

Water-Data Report 2006

12137800 SULTAN RIVER BELOW DIVERSION DAM, NEAR SULTAN, WA

Puget Sound Basin
Skykomish Subbasin

LOCATION.--Lat 47°57'34", long 121°47'46" referenced to North American Datum of 1927, in SE ¼ NE ¼ sec.32, T.29 N., R.8 E., Snohomish County, WA, 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.

SURFACE-WATER RECORDS

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.--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 FOR PERIOD OF RECORD.--23 years (water years 1984-2006), 201 ft³/s, 145,300 acre-ft/yr, unadjusted.

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, 718 ft³/s, Dec 12, gage height, 55.88 ft; minimum discharge, 86 ft³/s, Feb 18, gage height, 53.36 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	158	140	e100	98	154	194	180	183	184	100	99	99
2	158	110	98	98	174	180	180	184	183	101	99	99
3	158	125	98	98	193	180	180	183	182	107	99	99
4	158	192	98	98	164	182	180	184	183	101	99	99
5	158	156	99	104	154	180	180	183	182	101	99	99
6	159	283	98	123	155	180	180	183	183	100	99	99
7	158	267	98	129	155	180	179	183	183	99	99	99
8	158	132	98	147	155	180	180	183	184	99	99	99
9	158	100	98	289	155	179	180	183	183	99	99	99
10	158	104	98	463	155	180	179	183	182	99	100	99
11	158	127	137	378	155	180	180	183	183	100	99	99
12	158	122	621	169	155	180	180	183	184	100	99	99
13	158	153	646	198	155	180	182	183	183	100	99	99
14	158	105	549	307	155	180	184	183	183	100	99	122
15	158	103	100	155	155	180	182	183	183	101	99	150
16	158	103	98	156	154	180	183	183	136	100	99	150
17	159	100	98	157	153	180	183	183	101	100	99	150
18	158	101	98	154	148	180	183	183	101	99	99	150
19	159	101	98	155	145	180	183	184	101	99	99	150
20	158	101	99	155	142	180	183	183	101	99	100	150
21	158	101	98	155	151	180	183	184	100	99	99	154
22	158	100	100	155	156	180	183	183	101	99	99	160
23	158	101	98	155	358	180	182	183	100	100	99	160
24	158	101	140	154	157	180	182	183	100	99	99	160
25	158	101	102	155	156	180	182	183	100	101	99	160
26	159	101	100	155	158	180	183	184	101	100	99	160
27	159	101	98	155	156	180	183	183	101	100	99	160
28	159	101	99	155	168	180	183	193	101	99	100	160
29	159	101	99	155	---	180	184	263	101	99	99	160
30	159	e100	98	416	---	180	183	183	101	99	99	160
31	168	---	98	215	---	180	---	184	---	99	99	---
Total	4,916	3,733	4,657	5,656	4,591	5,595	5,449	5,769	4,291	3,098	3,072	3,903
Mean	159	124	150	182	164	180	182	186	143	99.9	99.1	130
Max	168	283	646	463	358	194	184	263	184	107	100	160
Min	158	100	98	98	142	179	179	183	100	99	99	99
Ac-ft	9,750	7,400	9,240	11,220	9,110	11,100	10,810	11,440	8,510	6,140	6,090	7,740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	222	364	170	213	221	231	220	237	180	158	117	162
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	99.9	60.6	127
(WY)	(2006)	(1988)	(1988)	(1988)	(2003)	(2002)	(1987)	(2002)	(1996)	(2006)	(1983)	(2003)

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SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1983 - 2006	
Annual total	55,478		54,730			
Annual mean	152		150		201	
Highest annual mean					433	1984
Lowest annual mean					144	1988
Highest daily mean	646	Dec 13	646	Dec 13	16,600	Nov 24, 1990
Lowest daily mean	98	Dec 2	98	Dec 2	35	Aug 23, 1983
Annual seven-day minimum	98	Dec 2	98	Dec 2	42	Aug 5, 1983
Annual runoff (ac-ft)	110,000		108,600		145,300	
10 percent exceeds	199		183		240	
50 percent exceeds	158		155		172	
90 percent exceeds	99		99		105	

