

NISQUALLY RIVER BASIN

12086500 NISQUALLY RIVER AT LA GRANDE, WA

LOCATION.--Lat 46°50'25", long 122°19'38", in NW 1/4 SE 1/4 sec.29, T.16 N., R.4 E., Pierce County, Hydrologic Unit 17110015, on right bank 0.4 mi downstream from Tacoma Public Utilities powerplant, 0.6 mi northwest of La Grande, 0.8 mi upstream from Mashel River, and at mile 40.4.

DRAINAGE AREA.--292 mi².

PERIOD OF RECORD.--September 1906 to October 1911, November to December 1911 (gage heights only), October 1919 to September 1931, October 1943 to current year. Monthly discharge only for some periods, published in WSP 1316. Published as "below Little Nisqually River, near La Grande" September 1906 to October 1911, and as "near La Grande" November to December 1911 and October 1919 to September 1931.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1316: 1927-28(M), 1949-50. WRD WA-74: 1956(M), 1959-61(M), 1965.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 490 ft above NGVD of 1929, from river-profile map. See WSP 1932 for history of changes prior to Feb. 8, 1945.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Tacoma Public Utilities powerplant at La Grande since December 1943, by Alder Reservoir (station 12085000) since November 1944, and by La Grande Reservoir (station 12085500) since February 1945. All diversions returned to river upstream from gage. U.S. Geological Survey satellite telemeter at station. Chemical analyses October 1972 to September 1985. Water temperatures October 1965 to September 1982.

AVERAGE DISCHARGE.--76 years (water years 1907-11, 1920-31, 1944-2002), 1,436 ft³/s, 66.78 in/yr, 1,040,000 acre-ft/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39,500 ft³/s, Feb. 8, 1996, gage height, 15.30 ft, from rating curve extended above 5,300 ft³/s and computed flow over dam as provided by Tacoma Public Utilities; practically no flow on many occasions at site "near La Grande" (which excluded diversion between 1920 and 1930) as a result of regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,750 ft³/s, Dec. 18, gage height, 7.39 ft; minimum discharge, 760 ft³/s July 13; minimum daily discharge, 912 ft³/s, Sept. 8.

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	1010	1040	2120	2250	2280	2220	1390	2260	1820	2010	1080	918
2	1010	1050	2110	2250	2280	1880	1400	2250	1830	1510	1060	921
3	997	1040	2250	2220	2300	1360	1400	1850	1810	1390	1050	916
4	998	1040	2310	2220	2260	1350	1400	1810	1820	1370	1050	918
5	1000	1040	2270	2210	2270	1370	1400	1810	1490	1160	1050	917
6	1010	1050	2270	2210	2310	1380	1400	1820	1360	1170	1050	918
7	993	1040	2290	3190	2320	1390	1400	1780	1360	1170	1050	918
8	998	1040	2320	4220	2290	1390	1400	1440	1360	1170	1050	912
9	1000	1040	2290	4340	2290	1390	1400	1200	1360	1170	1050	916
10	1020	1050	2310	4410	2300	1390	1720	1170	1360	1180	1050	919
11	1010	1050	2300	4400	1870	1400	2280	1160	1580	1170	1050	918
12	1010	1050	2300	4420	1260	1410	2300	1160	1770	1170	1050	918
13	1000	1070	2380	4480	1240	1410	2260	1170	1760	1170	1050	930
14	1000	1220	3300	3830	1240	1400	3930	1170	1770	1220	1050	944
15	1000	1320	5080	2530	1240	1400	4380	1170	1780	1190	1050	939
16	1000	1320	5140	2290	1230	1400	4300	1170	1790	1170	1020	939
17	1000	1290	5470	2300	1240	1400	3670	1170	1790	1150	1010	942
18	1020	1220	5010	2250	1240	1500	2790	1170	1790	1150	1010	937
19	999	1270	4390	2250	1240	1810	2330	1170	1650	1150	1000	941
20	983	1520	3510	2250	1240	1820	2340	1160	1360	1150	991	940
21	983	1520	2470	2250	1240	1650	2320	1170	1260	1140	979	939
22	989	1540	2220	2250	1240	1230	2270	1170	1050	1140	982	939
23	993	1720	2220	2250	1240	1810	2250	1180	1030	1170	988	941
24	992	1810	2200	2260	1250	1810	2250	1260	1020	1220	920	939
25	992	1800	2200	2290	1680	1810	2260	1360	1030	1200	920	939
26	993	1960	2220	2260	2280	1820	2280	1350	1030	1180	921	937
27	993	2310	2220	2260	2270	1820	2270	1360	1140	1170	925	938
28	990	2330	2240	2250	2290	1830	2280	1360	1330	1170	927	936
29	987	2340	2220	2250	---	1720	2280	1590	1990	1170	921	935
30	1000	2100	2230	2270	---	1420	2250	1820	2210	1170	918	935
31	1010	---	2260	2280	---	1400	---	1840	---	1170	919	---
TOTAL	30980	42190	86120	85390	49430	48390	67600	44520	45700	37890	31141	27899
MEAN	999	1406	2778	2755	1765	1561	2253	1436	1523	1222	1005	930
MAX	1020	2340	5470	4480	2320	2220	4380	2260	2210	2010	1080	944
MIN	983	1040	2110	2210	1230	1230	1390	1160	1020	1140	918	912
AC-FT	61450	83680	170800	169400	98040	95980	134100	88310	90650	75150	61770	55340
MEAN†	558	2402	2894	2806	1657	1593	2422	1751	1689	1033	604	413
CFSM†	1.91	8.23	9.91	9.61	5.67	5.46	8.29	6.00	5.78	3.54	2.97	1.41
IN.†	2.20	9.18	11.43	11.08	5.91	6.29	9.25	6.92	6.45	4.08	2.39	1.58
AC-FT†	34320	142900	178000	172600	91990	97990	144100	107700	100500	63550	37160	24580

CAL YR 2001 TOTAL 385830 MEAN 1057 MAX 5470 MIN 695 AC-FT 765300 MEAN† 1178 CFSM† 4.03 IN.† 54.76 AC-FT† 852800
WTR YR 2002 TOTAL 597250 MEAN 1636 MAX 5470 MIN 912 AC-FT 1185000 MEAN† 1652 CFSM† 5.66 IN.† 76.80 AC-FT† 1196000

† Adjusted for change in contents in Alder and La Grande Reservoirs.