

12138160 SULTAN RIVER BELOW POWERPLANT NEAR SULTAN, WA

LOCATION.--Lat 47°54'27", long 121°48'51", in SW 1/4 SW 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 mi².

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; unadjusted for storage. 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.--19 years (water years 1984-2002), 751 ft³/s, 544,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,300 ft³/s Nov. 24, 1990, gage height, 15.03 ft, from rating curve extended above 4,500 ft³/s; minimum discharge, 124 ft³/s July 14, 15, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,000 ft³/s Feb. 22, gage height, 8.53 ft; minimum discharge, 188 ft³/s July 19.

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	490	1140	1730	441	1560	1480	459	660	1070	1460	284	269
2	490	1560	1730	446	1480	1440	438	885	1070	1460	283	272
3	490	1530	1620	355	1420	1430	429	972	1170	1450	282	270
4	490	1530	1360	272	1360	1360	423	860	1400	1450	282	270
5	489	1490	1190	269	1310	1300	518	871	1590	1450	280	270
6	489	1420	1060	281	1290	1300	622	927	1490	1460	276	270
7	486	1390	941	1100	1270	1480	627	908	1450	1450	276	270
8	490	1370	943	1910	867	1500	733	904	1450	1480	276	269
9	487	1280	1090	1680	612	1480	792	893	1450	1470	276	271
10	489	1240	876	1550	592	1490	841	798	1450	1270	275	297
11	513	1240	753	1470	606	1420	835	675	1380	954	276	311
12	451	1210	761	1550	578	1300	1020	674	1320	806	275	311
13	410	1180	1530	1580	561	1250	962	926	1300	806	275	312
14	462	1810	1480	1530	551	1230	1150	1620	1260	804	275	312
15	439	1970	980	1510	527	1200	1490	1430	1250	798	275	355
16	436	1760	1160	1520	513	1170	1740	1520	1210	790	274	368
17	438	1610	1740	1500	516	1540	1710	1160	1150	790	274	370
18	434	1550	1770	1500	540	1540	1630	895	1140	637	273	366
19	990	1500	1700	1560	633	1510	1590	883	1140	350	274	366
20	953	1590	1570	1670	698	1480	1580	855	1140	252	273	360
21	867	1600	1280	1650	823	1260	1570	743	1220	245	273	354
22	1040	1620	1120	1600	2100	1280	1580	528	1450	226	274	365
23	1230	1820	1110	1590	1940	1290	1600	434	1450	221	273	349
24	1630	1640	974	1760	1680	1280	1590	417	1320	218	272	331
25	1970	1570	801	2090	1580	993	1150	410	1220	216	271	331
26	1730	1580	796	1680	1540	612	871	408	1120	223	271	330
27	1710	1540	794	1600	1530	457	865	406	871	461	272	330
28	1660	1520	693	1580	1520	581	862	446	773	430	272	332
29	1620	1700	573	1540	---	531	860	945	1280	374	272	331
30	1610	1680	568	1550	---	498	742	1480	1460	318	270	347
31	1330	---	490	1590	---	479	---	1210	---	296	271	---
TOTAL	26813	45640	35183	41924	30197	37161	31279	26743	38044	24615	8525	9559
MEAN	865	1521	1135	1352	1078	1199	1043	863	1268	794	275	319
MAX	1970	1970	1770	2090	2100	1540	1740	1620	1590	1480	284	370
MIN	410	1140	490	269	513	457	423	406	773	216	270	269
AC-FT	53180	90530	69790	83160	59900	73710	62040	53040	75460	48820	16910	18960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

MEAN	634	1356	1063	1035	882	746	750	801	723	434	268	341
MAX	1630	3080	1787	1766	1586	1223	1284	1257	1314	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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1984 - 2002
ANNUAL TOTAL	225034	355683	
ANNUAL MEAN	617	974	751
HIGHEST ANNUAL MEAN			1065
LOWEST ANNUAL MEAN			464
HIGHEST DAILY MEAN	1970	Oct 25	2100
LOWEST DAILY MEAN	188	Aug 13	216
ANNUAL SEVEN-DAY MINIMUM	204	Aug 8	229
ANNUAL RUNOFF (AC-FT)	446400	705500	544200
10 PERCENT EXCEEDS	1530	1600	1560
50 PERCENT EXCEEDS	401	962	524
90 PERCENT EXCEEDS	293	275	212