

Figure 8. Location of surface-water stations in the Naselle and Willapa River Basins.

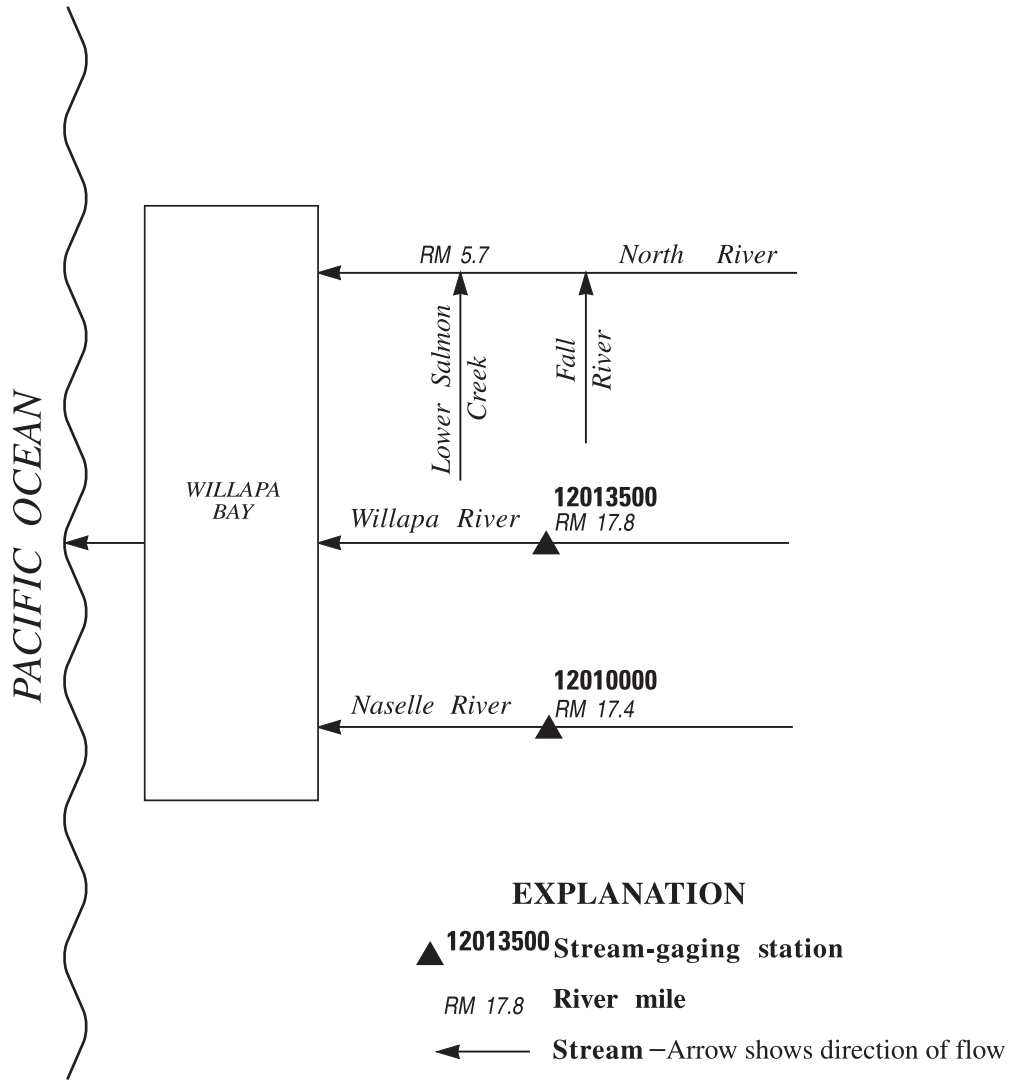


Figure 9. Schematic diagram showing surface-water stations in the Naselle and Willapa River Basins.

NASELLE RIVER BASIN
12010000 NASELLE RIVER NEAR NASELLE, WA

LOCATION.--Lat 46°22'27", long 123°44'32", in SW 1/4 SW 1/4 sec.1, T.10 N., R.9 W., Pacific County, Hydrologic Unit 17100106, on right bank 0.2 mi upstream from county highway bridge, 2.2 mi upstream from Salmon Creek, 3.4 mi east of Naselle, and at mile 17.4.

DRAINAGE AREA.--54.8 mi².

PERIOD OF RECORD.--May 1929 to current year.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1316: 1930(M), 1932-40(M), 1945-46(M).

GAGE.--Water-stage recorder. Elevation of gage is 24 ft above NGVD of 1929, by barometer. Prior to Jan. 11, 1957, nonrecording gage and crest-stage gage at site 1,350 ft downstream at present datum. Jan. 11, 1957, to Dec. 31, 1961, nonrecording gage and crest-stage gage at site 1,200 ft downstream at present datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Chemical analyses October 1965 to September 1970, January to September 1973, November 1975 to June 1980. Water temperatures August 1963 to September 1973. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--74 years (water years 1930-2003), 428 ft³/s, 106.10 in/yr, 310,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft³/s Mar. 18, 1997, gage height, 19.26 ft; minimum discharge, 17 ft³/s Sept. 3, 5, 2003.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 31	1200	4,790	12.13	Mar 22	0745	*5,550	*13.00

Minimum discharge, 17 ft³/s, Sept. 3, 5, gage height, 3.59 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e36	23	160	1,190	2,580	326	341	166	81	47	28	20
2	28	23	154	2,410	1,500	306	379	158	78	42	28	19
3	48	e22	144	2,280	1,050	294	440	158	76	42	27	18
4	e46	e21	143	2,190	796	268	439	203	71	41	29	18
5	e35	e20	139	1,690	640	295	476	e200	69	40	27	18
6	e31	33	130	1,080	532	409	739	e180	65	41	29	18
7	30	47	123	771	459	532	837	e170	e63	40	27	27
8	28	103	118	599	406	533	937	156	63	39	27	34
9	e27	128	115	494	365	1,140	792	147	e63	39	27	41
10	26	110	245	421	332	1,170	612	142	64	37	26	49
11	e25	167	847	405	304	1,200	514	136	66	37	25	67
12	e25	163	1,120	574	282	2,230	440	130	e70	36	25	75
13	24	154	918	476	262	3,140	493	123	e70	71	25	40
14	e24	284	1,730	471	247	2,580	443	122	e63	61	24	32
15	e23	173	1,770	418	267	1,710	412	125	e59	48	23	29
16	22	292	1,480	381	346	1,270	372	145	54	43	26	31
17	22	356	1,110	349	514	988	340	136	53	41	26	30
18	23	558	1,040	319	516	840	314	125	54	37	24	28
19	23	2,750	948	294	457	786	284	119	53	37	23	42
20	24	1,150	765	272	771	1,130	261	117	55	e36	23	36
21	e25	660	626	259	1,050	2,200	244	116	61	35	22	30
22	e24	480	522	443	933	4,350	226	108	65	35	22	27
23	e23	380	451	457	744	2,200	233	103	55	33	21	26
24	e22	316	404	606	603	1,230	240	100	52	33	21	25
25	21	271	458	813	504	858	215	102	49	32	20	24
26	e21	240	858	2,600	438	674	223	96	47	31	21	24
27	e21	217	979	1,600	392	567	204	93	46	31	23	23
28	23	198	957	989	358	480	e190	90	45	e30	22	22
29	23	183	742	950	---	416	e180	87	43	29	21	23
30	22	171	1,150	1,270	---	367	e170	83	47	28	20	23
31	22	---	926	3,980	---	347	---	82	---	28	20	---
TOTAL	817	9,693	21,272	31,051	17,648	34,836	11,990	4,018	1,800	1,200	752	919
MEAN	26.4	323	686	1,002	630	1,124	400	130	60.0	38.7	24.3	30.6
MAX	48	2,750	1,770	3,980	2,580	4,350	937	203	81	71	29	75
MIN	21	20	115	259	247	268	170	82	43	28	20	18
AC-FT	1,620	19,230	42,190	61,590	35,000	69,100	23,780	7,970	3,570	2,380	1,490	1,820
CFSM	0.48	5.90	12.5	18.3	11.5	20.5	7.29	2.37	1.09	0.71	0.44	0.56
IN.	0.55	6.58	14.44	21.08	11.98	23.65	8.14	2.73	1.22	0.81	0.51	0.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	272	862	20.9	(1998)	716	1,539	37.3	(1984)	933	2,530	245	(1934)
	863	1,969	215	(1953)	794	1,587	191	(1961)	622	1,424	153	(1997)
	398	858	120	(1937)	208	448	82.0	(1948)	138	400	54.9	(2000)
	76.3	250	33.8	(1983)	52.1	196	22.3	(2001)	83.0	455	26.4	(1978)
	83.0	455	26.4	(1978)	83.0	455	26.4	(1978)	76.3	52.1	83.0	(1978)
	76.3	52.1	83.0	(1978)	52.1	83.0	83.0	(1978)	52.1	83.0	83.0	(1978)
	52.1	83.0	83.0	(1978)	52.1	83.0	83.0	(1978)	52.1	83.0	83.0	(1978)
	83.0	455	26.4	(1978)	83.0	455	26.4	(1978)	83.0	455	26.4	(1978)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1930 - 2003
ANNUAL TOTAL	126,300	135,996	
ANNUAL MEAN	346	373	428
HIGHEST ANNUAL MEAN			611
LOWEST ANNUAL MEAN			226
HIGHEST DAILY MEAN	4,040	4,350	10,400
LOWEST DAILY MEAN	20	18	18
ANNUAL SEVEN-DAY MINIMUM	22	19	19
ANNUAL RUNOFF (AC-FT)	250,500	269,700	310,000
ANNUAL RUNOFF (CFSM)	6.31	6.80	7.81
ANNUAL RUNOFF (INCHES)	85.74	92.32	106.10
10 PERCENT EXCEEDS	913	1,010	1,060
50 PERCENT EXCEEDS	148	128	217
90 PERCENT EXCEEDS	26	23	39

e Estimated

