



Figure 18. Location of surface-water stations in the Puyallup and White River Basins.

12092000 PUYALLUP RIVER NEAR ELECTRON, WA

LOCATION.--Lat 46°54'14", long 122°02'02", in SE¼NW¼, sec.3, T.16 N., R.6 E., Pierce County, Hydrologic Unit 17110014, on right bank 1,000 ft upstream from Puget Sound Energy's flume headworks, 0.3 mi downstream from Mowich River, 9.8 mi southeast of Electron, and at mile 42.0.

DRAINAGE AREA.--92.8 mi².

PERIOD OF RECORD.--October 1908 to December 1933, October 1944 to September 1949, October 1957 to current year.

REVISED RECORDS.--WSP 1092: 1946(M). WSP 1346: 1913, 1916-17(M), 1918-23, drainage area. WSP 1566: 1945(M), 1947(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,632.7 ft above NGVD of 1929. Prior to Jan. 1, 1913, nonrecording gage, and Jan. 1, 1913, to Sept. 30, 1926, Oct. 1, 1944, to Sept. 30, 1949, and Oct. 1, 1957, to Nov. 22, 1959 (gage destroyed by flood), water-stage recorder, at sites near present gage at different datums. Aug. 19, 1960, to Dec. 23, 1980, at site 160 ft downstream at different datum. Dec. 24, 1980, to Dec. 24, 1987, at site 60 ft downstream at different datum. Dec. 24, 1987, to Feb. 8, 1996 (gage destroyed by flood), at site on left bank near present gage at same datum. Feb. 8 to June 5, 1996, no gage at site.

REMARKS.--No estimated daily discharges. Records fair, except for flows above 3,000 ft³/s, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemetry at station.

AVERAGE DISCHARGE.--77 years (water years 1909-33, 1945-49, 1958-2004), 528 ft³/s, 77.27 in/yr, 382,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s, Feb. 8, 1996, gage height, 10.94 ft, from floodmarks, result of slope-area measurement; minimum daily discharge, 75 ft³/s, Oct. 19, 1994.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 21	0345	2,810	5.79	Jan 29	1845	*3,550	5.94
Oct 28	1830	3,210	*6.10	May 26	1600	2,730	5.40
Nov 29	0500	2,970	5.57	Aug 24	1645	3,180	6.07

Minimum discharge, 153 ft³/s, Nov. 4.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	420	275	725	240	849	233	364	455	864	765	725	603
2	455	239	713	234	649	222	328	549	687	708	666	546
3	424	215	921	227	553	236	318	574	663	709	585	404
4	457	218	665	211	509	305	330	573	771	672	566	421
5	471	224	1,100	203	440	282	325	528	933	621	574	393
6	385	214	1,160	246	442	259	312	419	1,090	699	643	387
7	491	210	776	454	423	289	322	416	864	634	684	402
8	356	205	572	522	375	369	326	467	782	473	478	415
9	357	197	484	626	343	497	327	438	818	462	475	397
10	258	264	436	702	321	486	347	407	855	405	575	367
11	214	771	402	546	312	427	395	430	771	396	700	1,350
12	560	397	417	490	305	403	459	368	637	481	804	789
13	539	334	668	506	301	371	458	345	948	648	825	1,000
14	290	282	555	677	324	350	423	342	870	800	817	958
15	244	263	460	1,120	309	331	370	370	701	768	760	1,240
16	672	295	447	972	367	309	339	426	650	746	846	957
17	915	385	425	651	386	310	320	396	699	845	768	847
18	506	1,090	393	604	430	339	297	511	750	832	632	705
19	429	1,460	407	544	397	323	276	665	683	995	670	590
20	1,090	877	432	462	351	296	288	590	637	703	640	508
21	2,280	578	419	410	319	307	297	581	714	564	647	436
22	1,120	440	384	376	295	374	286	642	837	620	978	444
23	783	392	368	695	283	426	286	581	1,010	705	602	487
24	446	373	401	891	272	447	275	524	1,100	800	1,710	441
25	393	350	375	618	260	421	273	499	1,050	751	2,290	418
26	404	319	337	529	255	398	339	1,760	909	618	2,150	414
27	326	278	312	475	264	419	450	1,990	665	679	1,580	418
28	1,420	676	295	725	266	386	404	1,920	638	690	1,040	439
29	987	2,100	276	2,600	246	399	360	1,490	711	695	900	379
30	483	1,030	257	2,280	---	469	375	1,300	767	730	801	342
31	326	---	250	1,230	---	418	---	1,190	---	712	708	---
TOTAL	18,501	14,951	15,832	21,066	10,846	11,101	10,269	21,746	24,074	20,926	26,839	17,497
MEAN	597	498	511	680	374	358	342	701	802	675	866	583
MAX	2,280	2,100	1,160	2,600	849	497	459	1,990	1,100	995	2,290	1,350
MIN	214	197	250	203	246	222	273	342	637	396	475	342
AC-FT	36,700	29,660	31,400	41,780	21,510	22,020	20,370	43,130	47,750	41,510	53,240	34,710
CFSM	6.43	5.37	5.50	7.32	4.03	3.86	3.69	7.56	8.65	7.27	9.33	6.28
IN.	7.42	5.99	6.35	8.44	4.35	4.45	4.12	8.72	9.65	8.39	10.76	7.01

PUYALLUP RIVER BASIN

12092000 PUYALLUP RIVER NEAR ELECTRON, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2004, BY WATER YEAR (WY)												
MEAN	396	563	590	538	447	371	429	619	762	673	546	408
MAX	1,015	1,468	2,217	1,071	1,053	944	657	1,019	1,248	1,256	866	727
(WY)	(1960)	(1933)	(1934)	(1918)	(1996)	(1972)	(1988)	(1929)	(1974)	(1917)	(2004)	(1927)
MIN	185	134	174	193	154	146	200	380	406	407	338	257
(WY)	(1981)	(1930)	(1915)	(1979)	(1922)	(1922)	(1975)	(1909)	(1996)	(1996)	(1996)	(1996)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1909 - 2004	
ANNUAL TOTAL	197,431		213,648			
ANNUAL MEAN	541		584		528	
HIGHEST ANNUAL MEAN					664	
LOWEST ANNUAL MEAN					378	
HIGHEST DAILY MEAN	3,960	Jan 31	2,600	Jan 29	10,000	Feb 8, 1996
LOWEST DAILY MEAN	170	Mar 4	197	Nov 9	75	Oct 19, 1994
ANNUAL SEVEN-DAY MINIMUM	197	Feb 27	212	Nov 3	104	Nov 18, 1929
ANNUAL RUNOFF (AC-FT)	391,600		423,800		382,300	
ANNUAL RUNOFF (CFSM)	5.83		6.29		5.69	
ANNUAL RUNOFF (INCHES)	79.14		85.64		77.27	
10 PERCENT EXCEEDS	886		962		895	
50 PERCENT EXCEEDS	458		462		440	
90 PERCENT EXCEEDS	248		277		222	

12093500 PUYALLUP RIVER NEAR ORTING, WA

LOCATION.--Lat 47°02'22", long 122°12'24", in SW¹/₄SW¹/₄, sec.17, T.18 N., R.5 E., Pierce County, Hydrologic Unit 17110014, on right bank 600 ft downstream from highway bridge, 4.0 mi south of Orting, 8.5 mi upstream from Carbon River, and at mile 26.4.

DRAINAGE AREA.--172 mi².

PERIOD OF RECORD.--September 1931 to current year.

REVISED RECORDS.--WSP 932: 1937-39. WSP 962: 1934. WSP 1246: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 352.5 ft above NGVD of 1929. Prior to Feb. 6, 1946, at site 600 ft upstream at datum 8.93 ft higher. Supplementary water-stage recorder 200 ft upstream at datum 7.1 ft higher than present gage datum, used at times during period in 1942-46. Feb. 6, 1946, to Mar. 12, 1965, at present site at datum 5.0 ft higher.

REMARKS.--Records good except for Sept. 1-30, 2003 (revised), Oct. 1 to Nov. 13, and estimated daily discharges, which are fair. Up to 400 ft³/s diverted for Electron powerplant of Puget Sound Energy, which are returned to river 4.8 mi upstream from gage. Minor regulation by Electron powerplant. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--73 years (water years 1932-2004), 715 ft³/s, 56.48 in/yr, 517,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft³/s, Feb. 8, 1996, from slope-area measurement, gage height, 11.37 ft; minimum discharge, 25 ft³/s, Nov. 28, 1952; minimum daily discharge, 59 ft³/s, Nov. 29, 1952.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 29	1545	*5,550	*8.36	No other peak greater than base discharge.			

Minimum discharge, 214 ft³/s, Nov. 8.

REVISIONS.--Revised figures of discharge for September 2003, superseding those published in the report for 2003 are given below.

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	195	123	e189	561	3,760	467	963	631	830	625	702	519
2	180	124	e183	922	2,190	453	805	630	732	498	688	566
3	410	126	e180	1,070	1,710	496	710	620	648	455	590	e735
4	468	127	e180	1,320	1,330	458	640	613	662	475	512	e782
5	324	131	e170	1,290	1,090	513	593	634	742	535	575	e713
6	359	147	157	893	920	692	581	592	893	608	568	e679
7	324	156	151	726	809	707	563	535	997	589	528	629
8	279	170	146	628	723	687	586	502	995	546	510	432
9	267	174	144	555	655	998	790	472	851	514	558	302
10	232	173	195	489	602	1,190	736	456	754	607	647	e310
11	195	166	376	447	556	1,110	781	451	664	751	527	e635
12	177	323	703	561	523	1,810	729	459	645	766	391	467
13	179	393	807	508	495	2,700	816	464	625	725	e380	e358
14	197	325	986	514	473	1,930	811	517	586	597	461	e378
15	207	239	1,020	448	449	1,420	715	572	509	629	604	315
16	229	245	938	407	453	1,140	653	587	527	623	630	281
17	237	368	767	380	489	958	693	547	615	537	596	e241
18	226	277	597	361	456	826	680	502	740	588	651	e225
19	234	1,030	487	349	442	726	611	478	676	655	643	e359
20	266	761	419	331	536	700	577	472	583	752	546	297
21	229	577	379	349	974	746	631	481	507	766	594	286
22	216	448	343	542	1,070	1,400	653	529	481	732	585	e352
23	221	363	312	773	836	1,240	646	648	406	753	e484	e382
24	147	297	296	696	688	952	740	1,000	379	712	e466	e477
25	166	e253	285	646	602	832	713	1,030	351	629	536	e500
26	170	e237	299	2,090	550	820	697	847	472	628	609	e806
27	156	e224	407	1,430	503	778	654	780	620	630	503	e783
28	157	e218	395	1,030	490	723	604	965	710	655	448	e693
29	147	e208	377	986	---	665	592	967	779	671	499	e588
30	e131	e199	372	1,720	---	707	630	1,010	813	696	549	e497
31	e122	---	506	7,890	---	998	---	902	---	707	543	---
TOTAL	7,047	8,602	12,766	30,912	24,374	29,842	20,593	19,893	19,792	19,654	17,123	14,587
MEAN	227	287	412	997	870	963	686	642	660	634	552	486
MAX	468	1,030	1,020	7,890	3,760	2,700	963	1,030	997	766	702	806
MIN	122	123	144	331	442	453	563	451	351	455	380	225
AC-FT	13,980	17,060	25,320	61,310	48,350	59,190	40,850	39,460	39,260	38,980	33,960	28,930
CFSM	1.32	1.67	2.39	5.80	5.06	5.60	3.99	3.73	3.84	3.69	3.21	2.83
IN.	1.52	1.86	2.76	6.69	5.27	6.45	4.45	4.30	4.28	4.25	3.70	3.15

PUYALLUP RIVER BASIN

12093500 PUYALLUP RIVER NEAR ORTING, WA—Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)												
MEAN	474	818	952	891	770	620	652	785	877	728	563	445
MAX	1,291	2,149	3,015	2,314	2,291	1,619	1,038	1,282	1,470	1,239	881	748
(WY)	(1960)	(1996)	(1934)	(1934)	(1996)	(1972)	(1991)	(1936)	(1974)	(1933)	(1983)	(1968)
MIN	210	92.8	205	205	280	266	303	494	311	483	373	283
(WY)	(1953)	(1953)	(1953)	(1937)	(1977)	(1941)	(1975)	(1941)	(1934)	(1977)	(1957)	(1936)
SUMMARY STATISTICS				FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1932 - 2003		
ANNUAL TOTAL				239,660			225,185					
ANNUAL MEAN				657			617			714		
HIGHEST ANNUAL MEAN										1,174		
LOWEST ANNUAL MEAN										465		
HIGHEST DAILY MEAN				4,320			Jan 8			7,890		
LOWEST DAILY MEAN				122			Oct 31			122		
ANNUAL SEVEN-DAY MINIMUM				126			Oct 30			126		
ANNUAL RUNOFF (AC-FT)				475,400			446,700			517,500		
ANNUAL RUNOFF (CFSM)				3.82			3.59			4.15		
ANNUAL RUNOFF (INCHES)				51.83			48.70			56.43		
10 PERCENT EXCEEDS				1,080			966			1,180		
50 PERCENT EXCEEDS				588			568			588		
90 PERCENT EXCEEDS				204			204			309		

e Estimated

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e431	e394	1,170	380	1,490	398	525	495	1,230	826	720	809
2	e466	e353	1,040	364	1,190	373	472	605	1,010	724	684	715
3	e438	e318	1,380	352	1,010	394	447	660	928	766	619	575
4	e466	e289	1,040	328	944	581	449	645	971	740	578	558
5	e492	246	1,500	e316	820	569	442	653	1,080	680	606	524
6	e398	239	1,690	e422	778	530	419	502	1,320	734	607	501
7	e502	234	1,230	e766	775	512	422	471	1,060	764	773	509
8	e367	231	951	994	681	570	424	545	958	569	537	525
9	393	225	779	1,140	612	708	420	533	989	550	531	524
10	303	249	708	1,240	560	710	428	482	1,010	490	602	468
11	246	834	658	1,010	530	618	466	550	945	480	730	1,600
12	454	506	668	869	504	579	544	470	795	532	813	1,020
13	638	399	1,150	833	485	531	552	424	1,060	703	825	1,180
14	343	349	1,260	937	525	497	520	413	1,050	858	878	1,300
15	286	324	951	1,410	500	473	461	429	851	879	764	1,500
16	592	353	818	1,380	531	440	423	499	777	840	867	1,300
17	879	506	780	1,010	601	430	403	471	804	930	787	1,180
18	561	1,060	671	915	623	461	388	481	843	917	686	1,060
19	445	1,720	657	866	621	474	352	798	789	1,090	662	890
20	851	1,090	683	739	553	434	369	683	718	858	684	768
21	2,470	758	660	654	504	428	369	682	787	681	634	643
22	1,200	591	592	591	465	481	377	733	897	698	1,040	615
23	1,070	524	556	942	438	548	359	718	1,060	791	835	650
24	e653	572	597	1,440	419	589	348	630	1,170	853	1,700	595
25	e518	557	601	1,090	394	584	335	575	1,130	846	2,920	567
26	e513	555	533	927	389	572	384	1,730	1,030	684	3,020	545
27	e454	477	491	811	409	603	511	2,270	767	721	2,410	541
28	e1,460	750	470	1,040	471	586	489	2,560	714	749	1,410	559
29	1,080	2,960	435	4,040	434	555	427	2,090	773	728	1,170	518
30	595	1,600	401	3,640	---	651	428	1,740	826	738	1,020	462
31	e446	---	395	2,060	---	606	---	1,630	---	704	903	---
TOTAL	20,010	19,263	25,515	33,506	18,256	16,485	12,953	26,167	28,342	23,123	31,015	23,201
MEAN	645	642	823	1,081	630	532	432	844	945	746	1,000	773
MAX	2,470	2,960	1,690	4,040	1,490	710	552	2,560	1,320	1,090	3,020	1,600
MIN	246	225	395	316	389	373	335	413	714	480	531	462
AC-FT	39,690	38,210	50,610	66,460	36,210	32,700	25,690	51,900	56,220	45,860	61,520	46,020
CFSM	3.75	3.73	4.79	6.28	3.66	3.09	2.51	4.91	5.49	4.34	5.82	4.50
IN.	4.33	4.17	5.52	7.25	3.95	3.57	2.80	5.66	6.13	5.00	6.71	5.02

12093500 PUYALLUP RIVER NEAR ORTING, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)												
MEAN	476	816	951	893	768	619	649	786	878	728	569	450
MAX	1,291	2,149	3,015	2,314	2,291	1,619	1,038	1,282	1,470	1,239	1,000	773
(WY)	(1960)	(1996)	(1934)	(1934)	(1996)	(1972)	(1991)	(1936)	(1974)	(1933)	(2004)	(2004)
MIN	210	92.8	205	205	280	266	303	494	311	483	373	283
(WY)	(1953)	(1953)	(1953)	(1937)	(1977)	(1941)	(1975)	(1941)	(1934)	(1977)	(1957)	(1936)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1932 - 2004	
ANNUAL TOTAL	261,558		277,836			
ANNUAL MEAN	717		759		715	
HIGHEST ANNUAL MEAN					1,174	
LOWEST ANNUAL MEAN					465	
HIGHEST DAILY MEAN	7,890	Jan 31	4,040	Jan 29	13,400	Feb 8, 1996
LOWEST DAILY MEAN	225	Sep 18	225	Nov 9	59	Nov 29, 1952
ANNUAL SEVEN-DAY MINIMUM	245	Nov 4	245	Nov 4	66	Nov 25, 1952
ANNUAL RUNOFF (AC-FT)	518,800		551,100		517,900	
ANNUAL RUNOFF (CFSM)	4.17		4.41		4.16	
ANNUAL RUNOFF (INCHES)	56.57		60.09		56.48	
10 PERCENT EXCEEDS	1,070		1,190		1,180	
50 PERCENT EXCEEDS	613		622		588	
90 PERCENT EXCEEDS	380		394		310	

e Estimated

12094000 CARBON RIVER NEAR FAIRFAX, WA

LOCATION.--Lat 47°01'41", long 122°01'53", in SW¹/₄SW¹/₄, sec.22, T.18 N., R.6 E., Pierce County, Hydrologic Unit 17110014, on left bank, 1.1 mi upstream from State Highway 165 (Fairfax) bridge, 1.2 mi northwest of Fairfax, 2.3 mi downstream from Evans Creek, 4 mi south of Carbonado, and at mile 16.1.

DRAINAGE AREA.--78.9 mi².

PERIOD OF RECORD.--December 1910 to June 1912, April 1929 to May 1978, October 1991 to current year. Published as "at Fairfax" (station 12093900) 1910-12, 1966-78.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,201.7 ft above NGVD of 1929 (USGS National Mapping Division). Prior to July 12, 1912, nonrecording gage at railroad crossing 1.7 mi upstream at different datum. March 1929 to September 1965, recording gage 350 ft upstream at datum 1,212.6 ft above NGVD of 1929. October 1965 to May 1978, recording gage 1.7 mi upstream at datum then in use.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--61 years (water years 1930-77, 1992-2004), 428 ft³/s, 73.67 in/yr, 309,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s, Feb. 8, 1996, gage height, 15.85 ft; minimum discharge, 32 ft³/s, Nov. 24, 1993.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 24, 1990, reached a stage of 8.68 ft, from floodmark at former site and datum 350 ft upstream, discharge, 13,000 ft³/s, from rating extended above 6,200 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 21	0900	2,230	9.86	Jan 29	2030	*3,390	*11.23
Oct 28	2030	2,030	10.00	May 26	1915	2,750	10.69
Nov 29	0630	3,330	11.18	Aug 25	1100	2,760	10.73

Minimum discharge, 122 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	251	776	e231	880	e216	e344	e427	867	462	303	383
2	155	229	671	e222	e635	e208	e301	e522	713	445	302	397
3	142	196	756	e213	e537	e213	e292	e546	684	459	280	325
4	143	176	596	e198	e499	e253	e299	e549	717	425	270	288
5	151	162	723	e205	e418	e250	e297	e497	827	390	259	284
6	150	151	750	285	e416	e224	e285	e385	1,030	419	238	253
7	235	143	592	522	e399	e250	e289	e373	822	448	322	246
8	190	140	497	502	e355	e317	e288	e439	694	356	236	250
9	236	136	451	526	e316	e464	e299	e426	713	335	229	259
10	181	172	427	603	e295	e454	e318	e385	714	319	257	230
11	146	489	403	537	e283	e397	e363	e415	668	342	302	758
12	357	334	422	488	e276	e373	e425	e335	553	332	311	594
13	564	248	644	484	e263	e346	e442	e315	837	367	327	844
14	259	206	612	594	e289	e328	e393	e328	857	394	331	1,010
15	189	191	490	1,060	e272	e307	e339	e359	663	400	322	945
16	482	197	460	1,000	e327	e287	e301	e406	597	388	333	881
17	589	270	441	675	e336	e291	e280	e377	607	389	310	802
18	407	1,070	409	577	e353	e306	e274	489	642	389	282	658
19	320	1,150	405	536	e342	e302	e255	652	614	437	285	497
20	373	668	429	477	e325	e282	e277	561	568	375	283	418
21	1,660	437	e409	432	e293	e285	e272	572	579	319	280	356
22	800	347	e378	397	e261	e344	e259	634	636	326	446	325
23	618	313	e366	696	e251	e399	e263	610	717	351	309	307
24	417	311	e374	995	e241	e425	e262	522	732	361	995	298
25	312	300	e353	673	e237	e401	e251	490	689	381	2,160	301
26	264	272	e323	e458	e234	e374	e302	1,530	626	325	1,990	287
27	246	239	e299	e408	e241	e399	e418	1,800	522	318	1,170	266
28	670	503	e269	e648	e245	e375	e383	1,600	472	329	675	256
29	956	2,410	e258	2,300	e225	e381	e348	1,370	479	316	552	244
30	450	1,130	e245	2,260	---	e452	e347	1,230	484	320	452	215
31	323	---	e238	1,230	---	e395	---	1,210	---	303	391	---
TOTAL	12,141	12,841	14,466	20,432	10,044	10,298	9,466	20,354	20,323	11,520	15,202	13,177
MEAN	392	428	467	659	346	332	316	657	677	372	490	439
MAX	1,660	2,410	776	2,300	880	464	442	1,800	1,030	462	2,160	1,010
MIN	142	136	238	198	225	208	251	315	472	303	229	215
AC-FT	24,080	25,470	28,690	40,530	19,920	20,430	18,780	40,370	40,310	22,850	30,150	26,140
CFSM	4.96	5.43	5.91	8.35	4.39	4.21	4.00	8.32	8.59	4.71	6.22	5.57
IN.	5.72	6.05	6.82	9.63	4.74	4.86	4.46	9.60	9.58	5.43	7.17	6.21

12094000 CARBON RIVER NEAR FAIRFAX, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2004, BY WATER YEAR (WY)												
MEAN	311	490	538	473	382	315	384	557	646	481	318	245
MAX	830	1,732	1,952	948	1,301	879	577	854	1,083	828	500	538
(WY)	(1960)	(1996)	(1934)	(1934)	(1996)	(1972)	(1938)	(1936)	(1964)	(1972)	(1964)	(1959)
MIN	105	59.0	110	110	131	143	134	346	306	264	201	158
(WY)	(2003)	(1930)	(1953)	(1937)	(1966)	(1941)	(1975)	(1941)	(1992)	(1940)	(1994)	(1930)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1930 - 2004	
ANNUAL TOTAL	151,903		170,264			
ANNUAL MEAN	416		465		428	
HIGHEST ANNUAL MEAN					664	
LOWEST ANNUAL MEAN					276	
HIGHEST DAILY MEAN	5,350	Jan 31	2,410	Nov 29	9,020	Feb 8, 1996
LOWEST DAILY MEAN	124	Sep 18	136	Nov 9	40	Nov 28, 1952
ANNUAL SEVEN-DAY MINIMUM	139	Sep 17	154	Nov 4	42	Nov 25, 1952
ANNUAL RUNOFF (AC-FT)	301,300		337,700		309,900	
ANNUAL RUNOFF (CFSM)	5.27		5.90		5.42	
ANNUAL RUNOFF (INCHES)	71.62		80.28		73.67	
10 PERCENT EXCEEDS	705		763		768	
50 PERCENT EXCEEDS	328		374		337	
90 PERCENT EXCEEDS	184		235		158	

e Estimated

12095000 SOUTH PRAIRIE CREEK AT SOUTH PRAIRIE, WA

LOCATION.--Lat 47°08'23", long 122°05'29", in the NE $\frac{1}{4}$ NW $\frac{1}{4}$, sec.18, T.19 N., R.6 E., Pierce County, Hydrologic Unit 17110014, on left bank 300 ft upstream from bridge on State Highway 162, 0.8 mi downstream from Wilkeson Creek, 0.3 mi east of South Prairie, and at mile 5.9.

DRAINAGE AREA.--79.5 mi².

PERIOD OF RECORD.--June 1949 to September 1971, October 1987 to current year.

REVISED RECORDS.--WSP 1932: Drainage area. WDR WA-96-1: 1980(M), 1991(P).

GAGE.--Water-stage recorder. Datum of gage is 400.0 ft above NGVD of 1929. June 1949 to June 1969, water-stage recorder at site 400 ft downstream at different datum. June 1969 to September 1971, at present site at different datum.

REMARKS.--Records good, except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--39 years (water years 1950-71, 1988-2004), 233 ft³/s, 39.79 in/yr, 168,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,170 ft³/s, Feb. 8, 1996, gage height, 35.14 ft, on basis of contracted-opening measurement of peak flow; minimum discharge, 20 ft³/s, Sept. 23, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 29	0730	1,940	30.35	Jan 29	1930	*2,070	*30.47

Minimum daily discharge, 21 ft³/s, Oct. 2-5, but may have been less during period of missing record.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e22	68	412	e134	530	180	198	143	393	e62	e43	92
2	e21	67	e392	e126	422	169	183	158	299	e61	e41	103
3	e21	60	e662	e122	350	183	175	145	253	e63	e41	93
4	e21	54	347	e117	344	e260	172	147	232	e61	e42	78
5	e21	49	458	e116	299	e261	165	184	252	e59	e44	71
6	e23	46	490	132	281	258	155	134	438	e60	69	64
7	27	43	388	491	278	239	149	126	345	e64	85	60
8	29	46	319	525	251	e272	146	169	290	e59	e55	57
9	50	46	273	552	233	305	140	183	281	e57	e42	59
10	50	50	263	545	219	271	139	158	258	e60	e38	57
11	39	199	263	442	209	232	152	234	241	e68	e35	292
12	69	125	273	363	201	214	170	202	216	e57	e34	196
13	121	90	505	e333	192	195	163	181	265	e56	e33	258
14	55	76	571	e320	e197	182	151	164	253	e55	e33	281
15	44	74	395	660	e206	173	142	156	223	e53	e32	251
16	110	87	325	575	e223	162	143	169	197	e53	e32	253
17	85	146	e340	405	e232	157	149	154	178	e52	e32	289
18	51	466	e303	371	e245	168	150	149	156	e52	e31	274
19	42	491	239	363	214	176	136	171	136	e52	e31	224
20	52	318	244	311	201	163	142	153	120	e51	e31	214
21	412	217	236	e263	191	163	134	150	e109	e49	e38	173
22	177	163	215	e221	183	175	142	170	e96	e48	93	149
23	219	144	202	e467	173	185	135	196	e91	e47	94	137
24	134	200	198	824	167	199	136	169	e93	e46	261	123
25	99	198	197	519	159	196	126	152	e89	e46	668	106
26	80	201	183	408	156	200	137	629	e83	e45	680	95
27	66	161	173	346	183	226	170	709	e74	e45	418	86
28	70	331	169	390	202	220	156	1,000	e67	e44	230	80
29	166	1,390	160	1,440	191	213	132	870	e65	e44	163	75
30	106	639	149	1,390	---	235	125	650	e63	e43	126	73
31	79	---	e139	768	---	225	---	574	---	e43	99	---
TOTAL	2,561	6,245	9,483	14,039	6,932	6,457	4,513	8,549	5,856	1,655	3,694	4,363
MEAN	82.6	208	306	453	239	208	150	276	195	53.4	119	145
MAX	412	1,390	662	1,440	530	305	198	1,000	438	68	680	292
MIN	21	43	139	116	156	157	125	126	63	43	31	57
AC-FT	5,080	12,390	18,810	27,850	13,750	12,810	8,950	16,960	11,620	3,280	7,330	8,650
CFSM	1.04	2.62	3.85	5.70	3.01	2.62	1.89	3.47	2.46	0.67	1.50	1.83
IN.	1.20	2.92	4.44	6.57	3.24	3.02	2.11	4.00	2.74	0.77	1.73	2.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2004, BY WATER YEAR (WY)

MEAN	137	304	355	382	345	274	288	258	216	108	64.7	69.8
MAX	349	723	728	732	966	527	517	463	439	270	193	233
(WY)	(1960)	(1991)	(1956)	(1997)	(1996)	(1950)	(1991)	(1960)	(1964)	(1993)	(1968)	(1968)
MIN	26.4	35.2	61.5	126	112	138	150	131	59.1	43.6	30.3	30.7
(WY)	(1988)	(1953)	(1953)	(1957)	(1993)	(1992)	(2004)	(1992)	(1992)	(2003)	(2003)	(2003)

12095000 SOUTH PRAIRIE CREEK AT SOUTH PRAIRIE, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1949 - 2004	
ANNUAL TOTAL	69,064		74,347			
ANNUAL MEAN	189		203		233	
HIGHEST ANNUAL MEAN					338	
LOWEST ANNUAL MEAN					141	
HIGHEST DAILY MEAN	2,120	Jan 31	1,440	Jan 29	6,700	Feb 8, 1996
LOWEST DAILY MEAN	21	Oct 2	21	Oct 2	21	Oct 2, 2003
ANNUAL SEVEN-DAY MINIMUM	22	Sep 29	22	Oct 1	22	Sep 29, 2003
ANNUAL RUNOFF (AC-FT)	137,000		147,500		168,700	
ANNUAL RUNOFF (CFSM)	2.38		2.56		2.93	
ANNUAL RUNOFF (INCHES)	32.32		34.79		39.79	
10 PERCENT EXCEEDS	384		409		447	
50 PERCENT EXCEEDS	152		163		175	
90 PERCENT EXCEEDS	30		46		46	

e Estimated

12097500 GREENWATER RIVER AT GREENWATER, WA

LOCATION.--Lat 47°09'13", long 121°38'04", in NE ¼ NE ¼ sec.10, T.19 N., R.9 E., Pierce County, Hydrologic Unit 17110014, on left bank at bridge crossing, 0.7 mi east of Greenwater, and at mile 1.1.

DRAINAGE AREA.--73.5 mi².

PERIOD OF RECORD.--October 1911 to March 1912, May 1929 to September 1977, July 1980 to September 1993 (seasonal records), October 1993 to current year. Published as "near Enumclaw" 1911-12.

REVISED RECORDS.--WSP 1716: 1947(M). WA-94-1: 1990(M), 1993(M). WSP 1932: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,720 ft above NGVD of 1929, from river-profile survey. Prior to Aug. 10, 1912, nonrecording gages at sites approximately 500 ft upstream at different datums. May 1, 1929, to Aug. 14, 1934, water-stage recorder at site 1,400 ft upstream at different datum. Aug. 17, 1934, to Sept. 30, 1977, water-stage recorder at site 500 ft upstream at different datum. U.S. Geological Survey satellite telemeter at station.

REMARKS.--No estimated daily discharges. Records good. No regulation upstream from station. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--59 years (water years 1930-77, 1994-2004), 210 ft³/s, 38.89 in/yr, 152,400 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,900 ft³/s Feb. 8, 1996, gage height, 8.94 ft, from rating curve extended above 2,400 ft³/s on basis of slope-area measurement of peak flow; minimum discharge, 22 ft³/s Oct. 27-31, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 2, 1977, reached a stage of 9.8 ft former site and datum, from floodmarks, discharge, about 10,500 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 638 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 29	2100	*1,160	*5.56	No other peak greater than base discharge.			

Minimum discharge, 26 ft³/s, Oct. 1, 3, 4, 5, 6, gage height, 2.73 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	40	211	72	376	101	219	279	386	112	49	57
2	27	39	172	69	294	98	204	311	346	108	48	61
3	27	36	171	68	244	100	203	323	313	107	47	59
4	27	34	148	65	218	119	218	333	294	102	47	54
5	26	32	148	64	192	125	221	337	288	97	47	52
6	27	32	157	64	178	126	215	317	299	95	50	49
7	29	31	143	64	168	131	223	304	295	95	55	48
8	30	31	128	65	158	189	228	299	278	91	49	47
9	32	31	117	69	147	283	233	296	266	87	47	46
10	31	37	109	79	141	290	241	281	257	85	45	45
11	31	121	100	79	136	247	265	271	247	83	45	72
12	38	73	100	81	130	234	301	253	235	78	44	61
13	40	57	133	89	126	210	323	241	243	76	43	66
14	35	50	133	112	124	194	319	231	234	73	43	76
15	32	47	114	210	120	189	297	229	224	71	43	78
16	63	48	103	319	117	183	273	233	212	69	42	77
17	52	61	101	232	114	189	252	228	203	68	42	78
18	40	123	98	196	113	191	240	225	194	67	41	87
19	37	144	98	178	114	187	225	230	184	67	40	87
20	38	111	103	161	112	174	221	232	177	65	40	86
21	50	88	112	147	109	169	209	241	170	63	40	79
22	42	73	108	137	105	178	198	251	164	61	54	74
23	39	67	104	181	103	209	200	250	159	59	53	71
24	37	64	102	322	102	228	195	245	154	57	84	68
25	35	61	98	270	100	220	194	239	149	56	149	64
26	33	60	91	223	99	215	209	350	140	55	110	61
27	32	56	86	195	98	217	248	425	133	54	129	58
28	38	104	84	237	103	210	277	429	128	53	91	56
29	70	474	80	788	103	215	263	420	122	51	73	55
30	54	304	73	875	---	244	259	422	116	50	64	54
31	44	---	73	524	---	239	---	418	---	50	58	---
TOTAL	1,163	2,529	3,598	6,235	4,244	5,904	7,173	9,143	6,610	2,305	1,812	1,926
MEAN	37.5	84.3	116	201	146	190	239	295	220	74.4	58.5	64.2
MAX	70	474	211	875	376	290	323	429	386	112	149	87
MIN	26	31	73	64	98	98	194	225	116	50	40	45
AC-FT	2,310	5,020	7,140	12,370	8,420	11,710	14,230	18,140	13,110	4,570	3,590	3,820
CFSM	0.51	1.15	1.58	2.74	1.99	2.59	3.25	4.01	3.00	1.01	0.80	0.87
IN.	0.59	1.28	1.82	3.16	2.15	2.99	3.63	4.63	3.35	1.17	0.92	0.97

12097500 GREENWATER RIVER AT GREENWATER, WA—Continued

DISCHARGE, CUBIC FEET PER SECOND—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004, BY WATER YEAR (WY)												
MEAN	72.7	179	253	247	220	196	283	427	360	144	65.0	51.8
MAX	347	784	1,116	597	809	640	457	833	900	371	133	128
(WY)	(1960)	(1996)	(1934)	(1934)	(1996)	(1972)	(1956)	(1949)	(1950)	(1950)	(1976)	(1959)
MIN	24.1	29.7	35.0	45.3	70.3	77.5	124	158	83.0	51.6	36.5	30.9
(WY)	(1988)	(1937)	(1953)	(1937)	(1936)	(1941)	(1973)	(1941)	(1992)	(1934)	(1934)	(1987)

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004	
ANNUAL TOTAL	57,056		52,642			
ANNUAL MEAN	156		144		210	
HIGHEST ANNUAL MEAN					328	
LOWEST ANNUAL MEAN					92.4	
HIGHEST DAILY MEAN	2,040	Jan 31	875	Jan 30	4,800	Nov 29, 1995
LOWEST DAILY MEAN	26	Oct 5	26	Oct 5	22	Oct 28, 1987
ANNUAL SEVEN-DAY MINIMUM	27	Sep 29	27	Oct 1	23	Oct 24, 1987
ANNUAL RUNOFF (AC-FT)	113,200		104,400		152,400	
ANNUAL RUNOFF (CFSM)	2.13		1.96		2.86	
ANNUAL RUNOFF (INCHES)	28.88		26.64		38.89	
10 PERCENT EXCEEDS	332		282		456	
50 PERCENT EXCEEDS	108		108		146	
90 PERCENT EXCEEDS	32		40		44	

12098000 MUD MOUNTAIN LAKE NEAR BUCKLEY, WA

LOCATION.--Lat 47°08'27", long 121°55'48", in NE $\frac{1}{4}$ NE $\frac{1}{4}$, sec.17, T.19 N., R.7 E., Pierce County, Hydrologic Unit 17110014, on left bank of reservoir just upstream from Mud Mountain Dam on White River, 5 mi southeast of Buckley, 5.6 mi downstream from Clearwater River, and at mile 29.7.

DRAINAGE AREA.--400 mi².

PERIOD OF RECORD.--October 1943 to current year. Daily elevation at 0800 hours only October 1988 to September 1992. Month-end contents only October 1943 to September 1944, published in WSP 1316. Prior to October 1970, published as Mud Mountain Reservoir near Buckley.

GAGE.--Nonrecording gage. Datum of gage is NGVD of 1929 (levels by Corps of Engineers).

REMARKS.--Lake, for flood control, is formed by earth fill dam. Embankment completed and storage began on small scale in 1942. Capacity, 106,000 acre-ft between elevations 895 ft, invert of outlet tunnel, and 1,215 ft, spillway crest. Storage is dissipated as soon after a flood as is possible, without creating damaging flows downstream, in order to have the maximum capacity available for any following flood which might develop.

COOPERATION.--Records of lake elevations and capacity table furnished by Corps of Engineers (revised by USGS below 917 ft). Table uncertain below about 970 ft, due to siltation. Mud Mountain Lake is considered to have no appreciable storage below 917 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed since dam was completed, 89,245 acre-ft, Feb. 9, 1996, elevation, 1,196.1 ft; no contents at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 13,354 acre-ft, Jan. 31, elevation, 1,056.1 ft; no contents many days during the year.

RESERVOIR STORAGE, ACRE FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	10,838	0.0	0.0	0.0	96	0.0	0.0	126
2	0.0	0.0	0.0	0.0	5,240	0.0	0.0	0.0	0.0	0.0	0.0	121
3	0.0	0.0	0.0	---	2,412	0.0	0.0	0.0	0.0	0.0	0.0	116
4	0.0	0.0	0.0	---	1,365	0.0	0.0	0.0	89	0.0	0.0	112
5	0.0	0.0	0.0	0.0	235	0.0	0.0	0.0	97	0.0	0.0	112
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	105	0.0	0.0	103
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	96	0.0	130	111
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	121	110
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90	0.0	117	111
10	0.0	0.0	0.0	0.0	0.0	179	0.0	0.0	91	0.0	116	108
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	114	258
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151	143
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	151	129
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	157	154
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	139	138
16	0.0	0.0	0.0	128	0.0	0.0	0.0	0.0	0.0	0.0	161	141
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	159	138
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	143	135
19	0.0	99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	134	130
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	147	131
21	303	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	119	124
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	145	120
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	127	120
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	121	117
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	246	111
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	218	110
27	0.0	---	0.0	0.0	0.0	0.0	0.0	191	0.0	0.0	179	112
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	178	0.0	0.0	148	112
29	0.0	505	0.0	204	0.0	0.0	0.0	140	0.0	148	133	111
30	0.0	124	0.0	7,683	---	0.0	0.0	109	0.0	0.0	131	108
31	0.0	---	0.0	13,354	---	0.0	---	108	---	0.0	128	---
MAX	303	---	0.00	---	10,838	179	0.00	191	105	148	246	258
MIN	0.00	---	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	103
††	903.9	916.8	903.2	1,049.0	904.0	906.5	907.0	918.9	907.1	904.2	922.9	920.1
†	0.00	0.00	0.00	11,622	0.0	0.0	0.0	100	0.0	0.0	126	108
‡	0	0	0	+11,622	-11,622	0	0	+100	-100	0	+126	-18
CAL YR	2003	AC-FT‡	0									
WTR YR	2004	AC-FT‡	+108									

†† Monthend elevation, in feet, at 2400 hours.

† Monthend contents, in acre-feet.

‡ Change in contents, in acre-feet.

12098500 WHITE RIVER NEAR BUCKLEY, WA

LOCATION.--Lat 47°09'05", long 121°56'55", in SW¹/₄NW¹/₄, sec.8, T.19 N., R.7 E., King County, Hydrologic Unit 17110014, on right bank 0.4 mi upstream from Red Creek, 1.7 mi downstream from Mud Mountain Dam, 3.8 mi east of Buckley, 7.4 mi downstream from Clearwater River and at mile 27.9.

DRAINAGE AREA.--401 mi².

PERIOD OF RECORD.--October 1928 to November 1933, October 1938 to September 2003 (discharge only). October 2003 to September 2004 (stage only).

REVISED RECORDS.--WSP 1247: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929 (Corps of Engineers benchmark). Oct. 26 to Dec. 9, 1928, nonrecording gage, and Dec. 9, 1928, to Nov. 30, 1933, water-stage recorder at site 3.0 mi upstream at different datum. Nov. 26, 1938, to Feb. 14, 1939, nonrecording gage at present site and datum.

REMARKS.--Flow regulated by Mud Mountain Lake (station 12098000) for flood control. Storage is not retained and observed annual runoff closely represents natural runoff of the basin. No diversion upstream from station. U.S. Geological Survey satellite telemeter at station. Chemical analyses July 1981; water temperatures March 1971 to September 1972; sediment records November 1971 to November 1972.

COOPERATION.--Water-stage recorder inspected by Corps of Engineers.

AVERAGE DISCHARGE.--70 years (water years 1929-33, 1939-2003), 1,435 ft³/s, 48.60 in/yr, 1,040,000 acre-ft/yr, adjusted for storage since December 1943.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft³/s, Feb. 26, 1932, gage height, 17.5 ft, site and datum then in use, from rating curve extended above 3,500 ft³/s; probably no flow for part of each day Oct. 1, 2, 7, 8, Nov. 14, Dec. 1, 5, 15, 1958; Jan. 3, Mar. 24, June 8, Aug. 19, 1959; minimum daily discharge, 59 ft³/s, June 25, 1957, Mar. 26, 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in December 1933 reached a stage of 23.4 ft, from floodmarks, at former site, discharge, 28,000 ft³/s, from rating curve extended above 3,500 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum elevation 805.65 ft, Jan. 29; minimum elevation unknown, occurred during period of unuseable record; minimum recorded elevation, 800.58 ft, Nov. 9, 10.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	801.11	802.77	801.56	804.94	801.71	802.35	802.54	803.21	802.51	801.85	801.84
2	---	800.99	802.47	801.53	804.14	801.66	802.25	802.74	803.01	802.47	801.86	801.81
3	---	800.89	802.58	801.49	803.14	801.68	802.22	802.81	802.97	802.42	801.83	801.73
4	---	800.79	802.37	801.45	802.87	801.94	802.27	802.86	803.08	802.38	801.77	801.63
5	---	800.71	802.43	801.28	802.44	802.05	802.28	802.86	803.30	802.32	801.76	801.61
6	---	800.65	802.68	801.21	802.31	802.09	802.26	802.67	803.51	802.32	801.68	801.53
7	---	800.62	802.49	801.35	802.28	802.03	802.28	802.61	803.23	802.38	801.90	801.48
8	---	800.60	802.28	801.60	802.25	802.29	802.29	802.66	803.03	802.24	801.69	801.49
9	---	800.58	802.10	801.81	802.16	802.66	802.28	802.65	803.05	802.17	801.65	801.50
10	---	800.63	802.00	802.00	802.09	802.75	802.30	802.59	803.08	802.09	801.68	801.47
11	---	801.78	801.91	802.01	802.05	802.51	802.40	802.61	802.96	802.05	801.77	802.24
12	---	801.52	801.92	801.96	802.00	802.42	802.55	802.46	802.77	802.05	801.87	802.30
13	---	801.30	802.33	801.99	801.97	802.31	802.68	802.38	802.89	802.13	801.89	802.09
14	---	801.10	802.54	802.14	801.96	802.24	802.64	802.36	802.92	802.21	801.92	802.33
15	---	801.00	802.21	802.94	801.93	802.20	802.53	802.40	802.74	802.27	801.85	802.23
16	---	801.02	802.04	803.35	801.91	802.15	802.44	802.43	802.69	802.25	801.90	802.22
17	---	801.68	802.00	802.73	801.92	802.17	802.35	802.39	802.71	802.21	801.89	802.13
18	---	802.68	801.90	802.50	801.93	802.23	802.28	802.43	802.78	802.21	801.79	802.15
19	---	802.95	801.86	802.39	801.99	802.24	802.22	802.52	802.76	802.26	801.75	802.07
20	801.89	802.38	801.88	802.25	801.97	802.13	802.21	802.63	802.68	802.15	801.79	802.00
21	804.00	802.00	801.93	802.12	801.91	802.10	802.16	802.75	802.69	801.97	801.72	801.87
22	---	801.79	801.89	802.00	801.85	802.16	802.12	802.81	802.78	801.97	802.13	801.78
23	---	801.67	801.84	802.33	801.80	802.33	802.11	802.70	802.92	802.03	801.84	801.75
24	---	801.65	801.83	803.15	801.76	802.43	802.11	802.57	803.06	802.07	802.04	801.71
25	---	801.56	801.83	802.73	801.72	802.38	802.08	802.51	803.03	802.06	803.00	801.64
26	801.30	801.52	801.77	802.45	801.69	802.37	802.16	803.57	802.91	801.92	802.98	801.59
27	801.30	801.42	801.71	802.32	801.72	802.42	802.41	804.23	802.73	801.86	802.62	801.55
28	801.43	801.73	801.69	802.40	801.76	802.37	802.54	804.14	802.61	801.88	802.20	801.53
29	802.13	804.64	801.65	804.19	801.76	802.34	802.43	803.88	802.56	801.88	802.00	801.51
30	801.60	803.43	801.58	803.70	---	802.49	802.41	803.60	802.57	801.88	801.92	801.47
31	801.28	---	801.59	804.08	---	802.47	---	803.54	---	801.87	801.86	---
MEAN	---	801.55	802.07	802.29	802.21	802.24	802.32	802.84	802.91	802.14	801.95	801.81
MAX	---	804.64	802.77	804.19	804.94	802.75	802.68	804.23	803.51	802.51	803.00	802.33
MIN	---	800.58	801.58	801.21	801.69	801.66	802.08	802.36	802.56	801.86	801.65	801.47

12099000 WHITE RIVER CANAL AT BUCKLEY, WA

LOCATION.--Lat 47°10'19", long 122°01'13", in SE $\frac{1}{4}$ SE $\frac{1}{4}$, sec.34, T.20 N., R.6 E., Pierce County, Hydrologic Unit 17110014, on right bank 0.8 mi downstream from diversion dam, and 0.8 mi northwest of Buckley.

PERIOD OF RECORD.--February 1913 to September 1938 (monthly runoff only, published in WSP 1316), October 1981 to current year. Records for September 1958 to September 1981 available in files of the U.S. Geological Survey. Records prior to October 1961, published as White River flume near Buckley, at site 0.5 mi downstream from White River diversion dam. September 1959 to September 1992 station at site 4.0 mi downstream from diversion dam.

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Flow completely regulated at White River diversion dam about 0.8 mi upstream from gage. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,340 ft³/s, Dec. 17, 2001; no flow on many days during most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,220 ft³/s, Nov. 18, gage height, 6.88 ft; minimum discharge, 40 ft³/s, Jan. 29, gage height, 2.93 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	541	1,720	491	445	101	604	123	122	274	192	546
2	313	566	1,460	507	258	129	519	214	137	285	163	569
3	318	493	1,630	543	203	168	413	118	557	261	238	480
4	318	475	1,280	510	226	143	418	148	252	265	191	416
5	224	431	1,590	e722	191	132	324	111	212	203	178	481
6	246	432	1,920	e481	132	141	291	170	190	199	188	386
7	277	454	1,560	e387	149	120	214	202	129	163	173	406
8	239	510	1,260	e350	138	107	123	197	173	206	174	457
9	259	534	986	e271	137	182	179	190	186	146	189	555
10	339	442	858	508	128	378	229	200	225	120	168	426
11	215	1,100	769	664	127	163	131	179	158	137	201	844
12	289	628	823	687	132	144	160	151	179	150	229	692
13	246	497	1,420	728	122	174	183	154	190	148	204	638
14	227	502	1,740	1,060	173	139	115	153	266	177	220	675
15	200	472	1,150	1,530	138	139	122	166	234	167	282	466
16	463	421	912	959	106	169	136	132	306	145	246	805
17	658	661	894	878	109	164	138	243	257	148	266	854
18	638	1,540	749	965	120	195	137	158	293	160	284	861
19	319	1,390	776	967	123	188	138	177	234	156	247	810
20	722	1,180	755	753	122	182	124	140	115	152	355	769
21	1,650	870	794	650	148	186	131	156	128	144	420	660
22	845	815	751	489	122	167	135	169	145	172	385	750
23	862	722	701	721	126	172	138	121	152	168	199	922
24	636	757	749	1,010	142	166	155	143	145	160	231	860
25	548	700	683	844	157	207	71	159	163	152	193	762
26	552	663	658	667	127	351	114	151	156	159	187	670
27	490	592	601	569	268	519	185	156	181	232	174	681
28	782	874	589	703	120	626	119	120	189	233	305	667
29	1,320	1,970	583	814	102	724	124	115	159	225	276	634
30	701	1,910	530	87	---	656	121	108	208	230	247	298
31	504	---	549	220	---	566	---	112	---	238	490	---
TOTAL	15,721	23,142	31,440	20,735	4,591	7,598	5,991	4,836	6,041	5,775	7,495	19,040
MEAN	507	771	1,014	669	158	245	200	156	201	186	242	635
MAX	1,650	1,970	1,920	1,530	445	724	604	243	557	285	490	922
MIN	200	421	530	87	102	101	71	108	115	120	163	298
AC-FT	31,180	45,900	62,360	41,130	9,110	15,070	11,880	9,590	11,980	11,450	14,870	37,770
CAL YR	2003	TOTAL	236,640.00	MEAN	648	MAX	2,210	MIN	0.00	AC-FT	469,400	
WTR YR	2004	TOTAL	152,405	MEAN	416	MAX	1,970	MIN	71	AC-FT	302,300	

e Estimated

12099200 WHITE RIVER ABOVE BOISE CREEK, AT BUCKLEY, WA

LOCATION.--Lat 47°10'26", long 122°00'29", in SE¼SW¼, sec.35, T.20 N., R.6 E., Pierce County, Hydrologic Unit 17110014, on left bank 1,500 ft downstream from diversion dam, 1.5 mi northeast of Buckley, and at mile 23.9.

DRAINAGE AREA.--411 mi²

PERIOD OF RECORD.--July 2003 to current year. Prior to July 2003 records for "White River above Boise Creek at Buckley, WA" (station 12099100) published for station 1,200 ft upstream are not equivalent because of inflows between sites.

GAGE.--Water-stage recorder. Elevation of gage is 650 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Since November 1911, White River Canal has diverted water from left bank, 1,500 ft upstream, for storage in Lake Tapps. Water is returned to the White River 20.3 mi downstream via Lake Tapps Diversion, after power development at Dieringer Powerplant. Since 1942, flows have been regulated by Mud Mountain Dam for flood control. U.S. Geological Survey satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,630 ft³/s, Jan. 29, gage height, 44.91 ft; minimum daily discharge, 65 ft³/s, Jan. 5.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	239	427	e128	4,190	613	546	1,570	2,580	1,150	631	540
2	312	e106	355	e159	3,390	584	506	1,860	2,250	1,100	646	497
3	298	e112	395	e162	2,320	608	548	1,990	1,920	1,040	616	416
4	288	e119	367	e134	2,000	866	602	2,060	2,090	1,000	565	396
5	290	e115	318	e65	1,430	983	786	2,060	2,500	928	566	398
6	289	e126	258	e224	1,110	1,010	1,170	1,780	2,800	959	499	401
7	300	e108	227	e548	e1,080	950	1,210	1,650	2,550	1,030	683	396
8	291	e91	e191	e728	e1,040	1,370	1,230	1,720	2,280	910	511	394
9	294	e122	e173	680	e1,020	1,740	1,210	1,700	2,300	847	488	382
10	286	e122	e177	453	e979	1,660	1,240	1,540	2,270	758	531	382
11	285	e134	e191	432	e937	1,320	1,410	1,560	2,030	714	611	1,120
12	295	e114	e202	411	e924	1,160	1,640	1,320	1,720	701	654	982
13	299	e128	e266	428	e855	1,020	1,830	1,180	1,860	756	668	862
14	286	e133	e216	503	696	904	1,780	1,140	1,900	811	721	1,120
15	288	e107	e175	1,120	662	857	1,610	1,200	1,640	902	668	979
16	309	e138	e160	1,920	652	795	1,450	1,310	1,550	902	727	853
17	305	e175	e148	1,170	659	830	1,320	1,290	1,570	886	696	787
18	302	e663	e137	867	677	928	1,200	1,340	1,680	900	589	791
19	300	1,190	e125	803	732	923	1,080	1,490	1,660	948	567	708
20	588	550	e137	702	699	792	1,070	1,650	1,590	860	556	653
21	2,490	306	e149	616	649	735	984	1,840	1,610	697	468	548
22	761	e193	e135	576	611	811	928	1,960	1,720	689	877	483
23	464	e145	e114	857	585	1,040	925	1,810	1,920	742	651	479
24	295	e134	e130	1,800	567	1,170	912	1,620	2,050	797	1,010	439
25	297	e122	e147	1,350	547	995	884	1,530	1,940	819	2,280	406
26	298	e114	e134	1,090	545	804	994	2,800	1,770	685	2,010	405
27	299	e120	e132	935	634	695	1,360	3,730	1,490	624	1,580	392
28	326	e205	e129	973	655	512	1,590	3,600	1,320	646	1,090	390
29	396	3,070	e101	3,660	645	453	1,430	3,300	1,230	669	874	382
30	305	1,110	e119	3,480	---	709	1,370	3,010	1,220	667	743	382
31	304	---	e103	3,610	---	800	---	2,940	---	657	613	---
TOTAL	12,420	10,111	6,038	30,584	31,490	28,637	34,815	59,550	57,010	25,794	24,389	17,363
MEAN	401	337	195	987	1,086	924	1,160	1,921	1,900	832	787	579
MAX	2,490	3,070	427	3,660	4,190	1,740	1,830	3,730	2,800	1,150	2,280	1,120
MIN	280	91	101	65	545	453	506	1,140	1,220	624	468	382
AC-FT	24,640	20,060	11,980	60,660	62,460	56,800	69,060	118,100	113,100	51,160	48,380	34,440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	401	337	195	987	1,086	924	1,160	1,921	1,900	832	656	445
MAX	401	337	195	987	1,086	924	1,160	1,921	1,900	832	787	579
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	401	337	195	987	1,086	924	1,160	1,921	1,900	832	526	312
(WY)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2004)	(2003)	(2003)

SUMMARY STATISTICS

	FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	338,201			
ANNUAL MEAN	924		924	
HIGHEST ANNUAL MEAN			924	
LOWEST ANNUAL MEAN			924	
HIGHEST DAILY MEAN	4,190	Feb 1	4,190	Feb 1, 2004
LOWEST DAILY MEAN	65	Jan 5	65	Jan 5, 2004
ANNUAL SEVEN-DAY MINIMUM	111	Nov 2	111	Nov 2, 2003
ANNUAL RUNOFF (AC-FT)	670,800		669,400	
10 PERCENT EXCEEDS	1,910		1,910	
50 PERCENT EXCEEDS	724		724	
90 PERCENT EXCEEDS	148		148	

e Estimated

12099600 BOISE CREEK AT BUCKLEY, WA

LOCATION.--Lat 47°10'34", long 122°01'02", in NE¼SE¼, sec.34, T.20 N., R.6 E., King County, Hydrologic Unit 17110014, on left bank at downstream side of county road bridge, 1.0 mi northeast of Buckley, and at mile 0.1.

DRAINAGE AREA.--15.4 mi².

PERIOD OF RECORD.--March 1977 to September 1981, December 1981 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 640 ft above NGVD of 1929, from topographic map. Prior to January 25, 1984, at site 25 ft upstream at datum 0.91 ft higher. Prior to March 27, 1996, at site 10 ft downstream, at datum 1.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair, except for discharges above 200 ft³/s, which are poor. Flow partly regulated by millpond at mile 5.6. Diversions upstream from station for domestic and industrial use. Interbasin diversion from Scatter Creek of about 2 ft³/s during low-flow periods enters Boise Creek upstream from millpond. U.S. Geological Survey satellite telemeter at station. Chemical analyses November 1961 to July 1964.

AVERAGE DISCHARGE.--26 years (water years 1978-81, 1983-2004), 32.1 ft³/s, 23,260 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,200 ft³/s, Feb. 8, 1996, gage height, 4.26 ft, from rating curve extended above 180 ft³/s on basis of slope-area measurement of peak flow 0.94 mi upstream from station; minimum discharge, 1.7 ft³/s, Sept. 19, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 21	0345	247	2.79	Jan 29	1145	*320	*3.10
Jan 24	0030	251	2.81				

Minimum discharge, 2.9 ft³/s, Oct. 5, 6, gage height, 0.92 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	6.4	55	15	89	24	29	8.7	44	10	5.4	17
2	3.3	6.4	43	15	71	23	26	8.8	35	9.9	5.4	20
3	3.3	6.0	56	14	56	33	23	8.3	30	15	5.6	15
4	3.2	5.6	34	13	71	51	22	9.2	27	11	6.2	12
5	3.1	5.2	65	15	52	53	20	11	29	10	6.2	10
6	3.4	4.9	58	21	50	44	19	8.3	37	9.8	9.2	9.3
7	5.9	4.9	45	47	55	39	18	9.0	30	11	9.6	8.5
8	5.3	4.8	38	63	58	37	17	14	26	9.7	6.3	7.9
9	7.6	4.7	32	77	47	39	16	15	25	9.1	5.9	8.8
10	6.3	6.4	31	69	41	38	15	13	26	8.8	5.0	7.6
11	5.9	7.9	28	52	38	34	15	29	24	8.9	5.2	57
12	12	5.4	39	45	36	31	14	18	22	8.4	5.3	27
13	9.2	5.1	83	40	33	29	14	14	28	8.0	4.9	27
14	6.0	5.0	81	58	36	27	15	12	25	7.6	5.1	23
15	7.8	5.7	54	90	32	25	17	11	22	7.5	5.7	23
16	26	11	43	84	36	23	18	14	20	7.6	5.4	22
17	13	13	35	60	35	22	16	12	18	7.1	5.3	26
18	8.5	46	30	57	35	27	15	11	16	7.2	5.0	28
19	8.0	63	26	53	40	26	14	11	15	7.4	5.2	27
20	35	39	27	42	35	22	16	10	14	7.1	5.1	25
21	141	30	28	36	32	21	14	10	13	7.1	6.3	19
22	41	20	24	32	31	21	14	20	13	6.7	41	17
23	40	20	22	80	28	21	12	21	12	6.3	24	17
24	21	28	21	154	26	27	11	15	12	6.1	34	15
25	15	23	21	89	24	25	10	14	12	6.1	54	15
26	12	20	19	71	25	28	11	106	12	6.2	42	14
27	10	16	18	59	30	32	11	112	11	6.2	46	13
28	8.9	37	18	74	27	27	14	117	11	6.1	27	12
29	9.2	146	16	242	26	25	10	98	10	5.9	20	11
30	8.0	85	15	184	---	34	9.1	75	10	5.9	15	11
31	6.9	---	15	115	---	34	---	60	---	5.7	12	---
TOTAL	489.0	681.4	1,120	2,066	1,195	942	475.1	895.3	629	249.4	438.3	545.1
MEAN	15.8	22.7	36.1	66.6	41.2	30.4	15.8	28.9	21.0	8.05	14.1	18.2
MAX	141	146	83	242	89	53	29	117	44	15	54	57
MIN	3.1	4.7	15	13	24	21	9.1	8.3	10	5.7	4.9	7.6
AC-FT	970	1,350	2,220	4,100	2,370	1,870	942	1,780	1,250	495	869	1,080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2004, BY WATER YEAR (WY)

MEAN	13.6	44.2	50.2	55.3	55.2	44.7	39.1	30.6	23.0	14.2	9.14	9.52
MAX	29.8	124	96.2	162	145	76.7	69.3	57.5	55.1	35.5	16.3	29.5
(WY)	(1986)	(1991)	(1978)	(1984)	(1996)	(1997)	(1991)	(1984)	(1990)	(1983)	(1993)	(1978)
MIN	4.65	6.61	12.7	20.9	17.0	25.1	15.8	15.6	8.45	5.80	3.65	3.37
(WY)	(1990)	(2003)	(2003)	(2001)	(2001)	(1978)	(2004)	(1982)	(1982)	(2003)	(2003)	(1989)

12099600 BOISE CREEK AT BUCKLEY, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1977 - 2004	
ANNUAL TOTAL	9,495.0		9,725.6			
ANNUAL MEAN	26.0		26.6		32.1	
HIGHEST ANNUAL MEAN					50.4	1991
LOWEST ANNUAL MEAN					21.3	2001
HIGHEST DAILY MEAN	215	Jan 31	242	Jan 29	898	Feb 8, 1996
LOWEST DAILY MEAN	2.9	Sep 3	3.1	Oct 5	2.0	Sep 23, 1989
ANNUAL SEVEN-DAY MINIMUM	3.0	Aug 31	3.6	Oct 1	2.4	Sep 20, 1989
ANNUAL RUNOFF (AC-FT)	18,830		19,290		23,260	
10 PERCENT EXCEEDS	57		56		65	
50 PERCENT EXCEEDS	16		18		23	
90 PERCENT EXCEEDS	3.7		5.9		6.7	

12101000 LAKE TAPPS NEAR SUMNER, WA

LOCATION.--Lat 47°14'28", long 122°11'26", in NE¹/₄NE¹/₄, sec.8, T.20 N., R.5 E., Pierce County, Hydrologic Unit 17110014, 1.7 mi east of Dieringer, and 3.5 mi northeast of Sumner.

PERIOD OF RECORD.--November 1911 to current year. October 1934 to October 1950, change in contents published with records for Puyallup River at Puyallup. Month-end contents only November 1911 to September 1950, published in WSP 1316.

GAGE.--Water-stage recorder. Datum of gage is 0.7 ft above NGVD of 1929 (levels by Puget Sound Energy).

REMARKS.--Reservoir is formed by a diked natural lake into which a large part of the low-water flow of White River is diverted. Construction of dike began June 1910; storage began in 1911. Usable capacity (based on 1959 resurvey; capacity table dated July 28, 1959, put into use Oct. 1, 1958), 46,600 acre-ft between gage heights of 515 ft, normal minimum pool, and 543 ft, normal maximum pool. Storage below 515 feet unknown. Figures given herein represent usable contents. Reservoir was used for power development at the White River Powerplant at Dieringer until Jan. 15, 2004. U.S. Geological Survey satellite telemeter at station.

COOPERATION.--Prior to Oct. 1, 1990, and July 1996 to May 1997, gage-height record furnished by Puget Sound Energy. Contents curve furnished by Puget Sound Energy.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 51,710 acre-ft, June 30, 1958, gage height, 541.57 ft, capacity table dated Jan. 19, 1920; maximum gage height observed, 543.07 ft, July 8, 1990; minimum contents observed, not determined (below normal minimum pool) Jan. 23 to Apr. 16, 2003; minimum gage height, 498.91 ft, Mar. 14, 2003.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 46,252 acre-ft, Apr. 21, gage height, 542.84 ft; minimum contents, 12,476 acre-ft, Jan. 15, gage height, 526.09 ft.

MONTH-END GAGE HEIGHT AND CONTENTS AT 2400
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)
September 30	539.79	38,816	
October 31	537.87	34,373	-4,443
November 30	539.65	38,488	+4,115
December 31	540.14	39,641	+1,153
Calender Year 2003	--	--	+28,386
January 31	538.04	34,758	-4,883
February 29	540.09	39,522	+4,764
March 31	542.47	45,320	+5,798
April 30	542.64	45,749	+429
May 31	542.41	45,169	-580
June 30	542.32	44,942	-227
July 31	542.35	45,018	+76
August 31	542.19	44,616	-402
September 30	542.25	44,767	+151
Water Year 2004	--	--	+5,951

12101100 LAKE TAPPS DIVERSION AT DIERINGER, WA

LOCATION.--Lat 47°14'18", long 122°13'37", in SW¼NW¼, sec. 7, T.20 N., R.5 E., Pierce County, Hydrologic Unit 17110014, on right bank 850 ft downstream from White River Powerplant at Dieringer, and 1,400 ft upstream from mouth.

PERIOD OF RECORD.--April 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 42.36 ft above NGVD of 1929 (levels by Puget Sound Power and Light Co.). Prior to Sept. 30, 1990, at same site at datum 5.00 ft higher.

REMARKS.--Records good, except for estimated daily discharges and discharges below 15 ft³/s, which are fair. Flow regulated by White River Powerplant. U.S. Geological Survey satellite telemeter at station.

AVERAGE DISCHARGE.--46 years (water years 1959-2004), 922 ft³/s, 667,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,530 ft³/s, Jan. 29, 1965, gage height, 6.23 ft, datum then in use; maximum gage height, 12.44 ft, Dec. 1, 1995 (backwater from White River); no flow many days in July and August 1990, Sept. 29, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,330 ft³/s, Nov. 22, gage height, 9.80 ft; minimum discharge, 6.6 ft³/s, Apr. 6, 7, gage height, 5.66 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	894	782	1,820	1,860	301	24	616	90	156	211	168	225
2	394	660	1,050	1,910	503	25	526	90	156	211	168	225
3	743	341	971	1,950	500	25	529	90	156	211	168	225
4	26	501	1,020	1,970	235	25	529	90	156	211	168	225
5	526	608	1,290	1,970	69	25	503	90	156	211	168	225
6	795	675	1,030	1,980	65	25	114	108	156	211	169	218
7	263	719	1,190	1,860	65	24	13	139	156	187	168	118
8	709	34	978	1,490	65	23	22	140	155	161	168	118
9	644	34	1,030	1,150	147	27	22	141	155	162	168	118
10	345	152	909	1,090	92	30	22	141	155	162	101	118
11	27	35	900	1,020	92	34	22	131	155	162	167	196
12	587	35	785	1,180	92	39	36	106	155	160	166	228
13	31	35	954	1,590	87	39	47	86	156	157	167	227
14	256	340	1,640	1,580	76	39	47	105	155	158	167	228
15	29	35	1,710	43	76	39	47	105	155	159	168	228
16	30	624	914	42	76	39	47	105	155	159	168	227
17	29	764	782	42	76	39	47	105	155	159	168	228
18	263	962	804	42	52	39	47	105	155	159	168	228
19	670	1,140	693	42	26	39	47	106	155	161	168	226
20	38	1,340	837	42	26	39	47	107	155	162	197	225
21	1,270	1,420	852	42	26	39	47	107	155	162	231	227
22	1,100	734	795	42	25	39	79	108	155	162	230	229
23	704	1,100	1,050	44	25	42	97	108	155	163	229	229
24	1,420	920	580	44	25	44	97	108	187	165	229	229
25	1,170	889	863	42	25	264	97	134	210	165	229	229
26	865	651	1,330	42	25	445	94	158	210	165	228	229
27	1,300	442	1,160	42	26	592	90	157	210	165	226	229
28	254	38	1,280	43	25	771	90	157	211	165	225	229
29	562	126	733	e53	24	753	90	156	211	166	225	229
30	340	1,770	340	e60	---	729	90	156	211	167	225	229
31	753	---	906	59	---	728	---	156	---	168	225	---
TOTAL	17,037	17,906	31,196	23,366	2,947	5,084	4,201	3,685	5,023	5,347	5,820	6,344
MEAN	550	597	1,006	754	102	164	140	119	167	172	188	211
MAX	1,420	1,770	1,820	1,980	503	771	616	158	211	211	231	229
MIN	26	34	340	42	24	23	13	86	155	157	101	118
AC-FT	33,790	35,520	61,880	46,350	5,850	10,080	8,330	7,310	9,960	10,610	11,540	12,580

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

MEAN	612	880	1,068	1,170	1,061	1,026	1,058	1,022	1,228	901	560	515
MAX	1,443	1,516	1,719	1,939	1,819	1,545	1,716	1,715	1,925	1,807	1,018	1,251
(WY)	(1960)	(1959)	(1967)	(1967)	(1970)	(1961)	(1966)	(1961)	(2000)	(1999)	(1983)	(1974)
MIN	163	200	135	480	102	76.5	140	119	167	6.09	5.88	8.11
(WY)	(1988)	(1988)	(2001)	(1993)	(2004)	(2003)	(2004)	(2004)	(2004)	(1988)	(1988)	(1988)

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1958 - 2004

ANNUAL TOTAL	207,077.3	127,956	
ANNUAL MEAN	567	350	922
HIGHEST ANNUAL MEAN			1,232
LOWEST ANNUAL MEAN			350
HIGHEST DAILY MEAN	2,090	Jun 12	1,980
LOWEST DAILY MEAN	5.6	Feb 12	13
ANNUAL SEVEN-DAY MINIMUM	9.5	Feb 28	25
ANNUAL RUNOFF (AC-FT)	410,700		667,600
10 PERCENT EXCEEDS	1,440		1,640
50 PERCENT EXCEEDS	394		934
90 PERCENT EXCEEDS	22		47

e Estimated

12101500 PUYALLUP RIVER AT PUYALLUP, WA

LOCATION.--Lat 47°12'31", long 122°19'33", in SE¼NW¼, sec.20, T.20 N., R.4 E., Pierce County, Hydrologic Unit 17110014, on left bank 0.8 mi upstream from bridge at Clark Creek, 2.0 mi northwest of Puyallup City Hall, and at mile 6.6.

DRAINAGE AREA.--948 mi².

PERIOD OF RECORD.--May 1914 to current year.

REVISED RECORDS.--WSP 832: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Dec. 3, 1919, at sites 1.2 mi upstream and 900 ft upstream at different datums. Dec. 3, 1919, to Nov. 9, 1935, at site 500 ft upstream at datum 9.61 ft higher.

REMARKS.--Records good, except for estimated daily discharges, which are fair, and Oct. 1 to Jan. 30, which are poor. All diverted water returned to river upstream from gage. Large part of flow of White River (a tributary) diverted through Lake Tapps (station 12101000). Flood flow regulated by Mud Mountain Lake (station 12098000) on White River. Some pondage on tributaries and upper Puyallup River. Diurnal fluctuations caused by powerplants and glacial melt upstream from station. U.S. Geological Survey satellite telemeter at station. Chemical analyses October 1958 to September 1968, October 1970 to September 1972, October 1974 to September 1994. Water temperatures July 1959 to September 1961, August 1965 to September 1966. Since 1912 the City of Tacoma pipeline diversion from Green River has released as much as 123 ft³/s daily, and from 1957-90 an average of about 15 ft³/s per month into Puyallup River 0.5 mi east of McMillin. Since 1990 releases have been minimal.

AVERAGE DISCHARGE.--90 years (water years 1915-2004), 3,320 ft³/s, 2,405,000 acre-ft/yr, adjusted for storage in Lake Tapps since October 1934, and Mud Mountain Lake, October 1944 to September 1947.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,000 ft³/s, Dec. 10, 1933, elevation, 31.0 ft, present datum; minimum discharge, 306 ft³/s, Sept. 25, 1955, elevation, 8.23 ft; minimum daily discharge, 400 ft³/s, Nov. 30, 1952.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,100 ft³/s, Jan. 29, gage height, 19.26 ft; minimum discharge, 746 ft³/s, Nov. 8, gage height, 9.22 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,140	1,940	4,930	3,740	7,750	1,900	2,690	2,630	5,320	2,950	2,100	2,420
2	1,480	1,630	3,880	3,800	6,470	1,770	2,350	3,020	4,630	2,820	2,090	2,330
3	1,860	1,270	3,860	3,820	4,680	1,820	2,330	3,240	4,230	2,770	1,990	2,160
4	1,150	1,330	3,560	3,740	4,060	2,400	2,360	3,280	4,340	2,720	1,880	2,010
5	1,580	1,380	4,150	3,550	3,470	2,650	2,370	3,460	4,780	2,550	1,910	2,010
6	1,860	1,440	4,500	3,840	3,080	2,640	2,370	3,010	5,770	2,550	1,800	1,960
7	1,610	1,470	4,220	5,060	3,070	2,360	2,230	2,790	5,260	2,770	2,340	1,830
8	1,760	803	3,790	5,580	2,890	2,760	2,270	3,000	4,700	2,380	1,850	1,860
9	1,870	785	3,610	5,420	2,740	3,520	2,250	3,060	4,640	2,220	1,720	1,900
10	1,530	902	3,510	5,260	2,520	3,820	2,270	2,790	4,570	2,060	1,710	1,800
11	1,040	1,840	3,310	4,750	2,410	3,290	2,430	2,980	4,310	2,050	2,040	3,490
12	1,590	1,660	3,380	4,250	e2,400	2,960	2,710	2,690	3,810	2,010	2,190	3,600
13	2,280	1,250	3,860	4,490	e2,400	2,730	2,960	2,460	4,120	2,210	2,250	3,560
14	1,560	1,380	5,260	4,590	2,390	2,520	2,920	2,390	4,490	2,430	2,400	4,380
15	1,140	1,070	4,840	4,930	2,290	2,390	2,700	2,430	3,880	2,600	2,210	4,210
16	1,700	1,650	3,870	5,770	2,290	2,250	2,510	2,600	3,570	2,570	2,380	3,640
17	2,320	2,010	3,680	4,380	2,500	2,210	2,400	2,590	3,530	2,600	2,300	3,320
18	2,060	3,010	3,270	3,640	2,420	2,260	2,310	2,580	3,650	2,620	2,070	3,200
19	1,920	5,790	3,000	3,540	2,500	2,370	2,150	3,060	3,590	2,830	1,920	2,830
20	2,180	4,450	3,140	3,090	2,340	2,170	2,120	3,100	3,400	2,660	2,040	2,650
21	8,030	3,590	3,290	2,740	2,190	2,060	2,030	3,230	3,410	2,200	1,910	2,430
22	5,050	2,430	3,210	2,500	2,060	2,170	2,050	3,350	3,590	2,100	2,840	2,250
23	3,570	2,380	3,150	3,360	1,960	2,480	1,990	3,490	3,930	2,270	2,470	2,210
24	2,860	2,370	2,560	5,910	1,900	2,740	2,020	3,080	4,260	2,400	3,290	2,130
25	2,570	2,320	3,240	4,820	1,810	2,910	1,980	2,900	4,170	2,520	7,750	2,030
26	2,150	2,180	3,290	3,990	1,790	2,930	2,040	5,280	3,940	2,220	7,920	1,990
27	2,550	1,830	3,220	3,510	2,010	3,000	2,510	9,240	3,350	2,080	6,180	1,950
28	1,990	1,850	3,090	3,620	2,140	3,020	2,740	9,410	3,060	2,180	3,820	1,960
29	3,390	7,710	2,570	10,300	2,020	2,760	2,550	8,450	2,980	2,140	3,140	1,960
30	2,120	7,320	2,040	12,500	---	2,920	2,450	6,860	3,020	2,160	2,790	1,830
31	2,100	---	2,300	8,060	---	3,160	---	6,700	---	2,140	2,530	---
TOTAL	71,010	71,040	109,580	148,550	82,550	80,940	71,060	119,150	122,300	74,780	85,830	75,900
MEAN	2,291	2,368	3,535	4,792	2,847	2,611	2,369	3,844	4,077	2,412	2,769	2,530
MAX	8,030	7,710	5,260	12,500	7,750	3,820	2,960	9,410	5,770	2,950	7,920	4,380
MIN	1,040	785	2,040	2,500	1,790	1,770	1,980	2,390	2,980	2,010	1,710	1,800
AC-FT	140,800	140,900	217,400	294,600	163,700	160,500	140,900	236,300	242,600	148,300	170,200	150,500
MEAN†	2,217	2,438	3,554	4,711	2,928	2,704	2,376	3,833	4,074	2,413	2,761	2,532
CFSM†	2.34	2.57	3.75	4.97	3.09	3.85	2.51	4.04	4.30	2.54	2.91	2.67
IN.†	2.70	2.87	4.32	5.73	3.33	3.29	2.80	4.66	4.79	2.93	3.36	2.98
AC-FT†	136,400	145,000	218,600	289,700	168,500	166,300	141,300	235,700	242,400	148,400	169,800	150,600

CAL YR 2003 TOTAL 1,114,990 MEAN 3,055 MAX 16,200 MIN 785 AC-FT 2,212,000 MEAN† 3,094 CFSM† 3.27 IN.† 44.31 AC-FT† 2,240,000
WTR YR 2004 TOTAL 1,112,690 MEAN 3,040 MAX 12,500 MIN 785 AC-FT 2,207,000 MEAN† 3,049 CFSM† 3.22 IN.† 43.77 AC-FT† 2,213,000

† Adjusted for change in contents in Lake Tapps.
e Estimated

12102075 CLARKS CREEK AT TACOMA ROAD, NEAR PUYALLUP, WA

LOCATION.--Lat 47°11'52", long 122°20'10", in NE¹/₄NE¹/₄, sec.30, T.20 N., R.4 E., Pierce County, Hydrologic Unit 17110014, at private bridge at end of Tacoma Road, 1.0 mi northwest of Puyallup, and at mile 1.5.

DRAINAGE AREA.--13.0 mi².

PERIOD OF RECORD.--October 1992 to February 1995 (discharge measurements only). March 1995 to current year.

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

REMARKS.--Records fair, except estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--9 years (water year 1996-2004), 59.9 ft³/s, 62.56 in/yr, 43,360 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 190 ft³/s, Nov. 14, 2001, elevation 23.13 ft, but was likely exceeded Feb. 8 or 9, 1996; maximum elevation, 25.60 ft, Feb. 8 or 9, 1996, from inside high-water mark, affected by backwater from the Puyallup River; minimum daily discharge, 33 ft³/s, June 26-29, 1995, July 14, 19, 21, 23, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 173 ft³/s, Oct. 21, gage height, 23.71 ft; minimum daily discharge, 33 ft³/s, July 14, 19, 21, 23.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	47	48	44	e60	44	42	43	40	38	36	42
2	55	53	48	45	e58	43	42	43	39	39	36	41
3	56	47	52	44	e52	49	42	42	38	39	36	41
4	55	46	46	42	e53	45	41	46	38	38	37	41
5	55	45	63	41	e48	46	42	44	43	38	38	41
6	56	45	61	42	e50	44	42	43	43	36	47	41
7	58	44	52	65	e48	43	42	45	39	36	45	40
8	60	44	47	67	46	43	42	50	39	35	40	41
9	59	45	45	63	46	43	42	46	40	36	38	41
10	56	44	52	65	45	42	42	43	40	35	38	41
11	55	44	49	54	45	42	41	44	39	36	38	59
12	59	44	57	51	44	43	42	42	40	34	37	42
13	56	45	71	50	44	43	43	42	43	34	39	49
14	54	44	61	56	49	43	45	41	40	33	39	44
15	59	46	50	58	44	42	44	41	39	34	39	44
16	78	61	48	50	56	43	44	41	38	34	39	47
17	59	56	45	49	50	43	44	40	37	34	42	55
18	54	64	44	55	49	44	44	40	37	35	43	53
19	54	75	44	51	46	44	45	39	43	33	43	45
20	86	68	49	48	45	43	46	39	38	34	43	43
21	138	65	44	48	44	42	44	39	37	33	45	43
22	71	51	44	e47	44	42	43	43	37	34	53	43
23	64	50	43	e67	43	42	44	41	39	33	45	44
24	53	50	46	e68	44	49	43	39	40	34	53	44
25	52	52	47	e55	44	46	43	39	41	34	70	44
26	50	47	43	e54	46	46	42	50	38	34	53	44
27	49	44	44	e52	52	46	43	46	38	34	47	45
28	48	62	44	e65	45	43	44	45	38	34	44	45
29	49	73	43	e97	44	43	43	42	38	35	43	45
30	48	52	42	e86	---	43	42	42	38	35	42	46
31	47	---	44	e67	---	42	---	41	---	37	42	---
TOTAL	1,848	1,553	1,516	1,746	1,384	1,356	1,288	1,321	1,177	1,088	1,330	1,334
MEAN	59.6	51.8	48.9	56.3	47.7	43.7	42.9	42.6	39.2	35.1	42.9	44.5
MAX	138	75	71	97	60	49	46	50	43	39	70	59
MIN	47	44	42	41	43	42	41	39	37	33	36	40
AC-FT	3,670	3,080	3,010	3,460	2,750	2,690	2,550	2,620	2,330	2,160	2,640	2,650
CFSM	4.59	3.98	3.76	4.33	3.67	3.36	3.30	3.28	3.02	2.70	3.30	3.42
IN.	5.29	4.44	4.34	5.00	3.96	3.88	3.69	3.78	3.37	3.11	3.81	3.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2004, BY WATER YEAR (WY)

MEAN	57.7	65.8	67.6	65.8	63.4	59.9	59.5	56.0	52.4	51.5	54.4	54.2
MAX	68.0	75.9	84.3	83.3	88.8	87.6	82.3	77.6	67.9	66.2	66.3	64.6
(WY)	(1998)	(1999)	(1997)	(1997)	(1996)	(1997)	(1997)	(1997)	(1998)	(1999)	(1997)	(1997)
MIN	46.9	51.8	48.9	56.3	47.7	42.3	42.9	41.0	37.6	35.1	42.8	42.2
(WY)	(1996)	(2004)	(2004)	(2004)	(2004)	(1995)	(2004)	(1995)	(1995)	(2004)	(1995)	(1995)

PUYALLUP RIVER BASIN

12102075 CLARKS CREEK AT TACOMA ROAD, NEAR PUYALLUP, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1995 - 2004	
ANNUAL TOTAL	19,005		16,941			
ANNUAL MEAN	52.1		46.3		59.9	
HIGHEST ANNUAL MEAN					73.8	
LOWEST ANNUAL MEAN					46.3	
HIGHEST DAILY MEAN	138	Oct 21	138	Oct 21	190	Feb 9, 1996
LOWEST DAILY MEAN	38	Jun 3	33	Jul 14	33	Jun 26, 1995
ANNUAL SEVEN-DAY MINIMUM	39	Jun 3	34	Jul 19	34	Jul 19, 2004
ANNUAL RUNOFF (AC-FT)	37,700		33,600		43,360	
ANNUAL RUNOFF (CFSM)	4.01		3.56		4.60	
ANNUAL RUNOFF (INCHES)	54.38		48.48		62.56	
10 PERCENT EXCEEDS	60		58		76	
50 PERCENT EXCEEDS	52		44		60	
90 PERCENT EXCEEDS	43		38		44	

e Estimated

12102190 SWAN CREEK AT 80TH STREET EAST, NEAR TACOMA, WA

LOCATION.--Lat 47°11'05", long 122°23'33", in SE¹/₄SW¹/₄, sec.26, T.20 N., R.3 E., Pierce County, Hydrologic Unit 17110014, on right bank, downstream from 80th Street East crossing, 5.1 mi south-southeast of Tacoma.

DRAINAGE AREA.--2.35 mi².

PERIOD OF RECORD.--October 1989 to September 1991, October 1994 to September 1997, October 1997 to current year (seasonal records).

REVISED RECORDS.--WDR WA-97-1: 1996 (M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 395 ft above NGVD of 1929, from topographic map. Prior to November 1994, at datum 5.00 ft higher.

REMARKS.--Records fair, except estimated daily discharges and those above 100 ft³/s and below 5 ft³/s, which are poor.

AVERAGE DISCHARGE.--5 years (water years 1990-91, 1995-97), 4.78 ft³/s, 27.66 in/yr, 3,470 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined but occurred Feb. 8, 1996, elevation, 10.85 ft, from outside high-water mark; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 93 ft³/s, Oct. 21, gage height, 8.12 ft; minimum discharge, no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO APRIL 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR
1	0.00	0.68	5.4	2.6	7.0	2.8	1.3
2	0.00	1.7	5.4	2.5	7.0	2.4	1.2
3	0.00	1.7	7.8	2.6	4.7	3.5	1.1
4	0.00	1.3	4.6	e2.4	5.0	3.6	0.96
5	0.00	1.1	11	e2.4	3.5	3.4	0.79
6	0.00	0.97	14	e2.7	3.4	3.2	0.67
7	0.00	0.82	7.9	16	3.6	2.9	0.50
8	0.00	0.74	5.4	26	2.8	2.6	0.42
9	0.06	0.73	3.9	21	2.3	2.3	0.37
10	0.34	0.62	6.2	17	2.2	2.2	0.35
11	0.09	0.74	6.2	7.9	2.0	2.1	0.32
12	0.33	0.69	10	4.9	1.9	1.9	0.29
13	0.55	0.62	19	4.6	1.7	1.9	0.29
14	0.15	0.56	12	6.5	3.6	1.7	0.37
15	0.56	0.75	5.5	9.4	3.2	1.6	0.52
16	3.6	4.6	4.0	5.0	6.8	1.6	0.44
17	2.2	4.9	3.6	3.5	6.2	1.6	0.54
18	1.3	11	3.1	5.3	6.5	1.7	0.38
19	0.71	19	2.8	5.2	3.9	2.0	0.33
20	16	17	5.2	3.6	3.0	2.1	0.51
21	46	13	3.9	2.9	2.6	1.8	0.46
22	6.8	6.4	3.2	2.5	2.3	1.7	0.39
23	5.7	4.8	2.8	13	2.2	1.7	0.32
24	2.4	5.3	3.2	13	2.1	3.0	0.29
25	1.6	6.0	4.0	4.6	2.0	3.1	0.27
26	1.3	4.6	3.0	3.4	2.5	3.6	0.26
27	1.1	3.2	2.9	3.0	8.1	4.0	0.24
28	0.89	16	2.9	10	4.5	3.0	0.23
29	0.83	26	2.8	45	3.3	2.4	0.20
30	0.82	9.1	2.4	31	---	2.0	0.19
31	0.78	---	2.3	10	---	1.6	---
TOTAL	94.11	164.62	176.4	289.5	109.9	75.0	14.50
MEAN	3.04	5.49	5.69	9.34	3.79	2.42	0.48
MAX	46	26	19	45	8.1	4.0	1.3
MIN	0.00	0.56	2.3	2.4	1.7	1.6	0.19
AC-FT	187	327	350	574	218	149	29
CFSM	1.29	2.34	2.42	3.97	1.61	1.03	0.21
IN.	1.49	2.61	2.79	4.58	1.74	1.19	0.23

e Estimated