

NISQUALLY RIVER BASIN

12087000 MASHEL RIVER NEAR LA GRANDE, WA

LOCATION.--Lat 46°51'25", long 122°18'05", in NW 1/4 SE 1/4 sec.21, T.16 N., R.4 E., Pierce County, Hydrologic Unit 17110015, on left bank, 50 ft downstream from State Highway 7 bridge, 1.8 mi northeast of La Grande, and at mile 3.3.

DRAINAGE AREA.--80.7 mi².

PERIOD OF RECORD.--October 1940 to September 1957, October 1991 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 619.53 ft above NGVD of 1929. Prior to Oct. 1, 1957, on right bank at same datum.

REMARKS.No estimated daily discharges. Records good. Small diversion for municipal supply for Eatonville. Some regulation at low water by millpond in Eatonville.

AVERAGE DISCHARGE.--28 years (1940-56, 1992-2002), 226 ft³/s, 38.05 in/yr, 163,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,980 ft³/s Dec. 11, 1946, gage height, 9.30 ft, from rating curve extended above 3,200 ft³/s, present datum; minimum discharge, 2.3 ft³/s Aug. 27, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	2315	2,090	5.99	Jan. 07	2330	2,250	6.12
Dec. 01	0615	1,580	5.49	Mar. 11	2030	1,720	5.64
Dec. 13	2245	2,500	6.34	Apr. 14	0615	1,910	5.82
Dec. 17	0145	*3,940	*7.35				

Minimum discharge, 7.7 ft³/s Sept. 27-29.

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	14	235	1370	235	258	239	276	250	118	43	14	9.6
2	13	174	1090	374	227	209	278	250	111	36	14	10
3	12	130	696	305	258	187	269	206	104	33	14	14
4	12	100	518	231	245	175	285	169	98	31	14	14
5	11	136	410	196	225	185	344	159	120	31	18	12
6	11	108	465	297	284	193	371	169	108	29	22	11
7	11	86	462	1470	474	165	396	162	87	28	18	13
8	12	71	388	1660	542	150	326	155	82	86	16	14
9	14	60	393	862	472	151	327	140	73	50	15	13
10	14	52	359	539	441	245	500	142	64	36	14	12
11	39	45	361	402	432	968	499	134	65	30	15	11
12	26	49	308	420	336	1180	509	145	62	26	13	11
13	76	104	1070	369	281	751	601	199	59	24	12	10
14	137	930	1640	306	238	539	1550	219	57	23	12	9.7
15	87	781	873	256	214	416	897	187	53	22	12	9.6
16	47	573	1680	224	217	344	658	164	46	21	12	10
17	46	394	2440	202	221	286	492	163	44	20	11	13
18	34	274	1310	184	255	238	409	164	44	20	11	12
19	32	272	890	206	360	397	341	155	47	20	11	11
20	38	402	609	242	379	643	300	194	40	19	12	9.9
21	34	464	451	281	614	470	264	269	36	18	14	10
22	52	1030	356	227	907	405	250	240	34	17	13	9.5
23	158	1450	289	194	1000	392	225	199	32	17	12	9.1
24	112	688	244	269	1020	396	200	172	31	17	11	8.8
25	150	444	211	726	586	546	192	164	29	16	11	8.6
26	107	334	187	516	427	449	193	161	27	17	11	8.6
27	91	255	176	356	338	395	277	160	26	17	13	8.4
28	97	558	215	274	283	356	238	206	36	17	12	8.1
29	70	999	198	227	---	346	208	213	112	17	11	9.3
30	61	787	179	214	---	313	220	173	62	16	11	11
31	215	---	219	263	---	284	---	139	---	15	9.6	---
TOTAL	1833	11985	20057	12527	11534	12013	11895	5622	1907	812	408.6	321.2
MEAN	59.13	399.5	647.0	404.1	411.9	387.5	396.5	181.4	63.57	26.19	13.18	10.71
MAX	215	1450	2440	1660	1020	1180	1550	269	120	86	22	14
MIN	11	45	176	184	214	150	192	134	26	15	9.6	8.1
AC-FT	3640	23770	39780	24850	22880	23830	23590	11150	3780	1610	810	637
CFSM	0.73	4.95	8.02	5.01	5.10	4.80	4.91	2.25	0.79	0.32	0.16	0.13
IN.	0.84	5.52	9.25	5.77	5.32	5.54	5.48	2.59	0.88	0.37	0.19	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

	MEAN	112.0	330.3	444.1	360.6	395.1	309.1	287.1	215.6	151.1	59.27	24.53	34.60
MAX	307	688	890	694	786	567	475	441	329	178	70.6	115	
(WY)	1956	1956	1947	1953	1996	1950	1955	1945	1946	1993	1954	1954	
MIN	10.0	12.9	83.2	113	98.8	88.2	132	67.2	25.2	14.7	12.3	10.7	
(WY)	1953	1953	1953	2001	1941	1941	1942	1947	1992	1951	1996	2002	

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	69140		90914.8			
ANNUAL MEAN	189.4		249.1		226.0	
HIGHEST ANNUAL MEAN					337	
LOWEST ANNUAL MEAN					125	
HIGHEST DAILY MEAN	2440		Dec 17		5570	
LOWEST DAILY MEAN	11		Sep 23		4.6	
ANNUAL SEVEN-DAY MINIMUM	12		Sep 18		5.1	
ANNUAL RUNOFF (AC-FT)	137100		180300		163700	
ANNUAL RUNOFF (CFSM)	2.35		3.09		2.80	
ANNUAL RUNOFF (INCHES)	31.87		41.91		38.05	
10 PERCENT EXCEEDS	405		564		511	
50 PERCENT EXCEEDS	110		169		141	
90 PERCENT EXCEEDS	14		12		16	