2.3	3.0
15	11.3	10.9	11.1	8.4	8.0	8.2	6.4	6.0	6.1	2.8	2.1	2.4
16	11.2	10.7	11.0	8.4	7.7	8.0	6.2	5.7	5.9	3.8	2.4	3.4
17	10.8	9.8	10.5	7.7	6.3	7.0	6.2	5.8	6.0	4.1	3.7	3.9
18	9.9	9.4	9.6	7.4	6.9	7.2	6.4	6.1	6.2	5.7	3.8	4.6
19	10.4	9.4	9.8	7.3	6.0	6.9	6.3	5.9	6.1	5.9	4.2	5.2
20	10.1	8.9	9.5	6.2	5.4	5.9	6.0	5.6	5.8	4.7	4.2	4.4
21	9.9	9.3	9.6	6.9	5.4	6.2	5.8	5.5	5.7	4.9	4.5	4.7
22	9.6	9.1	9.3	7.8	6.8	7.3	5.9	5.5	5.7	4.7	4.4	4.6
23	9.2	8.2	8.7	7.8	7.6	7.7	5.5	5.2	5.4	4.7	4.4	4.6
24	8.9	7.6	8.2	8.0	7.7	7.9	5.6	5.1	5.3	4.7	4.1	4.4
25	8.9	7.7	8.3	8.1	7.2	7.7	5.9	5.6	5.7	4.5	3.9	4.1
26	9.5	8.3	8.8	7.3	7.0	7.2	5.8	5.4	5.6	4.3	4.1	4.3
27	8.7	7.2	8.0	7.2	6.6	7.0	5.5	5.1	5.3	5.1	4.3	4.6
28	8.5	7.1	7.9	6.7	6.4	6.6	5.6	4.9	5.2	6.0	4.3	5.0
29	9.2	8.4	8.7	6.9	6.2	6.5	6.1	5.6	5.9	6.3	5.6	6.0
30	8.8	7.7	8.6	7.2	6.7	6.9	5.9	5.1	5.6	6.5	5.9	6.2
31	8.2	7.2	7.7	---	---	---	5.6	4.9	5.3	6.8	5.6	6.3
MONTH	11.6	7.1	9.8	8.8	5.4	7.3	7.3	4.9	6.1	6.8	2.1	4.3





12148500 TOLT RIVER NEAR CARNATION, WA

LOCATION.--Lat 47°41'45", long 121°49'22", in SE¼NE¼ 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 mi<sup>2</sup>.

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.--Records good except estimated daily discharges, which are fair. 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 77 ft<sup>3</sup>/s upstream from station for municipal use. Chemical analyses July 1960 to September 1970. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--71 years (water years 1929-31, 1938-2005), 572 ft<sup>3</sup>/s, 414,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,400 ft<sup>3</sup>/s, Dec. 15, 1959, gage height, 13.04 ft; minimum discharge, 53 ft<sup>3</sup>/s, Sept. 22, 23, 1951, gage height, 3.84 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 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 2	0745	3,900	8.57	Dec 11	0215	7,990	10.21
Nov 25	0400	*9,060	*10.54	Jan 18	1030	7,090	9.91

Minimum discharge, 122 ft<sup>3</sup>/s, Sept. 28, 29, gage height, 4.46 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	241	585	837	414	398	292	743	334	818	271	178	137
2	230	2,280	850	395	364	266	605	328	563	270	175	132
3	222	959	791	380	342	257	540	340	536	268	172	132
4	216	643	719	367	613	241	534	319	509	254	169	133
5	211	541	764	349	615	232	489	321	486	243	168	134
6	226	526	737	330	497	226	460	306	488	480	166	132
7	224	481	805	334	456	229	587	288	474	364	166	130
8	308	448	1,010	318	415	239	616	277	523	474	164	128
9	586	410	904	297	386	238	487	277	468	684	159	143
10	503	375	3,760	286	364	243	436	438	403	417	159	275
11	367	351	3,570	278	347	223	504	360	379	353	158	195
12	313	331	1,320	293	382	214	472	320	416	325	157	152
13	284	326	1,100	295	423	203	430	295	407	306	156	141
14	264	320	1,560	278	374	196	447	292	381	287	153	136
15	252	375	1,410	281	336	190	461	442	415	274	152	133
16	675	454	1,160	373	323	201	999	586	369	277	151	135
17	796	428	1,040	1,600	315	226	779	478	431	267	158	136
18	705	490	989	4,950	307	222	740	449	376	248	155	135
19	530	507	1,060	1,970	284	213	596	541	338	236	151	132
20	454	429	977	1,420	272	307	546	544	315	226	148	130
21	419	383	905	1,370	262	356	538	552	302	220	146	128
22	e596	437	851	1,070	254	276	554	535	350	222	144	127
23	833	574	693	1,080	250	247	550	509	389	219	144	126
24	728	2,480	599	862	247	230	560	439	324	210	143	124
25	580	3,890	603	892	244	221	507	393	298	203	141	124
26	535	1,310	657	790	240	624	475	361	287	198	140	124
27	498	991	574	627	238	1,450	450	336	297	193	140	124
28	440	819	495	518	248	954	420	316	320	191	139	123
29	416	753	445	419	---	737	371	302	306	186	143	599
30	473	873	468	412	---	659	349	294	285	181	142	1,270
31	556	---	435	422	---	553	---	359	---	178	140	---
TOTAL	13,681	23,769	32,088	23,670	9,796	10,965	16,245	11,931	12,253	8,725	4,777	5,770
MEAN	441	792	1,035	764	350	354	542	385	408	281	154	192
MAX	833	3,890	3,760	4,950	615	1,450	999	586	818	684	178	1,270
MIN	211	320	435	278	238	190	349	277	285	178	139	123
AC-FT	27,140	47,150	63,650	46,950	19,430	21,750	32,220	23,670	24,300	17,310	9,480	11,440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2005, BY WATER YEAR (WY)

MEAN	439	779	876	849	727	602	663	671	545	295	181	245
MAX	933	1,965	1,897	2,058	1,634	1,472	1,275	1,208	1,204	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)

## SNOHOMISH RIVER BASIN

12148500 TOLT RIVER NEAR CARNATION, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1928 - 2005	
ANNUAL TOTAL	198,436		173,670			
ANNUAL MEAN	542		476		572	
HIGHEST ANNUAL MEAN					922	1959
LOWEST ANNUAL MEAN					365	1994
HIGHEST DAILY MEAN	4,920	Jan 29	4,950	Jan 18	11,400	Feb 9, 1951
LOWEST DAILY MEAN	122	Aug 20	123	Sep 28	53	Sep 22, 1951
ANNUAL SEVEN-DAY MINIMUM	126	Aug 15	125	Sep 22	56	Sep 17, 1951
ANNUAL RUNOFF (AC-FT)	393,600		344,500		414,600	
10 PERCENT EXCEEDS	928		842		1,100	
50 PERCENT EXCEEDS	440		360		442	
90 PERCENT EXCEEDS	178		147		141	

e Estimated

## 12149000 SNOQUALMIE RIVER NEAR CARNATION, WA

LOCATION.--Lat 47°39'58", long 121°55'27", in NW $\frac{1}{4}$ SW $\frac{1}{4}$  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 mi<sup>2</sup>.

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 77 ft<sup>3</sup>/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.--76 years (water years 1930-2005), 3,710 ft<sup>3</sup>/s, 83.59 in/yr, 2,688,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,200 ft<sup>3</sup>/s, Nov. 24, 1990, gage height, 60.70 ft, from inside high-water mark; minimum discharge, 239 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Sept. 15, 1973.

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 2	2130	16,400	52.81	Jan 19	0100	*49,400	*59.08
Nov 25	1830	21,700	54.88	Sep 30	1430	16,800	52.97
Dec 11	1630	41,900	58.20				

Minimum discharge, 526 ft<sup>3</sup>/s, Sept. 25-29, gage height, 45.19 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,380	2,290	3,810	2,860	2,830	1,530	4,830	2,670	4,220	1,530	877	612
2	1,300	11,500	3,530	2,740	2,560	1,520	5,150	2,580	4,070	1,460	868	583
3	1,220	10,400	3,280	2,600	2,370	1,500	4,180	2,640	3,550	1,450	842	563
4	1,160	5,200	3,060	2,500	2,560	1,430	3,860	2,520	3,220	1,360	821	555
5	1,120	3,800	3,180	2,400	3,730	1,370	3,340	2,550	2,780	1,290	801	599
6	1,150	3,110	3,010	2,350	3,010	1,340	2,970	2,480	2,700	1,680	776	585
7	1,390	2,700	3,030	2,460	2,650	1,340	3,440	2,330	2,600	2,010	766	550
8	1,310	2,480	4,620	2,380	2,400	1,480	4,230	2,120	2,700	1,710	757	542
9	2,270	2,350	5,530	2,320	2,240	1,510	3,330	2,040	2,630	3,450	744	552
10	3,300	2,180	13,600	2,240	2,120	1,620	2,810	3,210	2,310	2,790	735	932
11	2,470	2,050	34,400	2,130	2,030	1,540	3,020	3,320	2,190	2,170	728	1,310
12	1,930	1,920	19,900	2,090	1,980	1,470	3,120	2,770	2,590	1,900	724	893
13	1,670	1,840	8,320	2,230	2,180	1,430	2,720	2,430	2,760	1,790	701	750
14	1,520	1,830	8,050	2,190	2,060	1,330	2,550	2,280	2,730	1,660	686	677
15	1,380	1,790	10,500	2,100	1,930	1,250	2,490	2,700	2,550	1,540	678	632
16	2,020	2,220	7,590	2,230	1,820	1,260	4,110	4,950	2,360	1,490	665	614
17	5,360	2,240	6,230	3,930	1,750	1,620	5,390	4,040	2,420	1,480	682	614
18	5,780	2,350	5,630	27,500	1,690	1,530	4,440	3,410	2,410	1,380	714	613
19	4,020	2,540	5,770	38,900	1,630	1,420	3,750	3,930	2,140	1,300	677	594
20	3,030	2,310	5,800	15,100	1,570	1,650	3,440	4,050	1,950	1,250	647	565
21	2,620	2,010	4,940	10,700	1,510	2,400	3,500	4,410	1,840	1,190	634	551
22	2,630	1,970	4,470	7,480	1,460	1,980	3,890	4,210	1,870	1,160	631	546
23	3,670	2,380	4,000	7,660	1,430	1,690	4,440	3,890	2,120	1,210	619	540
24	3,640	8,930	3,630	6,030	1,410	1,540	4,910	3,210	1,910	1,150	613	535
25	3,300	20,000	3,540	5,060	1,370	1,450	4,670	2,780	1,730	1,090	600	531
26	2,710	13,100	3,870	4,430	1,360	1,990	4,610	2,530	1,630	1,040	589	526
27	2,360	6,810	3,540	4,020	1,340	7,160	4,350	2,410	1,620	1,010	566	526
28	2,150	5,180	3,210	3,650	1,350	7,420	4,030	2,310	1,720	964	564	526
29	2,030	4,230	3,060	3,150	---	5,750	3,310	2,230	1,700	943	590	724
30	2,050	4,060	3,190	2,930	---	6,230	2,890	2,130	1,620	912	663	14,100
31	2,570	---	3,020	2,860	---	4,730	---	2,080	---	892	680	---
TOTAL	74,510	135,770	199,310	181,220	56,340	71,480	113,770	91,210	72,640	46,251	21,638	32,440
MEAN	2,404	4,526	6,429	5,846	2,012	2,306	3,792	2,942	2,421	1,492	698	1,081
MAX	5,780	20,000	34,400	38,900	3,730	7,420	5,390	4,950	4,220	3,450	877	14,100
MIN	1,120	1,790	3,010	2,090	1,340	1,250	2,490	2,040	1,620	892	564	526
AC-FT	147,800	269,300	395,300	359,400	111,800	141,800	225,700	180,900	144,100	91,740	42,920	64,340
CFSM	3.99	7.51	10.7	9.69	3.34	3.82	6.29	4.88	4.02	2.47	1.16	1.79
IN.	4.60	8.38	12.30	11.18	3.48	4.41	7.02	5.63	4.48	2.85	1.33	2.00

## SNOHOMISH RIVER BASIN

12149000 SNOQUALMIE RIVER NEAR CARNATION, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)													
MEAN	2,556	4,865	5,462	5,104	4,359	3,798	4,302	4,941	4,434	2,293	1,102	1,369	
MAX	5,811	12,850	14,530	11,140	9,743	9,979	6,797	7,847	8,983	5,629	2,992	5,128	
(WY)	(1948)	(1991)	(1934)	(1953)	(1982)	(1932)	(1932)	(1936)	(1974)	(1955)	(1964)	(1959)	
MIN	407	619	1,694	1,291	1,860	1,933	2,230	2,434	1,362	840	492	484	
(WY)	(1988)	(1953)	(1986)	(1937)	(1973)	(1941)	(1941)	(1992)	(1992)	(1940)	(1930)	(1998)	
SUMMARY STATISTICS													
	FOR 2004 CALENDAR YEAR					FOR 2005 WATER YEAR			WATER YEARS 1929 - 2005				
ANNUAL TOTAL	1,241,360					1,096,579							
ANNUAL MEAN	3,392					3,004			3,710				
HIGHEST ANNUAL MEAN									5,439				
LOWEST ANNUAL MEAN									2,314				
HIGHEST DAILY MEAN	34,400					Dec 11		38,900		Jan 19		54,500	
LOWEST DAILY MEAN	572					Aug 21		526		Sep 26		341	
ANNUAL SEVEN-DAY MINIMUM	613					Aug 15		533		Sep 22		359	
ANNUAL RUNOFF (AC-FT)	2,462,000					2,175,000			2,688,000				
ANNUAL RUNOFF (CFSM)	5.62					4.98			6.15				
ANNUAL RUNOFF (INCHES)	76.58					67.65			83.59				
10 PERCENT EXCEEDS	5,780					5,100			6,950				
50 PERCENT EXCEEDS	2,640					2,240			2,940				
90 PERCENT EXCEEDS	1,140					677			830				

12150800 SNOHOMISH RIVER NEAR MONROE, WA

LOCATION.--Lat 47°49'52", long 122°02'50", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> 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, at mi 20.4.

DRAINAGE AREA.--1,537 mi<sup>2</sup>.

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 at the USGS Washington Water Science Center.

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 77 ft<sup>3</sup>/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 at the USGS Washington Water Science Center office in Tacoma, WA. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--42 years (water years 1964-2005), 9,512 ft<sup>3</sup>/s, 84.08 in/yr, 6,891,000 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 ft<sup>3</sup>/s, Nov. 25, 1990, gage height, 25.30 ft, from rating curve extended above 80,000 ft<sup>3</sup>/s; minimum discharge, 763 ft<sup>3</sup>/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 ft<sup>3</sup>/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 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 2	1830	48,300	13.06	Dec 11	1300	68,500	17.17
Nov 25	1130	54,200	14.30	Jan 19	0630	*69,900	*17.44

Minimum discharge, 1,240 ft<sup>3</sup>/s, Sept. 28, 29, gage height, 0.74 ft.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,630	8,790	10,700	6,170	8,810	3,910	10,800	7,630	9,260	3,730	2,170	1,640
2	3,490	33,200	9,570	5,750	7,950	3,940	12,100	7,250	10,300	3,590	2,140	1,560
3	3,350	32,600	8,370	5,370	7,080	3,840	10,200	7,220	8,500	3,560	2,090	1,510
4	3,250	19,100	7,820	5,060	7,330	3,730	9,360	6,980	7,730	3,420	2,050	1,480
5	3,130	14,100	8,330	4,790	10,200	3,590	8,370	6,850	6,760	3,260	1,990	1,510
6	3,150	11,500	8,050	4,570	8,800	3,540	7,310	6,840	6,710	3,650	1,910	1,520
7	3,540	9,990	8,060	4,590	7,790	3,540	7,760	6,560	6,390	4,650	1,890	1,460
8	3,480	9,230	10,800	4,340	7,070	3,880	10,200	5,940	6,650	4,010	1,860	1,410
9	5,430	8,540	13,400	4,160	6,550	3,950	8,680	5,590	6,730	7,330	1,810	1,460
10	8,770	7,670	33,600	4,020	6,170	4,340	7,290	7,600	5,920	6,750	1,770	2,010
11	6,990	6,810	62,900	3,920	5,740	4,200	7,220	8,740	5,650	5,160	1,760	2,760
12	5,300	6,320	43,800	4,090	5,350	4,120	7,550	7,480	6,190	4,440	1,740	2,280
13	4,500	5,950	29,100	4,190	5,800	4,010	6,740	6,640	6,480	4,140	1,720	1,910
14	4,090	5,820	23,600	3,870	5,600	3,740	6,310	6,210	6,390	3,900	1,670	1,640
15	3,840	5,680	26,700	3,580	5,150	3,530	6,160	6,840	5,960	3,660	1,530	1,520
16	4,620	6,710	20,500	3,740	4,790	3,460	8,860	10,800	5,660	3,560	1,480	1,480
17	10,600	6,730	16,500	6,350	4,560	4,020	13,100	10,000	5,500	3,550	1,490	1,470
18	13,500	6,770	14,400	52,300	4,390	3,970	11,700	8,470	5,670	3,370	1,580	1,480
19	11,400	7,850	14,300	67,200	4,230	3,780	10,000	9,870	5,110	3,210	1,590	1,440
20	9,170	7,210	14,700	49,500	4,100	4,160	9,040	10,600	4,660	3,070	1,510	1,400
21	8,880	6,280	12,600	35,400	3,950	5,760	9,040	10,500	4,390	2,940	1,460	1,360
22	8,930	5,980	11,200	25,800	3,840	5,270	9,870	10,200	4,460	2,840	1,440	1,330
23	12,100	6,720	10,000	25,300	3,760	4,480	11,400	9,750	4,980	2,950	1,420	1,320
24	11,900	18,300	9,120	20,600	3,680	4,080	12,500	8,320	4,610	2,840	1,470	1,300
25	10,800	47,400	8,780	16,800	3,630	3,840	12,500	7,180	4,210	2,690	1,540	1,280
26	9,220	32,700	9,580	14,300	3,580	4,370	12,600	6,540	3,990	2,570	1,460	1,270
27	8,020	20,900	8,870	12,700	3,560	13,300	12,200	6,300	3,930	2,490	1,370	1,260
28	7,240	15,600	8,160	11,500	3,540	17,000	11,400	6,140	4,090	2,410	1,420	1,250
29	6,710	12,700	7,570	10,200	---	13,700	9,810	6,010	4,080	2,340	1,470	1,350
30	7,360	11,600	7,340	9,380	---	13,500	8,420	5,760	3,900	2,270	1,550	22,000
31	9,310	---	6,650	8,960	---	11,100	---	5,560	---	2,220	1,670	---
TOTAL	215,700	398,750	485,070	438,500	157,000	173,650	288,490	236,370	174,860	110,570	52,020	66,660
MEAN	6,958	13,290	15,650	14,150	5,607	5,602	9,616	7,625	5,829	3,567	1,678	2,222
MAX	13,500	47,400	62,900	67,200	10,200	17,000	13,100	10,800	10,300	7,330	2,170	22,000
MIN	3,130	5,680	6,650	3,580	3,540	3,460	6,160	5,560	3,900	2,220	1,370	1,250
AC-FT	427,800	790,900	962,100	869,800	311,400	344,400	572,200	468,800	346,800	219,300	103,200	132,200
CFSM	4.53	8.65	10.2	9.20	3.65	3.64	6.26	4.96	3.79	2.32	1.09	1.45
IN.	5.22	9.65	11.74	10.61	3.80	4.20	6.98	5.72	4.23	2.68	1.26	1.61

## SNOHOMISH RIVER BASIN

12150800 SNOHOMISH RIVER NEAR MONROE, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2005, BY WATER YEAR (WY)												
MEAN	6,142	12,440	13,260	13,000	10,940	9,316	10,370	12,940	12,410	6,743	3,025	3,421
MAX	13,340	34,800	29,580	22,000	24,300	25,700	16,050	20,450	24,730	15,290	7,885	7,646
(WY)	(1996)	(1991)	(1976)	(1984)	(1982)	(1972)	(1989)	(1972)	(1974)	(1964)	(1964)	(1978)
MIN	894	2,624	3,966	4,401	4,606	4,859	5,340	7,625	4,070	2,683	1,388	1,133
(WY)	(1988)	(1988)	(1986)	(1979)	(1973)	(1985)	(1975)	(2005)	(1992)	(1987)	(2003)	(1987)
SUMMARY STATISTICS												
	FOR 2004 CALENDAR YEAR			FOR 2005 WATER YEAR			WATER YEARS 1963 - 2005					
ANNUAL TOTAL	3,382,480			2,797,640			9,512					
ANNUAL MEAN	9,242			7,665			13,670					
HIGHEST ANNUAL MEAN							1972					
LOWEST ANNUAL MEAN							6,308					
HIGHEST DAILY MEAN	62,900			Dec 11			67,200			Jan 19		
LOWEST DAILY MEAN	1,490			Aug 21			1,250			Sep 28		
ANNUAL SEVEN-DAY MINIMUM	1,600			Aug 15			1,290			Sep 22		
ANNUAL RUNOFF (AC-FT)	6,709,000			5,549,000			6,891,000					
ANNUAL RUNOFF (CFSM)	6.01			4.99			6.19					
ANNUAL RUNOFF (INCHES)	81.87			67.71			84.08					
10 PERCENT EXCEEDS	15,600			13,200			18,200					
50 PERCENT EXCEEDS	8,080			5,820			7,580					
90 PERCENT EXCEEDS	3,120			1,560			2,250					

## 12155300 PILCHUCK RIVER NEAR SNOHOMISH, WA

LOCATION.--Lat 47°56'06", long 122°04'19", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.8, T.28 N., R.6 E., Snohomish County, Hydrologic Unit 17110011, on right bank, 1.8 mi northeast of Snohomish, and at mile 3.6.

DRAINAGE AREA.--127 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1992 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 30.00 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good except for period of May 27 to June 10, which is fair. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--13 years (water years 1993-2005), 467 ft<sup>3</sup>/s, 49.92 in/yr, 338,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,480 ft<sup>3</sup>/s, Dec. 16, 1999, gage height, 19.16 ft; minimum discharge, 35 ft<sup>3</sup>/s, Sept. 6, 2003.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 24, 1990, reached a stage of 18.75 ft, from high-water mark at former bridge, discharge, 7,100 ft<sup>3</sup>/s (from slope-area measurement of peak flow).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 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 2	1500	2,720	13.58	Dec 11	0730	4,610	16.03
Nov 25	1015	*5,220	*16.80	Jan 18	1500	4,000	15.24

Minimum discharge, 48 ft<sup>3</sup>/s, Sept. 7-9.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	250	561	409	312	228	769	214	434	187	83	58
2	104	1,760	491	366	285	234	690	205	351	173	82	54
3	100	1,240	447	331	263	209	587	205	277	179	78	52
4	97	622	452	300	345	191	921	187	244	175	76	51
5	94	435	750	276	512	176	951	177	228	163	73	52
6	106	346	727	262	399	169	688	169	333	175	78	51
7	121	300	646	297	367	163	650	160	412	173	75	49
8	116	257	977	292	327	163	1,110	155	755	150	69	49
9	398	228	875	276	302	160	733	156	625	270	68	61
10	443	207	2,440	260	280	154	563	281	438	194	69	113
11	262	190	3,430	242	264	148	649	264	476	171	69	137
12	194	172	1,710	239	269	142	655	205	586	152	68	91
13	162	163	1,120	245	411	137	563	179	446	142	65	72
14	145	163	1,250	230	410	133	556	169	358	130	63	66
15	134	200	1,840	219	370	131	563	198	315	121	61	64
16	385	344	1,140	266	332	135	1,380	393	280	147	62	64
17	590	298	810	1,170	307	219	1,550	447	362	187	69	64
18	649	336	684	3,130	287	242	1,290	351	360	155	77	62
19	413	438	615	1,980	269	230	935	659	297	133	67	60
20	292	377	533	1,120	253	336	711	675	261	115	62	57
21	315	301	526	1,100	238	549	593	567	239	108	60	54
22	324	303	539	778	226	374	519	467	267	107	59	52
23	503	520	473	908	216	293	462	404	386	119	57	53
24	368	2,530	432	659	209	245	415	329	270	106	57	52
25	293	3,590	418	539	204	216	367	285	230	100	56	53
26	248	1,600	667	464	197	219	336	262	216	96	54	56
27	217	1,100	534	423	189	859	311	227	215	90	52	58
28	196	832	452	386	188	882	295	203	240	87	52	58
29	186	658	426	351	---	770	254	191	231	82	59	59
30	225	628	499	327	---	914	225	177	207	81	65	608
31	258	---	461	313	---	607	---	188	---	79	61	---
TOTAL	8,047	20,388	26,925	18,158	8,231	9,628	20,291	8,749	10,339	4,347	2,046	2,430
MEAN	260	680	869	586	294	311	676	282	345	140	66.0	81.0
MAX	649	3,590	3,430	3,130	512	914	1,550	675	755	270	83	608
MIN	94	163	418	219	188	131	225	155	207	79	52	49
AC-FT	15,960	40,440	53,410	36,020	16,330	19,100	40,250	17,350	20,510	8,620	4,060	4,820
CFSM	2.04	5.35	6.84	4.61	2.31	2.45	5.33	2.22	2.71	1.10	0.52	0.64
IN.	2.36	5.97	7.89	5.32	2.41	2.82	5.94	2.56	3.03	1.27	0.60	0.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2005, BY WATER YEAR (WY)

MEAN	335	661	873	830	664	645	526	403	276	166	98.6	117
MAX	697	1,140	1,467	1,532	1,110	1,084	738	597	543	378	209	246
(WY)	(1996)	(1996)	(2000)	(1997)	(1996)	(1997)	(2002)	(1999)	(1999)	(1997)	(1995)	(2004)
MIN	75.3	179	379	434	264	311	228	208	118	69.4	45.5	52.8
(WY)	(2003)	(1994)	(2001)	(2001)	(1993)	(2005)	(2004)	(1994)	(1992)	(2003)	(2003)	(1998)

## SNOHOMISH RIVER BASIN

12155300 PILCHUCK RIVER NEAR SNOHOMISH, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1992 - 2005	
ANNUAL TOTAL	160,949		139,579			
ANNUAL MEAN	440		382		467	
HIGHEST ANNUAL MEAN					721	
LOWEST ANNUAL MEAN					314	
HIGHEST DAILY MEAN	3,600	Jan 30	3,590	Nov 25	5,050	Jan 1, 1997
LOWEST DAILY MEAN	43	Aug 19	49	Sep 7	36	Sep 4, 2003
ANNUAL SEVEN-DAY MINIMUM	45	Aug 15	51	Sep 2	37	Aug 31, 2003
ANNUAL RUNOFF (AC-FT)	319,200		276,900		338,000	
ANNUAL RUNOFF (CFSM)	3.46		3.01		3.67	
ANNUAL RUNOFF (INCHES)	47.14		40.88		49.92	
10 PERCENT EXCEEDS	923		761		999	
50 PERCENT EXCEEDS	300		260		323	
90 PERCENT EXCEEDS	75		64		70	