

12137800 SULTAN RIVER BELOW DIVERSION DAM, NEAR SULTAN, WA

LOCATION.--Lat 47°57'34", long 121°47'46", in SE 1/4 NE 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 mi².

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, unadjusted for storage. 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.--19 years (water years 1984-2002), 211 ft³/s, 152,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s Nov. 24, 1990, gage height, 63.79 ft, from rating curve extended above 3,200 ft³/s; minimum recorded discharge, 23 ft³/s Oct. 30, 1988, result of regulation, but may have been lower Dec. 13, 14, 2001; minimum daily, 35 ft³/s Aug. 23-25, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,370 ft³/s Dec. 13, gage height, 56.68 ft; minimum daily discharge, 97 ft³/s July 17-18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	127	258	98	155	177	175	175	175	99	98	98
2	164	135	237	101	155	173	175	175	175	98	98	99
3	163	115	157	98	155	171	175	175	175	98	98	98
4	163	120	136	98	155	174	175	175	175	98	98	98
5	164	156	126	98	155	175	175	175	175	98	98	98
6	164	109	181	112	164	175	175	175	175	98	98	99
7	164	99	181	372	162	175	175	175	175	98	98	98
8	164	99	215	382	155	175	175	175	175	98	98	98
9	164	99	274	186	155	175	175	175	175	98	98	98
10	164	99	167	119	155	175	184	175	175	98	98	98
11	163	99	142	98	155	175	187	175	175	98	98	98
12	164	99	173	156	155	175	305	175	175	98	98	98
13	163	100	654	116	155	175	257	175	175	98	98	98
14	191	406	497	98	155	175	299	177	175	98	98	98
15	163	305	229	98	155	175	179	175	175	98	98	144
16	163	212	369	155	155	175	194	175	128	98	98	149
17	163	155	310	155	156	175	176	175	98	97	98	151
18	163	124	170	155	157	175	175	175	98	97	98	151
19	370	122	155	155	170	175	175	175	98	99	98	152
20	215	147	127	184	156	175	175	175	98	232	98	152
21	202	157	108	156	279	175	175	175	98	224	98	152
22	300	182	101	155	822	175	175	175	98	207	98	162
23	284	277	99	155	304	175	175	175	98	207	98	162
24	279	162	100	293	173	175	175	175	98	207	98	162
25	353	133	100	442	152	175	175	175	98	208	98	162
26	205	143	99	179	152	175	175	175	98	196	98	162
27	198	140	98	155	152	175	175	175	98	116	98	162
28	164	131	99	155	152	219	175	175	98	98	98	162
29	162	256	98	155	---	175	175	175	132	98	98	162
30	167	210	98	155	---	175	175	175	98	98	98	162
31	170	---	98	155	---	175	---	175	---	98	98	---
TOTAL	6040	4718	5856	5189	5321	5464	5631	5427	4159	3851	3038	3883
MEAN	195	157	189	167	190	176	188	175	139	124	98.0	129
MAX	370	406	654	442	822	219	305	177	175	232	98	162
MIN	162	99	98	98	152	171	175	175	98	97	98	98
AC-FT	11980	9360	11620	10290	10550	10840	11170	10760	8250	7640	6030	7700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2002, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	230	412	179	224	234	239	226	247	187	167	120	169								
MAX	726	1606	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	163	176	179	175	118	104	60.6	129								
(WY)	1988	1988	1988	1988	2001	2002	1987	2002	1996	2001	1983	2002								

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1983 - 2002
ANNUAL TOTAL	58259	58577	
ANNUAL MEAN	160	160	211
HIGHEST ANNUAL MEAN			433
LOWEST ANNUAL MEAN			144
HIGHEST DAILY MEAN	654	822	16600
LOWEST DAILY MEAN	98	97	35
ANNUAL SEVEN-DAY MINIMUM	99	98	42
ANNUAL RUNOFF (AC-FT)	115600	116200	152700
10 PERCENT EXCEEDS	195	207	250
50 PERCENT EXCEEDS	162	162	175
90 PERCENT EXCEEDS	100	98	112