

Figure 10. Location of surface-water stations in the Chehalis and Humptulips River Basins.

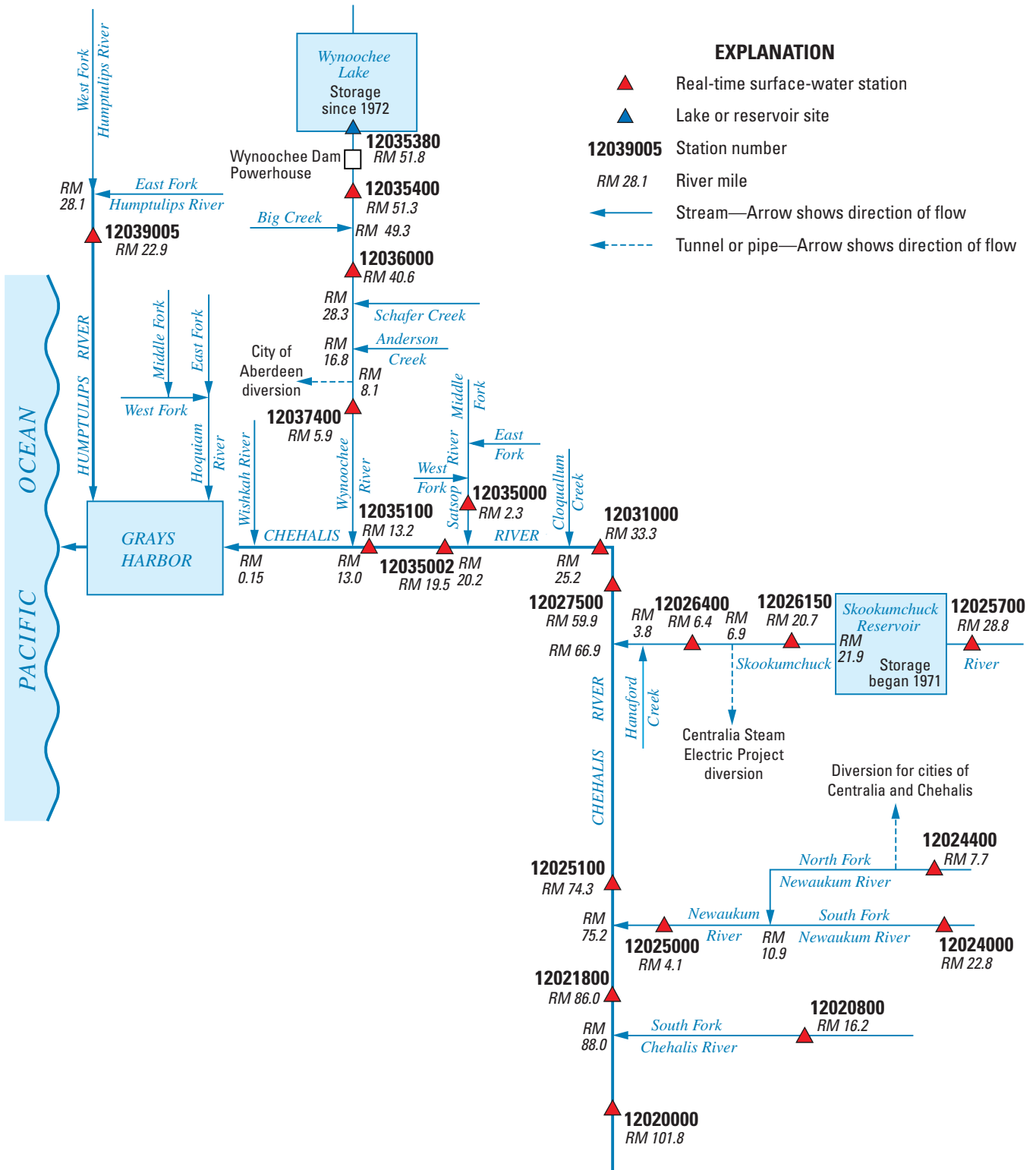


Figure 11. Schematic diagram showing surface-water stations in the Chehalis and Humptulips River Basins.

12020000 CHEHALIS RIVER NEAR DOTY, WA

LOCATION.--Lat 46°37'03", long 123°16'35", in NE¼NW¼ sec.14, T.13 N., R.5 W., Lewis County, Hydrologic Unit 17100103, on right bank 1.3 mi south of Doty, 1.6 mi upstream from Elk Creek, 3.4 mi north of Pe Ell, and at mile 101.8.

DRAINAGE AREA.--113 mi².

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1316: 1943(M). WSP 1446: 1946(M). WDR-WA-72-1: 1945(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 301.1 ft above NGVD of 1929 (river-profile survey). Prior to Oct. 1, 1961, nonrecording gage and crest-stage gage at site 50 ft upstream at datum 1 ft higher. Oct 1, 1961 to Sept. 15, 1995, water-stage recorder at site 150 ft upstream at datum 1 ft higher. Prior to Feb. 24, 1999, at same site at datum 1 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation or diversion upstream from station. Chemical analyses July 1959 to September 1970, sediment records October 1961 to December 1964 (partial-record station).

AVERAGE DISCHARGE.--66 years (water years 1940-2005), 571 ft³/s, 68.65 in/yr, 413,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,900 ft³/s, Feb. 8, 1996, gage height, 20.37 ft, from rating curve extended above 8,000 ft³/s, on basis of slope-area measurement at gage height 18.36 ft; minimum discharge, 16 ft³/s, Aug. 31, Sept. 3, 4, 7, 8, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 11	0230	*9,270	*11.35	Jan 18	0315	8,610	10.88

Minimum discharge, 21 ft³/s, Sept. 25-27, gage height, 0.90 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	460	279	237	281	208	1,560	246	241	91	39	28
2	94	1,870	239	214	261	179	1,440	328	218	89	38	26
3	87	1,460	218	194	244	169	1,290	273	205	86	37	25
4	85	934	222	180	269	153	1,130	261	188	79	35	25
5	81	698	230	166	321	144	932	239	181	77	34	25
6	144	546	258	167	345	136	783	222	187	88	33	25
7	112	438	640	272	381	130	725	207	172	88	33	24
8	127	365	2,590	351	343	127	670	207	158	92	33	23
9	361	322	1,930	321	318	121	573	287	150	171	32	23
10	489	281	3,750	290	295	117	504	487	144	122	32	26
11	323	270	5,840	263	279	112	621	497	152	113	32	39
12	253	249	2,300	285	275	109	714	411	143	111	32	32
13	223	228	1,390	334	275	105	933	346	136	100	31	27
14	196	211	1,240	307	261	103	927	307	129	91	30	26
15	179	209	1,120	288	241	100	829	304	123	82	29	26
16	168	212	863	304	227	116	1,490	302	118	78	28	26
17	759	203	679	1,460	213	142	1,480	280	149	75	30	25
18	793	301	554	6,900	204	116	1,110	616	135	68	32	25
19	910	338	471	3,300	194	120	873	877	139	62	30	24
20	766	290	400	1,840	182	618	710	920	121	59	29	24
21	578	258	351	1,320	173	723	587	746	110	57	28	23
22	474	e250	314	996	164	534	498	694	109	56	28	22
23	417	e235	276	792	155	429	451	606	108	55	28	22
24	371	270	248	650	150	356	404	517	98	52	27	22
25	348	1,760	254	549	145	302	393	441	95	49	27	21
26	413	936	372	477	139	1,420	348	382	93	47	26	21
27	365	608	302	428	133	3,850	316	333	114	46	26	21
28	e330	453	270	385	141	2,090	290	295	124	44	26	22
29	e305	362	248	358	---	2,540	269	268	106	42	29	22
30	416	323	231	325	---	2,230	257	249	97	41	37	72
31	454	---	217	304	---	1,540	---	231	---	40	32	---
TOTAL	10,720	15,340	28,296	24,257	6,609	19,139	23,107	12,379	4,243	2,351	963	792
MEAN	346	511	913	782	236	617	770	399	141	75.8	31.1	26.4
MAX	910	1,870	5,840	6,900	381	3,850	1,560	920	241	171	39	72
MIN	81	203	217	166	133	100	257	207	93	40	26	21
AC-FT	21,260	30,430	56,130	48,110	13,110	37,960	45,830	24,550	8,420	4,660	1,910	1,570
CFSM	3.06	4.53	8.08	6.92	2.09	5.46	6.82	3.53	1.25	0.67	0.27	0.23
IN.	3.53	5.05	9.32	7.99	2.18	6.30	7.61	4.08	1.40	0.77	0.32	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2005, BY WATER YEAR (WY)

MEAN	278	905	1,257	1,221	1,146	889	575	274	145	70.3	46.7	77.7
MAX	1,121	2,131	2,486	2,888	2,940	1,870	1,285	700	390	183	124	357
(WY)	(1998)	(1956)	(1995)	(1953)	(1999)	(1956)	(1996)	(1948)	(1968)	(1983)	(1968)	(1959)
MIN	20.5	57.6	217	176	236	216	207	125	62.8	33.9	23.3	22.0
(WY)	(1988)	(1994)	(1977)	(1977)	(2005)	(1992)	(1941)	(1994)	(1992)	(1951)	(2003)	(1998)

CHEHALIS RIVER BASIN

12020000 CHEHALIS RIVER NEAR DOTY, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1940 - 2005	
ANNUAL TOTAL	163,237		148,196		571	
ANNUAL MEAN	446		406		911	
HIGHEST ANNUAL MEAN					253	
LOWEST ANNUAL MEAN					1956	
HIGHEST DAILY MEAN	5,840	Dec 11	6,900	Jan 18	19,200	Feb 8, 1996
LOWEST DAILY MEAN	34	Jul 29	21	Sep 25	16	Sep 3, 1992
ANNUAL SEVEN-DAY MINIMUM	35	Jul 25	22	Sep 22	17	Aug 29, 1992
ANNUAL RUNOFF (AC-FT)	323,800		293,900		413,600	
ANNUAL RUNOFF (CFSM)	3.95		3.59		5.05	
ANNUAL RUNOFF (INCHES)	53.74		48.79		68.65	
10 PERCENT EXCEEDS	935		914		1,450	
50 PERCENT EXCEEDS	270		231		258	
90 PERCENT EXCEEDS	59		29		36	

e Estimated

12020800 SOUTH FORK CHEHALIS RIVER NEAR WILDWOOD, WA

LOCATION.--Lat 46°26'42", long 123°04'57", in NW¼ NE¼ sec.17, T.11 N., R.3 W., Lewis County, Hydrologic Unit 17100103, on left bank at Wildwood Road bridge, 0.4 mi downstream from Black Creek, 1.2 mi southeast of Wildwood, and at mile 16.2.

DRAINAGE AREA.--27.0 mi².

PERIOD OF RECORD.--October 1998 to current year (seasonal records).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929 (levels by Lewis County).

REMARKS.--Records good except for estimated daily discharges, which are fair, and flows below 10 ft³/s, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,370 ft³/s, Nov. 25, 1998, elevation, 361.44 ft, from floodmarks; minimum discharge, 4.5 ft³/s, Oct. 17, 18, 19, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 8, 1996, reached a stage of 363.57 ft from floodmarks, discharge, 5,620 ft³/s, from rating curve extended above 2,600 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,150 ft³/s, Jan. 18, elevation, 357.74 ft; minimum discharge, 25 ft³/s, Oct. 5, elevation, 352.67 ft.

DISCHARGE, CUBIC FEET PER SECOND
OCTOBER 2004 TO APRIL 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	29	87	e78	77	79	57	366
2	28	378	73	71	75	50	313
3	27	287	69	66	71	48	281
4	27	195	67	64	78	45	239
5	27	150	72	61	78	43	204
6	46	121	82	61	99	42	178
7	33	104	129	82	107	41	168
8	37	91	451	91	92	40	149
9	65	82	418	84	84	39	129
10	75	74	765	81	78	38	118
11	55	69	1,270	76	75	38	151
12	47	64	522	84	74	36	180
13	42	61	327	90	71	36	196
14	39	58	276	83	68	35	177
15	37	58	230	81	64	35	169
16	38	56	190	91	62	39	271
17	140	58	159	337	59	43	259
18	131	76	137	1,650	58	37	215
19	150	74	122	700	56	47	181
20	123	65	109	406	54	147	153
21	99	60	99	298	52	161	132
22	87	58	92	232	50	118	118
23	78	56	85	192	49	101	109
24	73	60	80	161	47	88	100
25	71	274	79	138	46	77	103
26	79	e200	86	124	45	493	91
27	68	e160	76	111	44	1,270	83
28	62	e130	72	103	46	552	77
29	59	e110	69	100	---	618	75
30	83	e94	67	91	---	489	71
31	82	---	67	86	---	341	---
TOTAL	2,037	3,410	6,418	5,972	1,861	5,244	5,056
MEAN	65.7	114	207	193	66.5	169	169
MAX	150	378	1,270	1,650	107	1,270	366
MIN	27	56	67	61	44	35	71
AC-FT	4,040	6,760	12,730	11,850	3,690	10,400	10,030
CFSM	2.43	4.21	7.67	7.14	2.46	6.27	6.24
IN.	2.81	4.70	8.84	8.23	2.56	7.23	6.97

e Estimated

CHEHALIS RIVER BASIN

12021800 CHEHALIS RIVER NEAR ADNA, WA

LOCATION.--Lat 46°37'33", long 123°06'02", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.7, T.13 W., R.3 W., Lewis County, Hydrologic Unit 17100103, on right bank at railroad bridge, 2.0 mi downstream from South Fork Chehalis River, 2.0 mi west of Adna, and at mile 86.0.

DRAINAGE AREA.--340 mi².

PERIOD OF RECORD.--October 1998, to current year (seasonal records).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929 (levels by Lewis County).

REMARKS.--Elevation record only. Probably some diversion upstream for irrigation and domestic use. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 206.66 ft, Dec. 17, 2001.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 8, 1996, reached an elevation of 213.14 ft from floodmark at site.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 201.58 ft, Jan. 18; minimum elevation, 189.98 Oct. 5.

ELEVATION ABOVE NGVD 1929, FEET
OCTOBER 2004 TO APRIL 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	190.05	190.85	190.86	---	190.81	190.48	193.84
2	190.03	192.71	190.75	---	190.75	190.45	193.70
3	190.01	193.16	190.68	---	190.70	190.41	193.37
4	189.99	192.05	190.64	---	190.70	190.36	193.01
5	189.99	191.50	190.65	---	190.89	190.32	192.57
6	190.07	191.18	190.69	190.63	190.90	190.29	192.19
7	190.16	190.97	191.10	190.84	191.09	190.27	192.02
8	190.08	190.82	194.37	191.30	190.94	190.26	191.97
9	190.42	190.71	194.25	191.21	190.86	190.24	191.66
10	190.81	190.62	195.19	191.09	190.79	190.23	191.45
11	190.57	190.55	199.31	190.99	190.75	190.21	191.67
12	190.39	190.49	195.38	190.98	190.72	190.20	191.90
13	190.29	190.44	193.66	191.15	190.72	190.18	192.35
14	190.22	190.40	193.09	191.06	190.69	190.16	192.35
15	190.17	190.39	192.85	190.98	190.64	190.15	192.11
16	190.16	190.42	192.37	191.03	190.59	190.17	193.06
17	191.19	190.43	191.98	191.62	190.55	190.34	193.55
18	191.62	190.60	---	200.31	190.52	190.26	192.90
19	191.67	190.83	---	197.37	190.50	190.23	192.37
20	191.60	190.68	191.31	194.56	190.47	191.31	191.98
21	191.17	190.58	---	193.44	190.43	192.00	191.66
22	190.92	190.54	---	192.72	190.40	191.46	191.42
23	190.81	190.50	190.95	192.25	190.38	191.14	191.29
24	190.70	190.50	190.86	191.87	190.36	190.95	191.22
25	190.62	192.79	190.82	191.61	190.34	190.79	191.13
26	190.71	192.39	---	191.43	190.33	192.01	191.05
27	190.67	191.66	---	191.28	190.31	198.14	190.92
28	190.58	191.27	---	191.15	190.31	195.45	190.84
29	190.54	191.04	190.80	191.05	---	195.57	190.77
30	190.66	190.95	---	190.95	---	195.61	190.73
31	190.88	---	---	190.88	---	194.08	---
MEAN	190.57	191.07	---	---	190.62	191.41	192.03
MAX	191.67	193.16	---	---	191.09	198.14	193.84
MIN	189.99	190.39	---	---	190.31	190.15	190.73

12024000 SOUTH FORK NEWAUKUM RIVER NEAR ONALASKA, WA

LOCATION.--Lat 46°34'33", long 122°41'02", on south line of SE $\frac{1}{4}$ sec.28, T.13 N., R.1 E., Lewis County, Hydrologic Unit 17100103, on right bank at Jorgenson Road bridge, 1 mi upstream from Lost Creek, 1.7 mi east of Onalaska, and at mile 22.8.

DRAINAGE AREA.--42.4 mi².

PERIOD OF RECORD.--July to October 1942, July to October 1943, July 1944 to November 1948, June 1957 to September 1971, October 1943 to September 1958, published as Newaukum River near Onalaska, and October 1998, to current year (seasonal records).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929 (levels by Lewis County). Prior to October 1998 at same site at different datum. Prior to September 28, 1944, nonrecording gage at same site at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Probably some small diversions for irrigation and domestic use upstream from station. No regulation. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--18 years (water years 1944-48, 1957-71) 200 ft³/s, 64.06 in/yr, 144,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,810 ft³/s, Dec. 11, 1946, gage height, 8.40 ft, datum then in use; minimum discharge, 8.9 ft³/s, Oct. 1-4, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,720 ft³/s, Jan. 18, elevation, 535.58 ft; minimum discharge, 51.0 ft³/s, Mar. 15, 16, elevation, 529.97 ft.

DISCHARGE, CUBIC FEET PER SECOND
OCTOBER 2004 TO APRIL 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	83	158	182	128	118	81	385
2	79	355	156	117	113	76	331
3	74	340	146	108	108	74	306
4	71	257	141	104	118	70	304
5	69	216	161	98	121	67	265
6	91	186	167	98	197	65	234
7	74	164	196	105	215	64	259
8	133	147	486	103	168	62	272
9	233	135	458	96	146	61	223
10	174	126	553	93	132	59	196
11	137	118	1,030	89	124	58	291
12	115	112	584	96	127	56	286
13	101	107	404	98	131	55	253
14	93	103	333	91	124	53	223
15	88	114	280	91	115	53	214
16	152	109	241	119	109	55	536
17	576	105	213	411	104	65	491
18	459	156	190	2,540	100	58	391
19	420	142	178	799	97	67	313
20	325	125	162	468	91	84	264
21	261	116	153	356	87	91	226
22	251	111	148	290	84	78	201
23	231	110	135	246	81	71	192
24	211	155	128	211	78	71	194
25	194	464	128	187	76	69	188
26	186	318	134	169	75	208	169
27	166	236	121	158	73	1,110	155
28	153	e190	114	145	75	687	143
29	144	e181	117	140	---	831	140
30	167	e180	117	134	---	620	140
31	154	---	111	125	---	423	---
TOTAL	5,665	5,336	7,667	8,013	3,187	5,542	7,785
MEAN	183	178	247	258	114	179	260
MAX	576	464	1,030	2,540	215	1,110	536
MIN	69	103	111	89	73	53	140
AC-FT	11,240	10,580	15,210	15,890	6,320	10,990	15,440
CFSM	4.31	4.19	5.83	6.10	2.68	4.22	6.12
IN.	4.97	4.68	6.73	7.03	2.80	4.86	6.83

e Estimated

CHEHALIS RIVER BASIN

12024400 NORTH FORK NEWAUKUM RIVER ABOVE BEAR CREEK, NEAR FOREST, WA
(Formerly published as North Fork Newaukum River Near Forest)

LOCATION.--Lat 46°40'03", long 122°46'08", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.26, T.14 N., R.1 W., Lewis County, Hydrologic Unit 17100103, on right bank 0.5 mi upstream from Bear Creek, at North Fork Road bridge, 6.3 mi northeast of Forest, and at mile 7.7.

DRAINAGE AREA.--29.6 mi².

PERIOD OF RECORD.--October 1998 to current year (seasonal records).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929 (levels by Lewis County).

REMARKS.--No estimated daily discharges. Records fair. Probably some small diversions for irrigation and domestic use upstream from station. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,090 ft³/s, Dec. 15, 1999, elevation 406.44 ft; minimum daily discharge, 6.6 ft³/s, Oct. 1, 2, 4, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,130 ft³/s, Jan. 18, elevation, 405.33 ft; minimum daily discharge, 18.0 ft³/s, Mar. 14, 15.

DISCHARGE, CUBIC FEET PER SECOND
OCTOBER 2004 TO APRIL 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	35	79	93	66	67	34	246
2	33	232	79	61	63	33	221
3	32	194	74	53	60	31	187
4	31	133	73	47	69	27	171
5	31	106	89	42	66	26	133
6	42	89	104	42	113	25	116
7	33	78	129	49	124	24	155
8	60	70	365	50	91	23	159
9	99	64	298	45	76	22	122
10	70	60	318	43	67	21	103
11	53	56	620	40	62	21	183
12	46	53	309	45	66	20	200
13	42	51	206	45	62	19	164
14	39	50	160	42	58	18	135
15	38	60	126	41	52	18	123
16	63	56	106	73	48	20	372
17	310	54	92	296	45	27	340
18	192	96	81	1,430	44	21	272
19	188	88	78	498	42	30	211
20	147	69	69	311	40	51	170
21	111	61	62	241	37	64	130
22	108	58	59	198	34	41	117
23	101	55	55	170	33	32	112
24	95	68	51	135	31	31	113
25	87	335	53	117	30	28	114
26	89	189	61	103	29	114	87
27	79	132	51	98	28	670	73
28	71	102	47	92	31	352	63
29	66	88	48	89	---	454	63
30	85	88	47	84	---	364	59
31	79	---	44	74	---	260	---
TOTAL	2,555	2,914	4,047	4,720	1,568	2,921	4,714
MEAN	82.4	97.1	131	152	56.0	94.2	157
MAX	310	335	620	1,430	124	670	372
MIN	31	50	44	40	28	18	59
AC-FT	5,070	5,780	8,030	9,360	3,110	5,790	9,350
CFSM	2.78	3.28	4.41	5.14	1.89	3.18	5.31
IN.	3.21	3.66	5.09	5.93	1.97	3.67	5.92

12025000 NEWAUKUM RIVER NEAR CHEHALIS, WA

LOCATION.--Lat 46°37'13", long 122°56'38", in SW¼SW¼ sec.9, T.13 N., R.2 W., Lewis County, Hydrologic Unit 17100103, on left bank at highway bridge, 3.0 mi southeast of Chehalis, and at mile 4.1.

DRAINAGE AREA.--155 mi².

PERIOD OF RECORD.--March 1929 to September 1931, July 1942 to September 1981, October 1982 to current year.

REVISED RECORDS.--WSP 1012: 1943. WSP 1316: 1929-30(M), 1960(M). WSP 1716: Drainage area. WSP 1932: 1931(M), 1945-49, 1954(M), 1956(P), 1958(M), 1959-60.

GAGE.--Water-stage recorder. Elevation of gage is 190 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1929, nonrecording gage at same site at datum 1.0 ft higher. Oct. 1, 1929, to July 5, 1962, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Records good, except for estimated daily discharges, which are poor. Cities of Chehalis and Centralia divert about 3.31 ft³/s from North Fork Newaukum River for municipal use. No regulation. Some diversion for irrigation upstream from station during summer months.

AVERAGE DISCHARGE.--64 years (water years, 1930-31, 1943-81, 1983-2005), 500 ft³/s, 43.85 in/yr, 362,400 acre-ft/yr, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,300 ft³/s, Feb. 8, 1996, gage height, 13.54 ft, from outside high-water mark; maximum gage height, 13.62 ft, Dec. 9, 1953; minimum discharge, 12 ft³/s, Sept. 13, 14, 1949, Aug. 29, 1967.

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)
Dec 11	1000	4,550	8.66	Mar 27	1100	5,790	9.76
Jan 18	1500	*7,740	*11.31				

Minimum discharge, 38 ft³/s, Sept. 26-29, gage height, 0.80 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	381	483	439	310	202	1,290	330	282	131	62	50
2	147	1,120	413	418	292	193	1,130	416	281	125	63	48
3	139	1,330	373	356	277	203	965	409	251	120	60	46
4	134	824	356	319	281	184	911	357	229	113	57	45
5	129	622	391	286	315	172	780	337	220	107	55	45
6	157	500	439	269	440	165	671	299	239	151	53	45
7	152	421	523	311	800	161	715	273	220	148	54	44
8	147	365	1,720	385	564	156	875	260	218	126	55	42
9	517	326	1,700	339	457	151	672	268	203	233	54	40
10	417	296	1,600	310	393	147	553	724	187	191	54	41
11	308	273	3,590	292	357	143	841	724	197	167	54	45
12	254	255	2,000	286	339	139	1,020	548	205	151	55	48
13	218	241	1,290	318	361	134	897	439	190	137	54	45
14	198	228	1,000	285	338	131	742	454	181	126	50	44
15	184	238	807	270	305	129	649	444	172	115	48	44
16	195	287	672	379	283	130	1,480	641	167	110	47	47
17	e1,140	267	573	540	268	158	1,640	641	272	105	52	48
18	e1,280	401	499	6,020	257	159	1,240	768	234	98	66	47
19	1,100	449	451	2,890	247	158	956	998	222	91	55	45
20	891	361	414	1,510	236	288	778	e1,180	187	87	51	43
21	655	316	372	1,110	222	335	645	967	168	85	48	42
22	548	295	357	881	211	268	547	866	167	83	47	40
23	529	278	326	785	204	224	498	714	168	89	46	39
24	463	331	305	645	198	209	554	571	151	82	46	39
25	412	1,200	297	553	191	193	552	474	142	77	44	39
26	424	1,020	332	490	186	e430	501	401	138	74	43	39
27	417	698	303	453	183	e4,550	434	347	164	70	43	38
28	357	529	280	411	184	2,520	384	312	170	67	44	38
29	340	436	280	378	---	2,850	364	289	155	66	46	39
30	394	435	307	361	---	2,210	365	274	140	65	61	117
31	421	---	292	333	---	1,400	---	261	---	63	57	---
TOTAL	12,822	14,723	22,745	22,622	8,699	18,492	23,649	15,986	5,920	3,453	1,624	1,372
MEAN	414	491	734	730	311	597	788	516	197	111	52.4	45.7
MAX	1,280	1,330	3,590	6,020	800	4,550	1,640	1,180	282	233	66	117
MIN	129	228	280	269	183	129	364	260	138	63	43	38
AC-FT	25,430	29,200	45,110	44,870	17,250	36,680	46,910	31,710	11,740	6,850	3,220	2,720
CFSM	2.67	3.17	4.73	4.71	2.00	3.85	5.09	3.33	1.27	0.72	0.34	0.30
IN.	3.08	3.53	5.46	5.43	2.09	4.44	5.68	3.84	1.42	0.83	0.39	0.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)

MEAN	183	727	1,056	1,081	974	767	543	298	184	90.0	55.9	71.4
MAX	646	1,717	2,244	2,169	1,940	1,609	1,052	680	464	307	159	304
(WY)	(1998)	(1956)	(1997)	(1953)	(1999)	(1972)	(1991)	(1960)	(1981)	(1983)	(1968)	(2004)
MIN	25.5	47.6	194	192	262	280	209	130	66.3	36.1	21.6	27.9
(WY)	(1988)	(1930)	(1977)	(1977)	(1977)	(1992)	(2004)	(1947)	(1992)	(1951)	(1951)	(1987)

CHEHALIS RIVER BASIN

12025000 NEWAUKUM RIVER NEAR CHEHALIS, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005	
ANNUAL TOTAL	169,040		152,107			
ANNUAL MEAN	462		417		500	
HIGHEST ANNUAL MEAN					795	
LOWEST ANNUAL MEAN					244	
HIGHEST DAILY MEAN	6,170	Jan 30	6,020	Jan 18	10,200	Feb 8, 1996
LOWEST DAILY MEAN	33	Aug 18	38	Sep 27	14	Sep 13, 1949
ANNUAL SEVEN-DAY MINIMUM	35	Aug 14	39	Sep 23	15	Aug 20, 1951
ANNUAL RUNOFF (AC-FT)	335,300		301,700		362,400	
ANNUAL RUNOFF (CFSM)	2.98		2.69		3.23	
ANNUAL RUNOFF (INCHES)	40.57		36.51		43.85	
10 PERCENT EXCEEDS	1,010		893		1,210	
50 PERCENT EXCEEDS	286		278		260	
90 PERCENT EXCEEDS	63		48		45	

e Estimated

12025100 CHEHALIS RIVER AT WASTEWATER TREATMENT PLANT, AT CHEHALIS, WA

LOCATION.--Lat 46°39'40", long 122°58'58", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.31, T.14 N., R.2 W., Lewis County, Hydrologic Unit 17100103, on right bank at City of Chehalis wastewater treatment plant, 0.25 mi downstream from State Highway 6 bridge, and at mile 74.3.

DRAINAGE AREA.--618 mi².

PERIOD OF RECORD.--Water years 1999, 2000 (annual maximum). October 2000 to current year (seasonal records).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929 (levels by Lewis County).

REMARKS.--Elevation record only. Probably some diversion upstream for irrigation and domestic use. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Peak of Nov. 26, 1998, reached an elevation of 177.61 ft, from floodmarks at site.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 173.64 ft, Jan. 19; minimum elevation, 148.93 ft, Oct. 5.

ELEVATION, FEET
OCTOBER 2004 TO APRIL 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	149.17	151.61	152.05	151.81	151.56	149.99	160.15
2	149.09	154.36	151.70	151.98	151.34	150.09	159.83
3	149.02	158.52	151.37	151.62	151.17	150.02	158.66
4	148.97	155.54	151.19	151.36	151.07	149.85	157.75
5	148.94	153.89	151.22	151.13	151.55	149.70	156.60
6	149.06	152.86	151.40	150.95	151.74	149.61	155.49
7	149.37	152.18	152.03	151.33	153.11	149.55	154.93
8	149.21	151.67	158.18	152.73	152.55	149.49	155.44
9	150.37	151.28	161.32	152.71	152.06	149.43	154.45
10	151.31	150.96	160.75	152.34	151.71	149.37	153.65
11	150.90	150.72	168.66	152.03	151.47	149.31	154.17
12	150.32	150.52	166.57	151.84	151.29	149.27	155.14
13	149.96	150.35	160.91	152.26	151.30	149.19	155.79
14	149.73	150.21	158.33	152.06	151.19	149.14	155.64
15	149.57	150.14	157.25	151.80	150.97	149.10	155.02
16	149.51	150.37	155.81	152.14	150.77	149.10	156.75
17	152.47	150.36	154.73	152.67	150.60	149.46	159.99
18	154.98	150.81	153.93	168.40	150.48	149.53	158.22
19	154.36	151.89	153.34	172.18	150.39	149.36	156.51
20	154.25	151.53	152.90	166.13	150.29	151.03	155.23
21	153.03	151.13	152.43	160.98	150.16	153.92	154.24
22	152.18	150.87	152.15	158.04	150.04	152.80	153.47
23	151.88	150.73	151.82	156.43	149.96	151.92	152.98
24	151.49	150.71	151.55	155.09	149.89	151.38	153.01
25	151.20	155.07	151.38	154.22	149.84	150.98	152.74
26	151.26	156.81	151.84	153.59	149.78	151.68	152.61
27	151.37	154.55	151.75	153.11	149.71	167.29	152.14
28	151.05	153.29	151.41	152.70	149.69	167.60	151.81
29	150.88	152.47	151.26	152.35	---	164.98	151.56
30	151.01	152.12	151.29	152.06	---	165.83	151.50
31	151.75	---	151.18	151.78	---	162.14	---
MEAN	150.89	152.25	154.57	154.51	150.92	152.65	155.18
MAX	154.98	158.52	168.66	172.18	153.11	167.60	160.15
MIN	148.94	150.14	151.18	150.95	149.69	149.10	151.50

CHEHALIS RIVER BASIN

12025700 SKOOKUMCHUCK RIVER NEAR VAIL, WA

LOCATION.--Lat 46°46'22", long 122°35'34", in SW¹/₄NW¹/₄ sec.20, T.15 N., R.2 E., Thurston County, Hydrologic Unit 17100103, on right bank about 150 ft downstream from logging bridge, 0.4 mi downstream from Hospital Creek, 5.8 mi southeast of Vail, and at mile 28.8.

DRAINAGE AREA.--40.0 mi².

PERIOD OF RECORD.--October 1967 to current year.

REVISED RECORDS.--WDR WA-75-1: 1974.

GAGE.--Water-stage recorder. Elevation of gage is 710 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good, except flows above 1,500 ft³/s, which are fair. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--38 years (water years 1968-2005), 199 ft³/s, 67.61 in/yr, 144,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,350 ft³/s, Feb. 8, 1996, gage height, 11.24 ft; minimum discharge, 13 ft³/s, Oct. 29, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 11	0300	1,850	6.86	Mar 27	0915	1,640	6.67
Jan 18	0700	*3,320	*8.09				

Minimum discharge, 24 ft³/s, Sept. 25-29, gage height, 3.04 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	134	133	117	115	88	449	125	109	54	42	29
2	73	323	121	109	109	79	427	135	99	52	41	29
3	69	320	115	103	104	77	393	128	93	51	40	29
4	67	235	111	99	117	72	376	122	89	49	39	29
5	64	189	129	95	116	69	317	116	87	47	38	29
6	78	161	135	96	127	66	275	110	87	77	38	28
7	67	141	178	104	131	64	285	104	81	57	38	28
8	111	127	752	97	121	62	282	101	78	82	37	27
9	182	115	572	92	113	60	235	119	75	126	36	27
10	158	107	794	88	107	58	205	174	73	100	36	31
11	128	99	1,390	85	103	56	355	155	77	90	36	32
12	110	94	670	90	107	55	344	142	73	83	36	29
13	99	89	428	90	107	53	293	130	71	77	35	28
14	91	85	382	85	100	52	253	130	69	72	34	27
15	86	89	348	86	95	51	238	147	67	68	33	27
16	116	85	290	138	92	57	781	202	66	65	33	27
17	552	83	242	826	88	62	635	193	101	62	35	27
18	417	136	208	2,510	85	55	432	241	77	59	34	27
19	386	132	187	896	83	65	335	302	77	56	33	26
20	312	115	167	499	79	125	276	327	70	54	32	26
21	236	105	154	376	76	153	234	286	68	53	32	25
22	199	99	144	300	73	125	204	271	70	57	32	25
23	177	93	133	249	72	109	188	234	67	53	32	25
24	162	102	125	212	70	98	182	201	62	50	31	25
25	149	355	130	187	68	91	185	175	60	49	30	25
26	141	247	146	168	67	241	166	155	59	47	30	24
27	127	191	133	158	65	1,350	155	140	68	46	30	24
28	117	158	126	144	70	779	144	128	63	45	30	24
29	109	141	122	139	---	750	139	119	59	44	32	28
30	135	134	117	129	---	580	134	112	55	43	32	94
31	135	---	111	122	---	402	---	109	---	42	30	---
TOTAL	4,930	4,484	8,793	8,489	2,660	6,004	8,917	5,133	2,250	1,910	1,067	881
MEAN	159	149	284	274	95.0	194	297	166	75.0	61.6	34.4	29.4
MAX	552	355	1,390	2,510	131	1,350	781	327	109	126	42	94
MIN	64	83	111	85	65	51	134	101	55	42	30	24
AC-FT	9,780	8,890	17,440	16,840	5,280	11,910	17,690	10,180	4,460	3,790	2,120	1,750
CFSM	3.98	3.74	7.09	6.85	2.38	4.84	7.43	4.14	1.88	1.54	0.86	0.73
IN.	4.58	4.17	8.18	7.89	2.47	5.58	8.29	4.77	2.09	1.78	0.99	0.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2005, BY WATER YEAR (WY)

MEAN	89.1	284	399	391	353	302	232	136	89.9	47.8	32.7	40.2
MAX	298	622	756	756	797	621	454	261	187	122	71.2	137
(WY)	(1998)	(1984)	(1997)	(1971)	(1999)	(1972)	(1991)	(1984)	(1981)	(1983)	(1968)	(2004)
MIN	14.6	37.4	78.4	68.6	92.5	90.9	102	65.1	33.3	27.1	19.3	18.6
(WY)	(1988)	(1994)	(1977)	(1977)	(1977)	(1992)	(2004)	(1994)	(1992)	(1992)	(1992)	(1987)

12025700 SKOOKUMCHUCK RIVER NEAR VAIL, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1968 - 2005	
ANNUAL TOTAL	62,800		55,518		199	
ANNUAL MEAN	172		152		302	
HIGHEST ANNUAL MEAN					103	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	1,840	Jan 29	2,510	Jan 18	5,550	Feb 8, 1996
LOWEST DAILY MEAN	23	Aug 18	24	Sep 26	14	Oct 11, 1987
ANNUAL SEVEN-DAY MINIMUM	24	Aug 14	25	Sep 22	14	Oct 17, 1987
ANNUAL RUNOFF (AC-FT)	124,600		110,100		144,200	
ANNUAL RUNOFF (CFSM)	4.29		3.80		4.98	
ANNUAL RUNOFF (INCHES)	58.40		51.63		67.61	
10 PERCENT EXCEEDS	339		314		455	
50 PERCENT EXCEEDS	117		99		113	
90 PERCENT EXCEEDS	37		32		26	

12026150 SKOOKUMCHUCK RIVER BELOW BLOODY RUN CREEK, NEAR CENTRALIA, WA

LOCATION.--Lat 46°47'25", long 122°44'03", in NW¹/₄NW¹/₄ sec.18, T.15 N., R.1 E., Thurston County, Hydrologic Unit 17100103, on right bank 0.7 mi downstream from Bloody Run Creek, 1.2 mi downstream from Skookumchuck Dam, 12 mi northeast of Centralia, and at mile 20.7.

DRAINAGE AREA.--65.9 mi². Prior to August 1969, 61.7 mi².

PERIOD OF RECORD.--April 1929 to November 1933, October 1939 to current year. Monthly discharge only for some periods, published in WSP 1316 and 1736. Published as "near Centralia" (12026000) prior to August 1969.

GAGE.--Water-stage recorder. Datum of gage is 317.34 ft above NGVD of 1929. Apr. 1, 1929, to Sept. 30, 1931, and Feb. 1, 1932, to Dec. 6, 1933, nonrecording gage at site 1.1 mi upstream at different datum. Oct. 9, 1939, to July 31, 1969, at site 1.3 mi upstream at datum 301.04 ft above NGVD of 1929.

REMARKS.--Records good except estimated daily discharges, which are fair. Flow regulated by Skookumchuck Dam since January 1971. No diversions upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--70 years (water years 1930-33, 1940-2005), 254 ft³/s, 184,000 acre-ft/yr, unadjusted.
34 years (water years 1972-2005), 259 ft³/s, 187,500 acre-ft/yr, regulated period.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,020 ft³/s, Feb. 8, 1996, gage height, 13.41 ft, result of flow over dam computation, provided by Pacific Power & Light; minimum discharge, 12 ft³/s, May 28, 1970, caused by pumping during dam construction.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 18	1445	*2,920	*10.85	No other peak greater than base discharge.			

Minimum discharge, 86 ft³/s, Mar. 9-19, gage height, 5.76 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	203	212	196	295	98	595	227	150	108	106	143
2	159	232	210	196	294	98	627	230	150	108	106	143
3	159	231	209	195	279	98	554	228	138	108	107	143
4	160	219	209	193	273	98	522	223	130	108	108	143
5	171	214	211	193	272	98	455	220	130	108	108	143
6	177	210	214	193	273	98	396	214	131	109	108	143
7	177	209	214	193	273	98	369	211	120	108	e104	142
8	180	208	222	193	260	98	378	206	113	109	e104	142
9	183	208	233	193	240	92	355	202	112	110	e104	142
10	183	207	236	186	219	86	338	223	112	108	e104	143
11	180	207	278	173	195	86	344	222	112	107	e108	142
12	180	206	232	167	180	86	362	214	112	106	e108	140
13	178	206	213	167	179	86	393	208	110	106	e108	138
14	178	206	215	166	167	86	364	207	108	107	e108	137
15	178	208	220	165	143	86	327	209	110	e108	e108	137
16	183	207	210	172	116	87	658	219	109	108	e110	136
17	228	207	207	203	109	87	1,020	220	111	108	e108	136
18	213	216	220	1,960	106	86	720	221	110	108	e108	136
19	205	216	225	1,700	106	87	527	209	110	110	106	136
20	200	214	219	942	106	90	406	178	108	108	107	136
21	201	212	208	652	106	93	339	279	108	106	107	137
22	200	210	200	515	101	91	289	377	108	106	108	138
23	199	208	196	481	98	90	260	351	108	106	108	141
24	198	207	196	467	99	90	253	299	108	106	106	141
25	199	233	196	433	98	89	248	255	108	106	106	140
26	202	224	196	415	98	106	241	221	108	106	116	139
27	202	217	196	395	98	203	235	193	109	106	121	140
28	201	213	196	356	98	149	234	173	108	106	121	139
29	198	211	196	340	---	169	232	161	108	106	132	140
30	203	210	196	335	---	720	230	153	108	106	143	145
31	204	---	195	304	---	670	---	150	---	106	144	---
TOTAL	5,839	6,379	6,580	12,439	4,881	4,299	12,271	6,903	3,467	3,326	3,450	4,201
MEAN	188	213	212	401	174	139	409	223	116	107	111	140
MAX	228	233	278	1,960	295	720	1,020	377	150	110	144	145
MIN	159	203	195	165	98	86	230	150	108	106	104	136
AC-FT	11,580	12,650	13,050	24,670	9,680	8,530	24,340	13,690	6,880	6,600	6,840	8,330

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY)

MEAN	141	230	483	487	454	371	295	181	134	104	98.5	136
MAX	230	552	1,100	910	1,131	829	590	365	254	140	134	167
(WY)	(1998)	(1984)	(1978)	(1974)	(1999)	(1972)	(1991)	(1984)	(1990)	(1997)	(1997)	(1983)
MIN	91.7	75.8	95.8	92.6	62.5	88.0	145	109	85.4	81.7	78.9	114
(WY)	(2003)	(2003)	(1977)	(1977)	(1977)	(1977)	(1973)	(1989)	(1989)	(1992)	(1985)	(2003)

12026150 SKOOKUMCHUCK RIVER BELOW BLOODY RUN CREEK, NEAR CENTRALIA, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1972 - 2005	
ANNUAL TOTAL	78,436		74,035			
ANNUAL MEAN	214		203		259	
HIGHEST ANNUAL MEAN					413	1999
LOWEST ANNUAL MEAN					119	1977
HIGHEST DAILY MEAN	2,420	Jan 30	1,960	Jan 18	6,600	Feb 8, 1996
LOWEST DAILY MEAN	111	May 17	86	Mar 10	52	Feb 18, 1977
ANNUAL SEVEN-DAY MINIMUM	112	May 14	86	Mar 10	53	Feb 14, 1977
ANNUAL RUNOFF (AC-FT)	155,600		146,800		187,500	
10 PERCENT EXCEEDS	324		336		499	
50 PERCENT EXCEEDS	180		178		146	
90 PERCENT EXCEEDS	112		105		96	

e Estimated

CHEHALIS RIVER BASIN

12026400 SKOOKUMCHUCK RIVER NEAR BUCODA, WA

LOCATION.--Lat 46°46'20", long 122°55'23", in SW¼NW¼ sec.22, T.15 N., R.2 W., Thurston County, Hydrologic Unit 17100103, on left bank 100 ft downstream from bridge on State Highway 507, 3.3 mi southwest of Bucoda, and at mile 6.4.

DRAINAGE AREA.--112 mi².

PERIOD OF RECORD.--December 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 198.19 ft above NGVD of 1929. Prior to Oct. 1, 1992, at datum 0.41 ft higher.

REMARKS.--Records good except for estimated daily discharges and flows above 700 ft³/s, which are poor. Flow regulated by Skookumchuck Dam since January 1971. An average of 30 ft³/s is diverted at point 0.5 mi upstream for consumptive use at Centralia Steam Electric Project. During peak demand months, up to 54 ft³/s may be diverted for periods of one day or less. Other minor diversions for domestic use and irrigation upstream from station. Water temperatures, October 1968 to September 1971. Sediment records, July 1968 to September 1971.

AVERAGE DISCHARGE.--34 years (water years 1972-2005), 347 ft³/s, 251,400 acre-ft/yr, regulated.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s, Feb. 8, 1996, gage height, 17.87 ft, present datum, estimated based on comparison with upstream gaging stations; minimum discharge, 21 ft³/s, Aug. 15, 16, 18, 19, 20, 1970, gage height, 3.85 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 18	2215	*5,000	*14.97	No other peak greater than base discharge.			

Minimum discharge, 70 ft³/s, Mar. 13, gage height, 5.50 ft, but may have been less during period of estimated record.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	199	233	211	357	99	793	295	175	91	e78	120
2	120	300	225	219	347	99	849	306	160	90	e78	120
3	119	360	218	214	333	102	742	316	152	89	e76	120
4	119	286	217	209	321	99	670	311	134	88	e76	120
5	122	254	226	205	322	95	586	288	137	87	e76	120
6	139	230	239	202	327	95	509	265	139	90	e76	118
7	135	216	250	209	353	93	476	248	128	91	e79	117
8	141	206	347	219	329	93	500	243	112	91	e80	114
9	161	200	390	215	302	89	459	261	108	e104	e80	116
10	171	195	391	209	271	78	424	418	123	e100	e86	117
11	158	191	777	197	247	76	443	419	115	e98	e86	116
12	152	188	575	186	218	74	483	379	106	e97	e87	116
13	147	185	408	187	215	72	505	345	104	e97	e86	113
14	145	184	365	183	205	72	477	325	100	e97	e88	113
15	140	187	378	181	178	72	435	305	100	e98	e88	112
16	151	195	326	207	148	74	703	341	98	e99	e87	112
17	312	193	290	273	126	79	1,360	327	111	e100	e90	111
18	292	216	278	3,150	121	77	987	342	106	e99	e88	110
19	246	246	273	3,390	119	78	715	368	111	e96	e86	111
20	224	230	259	1,490	117	93	552	366	99	e93	e85	120
21	200	220	242	957	114	123	457	389	96	e90	e84	125
22	185	213	228	740	110	111	394	498	96	e88	e86	126
23	180	205	218	690	103	99	361	474	107	e86	e88	127
24	176	204	212	658	102	92	365	408	109	e89	e86	116
25	174	367	209	621	100	87	360	352	102	e89	e87	115
26	178	358	213	557	98	133	349	302	92	e88	e85	113
27	186	297	209	547	98	991	327	261	98	e86	e100	113
28	180	263	207	499	97	619	312	228	97	e86	e90	118
29	181	241	204	453	---	503	305	205	93	e83	e105	115
30	190	230	204	430	---	861	307	193	91	e86	e120	129
31	203	---	202	396	---	907	---	184	---	e83	e119	---
TOTAL	5,349	7,059	9,013	18,104	5,778	6,235	16,205	9,962	3,399	2,849	2,706	3,513
MEAN	173	235	291	584	206	201	540	321	113	91.9	87.3	117
MAX	312	367	777	3,390	357	991	1,360	498	175	104	120	129
MIN	119	184	202	181	97	72	305	184	91	83	76	110
AC-FT	10,610	14,000	17,880	35,910	11,460	12,370	32,140	19,760	6,740	5,650	5,370	6,970

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2005, BY WATER YEAR (WY)

MEAN	140	339	705	713	665	537	399	226	152	99.3	82.0	123
MAX	294	846	1,669	1,367	1,559	1,446	970	461	331	156	123	180
(WY)	(1998)	(1984)	(1997)	(1997)	(1996)	(1972)	(1991)	(1984)	(1990)	(1983)	(1997)	(1978)
MIN	70.5	45.4	105	95.0	85.7	130	171	118	78.5	50.1	53.5	85.6
(WY)	(2003)	(2003)	(1977)	(1977)	(1977)	(2001)	(2004)	(1994)	(1979)	(2003)	(2003)	(2003)

12026400 SKOOKUMCHUCK RIVER NEAR BUCODA, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1972 - 2005	
ANNUAL TOTAL	88,256		90,172			
ANNUAL MEAN	241		247		347	
HIGHEST ANNUAL MEAN					571	1972
LOWEST ANNUAL MEAN					143	2001
HIGHEST DAILY MEAN	3,610	Jan 30	3,390	Jan 19	8,560	Feb 8, 1996
LOWEST DAILY MEAN	71	Aug 17	72	Mar 13	40	Dec 6, 2002
ANNUAL SEVEN-DAY MINIMUM	72	Aug 14	74	Mar 10	41	Nov 30, 2002
ANNUAL RUNOFF (AC-FT)	175,100		178,900		251,400	
10 PERCENT EXCEEDS	411		465		751	
50 PERCENT EXCEEDS	172		180		166	
90 PERCENT EXCEEDS	82		87		84	

e Estimated

12027500 CHEHALIS RIVER NEAR GRAND MOUND, WA

LOCATION.--Lat 46°46'34", long 123°02'04", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.22, T.15 N., R.3 W., Thurston County, Hydrologic Unit 17100103, on left bank at downstream side of highway bridge at Meadows, 1.5 mi southwest of Grand Mound, 7.0 mi downstream from Skookumchuck River, and at mile 59.9.

DRAINAGE AREA.--895 mi².

PERIOD OF RECORD.--October 1928 to current year.

REVISED RECORDS.--WSP 1216: Drainage area. WSP 1286: 1929-30(M), 1931, 1932-34(M).

GAGE.--Water-stage recorder. Datum of gage is 123.65 ft above NGVD of 1929. Prior to Oct. 3, 1934, nonrecording gage at present site at datum 3.0 ft higher.

REMARKS.--No estimated daily discharges. Records good. Minor effect from regulation by Skookumchuck Dam since January 1971. Up to 54 ft³/s of Skookumchuck River is consumptively used at Centralia steam generating plant. Many small diversions for irrigation and domestic use upstream from station, including about 3 ft³/s for municipal water supply for Centralia and Chehalis. Water temperatures March 1952 to September 1974. Miscellaneous suspended sediment data published for water years 1962-64. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--77 years (water years 1929-2005), 2,796 ft³/s, 42.45 in/yr, 2,026,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 74,800 ft³/s, Feb. 9, 1996, gage height, 19.98 ft; minimum discharge, 82 ft³/s, Aug. 30, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 19	1000	*20,700	*14.17	No other peak greater than base discharge.			

Minimum discharge, 215 ft³/s, Aug. 26, 27, gage height, 2.08 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	634	1,770	1,890	1,690	1,770	895	7,280	1,680	1,210	630	281	314
2	606	2,420	1,750	1,890	1,670	984	7,120	1,860	1,220	585	274	297
3	582	5,790	1,580	1,740	1,580	948	6,230	2,180	1,160	548	267	286
4	560	3,950	1,500	1,600	1,510	903	5,550	1,890	1,100	524	258	275
5	546	2,970	1,490	1,490	1,660	842	4,800	1,830	1,020	493	249	275
6	561	2,400	1,560	1,400	1,760	805	4,020	1,690	1,010	478	244	275
7	670	2,020	1,790	1,500	2,330	782	3,560	1,540	1,010	544	241	279
8	661	1,750	4,110	2,110	2,290	757	3,810	1,440	956	541	245	268
9	910	1,550	7,520	2,260	2,020	732	3,460	1,440	912	584	248	255
10	1,450	1,390	6,790	2,090	1,820	709	3,000	2,190	867	798	251	249
11	1,420	1,270	11,700	1,940	1,670	686	2,930	3,350	863	687	255	255
12	1,140	1,190	12,600	1,800	1,570	664	3,510	2,940	883	625	266	276
13	974	1,120	8,220	1,950	1,540	640	3,820	2,460	873	591	270	293
14	863	1,070	6,020	1,910	1,490	624	3,850	2,140	859	549	271	275
15	790	1,030	5,180	1,780	1,390	604	3,560	2,020	839	513	266	262
16	754	1,080	4,160	1,910	1,290	601	3,910	2,080	824	480	257	257
17	1,520	1,100	3,450	2,180	1,210	687	7,180	2,170	915	456	255	260
18	3,650	1,170	2,980	11,300	1,160	768	6,230	2,230	1,130	439	269	259
19	3,170	1,710	2,640	20,000	1,120	706	4,970	3,340	1,080	412	286	255
20	3,230	1,730	2,400	14,300	1,080	1,020	3,980	3,960	1,040	387	275	249
21	2,650	1,550	2,160	8,880	1,030	2,520	3,340	3,770	944	371	259	249
22	2,170	1,390	1,990	6,260	985	2,250	2,870	3,500	878	355	241	244
23	1,930	1,310	1,830	4,920	948	1,830	2,550	3,250	848	348	231	241
24	1,740	1,260	1,680	3,940	918	1,560	2,510	2,780	823	348	226	236
25	1,610	2,590	1,590	3,370	901	1,390	2,400	2,390	760	334	221	226
26	1,540	4,790	1,700	2,960	881	1,360	2,360	2,070	711	319	218	228
27	1,620	3,400	1,760	2,680	849	9,930	2,140	1,810	710	314	216	229
28	1,550	2,690	1,600	2,430	834	13,300	1,960	1,600	800	305	227	229
29	1,440	2,190	1,530	2,210	---	10,400	1,820	1,450	794	289	233	229
30	1,400	1,950	1,530	2,060	---	11,200	1,770	1,350	700	283	250	252
31	1,750	---	1,490	1,910	---	9,270	---	1,270	---	283	298	---
TOTAL	44,091	61,600	108,190	118,460	39,276	80,367	116,490	69,670	27,739	14,413	7,848	7,777
MEAN	1,422	2,053	3,490	3,821	1,403	2,592	3,883	2,247	925	465	253	259
MAX	3,650	5,790	12,600	20,000	2,330	13,300	7,280	3,960	1,220	798	298	314
MIN	546	1,030	1,490	1,400	834	601	1,770	1,270	700	283	216	226
AC-FT	87,450	122,200	214,600	235,000	77,900	159,400	231,100	138,200	55,020	28,590	15,570	15,430
CFSM	1.59	2.29	3.90	4.27	1.57	2.90	4.34	2.51	1.03	0.52	0.28	0.29
IN.	1.83	2.56	4.50	4.92	1.63	3.34	4.84	2.90	1.15	0.60	0.33	0.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2005, BY WATER YEAR (WY)

MEAN	924	3,774	6,272	6,335	5,786	4,500	2,948	1,393	811	380	244	343
MAX	3,643	9,697	19,280	13,900	13,680	9,477	6,787	3,496	2,482	934	570	1,289
(WY)	(1998)	(1956)	(1934)	(1971)	(1999)	(1972)	(1937)	(1948)	(1936)	(1983)	(1968)	(1978)
MIN	125	221	884	860	1,201	1,354	1,086	549	352	174	118	117
(WY)	(1953)	(1937)	(1977)	(1977)	(1977)	(1992)	(1939)	(1939)	(1992)	(1970)	(1967)	(1967)

12027500 CHEHALIS RIVER NEAR GRAND MOUND, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1929 - 2005	
ANNUAL TOTAL	750,679		695,921			
ANNUAL MEAN	2,051		1,907		2,796	
HIGHEST ANNUAL MEAN					4,480	
LOWEST ANNUAL MEAN					1,122	
HIGHEST DAILY MEAN	19,600	Jan 31	20,000	Jan 19	64,200	Feb 9, 1996
LOWEST DAILY MEAN	187	Aug 19	216	Aug 27	85	Aug 30, 1967
ANNUAL SEVEN-DAY MINIMUM	191	Aug 15	225	Aug 23	91	Aug 28, 1967
ANNUAL RUNOFF (AC-FT)	1,489,000		1,380,000		2,026,000	
ANNUAL RUNOFF (CFSM)	2.29		2.13		3.12	
ANNUAL RUNOFF (INCHES)	31.20		28.93		42.45	
10 PERCENT EXCEEDS	4,220		3,870		7,400	
50 PERCENT EXCEEDS	1,400		1,390		1,240	
90 PERCENT EXCEEDS	290		259		222	

CHEHALIS RIVER BASIN

12031000 CHEHALIS RIVER AT PORTER, WA

LOCATION.--Lat 46°56'17", long 123°18'45", on north line of NE¼ sec.28, T.17 N., R.5 W., Grays Harbor County, Hydrologic Unit 17100103, at downstream end of left bank bridge pier, 30 ft downstream from Porter Creek, 0.1 mi west of Porter, and at mile 33.3.

DRAINAGE AREA.--1,294 mi².

PERIOD OF RECORD.--January 1952 to September 1972, water years 1973-75 (annual maximum), May 1975 to September 1985, October 1985 to September 1986 (monthly means only), October 1986 to current year. Daily routed values for October 1985 to September 1986 are available in the files of the U.S. Geological Survey.

REVISED RECORDS.--WSP 1716: Drainage area. WSP 1932: 1954, 1956, 1960(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 23.64 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records fair. Minor effect from regulation on Skookumchuck River by Skookumchuck Dam since January 1971. Up to 54 ft³/s of Skookumchuck River is consumptively used at Centralia steam generating plant. Many small diversions for irrigation and domestic use upstream from station, including about 3 ft³/s for municipal water supply for Centralia and Chehalis. U.S. Geological Survey satellite telemeter at station. Suspended sediment October 1961 to September 1971. Water temperatures July 1959 to September 1960, October 1961 to July 1972. Chemical analyses July 1959 to September 1973, October 1974 to September 1994.

AVERAGE DISCHARGE.--50 years (water years 1953-72, 1976-2005), 4,043 ft³/s, 42.45 in/yr, 2,929,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 80,700 ft³/s, Feb. 9, 1996, gage height, 25.22 ft; minimum discharge, 164 ft³/s, Oct. 17, 1952, gage height, 2.25 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 28, 1937, reached a stage of 24.7 ft, from levels by Grays Harbor County. Flood of December 1933 reached a stage of 23.13 ft, from river profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 20	0700	*22,100	*20.50	No other peak greater than base discharge.			

Minimum discharge, 317 ft³/s, Sept. 28, 29, gage height, 3.38 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	776	2,390	2,970	2,530	2,920	1,510	11,000	2,560	1,950	1,010	463	451
2	737	3,580	2,760	2,900	2,750	1,610	9,970	2,570	1,900	968	457	433
3	707	6,320	2,490	2,780	2,620	1,570	9,000	2,950	1,800	937	444	415
4	681	5,790	2,370	2,570	2,560	1,530	7,890	2,720	1,700	914	433	410
5	671	4,500	2,380	2,390	2,620	1,440	6,900	2,660	1,610	887	422	409
6	756	3,750	2,460	2,250	2,770	1,380	6,000	2,510	1,600	884	414	402
7	764	3,190	2,840	2,400	3,160	1,340	5,350	2,340	1,580	911	415	400
8	862	2,740	4,620	3,060	3,350	1,300	5,390	2,210	1,500	981	414	396
9	996	2,410	8,770	3,550	3,040	1,270	5,050	2,150	1,430	1,030	414	377
10	1,570	2,140	9,180	3,380	2,810	1,240	4,430	2,800	1,370	1,150	415	377
11	1,710	1,910	13,000	3,140	2,640	1,200	4,320	4,050	1,360	1,030	415	396
12	1,420	1,750	16,500	2,990	2,530	1,170	4,860	3,850	1,350	939	418	391
13	1,210	1,630	13,800	3,010	2,460	1,140	5,160	3,340	1,320	882	416	413
14	1,080	1,530	9,820	3,030	2,400	1,110	5,350	2,950	1,270	827	413	401
15	986	1,490	8,440	2,830	2,290	1,090	5,080	2,860	1,220	782	403	385
16	971	1,510	7,070	2,910	2,150	1,100	5,580	2,860	1,180	744	394	375
17	1,390	1,570	5,970	3,980	2,030	1,160	8,680	2,940	1,220	709	403	392
18	3,690	1,740	5,190	12,700	1,930	1,250	8,780	3,080	1,360	683	413	379
19	3,940	2,280	4,630	19,900	1,860	1,240	7,270	4,130	1,330	648	420	372
20	3,950	2,480	4,210	21,500	1,800	1,660	5,990	4,860	1,260	617	423	363
21	3,470	2,230	3,850	16,800	1,720	3,000	5,050	4,920	1,160	592	414	357
22	2,860	2,010	3,550	11,000	1,650	3,230	4,370	4,650	1,100	577	400	350
23	2,470	1,870	3,270	8,130	1,590	2,740	3,890	4,450	1,080	563	389	340
24	2,220	1,880	2,980	6,550	1,550	2,390	3,720	3,970	1,060	560	380	338
25	2,010	3,600	2,790	5,550	1,520	2,180	3,570	3,470	1,030	541	371	330
26	2,000	6,290	2,790	4,860	1,480	2,730	3,440	3,070	998	519	369	326
27	2,050	5,190	2,900	4,350	1,440	8,860	3,180	2,740	1,040	506	367	326
28	1,940	4,250	2,650	3,960	1,430	15,800	2,940	2,480	1,100	499	376	323
29	1,780	3,610	2,510	3,620	---	15,500	2,760	2,270	1,140	478	405	363
30	1,940	3,200	2,470	3,370	---	14,800	2,660	2,110	1,070	464	409	615
31	2,190	---	2,410	3,150	---	13,800	---	2,000	---	461	422	---
TOTAL	53,797	88,830	161,640	175,140	63,070	111,340	167,630	96,520	40,088	23,293	12,711	11,605
MEAN	1,735	2,961	5,214	5,650	2,252	3,592	5,588	3,114	1,336	751	410	387
MAX	3,950	6,320	16,500	21,500	3,350	15,800	11,000	4,920	1,950	1,150	463	615
MIN	671	1,490	2,370	2,250	1,430	1,090	2,660	2,000	998	461	367	323
AC-FT	106,700	176,200	320,600	347,400	125,100	220,800	332,500	191,400	79,510	46,200	25,210	23,020
CFSM	1.34	2.29	4.03	4.37	1.74	2.78	4.32	2.41	1.03	0.58	0.32	0.30
IN.	1.55	2.55	4.65	5.03	1.81	3.20	4.82	2.77	1.15	0.67	0.37	0.33

12031000 CHEHALIS RIVER AT PORTER, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2005, BY WATER YEAR (WY)

MEAN	1,265	5,121	8,840	9,282	8,322	6,567	4,415	2,132	1,202	613	415	544
MAX	4,627	12,770	17,710	19,050	20,550	12,920	9,130	4,202	2,456	1,295	838	1,879
(WY)	(1998)	(1956)	(1978)	(1971)	(1999)	(1972)	(1991)	(1984)	(1968)	(1983)	(1968)	(1978)
MIN	196	376	1,273	1,360	1,711	2,287	2,025	1,024	528	350	223	228
(WY)	(1953)	(1953)	(1977)	(1977)	(1977)	(2001)	(1977)	(1994)	(1992)	(1992)	(1967)	(1967)

SUMMARY STATISTICS

FOR 2004 CALENDAR YEAR

FOR 2005 WATER YEAR

WATER YEARS 1953 - 2005

ANNUAL TOTAL	1,062,788		1,005,664		4,043		
ANNUAL MEAN	2,904		2,755		6,492		
HIGHEST ANNUAL MEAN					1,578		
LOWEST ANNUAL MEAN					1999		
HIGHEST DAILY MEAN	23,800	Feb 1	21,500	Jan 20	55,000	Feb 9, 1996	2001
LOWEST DAILY MEAN	336	Aug 20	323	Sep 28	166	Oct 17, 1952	
ANNUAL SEVEN-DAY MINIMUM	348	Aug 15	333	Sep 22	169	Oct 6, 1952	
ANNUAL RUNOFF (AC-FT)	2,108,000		1,995,000		2,929,000		
ANNUAL RUNOFF (CFSM)	2.24		2.13		3.12		
ANNUAL RUNOFF (INCHES)	30.55		28.91		42.45		
10 PERCENT EXCEEDS	6,200		5,450		10,600		
50 PERCENT EXCEEDS	1,910		1,950		1,980		
90 PERCENT EXCEEDS	492		410		377		

12035000 SATSOP RIVER NEAR SATSOP, WA

LOCATION.--Lat 47°00'03", long 123°29'37", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.18 N., R.7 W., Grays Harbor County, Hydrologic Unit 17100104, in west pier of bridge on old U.S. Highway 410, 0.6 mi west of Satsop, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--299 mi².

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

REVISED RECORDS.--WSP 1286: 1930-35(M), 1937(M). WSP 1716: Drainage area. WSP 1932: 1945, 1949(M), 1951(M), 1956-57(M), 1959(M).

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Mar. 19, 1938, nonrecording gage at site 60 ft upstream at datum 20.9 ft higher.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station. Chemical analyses July 1960 to September 1971, October 1974 to September 1975, October 1976 to June 1980; sediment records November 1961 to June 1965 (partial-record station). U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--76 years (water years 1930-2005), 2,039 ft³/s, 92.67 in/yr, 1,477,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,600 ft³/s, Mar. 19, 1997, elevation, 38.87 ft; maximum elevation, 38.9 ft, Jan. 22, 1935, from floodmarks, present datum; minimum discharge, 147 ft³/s, Aug. 31, Sept. 1, 2, 1994; minimum elevation, 21.66 ft, present datum, Sept. 3-6, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1909 reached a stage of 37.1 ft, from high-water mark, at railroad bridge 300 ft downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 13,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Elevation (ft)	Date	Time	Discharge (ft ³ /s)	Elevation (ft)
Dec 11	0330	23,800	34.20	Jan 18	0530	*29,200	*35.32

Minimum discharge, 240 ft³/s, Sept. 28, 29.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	462	1,770	1,240	1,100	2,190	1,310	4,410	1,160	1,010	479	357	284
2	439	5,770	1,110	1,040	2,040	1,470	4,320	1,180	924	466	353	279
3	423	4,200	1,010	966	1,910	1,490	4,380	1,130	876	460	347	276
4	410	2,810	1,090	913	1,900	1,310	4,160	1,100	831	449	341	276
5	409	2,170	1,740	861	1,870	1,180	3,390	1,090	806	444	338	282
6	510	1,790	1,680	827	1,920	1,100	3,650	1,020	836	536	335	275
7	482	1,540	2,020	914	2,060	1,040	3,280	974	775	510	335	269
8	503	1,350	5,520	1,030	1,910	994	2,930	949	740	517	334	266
9	1,060	1,220	5,040	1,000	1,800	956	2,510	933	714	775	331	263
10	2,030	1,100	12,800	952	1,700	923	2,230	1,160	695	632	330	262
11	1,380	1,010	17,000	906	1,620	893	2,540	1,100	697	586	326	264
12	1,050	939	6,730	935	1,650	863	2,500	1,010	665	594	325	264
13	869	896	4,480	899	1,650	834	2,680	961	655	569	320	260
14	763	876	5,650	846	1,550	810	2,810	934	643	537	315	260
15	690	923	5,800	812	1,450	792	2,770	963	622	513	311	260
16	674	1,020	4,060	1,110	1,370	804	6,180	973	610	497	307	259
17	869	1,040	3,180	9,450	1,300	875	6,030	935	673	475	313	260
18	1,320	1,260	2,590	25,600	1,240	807	4,280	1,500	635	458	315	261
19	2,550	1,560	2,200	12,900	1,190	811	3,300	2,810	596	440	309	260
20	2,860	1,370	1,880	7,370	1,140	3,400	2,740	3,280	571	431	302	255
21	1,900	1,210	1,650	6,180	1,090	4,810	2,370	2,450	557	424	297	252
22	1,640	1,110	1,450	5,330	1,050	2,960	2,090	2,500	554	422	294	249
23	1,520	1,040	1,300	5,870	1,020	2,260	1,890	2,590	543	416	293	248
24	1,300	1,510	1,190	4,790	983	1,860	1,790	2,110	528	402	290	248
25	1,210	7,420	1,250	4,040	952	1,610	1,670	1,760	518	396	287	244
26	1,730	3,550	1,890	3,510	933	4,140	1,530	1,530	516	389	285	244
27	1,590	2,370	1,610	3,190	905	7,050	1,410	1,360	534	381	283	244
28	1,380	1,800	1,390	2,860	918	4,910	1,320	1,230	516	371	284	243
29	1,210	1,490	1,290	2,560	---	5,110	1,260	1,140	501	368	300	312
30	1,700	1,400	1,210	2,370	---	4,900	1,240	1,080	494	366	300	1,210
31	1,650	---	1,140	2,300	---	3,820	---	1,030	---	361	289	---
TOTAL	36,583	57,514	102,190	113,431	41,311	66,092	87,660	43,942	19,835	14,664	9,746	8,829
MEAN	1,180	1,917	3,296	3,659	1,475	2,132	2,922	1,417	661	473	314	294
MAX	2,860	7,420	17,000	25,600	2,190	7,050	6,180	3,280	1,010	775	357	1,210
MIN	409	876	1,010	812	905	792	1,240	933	494	361	283	243
AC-FT	72,560	114,100	202,700	225,000	81,940	131,100	173,900	87,160	39,340	29,090	19,330	17,510
CFSM	3.95	6.41	11.0	12.2	4.93	7.13	9.77	4.74	2.21	1.58	1.05	0.98
IN.	4.55	7.16	12.71	14.11	5.14	8.22	10.91	5.47	2.47	1.82	1.21	1.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2005, BY WATER YEAR (WY)

MEAN	1,165	2,999	4,292	4,188	3,792	2,996	2,074	1,139	699	452	331	434
MAX	3,814	6,887	9,553	9,598	8,123	7,785	4,038	2,696	1,686	1,133	674	1,791
(WY)	(1976)	(1991)	(1995)	(1993)	(1999)	(1997)	(1937)	(1948)	(2000)	(1983)	(2001)	(1978)
MIN	201	268	1,361	1,127	1,148	1,155	898	592	407	287	198	208
(WY)	(1988)	(1937)	(1986)	(1949)	(1993)	(1992)	(1942)	(2004)	(1992)	(1951)	(1994)	(1938)

12035000 SATSOP RIVER NEAR SATSOP, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1930 - 2005	
ANNUAL TOTAL	607,430		601,797		2,039	
ANNUAL MEAN	1,660		1,649		3,235	
HIGHEST ANNUAL MEAN					1,199	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	17,000	Dec 11	25,600	Jan 18	51,800	Mar 19, 1997
LOWEST DAILY MEAN	251	Aug 20	243	Sep 28	147	Sep 1, 1994
ANNUAL SEVEN-DAY MINIMUM	260	Aug 15	246	Sep 22	154	Aug 27, 1994
ANNUAL RUNOFF (AC-FT)	1,205,000		1,194,000		1,477,000	
ANNUAL RUNOFF (CFSM)	5.55		5.51		6.82	
ANNUAL RUNOFF (INCHES)	75.57		74.87		92.67	
10 PERCENT EXCEEDS	4,060		3,590		4,760	
50 PERCENT EXCEEDS	1,040		1,030		1,150	
90 PERCENT EXCEEDS	309		296		283	

12035002 CHEHALIS RIVER NEAR SATSOP, WA

LOCATION.--Lat 46°58'20", long 123°29'25", in NW¼NE¼ sec.14, T.17 N., R.7 W., Grays Harbor County, Hydrologic Unit 17100104, 0.7 mi downstream from Satsop River, 2.1 mi southwest of Satsop, and at mile 19.5.

DRAINAGE AREA.--1,760 mi²

PERIOD OF RECORD.--June 1977 to September 1979 (gage heights and discharge records less than 2,000 ft³/s, unpublished, available in files of Washington Office), October 1979 to September 1980 (gage heights and discharge records less than 5,000 ft³/s), October 1980 to September 1981 (gage heights and discharge records less than 10,000 ft³/s), October 1981 to September 1983, October 2002 to current year.

GAGE.--Acoustic velocity meter with water-stage and velocity-index recorder and crest-stage gage. Datum of gage is NGVD of 1929. Prior to October 2002, datum 2.66 ft higher and at mile 18.0, 1.5 mi downstream.

REMARKS.--Records fair except for estimated daily discharges and discharges below 1,000 ft³/s, which are poor. Large diurnal fluctuations at times because of tides. Minor effects from regulation on Skookumchuck River by Skookumchuck Dam since January 1971. Up to 54 ft³/s of Skookumchuck River is consumptively used at Centralia steam generating plant. Many small diversions for irrigation and domestic use upstream from station, including about 3 ft³/s for Centralia and Chehalis. U.S. Geological Survey telemeter at station.

AVERAGE DISCHARGE.--5 years (water years 1982-83, 2003-05), 6,425 ft³/s, 49.57 in/yr, 4,654,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 53,500 ft³/s, Dec. 18, 1979, gage height, 17.93 ft, at former site and datum; minimum discharge, -819 ft³/s, Sept. 28, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 40,500 ft³/s, Jan. 18, maximum elevation, 20.63 ft, Jan. 18; minimum daily discharge, 606 ft³/s, Sept. 26, 28; minimum elevation, 3.63 ft, Sept. 26-28.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,470	4,230	5,840	4,750	e5,580	e3,020	e17,200	e3,980	e3,150	e1,660	e852	e761
2	1,420	9,670	5,420	5,090	e5,170	e3,280	e15,400	e4,040	e3,000	e1,570	e844	e738
3	1,380	11,100	5,000	4,870	e4,890	e3,260	e14,500	e4,390	e2,900	e1,510	e828	e718
4	1,320	9,760	4,930	4,560	e4,810	e3,020	e13,300	e4,130	e2,740	e1,470	e814	e716
5	1,310	7,500	5,830	e4,240	e4,890	e2,800	e11,300	e4,020	e2,590	e1,430	e793	e719
6	1,480	6,110	5,780	e4,030	e5,090	e2,640	e10,500	e3,810	e2,590	e1,480	e786	e707
7	1,480	5,160	6,500	e4,300	e5,660	e2,560	e9,500	e3,580	e2,520	e1,480	e786	e698
8	1,570	4,460	12,100	e4,830	e5,660	e2,460	e9,090	e3,430	e2,380	e1,600	e788	e695
9	2,190	3,950	15,900	e5,400	e5,210	e2,410	e8,340	e3,380	e2,320	e1,840	e778	e671
10	3,600	3,550	22,800	e5,460	e4,850	e2,330	e7,360	e4,290	e2,210	e1,820	e776	e668
11	3,240	3,240	30,000	e5,220	e4,610	e2,260	e7,540	e5,560	e2,230	e1,710	e773	e686
12	2,710	3,020	24,100	e5,110	e4,490	e2,200	e7,980	e5,130	e2,170	e1,580	e773	e683
13	2,310	2,850	21,000	e5,110	e4,450	e2,130	e8,430	e4,550	e2,150	e1,490	e765	e701
14	2,100	2,740	18,500	e5,170	e4,330	e2,110	e8,820	e4,100	e2,030	e1,410	e757	e687
15	1,960	2,770	17,300	e5,010	e4,090	e2,050	e8,600	e4,070	e1,980	e1,340	e746	e669
16	1,920	2,870	14,100	e5,300	e3,840	e2,120	e13,300	e4,060	e1,930	e1,280	e732	e653
17	2,510	2,940	11,800	e15,900	e3,700	e2,310	e16,500	e4,110	e2,020	e1,220	e748	e669
18	4,640	3,380	10,100	e40,500	e3,520	e2,310	e14,200	e5,030	e2,150	e1,180	e757	e659
19	6,390	4,070	9,080	e33,900	e3,340	e2,490	e11,700	e7,580	e2,080	e1,150	e757	e655
20	6,940	4,130	8,040	e29,900	e3,240	e5,480	e9,500	e9,020	e1,970	e1,090	e757	e639
21	5,480	3,750	7,270	e24,000	e3,130	e8,870	e8,360	e8,100	e1,870	e1,070	e743	e629
22	4,610	3,440	6,540	e17,400	e2,990	e6,790	e7,180	e7,760	e1,780	e1,040	e724	e621
23	4,140	3,200	5,970	e14,800	e2,920	e5,570	e6,240	e7,580	e1,740	e1,020	e710	e619
24	3,680	3,760	5,500	e12,400	e2,850	e4,720	e5,880	e6,680	e1,710	e1,000	e699	e619
25	3,400	12,200	5,340	e10,600	e2,810	e4,350	e5,580	e5,750	e1,650	e979	e686	e610
26	3,920	12,300	6,290	e9,280	e2,740	e8,460	e5,260	e4,930	e1,680	e959	e680	e606
27	3,820	10,100	6,000	e8,260	e2,670	e17,700	e4,920	e4,370	e1,740	e927	e678	e610
28	3,550	8,100	5,410	e7,500	e2,670	e22,800	e4,580	e3,910	e1,800	e915	e688	e606
29	3,230	6,840	5,100	e6,810	---	e22,800	e4,300	e3,580	e1,850	e896	e732	e753
30	3,880	6,300	4,940	e6,300	---	e21,700	e4,130	e3,350	e1,740	e875	e732	e2,070
31	4,000	---	4,750	e5,900	---	e19,600	---	e3,200	---	e865	e738	---
TOTAL	95,650	167,490	317,230	321,900	114,200	196,600	279,490	151,470	64,670	39,856	23,420	21,535
MEAN	3,085	5,583	10,230	10,380	4,079	6,342	9,316	4,886	2,156	1,286	755	718
MAX	6,940	12,300	30,000	40,500	5,660	22,800	17,200	9,020	3,150	1,840	852	2,070
MIN	1,310	2,740	4,750	4,030	2,670	2,050	4,130	3,200	1,650	865	678	606
AC-FT	189,700	332,200	629,200	638,500	226,500	390,000	554,400	300,400	128,300	79,050	46,450	42,710
CFSM	1.75	3.17	5.81	5.90	2.32	3.60	5.29	2.77	1.22	0.73	0.43	0.41
IN.	2.02	3.54	6.70	6.80	2.41	4.15	5.90	3.20	1.37	0.84	0.49	0.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2005, BY WATER YEAR (WY)

MEAN	3,623	6,959	13,760	14,140	13,220	10,520	7,505	2,958	1,603	1,261	822	1,067
MAX	6,879	10,440	19,380	17,440	24,100	15,360	9,882	4,886	2,156	2,489	1,105	2,006
(WY)	(2004)	(2004)	(1983)	(1983)	(1982)	(2003)	(1982)	(2005)	(2005)	(1983)	(2004)	(2004)
MIN	572	2,560	7,417	10,380	4,079	6,342	3,458	2,024	1,266	785	559	583
(WY)	(2003)	(2003)	(2003)	(2005)	(2005)	(2005)	(2004)	(2004)	(1982)	(2003)	(2003)	(2003)

12035002 CHEHALIS RIVER NEAR SATSOP, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1982 - 2005	
ANNUAL TOTAL	1,854,157		1,793,511			
ANNUAL MEAN	5,066		4,914		6,425	
HIGHEST ANNUAL MEAN					8,562	
LOWEST ANNUAL MEAN					4,914	
HIGHEST DAILY MEAN	36,300	Feb 1	40,500	Jan 18	47,000	Feb 19, 1982
LOWEST DAILY MEAN	599	Aug 20	606	Sep 26	440	Sep 6, 2003
ANNUAL SEVEN-DAY MINIMUM	621	Aug 15	613	Sep 22	484	Aug 31, 2003
ANNUAL RUNOFF (AC-FT)	3,678,000		3,557,000		4,654,000	
ANNUAL RUNOFF (CFSM)	2.88		2.79		3.65	
ANNUAL RUNOFF (INCHES)	39.17		37.89		49.57	
10 PERCENT EXCEEDS	11,100		10,500		16,600	
50 PERCENT EXCEEDS	3,210		3,440		3,250	
90 PERCENT EXCEEDS	823		736		699	

e Estimated

12035100 CHEHALIS RIVER NEAR MONTESANO, WA

LOCATION.--Lat 46°57'45", long 123°36'12", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.18, T.17 N., R.7 W., Grays Harbor County, Hydrologic Unit 17100104, on downstream side of State Highway 107 bridge, 0.2 mi upstream from Wynoochee River, 1.1 mi south of Montesano and at mile 13.2.

DRAINAGE AREA.--1,780 mi².

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3.32 ft above NGVD of 1929.

REMARKS.--Elevation record only. Large diurnal fluctuation because of tides. Minor effect from regulation on Skookumchuck River by Skookumchuck Dam since January 1971. Up to 54 ft³/s of Skookumchuck River is consumptively used at Centralia steam generating plant. Many small diversions for irrigation and domestic use upstream from station, including about 3 ft³/s for municipal water supply for Centralia and Chehalis. U.S. Geological Survey satellite telemeter at station. Chemical analyses, March 1970 to September 1971, October 1977 to June 1980.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded elevation, 18.66 ft, Dec. 17, 2001; minimum recorded elevation, -1.17 ft, July 12, 2002.

EXTREMES FOR CURRENT YEAR.--Maximum recorded elevation, 16.30 ft, Jan. 18; minimum recorded elevation, -0.45 ft, July 20, but may have been lower during period of missing record July 21 to Aug. 4.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.68	0.62	12.69	3.03	11.27	1.62	12.39	3.42	12.14	3.65	13.40	3.53
2	12.49	0.91	12.23	4.94	10.60	2.08	12.14	3.42	12.16	3.39	13.42	3.36
3	11.96	1.44	10.83	4.51	10.33	2.75	11.82	3.60	12.24	2.66	12.80	3.16
4	11.18	1.44	10.09	4.45	11.27	3.24	11.90	3.73	13.02	2.28	12.36	2.49
5	11.14	2.03	9.86	3.95	11.42	4.15	12.41	3.02	12.78	1.32	12.07	1.69
6	10.25	3.06	10.39	3.93	12.53	4.55	13.20	2.47	13.73	1.56	12.13	0.94
7	10.31	3.20	11.38	3.76	13.06	4.89	14.26	2.50	13.71	1.26	12.70	0.09
8	10.92	3.22	12.11	3.52	14.78	6.41	15.05	2.42	13.66	0.81	12.98	0.02
9	10.99	2.89	12.60	2.69	14.24	5.96	14.82	1.52	13.71	0.69	13.18	0.30
10	11.14	2.30	13.14	1.61	15.63	8.68	14.60	1.43	13.45	1.00	13.09	0.27
11	11.66	1.85	13.50	0.67	15.90	9.79	14.65	1.12	13.51	1.75	13.12	0.78
12	11.94	1.44	13.92	0.46	14.91	8.06	14.14	0.89	13.55	2.40	13.11	0.61
13	12.40	0.42	14.10	0.47	15.32	6.98	13.49	0.81	13.19	2.77	12.89	0.35
14	13.00	0.15	14.20	0.69	14.87	7.56	12.54	1.03	12.88	2.57	12.81	1.88
15	13.39	0.06	14.13	0.66	13.96	5.82	12.25	2.45	12.17	2.52	12.78	1.79
16	13.76	0.55	13.45	0.63	12.79	4.47	12.90	2.48	11.21	2.86	12.58	3.98
17	14.35	1.57	12.40	1.87	11.91	4.25	13.34	3.85	11.17	3.03	11.61	2.92
18	13.70	1.86	11.94	1.72	12.04	3.75	16.30	12.07	11.28	3.07	11.09	3.45
19	13.58	2.30	11.04	1.61	12.76	4.14	15.65	12.15	11.81	2.59	11.69	3.82
20	12.41	3.79	11.23	1.93	12.29	3.86	14.65	10.45	11.96	1.72	12.93	5.14
21	11.87	3.25	11.67	2.19	12.38	2.93	14.31	9.16	12.13	1.31	11.90	4.06
22	12.09	2.94	12.33	2.13	12.03	2.09	13.78	6.88	12.28	1.13	12.02	3.29
23	12.19	2.82	12.73	1.53	12.12	1.41	13.59	5.98	12.64	1.11	12.58	2.72
24	12.57	2.32	13.28	2.06	12.53	1.24	13.44	4.67	12.93	1.42	12.66	2.34
25	13.51	2.71	13.54	4.53	13.35	2.19	13.34	4.02	12.85	1.57	12.71	2.39
26	13.63	2.72	13.16	3.68	13.67	2.29	13.44	3.64	12.82	2.09	13.25	4.22
27	13.58	1.87	12.91	2.32	13.01	1.60	13.20	3.49	12.81	2.72	14.20	6.72
28	13.69	1.32	12.31	1.58	13.27	1.97	12.94	3.34	13.15	2.79	14.69	7.51
29	13.48	1.58	12.28	1.71	13.25	2.32	12.58	3.12	---	---	14.91	8.23
30	13.21	1.71	11.86	1.60	12.89	2.73	12.50	3.60	---	---	13.78	7.06
31	12.44	1.55	---	---	12.75	3.27	12.60	4.00	---	---	13.26	6.52
MONTH	14.35	0.06	14.20	0.46	15.90	1.24	16.30	0.81	13.73	0.69	14.91	0.02

CHEHALIS RIVER BASIN

12035380 WYNOOCHEE LAKE NEAR GRIDDALE, WA

LOCATION.--Lat 47°23'08", long 123°36'16", in NE¹/₄NW¹/₄ sec.20, T.22 N., R.7 W., Grays Harbor County, Hydrologic Unit 17100104, Olympic National Forest, in monolith No. 6, near center line axis of Wynoochee Dam on Wynoochee River, 2.0 mi north of Grisdale, at river mile 51.8.

DRAINAGE AREA.--41.0 mi².

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Corps of Engineers). Prior to May 22, 1973, staff gage on upstream face of dam.

REMARKS.--Reservoir is formed by concrete gravity-type dam with gate-type spillway. Construction began in 1969 and was completed in 1972. Usable capacity, 67,288 acre-ft between elevation 690 ft, sluice invert level, and 800 ft, full pool elevation at 69,405 acre-ft. Dead storage 2,117 acre-ft below elevation 690 ft. Figures given herein represent total contents. Water is used for power generation, flood control, water supply, and recreation. Tacoma Public Utilities satellite telemetry at station.

COOPERATION.--Daily elevations at 2400 hours, and capacity table furnished by Corps of Engineers, and by Tacoma Public Utilities.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 70,087 acre-ft, July 13, 1983, elevation, 800.60 ft; minimum contents observed, 4,227 acre-ft, Oct. 19, 1992, elevation, 701.04 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 69,394 acre-ft, May 3, elevation, 799.99 ft; minimum contents, 35,807 acre-ft, Jan. 17, elevation, 764.41 ft.

MONTH-END ELEVATION AND CONTENTS AT 2400
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
September 30	776.03	45,382	--
October 31	765.27	36,477	-8,905
November 30	768.06	38,690	+2,213
December 31	769.28	39,678	+988
Calendar Year 2004	--	--	+1,092
January 31	769.69	40,012	+334
February 28	770.99	41,083	+1,071
March 31	781.73	50,557	+9,474
April 30	799.39	68,721	+18,164
May 31	799.50	68,844	+123
June 30	795.60	64,553	-4,291
July 31	792.00	60,729	-3,824
August 31	783.99	52,703	-8,026
September 30	775.05	44,526	-8,177
Water Year 2005	--	--	-856

12035400 WYNOOCHEE RIVER NEAR GRISDALE, WA

LOCATION.--Lat 47°22'50", long 123°36'31", in NW¼SW¼ sec.20, T.22 N., R.7 W., Grays Harbor County, Hydrologic Unit 17100104, Olympic National Forest, on right bank 0.5 mi downstream from Wynoochee Dam, 1.7 mi north of Grisdale, 1.7 mi downstream from Scatter Creek, and at mile 51.3.

DRAINAGE AREA.--41.3 mi².

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 630 ft above NGVD of 1929, from topographic map. Prior to Nov. 3, 1967, at site 1,500 ft upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Since August 1972, flow regulated by Wynoochee Lake (station 12035380) for flood control, during summer months to augment the natural river flow, and for the water supply for the City of Aberdeen. Some regulation from 1969 to August 1972 due to dam construction. No diversion upstream from station. Tacoma Public Utilities satellite telemeter at station.

AVERAGE DISCHARGE.--40 years (water years 1966-2005), 521 ft³/s, 171.31 in/yr, 377,500 acre-ft/yr, adjusted for storage in Wynoochee Lake since October 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s, Dec. 12, 1966, gage height, about 18.0 ft, from graph based on gage readings, site and datum then in use; minimum discharge, 0.9 ft³/s, Sept. 10, 12, 1974, gage height, 0.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,860 ft³/s, Dec. 14, gage height, 5.12 ft; minimum discharge, 141 ft³/s, July 1, gage height, 1.10 ft; from minimum stage indicator clip; minimum daily discharge, 203 ft³/s, Mar. 19.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	511	610	361	433	227	496	231	324	308	216	209
2	331	1,250	610	361	433	227	496	230	223	243	216	209
3	331	920	611	361	433	227	496	312	223	227	216	209
4	333	622	616	361	347	227	496	443	223	228	216	209
5	334	622	616	361	276	227	760	443	223	228	216	209
6	337	622	616	361	276	227	895	443	223	230	216	209
7	339	622	616	363	276	227	818	437	223	230	216	209
8	336	622	816	366	276	227	295	309	223	230	216	209
9	339	554	1,250	366	276	227	222	309	223	233	216	209
10	339	220	922	332	250	227	216	309	223	230	216	209
11	339	206	956	260	223	228	216	309	223	230	216	209
12	339	237	1,290	260	223	227	430	313	223	230	216	209
13	339	507	1,600	260	220	227	622	304	227	230	216	209
14	351	507	3,570	260	220	227	614	272	227	234	216	209
15	309	511	2,740	260	220	227	247	227	227	237	210	209
16	309	435	1,650	776	220	227	234	227	227	218	209	209
17	309	284	1,260	1,020	220	223	234	257	240	216	209	209
18	448	284	1,260	1,340	220	206	234	1,240	249	217	209	209
19	1,000	284	1,260	1,710	220	203	234	1,440	249	218	209	209
20	1,300	284	1,260	1,700	220	208	236	1,060	249	220	209	209
21	1,300	284	1,270	1,920	220	212	237	747	249	220	209	209
22	1,310	284	860	1,960	220	209	231	1,140	249	220	209	209
23	882	445	361	1,500	221	209	227	776	249	218	209	209
24	859	727	361	1,260	223	209	227	590	249	216	209	209
25	864	1,310	361	1,250	223	701	227	567	249	216	213	209
26	564	883	361	1,260	223	1,190	227	472	249	217	213	209
27	472	610	361	1,270	223	1,000	227	330	256	217	213	209
28	469	610	361	1,010	225	316	227	330	292	216	213	209
29	470	610	361	433	---	304	228	330	300	216	210	397
30	828	610	361	433	---	404	230	330	304	216	209	724
31	933	---	361	433	---	491	---	330	---	216	209	---
TOTAL	17,343	16,477	29,508	24,168	7,260	9,718	10,779	15,057	7,318	7,025	6,595	6,973
MEAN	559	549	952	780	259	313	359	486	244	227	213	232
MAX	1,310	1,310	3,570	1,960	433	1,190	895	1,440	324	308	216	724
MIN	309	206	361	260	220	203	216	227	223	216	209	209
AC-FT	34,400	32,680	58,530	47,940	14,400	19,280	21,380	29,870	14,520	13,930	13,080	13,830
MEAN†	421	587	968	785	279	467	665	488	172	164	82.1	95.0
CFSM†	10.19	14.21	23.44	19.01	6.76	11.31	16.10	11.82	4.16	3.97	1.99	2.30
IN.†	11.75	15.84	27.02	21.91	7.02	13.05	17.95	13.61	4.64	4.59	2.29	2.56
AC-FT†	25,890	34,890	59,520	48,270	15,470	28,750	39,540	29,990	10,230	10,110	5,050	5,650
CAL YR	2004	TOTAL 159,794	MEAN 437	MAX 3,570	MIN 185	AC-FT 317,000	MEAN† 438	CFSM† 10.60	IN.† 144.42	AC-FT† 318,100		
WTR YR	2005	TOTAL 158,221	MEAN 433	MAX 3,570	MIN 203	AC-FT 313,800	MEAN† 432	CFSM† 10.46	IN.† 142.06	AC-FT† 312,900		

† Adjusted for change in contents in Wynoochee Lake.

12036000 WYNOOCHEE RIVER ABOVE SAVE CREEK, NEAR ABERDEEN, WA

LOCATION.--Lat 47°17'57", long 123°39'07", in NE¹/₄NE¹/₄ sec.23, T.21 N., R.8 W., Grays Harbor County, Hydrologic Unit 17100104, on right bank 0.8 mi upstream from Save Creek, 2.5 mi downstream from Oxbow Dam Site, 11.0 mi downstream from Wynoochee Dam, 23.5 mi northeast of city hall in Aberdeen, and at mile 40.6.

DRAINAGE AREA.--74.1 mi².

PERIOD OF RECORD.--May 1925 to current year. Published as "at Oxbow, near Aberdeen" (12035500) 1925-52, where drainage area was 70.7 mi². Records published for both sites October 1951 to October 1952.

REVISED RECORDS.--WSP 1346: 1952. WSP 1736: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 401 ft above NGVD of 1929 (stadia traverse). Prior to Nov. 7, 1925, nonrecording gage at site 2.3 mi upstream at different datum. Nov. 7, 1925, to Sept. 3, 1947, water-stage recorder at site 1.5 mi upstream at datum 444.0 ft above NGVD of 1929 (levels by City of Aberdeen). Sept. 4, 1947, to Oct. 13, 1952, water-stage recorder at site 2.5 mi upstream at datum about 91 ft higher. Oct. 5, 1951, to Sept. 30, 1976, water-stage recorder on left bank at same site and datum.

REMARKS.--Records good. Since August 1972, flow regulated by Wynoochee Lake (station 12035380) for flood control, during summer months to augment the natural river flow, and for the water supply for the City of Aberdeen. Some regulation from August 1969 to September 1972 due to dam construction. No diversions upstream from station. Tacoma Public Utilities satellite telemeter at station.

AVERAGE DISCHARGE.--80 years (water years 1926-2005), 833 ft³/s, 152.66 in/yr, 603,500 acre-ft/yr, adjusted for storage in Wynoochee Lake since October 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,600 ft³/s, Dec. 9, 1956, gage height, 16.95 ft, from rating curve extended above 9,000 ft³/s; minimum discharge, 57 ft³/s, Sept. 3-5, 1972, gage height, 4.43 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,290 ft³/s, Jan. 17, gage height, 9.70 ft; minimum discharge, 234 ft³/s, Sept. 14, 15, 16, gage height, 4.55 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	422	976	841	552	740	551	1,240	427	500	382	283	261
2	419	2,110	821	536	711	562	1,120	433	400	332	283	258
3	415	1,450	811	522	693	523	1,350	472	380	308	281	256
4	415	986	935	512	659	469	1,150	631	375	306	277	250
5	427	922	987	503	561	435	1,260	624	373	314	277	250
6	441	884	e980	500	585	420	1,480	618	372	341	277	250
7	423	857	e1,150	524	560	405	1,310	611	367	316	277	250
8	516	843	1,890	524	546	395	811	486	362	418	276	250
9	688	797	1,990	511	531	386	631	469	357	399	275	251
10	698	438	4,200	482	502	377	585	488	356	355	272	251
11	567	395	2,680	392	461	371	683	469	352	363	272	247
12	517	387	2,120	399	492	369	792	467	349	371	272	245
13	488	658	2,160	390	481	365	1,050	447	356	362	270	243
14	490	676	4,620	383	457	360	1,040	424	346	352	265	236
15	441	737	3,680	386	439	357	784	402	341	348	260	234
16	440	688	2,250	940	428	384	1,410	404	341	333	265	241
17	514	522	1,710	3,940	420	372	1,010	405	365	315	267	241
18	669	627	1,630	4,050	412	339	816	1,520	363	314	262	244
19	1,440	615	1,580	2,940	403	379	711	1,890	357	310	261	243
20	1,620	551	1,540	2,470	393	1,270	645	1,540	353	308	261	243
21	1,510	515	1,510	2,630	386	924	598	1,100	353	304	261	245
22	1,540	494	1,190	2,640	378	662	552	1,520	352	304	261	246
23	1,150	599	588	2,340	374	555	524	1,160	347	299	260	247
24	1,050	1,460	570	1,770	372	498	507	945	346	299	259	245
25	1,100	2,440	697	1,660	371	805	491	845	343	297	260	245
26	942	1,420	785	1,610	371	2,030	471	740	345	293	264	245
27	744	975	676	1,590	366	1,750	455	572	343	293	263	245
28	705	905	623	1,400	384	930	444	544	371	292	267	245
29	698	875	601	766	---	1,030	441	530	374	287	267	630
30	1,090	855	577	755	---	1,010	433	517	377	286	261	979
31	1,240	---	566	766	---	1,000	---	512	---	283	261	---
TOTAL	23,819	26,657	46,958	39,383	13,476	20,283	24,794	22,212	10,916	10,084	8,317	8,516
MEAN	768	889	1,515	1,270	481	654	826	717	364	325	268	284
MAX	1,620	2,440	4,620	4,050	740	2,030	1,480	1,890	500	418	283	979
MIN	415	387	566	383	366	339	433	402	341	283	259	234
AC-FT	47,240	52,870	93,140	78,120	26,730	40,230	49,180	44,060	21,650	20,000	16,500	16,890
MEAN†	623	926	1,531	1,276	501	808	1,132	718	292	263	138	146
CFSM†	8.41	12.50	20.66	17.22	6.76	10.90	15.28	9.69	3.94	3.55	1.86	1.97
IN.†	9.70	13.94	23.82	19.85	7.03	12.58	17.04	11.18	4.39	4.09	2.14	2.20
AC-FT†	38,340	55,080	94,130	78,450	27,800	49,700	67,340	44,180	17,360	16,180	8,470	8,710
CAL YR	2004	TOTAL 257,387	MEAN 703	MAX 4,620	MIN 219	AC-FT 510,500	MEAN† 705	CFSM† 9.51	IN.† 129.45	AC-FT† 511,600		
WTR YR	2005	TOTAL 255,415	MEAN 700	MAX 4,620	MIN 234	AC-FT 506,600	MEAN† 698	CFSM† 9.42	IN.† 127.96	AC-FT† 505,700		

† Adjusted for change in contents in Wynoochee Lake.

e Estimated

12037400 WYNOOCHEE RIVER ABOVE BLACK CREEK, NEAR MONTESANO, WA

LOCATION.--Lat 47°00'42", long 123°39'15", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.27, T.18 N., R.8 W., Grays Harbor County, Hydrologic Unit 17100104, on left bank 2,000 ft upstream from Black Creek, 3.5 mi northwest of Montesano, and at mile 5.9.

DRAINAGE AREA.--155 mi².

PERIOD OF RECORD.--October 1956 to current year.

REVISED RECORDS.--WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 40 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. City of Aberdeen diverted about 89 ft³/s for municipal supply at intake 2.2 mi upstream. Other small diversions for irrigation and domestic use. Since August 1972, flow regulated by Wynoochee Dam, 45.7 mi upstream, for flood control, during summer months to augment the natural river flow, and for the water supply for the City of Aberdeen. Some regulation from 1969 to August 1972 due to dam construction. Sediment records October 1961 to June 1965. Water temperatures October 1969 to September 1986. Tacoma Public Utilities satellite telemeter at station.

AVERAGE DISCHARGE.--16 years (water years 1957-72), 1,316 ft³/s, 953,600 acre-ft/yr, unregulated. 33 years (water years 1973-2005), 1,254 ft³/s, 908,600 acre-ft/yr, regulated.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft³/s, Mar. 19, 1997, gage height, 20.21 ft; maximum gage height, 20.54 ft, Dec. 10, 1956; minimum discharge, 3.0 ft³/s, part or all of each day Aug. 26-30, 1967, gage height, 2.86 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,900 ft³/s, Jan. 18, gage height, 16.16 ft; minimum discharge, 155 ft³/s, Sept. 24-27, gage height, 2.67 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	444	1,420	1,280	847	1,110	639	2,170	645	723	350	213	178
2	439	3,320	1,200	803	1,050	714	2,120	646	666	343	210	177
3	430	2,930	1,160	765	997	726	2,250	615	527	299	206	175
4	421	1,890	1,220	738	1,010	681	2,140	694	486	277	202	177
5	420	1,570	1,400	726	896	619	1,870	731	470	275	201	178
6	486	1,400	1,400	721	916	581	2,330	720	494	354	199	174
7	459	1,280	1,640	741	962	550	2,090	714	444	316	199	171
8	497	1,200	3,120	825	890	525	1,750	680	419	345	197	173
9	756	1,130	3,340	823	846	508	1,280	612	402	489	197	173
10	1,020	907	6,390	791	802	491	1,110	718	390	404	197	170
11	864	695	7,370	736	747	475	1,220	707	392	387	197	176
12	725	629	4,130	721	753	461	1,170	698	372	396	195	171
13	642	676	3,230	717	744	443	1,570	679	370	387	192	169
14	589	800	5,220	694	733	434	1,670	653	361	369	189	168
15	558	868	5,960	672	716	424	1,560	630	347	356	186	161
16	533	911	3,710	810	688	436	2,880	608	343	348	184	159
17	665	804	2,740	6,160	651	473	2,680	589	397	317	191	161
18	800	854	2,380	13,300	624	434	1,950	1,150	380	301	189	162
19	1,570	935	2,210	6,790	601	439	1,550	2,340	364	291	185	165
20	2,250	850	2,070	4,210	565	1,610	1,340	2,360	353	282	182	165
21	1,970	780	1,970	4,130	524	2,250	1,190	1,740	345	273	181	165
22	1,930	739	1,850	3,530	507	1,480	1,050	1,830	348	267	182	165
23	1,700	713	1,140	4,320	491	1,150	955	1,780	343	257	181	159
24	1,380	1,270	918	2,940	480	952	904	1,530	332	248	179	158
25	1,340	4,100	974	2,550	470	828	843	1,200	326	238	178	156
26	1,490	2,840	1,310	2,310	453	2,920	775	1,070	324	234	180	179
27	1,140	1,870	1,130	2,230	441	3,990	736	898	340	228	179	185
28	1,030	1,550	1,010	2,090	452	2,470	718	758	332	224	180	162
29	957	1,400	951	1,430	---	2,430	708	742	344	222	192	282
30	1,200	1,370	915	1,190	---	2,280	692	734	353	217	186	1,120
31	1,700	---	870	1,170	---	1,950	---	727	---	215	180	---
TOTAL	30,405	41,701	74,208	70,480	20,119	34,363	45,271	30,198	12,087	9,509	5,909	6,134
MEAN	981	1,390	2,394	2,274	719	1,108	1,509	974	403	307	191	204
MAX	2,250	4,100	7,370	13,300	1,110	3,990	2,880	2,360	723	489	213	1,120
MIN	420	629	870	672	441	424	692	589	324	215	178	156
AC-FT	60,310	82,710	147,200	139,800	39,910	68,160	89,800	59,900	23,970	18,860	11,720	12,170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2005, BY WATER YEAR (WY)

MEAN	848	2,212	2,751	2,411	2,173	1,598	984	683	513	338	234	357
MAX	2,967	4,951	5,122	4,444	4,623	4,180	1,791	1,322	1,208	766	456	1,287
(WY)	(1976)	(1991)	(1995)	(1997)	(1999)	(1997)	(1974)	(1984)	(2000)	(1974)	(2001)	(1978)
MIN	143	294	788	602	579	539	497	317	245	183	151	148
(WY)	(1988)	(1994)	(1986)	(1985)	(1993)	(1992)	(1973)	(2004)	(1979)	(1995)	(2003)	(1993)

CHEHALIS RIVER BASIN

12037400 WYNOOCHEE RIVER ABOVE BLACK CREEK, NEAR MONTESANO, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1973 - 2005	
ANNUAL TOTAL	371,490		380,384			
ANNUAL MEAN	1,015		1,042		1,254	
HIGHEST ANNUAL MEAN					1,907	
LOWEST ANNUAL MEAN					749	
HIGHEST DAILY MEAN	7,370	Dec 11	13,300	Jan 18	23,700	Mar 19, 1997
LOWEST DAILY MEAN	159	Aug 2	156	Sep 25	108	Sep 22, 1992
ANNUAL SEVEN-DAY MINIMUM	161	Jul 30	162	Sep 19	119	Oct 10, 1992
ANNUAL RUNOFF (AC-FT)	736,900		754,500		908,600	
10 PERCENT EXCEEDS	2,350		2,250		2,940	
50 PERCENT EXCEEDS	646		708		640	
90 PERCENT EXCEEDS	200		182		196	

12039005 HUMPTULIPS RIVER BELOW HIGHWAY 101, NEAR HUMPTULIPS, WA

LOCATION.--Lat 47°13'54", long 123°58'22", in SE 1/4 SW 1/4 sec.7, T.22 N., R.10 W., Grays Harbor County, Hydrologic Unit 17100105, on right bank at site of former bridge 0.6 mi downstream of Highway 101, 0.5 mi west of Humptulips, and at mile 22.9.

DRAINAGE AREA.--132 mi².

PERIOD OF RECORD.--May 1933 to January 1935, July 1942 to September 1979, and July 2002 to current year. Published as "Humptulips River near Humptulips" (12039000) May 1933 to January 1935 and July 1942 to September 1979.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 90.00 ft above NGVD of 1929. May 1933, Jan. 1935, and July 1942 to Sept. 1979, at site 1.0 mi upstream at different datum.

REMARKS.-- No estimated daily discharges. Records good except for flow above 3,000 ft³/s, which are poor. No regulation or diversion upstream of station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--41 years (water years 1934, 1943-79, 2005), 1,338 ft³/s, 137.17 in/yr, 969,000 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s, Jan. 22, 1935, gage height, 12.7 ft, datum then in use, from floodmarks, from rating curve extended above 16,500 ft³/s; maximum gage height, 23.40 ft, Oct. 21, 2003; minimum discharge observed, 82 ft³/s, Sept. 11, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 25	0330	15,600	19.26	Jan 18	0100	*29,000	*23.05
Dec 11	0045	23,500	21.62				

Minimum discharge, 121 ft³/s, Sept. 25-28, gage height, 9.72 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370	1,560	1,090	777	1,430	1,310	3,570	668	644	253	225	158
2	352	5,540	952	716	1,240	1,410	2,960	715	586	246	218	154
3	336	2,720	872	666	1,090	1,340	3,370	669	544	242	216	151
4	323	1,860	1,200	626	1,200	978	2,880	659	510	237	209	152
5	321	1,480	1,600	589	1,330	825	2,350	670	498	244	206	155
6	443	1,250	1,500	570	1,440	737	2,740	612	500	469	204	148
7	373	1,050	1,890	621	1,440	672	2,310	570	454	366	203	145
8	666	909	4,230	717	1,260	623	2,050	546	430	731	199	143
9	1,540	825	3,110	691	1,120	589	1,700	524	409	979	199	141
10	1,870	747	14,400	639	1,000	557	1,490	609	402	611	197	139
11	1,140	687	12,200	605	933	527	1,900	567	412	536	193	146
12	841	637	4,420	645	1,070	502	1,750	527	386	594	192	141
13	703	631	3,050	628	1,020	478	1,770	497	405	566	189	137
14	617	604	6,230	582	904	457	1,750	491	393	497	184	136
15	559	885	4,800	563	829	442	1,780	587	367	447	181	135
16	600	916	2,910	967	771	491	5,300	674	356	412	181	135
17	897	951	2,190	13,000	724	576	3,630	653	406	379	189	133
18	1,510	1,210	1,790	21,100	685	491	2,580	1,910	371	355	187	132
19	2,830	1,360	1,520	8,300	650	506	2,010	3,450	342	334	180	131
20	2,230	1,060	1,300	5,450	615	4,320	1,710	2,790	326	318	175	130
21	1,500	877	1,140	4,240	583	3,530	1,500	2,090	315	304	171	127
22	1,420	799	996	4,440	555	2,090	1,340	2,250	318	296	168	127
23	1,250	765	891	5,040	531	1,580	1,190	2,010	306	286	166	126
24	1,050	2,970	823	3,190	510	1,270	1,110	1,600	292	273	162	124
25	1,040	8,450	1,130	2,410	492	1,040	1,000	1,290	285	265	160	124
26	1,720	2,940	1,780	1,990	476	4,000	893	1,050	282	256	157	123
27	1,330	2,000	1,300	1,950	457	4,100	822	894	296	249	155	123
28	1,080	1,550	1,080	1,690	483	2,800	769	807	274	244	166	122
29	916	1,340	989	1,490	---	3,310	733	738	267	237	192	838
30	1,530	1,250	900	1,440	---	3,060	726	685	261	231	178	2,090
31	1,300	---	829	1,520	---	2,450	---	665	---	226	165	---
TOTAL	32,657	49,823	83,112	87,852	24,838	47,061	59,683	32,467	11,637	11,683	5,767	6,766
MEAN	1,053	1,661	2,681	2,834	887	1,518	1,989	1,047	388	377	186	226
MAX	2,830	8,450	14,400	21,100	1,440	4,320	5,300	3,450	644	979	225	2,090
MIN	321	604	823	563	457	442	726	491	261	226	155	122
AC-FT	64,780	98,820	164,900	174,300	49,270	93,350	118,400	64,400	23,080	23,170	11,440	13,420
CFSM	7.95	12.5	20.2	21.4	6.70	11.5	15.0	7.90	2.93	2.84	1.40	1.70
IN.	9.17	13.99	23.34	24.67	6.97	13.21	16.76	9.12	3.27	3.28	1.62	1.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2005, BY WATER YEAR (WY)

MEAN	1,095	2,099	2,727	2,594	2,241	1,844	1,314	816	468	322	243	406
MAX	3,195	3,462	5,646	5,750	4,799	3,814	2,257	1,731	895	751	552	1,250
(WY)	(2004)	(1955)	(1934)	(1953)	(1961)	(1972)	(1959)	(1948)	(1956)	(1974)	(1964)	(1978)
MIN	123	599	1,230	614	887	830	617	365	208	151	108	134
(WY)	(2003)	(1953)	(1945)	(1949)	(2005)	(1947)	(1973)	(2004)	(2003)	(1958)	(1951)	(1965)

HUMPTULIPS RIVER BASIN

12039005 HUMPTULIPS RIVER BELOW HIGHWAY 101, NEAR HUMPTULIPS, WA—Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1933 - 2005	
ANNUAL TOTAL	432,860		453,346			
ANNUAL MEAN	1,183		1,242		1,338	
HIGHEST ANNUAL MEAN					1,878	
LOWEST ANNUAL MEAN					868	
HIGHEST DAILY MEAN	14,400	Dec 10	21,100	Jan 18	23,200	Jan 19, 1968
LOWEST DAILY MEAN	152	Aug 2	122	Sep 28	82	Sep 11, 1944
ANNUAL SEVEN-DAY MINIMUM	155	Jul 30	124	Sep 22	86	Sep 6, 1944
ANNUAL RUNOFF (AC-FT)	858,600		899,200		969,000	
ANNUAL RUNOFF (CFSM)	8.93		9.37		10.1	
ANNUAL RUNOFF (INCHES)	121.54		127.29		137.17	
10 PERCENT EXCEEDS	2,650		2,790		3,060	
50 PERCENT EXCEEDS	798		674		785	
90 PERCENT EXCEEDS	210		170		183	