

NISQUALLY RIVER BASIN

12089500 NISQUALLY RIVER AT MCKENNA, WA

LOCATION.--Lat 46°56'01", long 122°33'35", in SE 1/4 NW 1/4 sec.28, T.17 N., R.2 E., Thurston County, Hydrologic Unit 17110015, on left bank at downstream side of State Highway 507 bridge at McKenna, and at mile 21.8.

DRAINAGE AREA.--517 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1947 to September 1968, May 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 285.47 ft above NGVD of 1929. Oct.1, 1947 to Sept. 30, 1968, water-stage recorder at site 80 ft downstream at present datum, and Oct. 1, 1968 to Oct. 11, 1985, water-stage recorder at site 20 ft upstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Alder Reservoir (station 12085000) at mile 44.2 and La Grande Reservoir (station 12085500) at mile 42.5. Centralia Power Canal (station 12089208) diverts water 4.4 mi upstream from station, which is returned to river at powerplant 9.2 mi downstream from station. Centralia Power Canal was built in 1929 and put into operation in 1930. Minor diversions for irrigation upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--46 years (water years 1948-68, 1978-2002), 1,309 ft<sup>3</sup>/s, 948,200 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft<sup>3</sup>/s Feb. 8 or 9, 1996, gage height, 17.13 ft, estimated based on comparison with upstream gaging stations; minimum discharge, 20 ft<sup>3</sup>/s Sept. 10, 11, 1965, Aug. 31, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft<sup>3</sup>/s Dec. 17, gage height, 8.06 ft; minimum discharge, 367 ft<sup>3</sup>/s several days in Aug. and Sept.

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	574	635	3080	1970	2090	1960	1100	2010	1340	1620	434	376
2	575	588	3040	2070	2040	1590	1120	2000	1330	989	381	375
3	575	584	2750	2020	2040	1000	1080	1640	1310	681	377	376
4	574	578	2620	1920	2030	860	1080	1480	1320	667	379	374
5	576	574	2380	1850	1960	886	1130	1460	1010	538	381	373
6	577	574	2370	1870	2030	920	1150	1490	823	530	390	373
7	577	578	2530	3440	2320	895	1200	1450	772	531	398	372
8	577	580	2390	5450	2600	865	1130	1110	758	532	399	373
9	578	583	2340	4680	2640	847	1090	776	753	524	392	373
10	583	584	2250	4440	2470	928	1470	674	717	520	387	373
11	576	583	2280	4150	2230	1540	2280	659	884	522	384	372
12	577	887	2200	3970	1230	2410	2310	660	1190	527	381	371
13	578	1140	2700	4000	1050	1980	2350	695	1180	527	378	372
14	579	2060	4710	3620	965	1770	4490	723	1160	519	377	370
15	576	2410	5840	2300	890	1560	4830	696	1190	513	378	371
16	590	2200	6130	1930	859	1400	4530	667	1190	514	378	670
17	583	1900	8540	1910	849	1300	3810	665	1190	516	382	879
18	576	1660	6300	1810	883	1240	2980	660	1180	518	381	885
19	571	1580	4920	1810	969	1760	2420	663	1110	516	380	768
20	567	2060	3990	1840	1040	2380	2290	688	746	516	379	537
21	563	2180	2780	1970	1160	2150	2230	774	674	515	376	595
22	567	2490	2290	1910	1590	1370	2120	770	577	514	375	599
23	560	3510	2160	1850	1600	1920	2070	723	534	510	376	567
24	575	2240	2030	1920	1960	1860	2020	730	533	510	377	544
25	583	1790	1970	2500	1720	2010	2010	855	528	509	378	574
26	577	1680	1930	2530	2270	1910	2000	856	523	508	378	585
27	574	2000	1880	2300	2120	1830	2090	854	559	508	377	593
28	569	2230	1940	2120	2050	1760	2110	911	736	506	374	593
29	577	2930	1900	2040	---	1640	2030	1090	1410	507	375	595
30	582	2580	1880	2020	---	1290	1990	1400	1750	508	375	600
31	600	---	1960	2040	---	1130	---	1380	---	512	375	---
TOTAL	17866	45968	96080	80250	47655	46961	64510	31209	28977	17927	11852	15178
MEAN	576	1532	3099	2589	1702	1515	2150	1007	966	578	382	506
MAX	600	3510	8540	5450	2640	2410	4830	2010	1750	1620	434	885
MIN	560	574	1880	1810	849	847	1080	659	523	506	374	370
AC-FT	35440	91180	190600	159200	94520	93150	128000	61900	57480	35560	23510	30110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2002, BY WATER YEAR (WY)

MEAN	837	1661	2354	2155	2217	1589	1353	1165	906	573	436	522
MAX	1693	4071	5516	4397	6198	3398	2714	2659	1894	1419	1104	1167
(WY)	1956	1956	1978	1997	1996	1950	1991	1949	1950	1999	1999	1977
MIN	298	272	595	620	593	405	553	499	254	85.5	137	148
(WY)	1962	1953	2001	2001	2001	1962	1978	1978	1965	1965	1963	1965

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1948 - 2002	
ANNUAL TOTAL	309700		504433			
ANNUAL MEAN	848		1382		1309	
HIGHEST ANNUAL MEAN					2238	
LOWEST ANNUAL MEAN					590	
HIGHEST DAILY MEAN	8540	Dec 17	8540	Dec 17	27300	Feb 9 1996
LOWEST DAILY MEAN	361	Sep 14	370	Sep 14	22	Sep 11 1965
ANNUAL SEVEN-DAY MINIMUM	363	Sep 20	372	Sep 9	27	Sep 1 1965
ANNUAL RUNOFF (AC-FT)	614300		1001000		948200	
10 PERCENT EXCEEDS	1980		2440		2320	
50 PERCENT EXCEEDS	583		1000		930	
90 PERCENT EXCEEDS	383		381		385	