



Figure 36. Location of surface-water stations in the Walla Walla River Basin.

14013000 MILL CREEK NEAR WALLA WALLA, WA

LOCATION.--Lat 46°00'29", long 118°07'03", in SW¹/₄SW¹/₄, sec.7, T.6 N., R.38 E., Walla Walla County, Hydrologic Unit 17070102, on left bank 0.1 mi downstream from Railroad Canyon, 4.0 mi downstream from City of Walla Walla diversion dam, 4.4 mi upstream from Blue Creek, 11.5 mi southeast of Walla Walla, and at mile 21.2.

DRAINAGE AREA.--59.6 mi².

PERIOD OF RECORD.--August 1913 to September 1917, April to September 1938, October 1939 to September 1976, October 1979 to current year. Maximum discharge and occasional discharge measurements 1977-79.

REVISED RECORDS.--WSP 1398: 1946-48(M), 1950 (M). WSP 1935: 1959, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,995.85 ft above NGVD of 1929 (levels by U.S. Corps of Engineers). Prior to Oct. 1, 1938, nonrecording gages at about same site at different datums.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. No regulation. City of Walla Walla diverts about 28 ft³/s 4.0 mi upstream from station for municipal use. Water temperatures March 1962 to July 1965. Sediment records March 1962 to July 1965. U.S. Geological Survey telephone telemeter at station.

AVERAGE DISCHARGE.--66 years (water years 1914-17, 1940-76, 1980-2004), 96.1 ft³/s, 69,660 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,350 ft³/s, Feb. 9, 1996, gage height, 20.43 ft, from rating curve extended above 1,600 ft³/s on basis of slope-area measurement of peak flow; minimum daily discharge, 9.5 ft³/s, Dec. 9, 10, 1972.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31 or Apr. 1, 1931, reached a discharge of about 11,000 ft³/s, based on slope-area measurement about 900 ft upstream at old City of Walla Walla diversion dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 29	1230	*1,780	*17.45	No other peak greater than base discharge.			

Minimum discharge, 20 ft³/s, Sept. 8.

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	36	35	109	60	273	101	128	112	185	31	29	30
2	38	35	94	59	194	93	110	114	144	30	31	29
3	37	35	98	56	154	89	103	123	118	29	31	26
4	37	35	88	51	128	125	105	122	102	29	35	24
5	35	35	82	e34	107	136	113	113	96	30	29	24
6	36	36	113	e36	99	136	113	102	96	29	30	25
7	36	35	110	e40	96	129	114	95	87	30	30	24
8	36	35	89	e48	92	154	114	94	147	28	31	24
9	36	35	76	74	87	232	108	90	172	28	29	25
10	35	44	67	147	83	252	103	86	263	29	29	26
11	37	71	60	152	78	209	102	100	301	32	29	29
12	37	42	61	131	77	181	107	107	229	29	28	34
13	37	38	157	116	75	165	114	99	175	29	28	32
14	38	36	258	113	73	147	116	92	133	28	27	44
15	40	36	167	123	72	135	127	88	108	28	27	42
16	45	39	122	189	103	128	108	109	91	28	27	43
17	41	43	99	170	221	130	104	107	80	30	27	36
18	39	39	86	137	339	144	99	116	72	31	27	35
19	39	44	82	113	378	154	93	123	65	31	26	33
20	39	44	83	93	272	131	96	140	60	31	27	32
21	39	41	90	84	207	116	116	143	53	30	27	31
22	39	40	96	79	167	120	131	160	51	30	34	29
23	39	39	91	110	141	139	130	193	46	30	46	28
24	39	40	102	435	133	138	130	223	42	30	41	30
25	36	40	112	327	130	126	122	207	39	29	52	30
26	35	42	104	211	130	130	120	210	37	30	53	31
27	34	41	89	163	124	144	126	261	37	29	42	31
28	34	42	81	304	115	133	139	365	35	29	38	31
29	35	200	74	1,370	108	126	122	408	35	29	34	30
30	35	141	65	874	---	139	110	322	32	29	30	30
31	35	---	62	453	---	148	---	238	---	30	28	---
TOTAL	1,154	1,458	3,067	6,352	4,256	4,430	3,423	4,862	3,131	915	1,002	918
MEAN	37.2	48.6	98.9	205	147	143	114	157	104	29.5	32.3	30.6
MAX	45	200	258	1,370	378	252	139	408	301	32	53	44
MIN	34	35	60	34	72	89	93	86	32	28	26	24
AC-FT	2,290	2,890	6,080	12,600	8,440	8,790	6,790	9,640	6,210	1,810	1,990	1,820

WALLA WALLA RIVER BASIN

14013000 MILL CREEK NEAR WALLA WALLA, 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 1914 - 2004, BY WATER YEAR (WY)												
MEAN	36.7	72.2	112	132	156	161	173	138	75.2	37.6	30.9	31.4
MAX	105	263	376	362	548	410	420	495	260	69.8	48.7	47.5
(WY)	(1952)	(1996)	(1965)	(1965)	(1996)	(1997)	(1917)	(1917)	(1974)	(1974)	(1975)	(1959)
MIN	19.4	24.1	32.9	33.7	44.3	45.4	46.5	40.1	27.7	23.0	20.4	20.7
(WY)	(1940)	(1940)	(1966)	(1944)	(1994)	(1941)	(1941)	(1992)	(1992)	(1994)	(1987)	(1983)
SUMMARY STATISTICS												
	FOR 2003 CALENDAR YEAR				FOR 2004 WATER YEAR				WATER YEARS 1914 - 2004			
ANNUAL TOTAL	39,031				34,968							
ANNUAL MEAN	107				95.5				96.1			
HIGHEST ANNUAL MEAN									180			
LOWEST ANNUAL MEAN									54.1			
HIGHEST DAILY MEAN	1,480				1,370				3,240			
LOWEST DAILY MEAN	28				24				9.5			
ANNUAL SEVEN-DAY MINIMUM	30				25				10			
ANNUAL RUNOFF (AC-FT)	77,420				69,360				69,660			
10 PERCENT EXCEEDS	210				171				203			
50 PERCENT EXCEEDS	51				76				58			
90 PERCENT EXCEEDS	33				29				28			

e Estimated

14013700 MILL CREEK AT FIVE MILE ROAD BRIDGE, NEAR WALLA WALLA, WA

LOCATION.--Lat 46°05'09", long 118°13'38", in SW¹/₄NE¹/₄, sec.18, T.7 N., R.37 E., Walla Walla County, Hydrologic Unit 17070102, on right bank 4.2 mi downstream from Blue Creek, 3.0 mi upstream from diversion to Bennington Lake, 6 mi east of Walla Walla, and at mile 12.6.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--November 1997 to April 2003 (seasonal records), October 2003 to September 2004.

GAGE.--Water-stage recorder. Elevation of gage is 1,348 ft above NGVD of 1929 (levels by Walla Walla County).

REMARKS.--Records poor. No regulation. City of Walla Walla diverts water for municipal supply about 13 mi upstream.

AVERAGE DISCHARGE.--1 year (water year 2004), 125 ft³/s, 90,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, unknown, Feb. 1, 2003, gage height, unknown; maximum gage height, 9.91 ft, Feb. 24, 2002; minimum discharge, 21 ft³/s, Aug. 20, 2004.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,320 ft³/s, Jan. 29, gage height, 9.60 ft; minimum discharge, 21 ft³/s, Aug. 20.

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	32	38	119	70	467	148	177	130	302	35	31	31
2	32	38	101	70	355	132	149	126	239	33	34	35
3	32	38	106	66	289	126	136	132	193	33	44	30
4	32	38	96	59	249	177	136	129	158	33	47	29
5	32	38	88	e46	211	206	149	118	138	34	38	29
6	32	38	120	e48	193	208	147	101	141	33	38	29
7	32	38	124	e54	196	195	148	89	119	33	39	28
8	32	38	100	e60	183	229	144	86	226	32	38	27
9	35	38	84	127	168	318	134	81	270	31	33	28
10	36	41	75	210	157	338	126	78	409	32	31	30
11	37	72	69	208	143	289	122	92	468	34	32	33
12	39	47	70	176	134	252	126	111	391	30	31	44
13	38	41	164	154	127	230	137	95	318	28	29	39
14	39	39	301	148	124	210	144	85	253	28	27	54
15	41	39	208	152	127	191	173	80	206	28	27	50
16	45	42	158	225	167	177	141	113	168	27	27	54
17	45	46	130	210	405	178	133	109	142	28	28	49
18	40	43	109	176	529	195	124	133	121	29	28	44
19	39	47	98	150	537	210	112	158	105	30	27	42
20	39	52	98	126	421	178	118	203	92	29	24	39
21	38	46	107	110	339	155	161	202	80	28	24	38
22	38	44	115	101	280	159	196	227	74	27	34	35
23	39	43	109	135	237	187	187	269	65	27	66	33
24	40	44	117	456	222	187	185	310	59	26	57	33
25	37	44	135	346	215	168	168	284	52	26	80	32
26	37	46	127	235	208	179	157	279	44	26	81	32
27	37	45	108	187	194	200	158	324	43	26	59	32
28	35	45	96	280	177	187	178	465	42	27	46	32
29	36	177	88	1,400	160	174	155	545	40	29	39	30
30	37	159	77	1,040	---	190	135	462	37	30	32	30
31	37	---	72	645	---	209	---	371	---	31	31	---
TOTAL	1,140	1,544	3,569	7,470	7,214	6,182	4,456	5,987	4,995	923	1,202	1,071
MEAN	36.8	51.5	115	241	249	199	149	193	166	29.8	38.8	35.7
MAX	45	177	301	1,400	537	338	196	545	468	35	81	54
MIN	32	38	69	46	124	126	112	78	37	26	24	27
AC-FT	2,260	3,060	7,080	14,820	14,310	12,260	8,840	11,880	9,910	1,830	2,380	2,120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2004, BY WATER YEAR (WY)

MEAN	36.8	77.8	128	182	204	209	181	193	166	29.8	38.8	35.7
MAX	36.8	110	209	241	306	339	252	193	166	29.8	38.8	35.7
(WY)	(2004)	(2000)	(1999)	(2004)	(2003)	(2003)	(2002)	(2004)	(2004)	(2004)	(2004)	(2004)
MIN	36.8	37.8	58.7	71.4	107	107	108	193	166	29.8	38.8	35.7
(WY)	(2004)	(2003)	(2003)	(2001)	(2001)	(2001)	(1998)	(2004)	(2004)	(2004)	(2004)	(2004)

SUMMARY STATISTICS

	FOR 2004 WATER YEAR	WATER YEARS 1998 - 2004
ANNUAL TOTAL	45,753	
ANNUAL MEAN	125	125
HIGHEST ANNUAL MEAN		125
LOWEST ANNUAL MEAN		125
HIGHEST DAILY MEAN	1,400	1,800
LOWEST DAILY MEAN	24	24
ANNUAL SEVEN-DAY MINIMUM	26	26
ANNUAL RUNOFF (AC-FT)	90,750	90,560
10 PERCENT EXCEEDS	250	250
50 PERCENT EXCEEDS	90	90
90 PERCENT EXCEEDS	30	30

e Estimated

14015000 MILL CREEK AT WALLA WALLA, WA

LOCATION.--Lat 46°04'35", long 118°16'21", in NE $\frac{1}{4}$ NW $\frac{1}{4}$, sec.23, T.7 N., R.36 E., Walla Walla County, Hydrologic Unit 17070102, on left bank 200 ft downstream from diversion dam, 1.5 mi east of Walla Walla, and at mile 10.5.

DRAINAGE AREA.--95.7 mi².

PERIOD OF RECORD.--April 1941 to current year.

REVISED RECORDS.--WSP 1288: Drainage area. WSP 1348: 1943, 1945-46.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 1,165.49 ft above NGVD of 1929 (levels by U.S. Corps of Engineers). April 1941 to June 11, 1941, nonrecording gage, and June 11, 1941, to Jan. 22, 1957, water-stage recorder, at sites 0.8 mi downstream at different datum. U.S. Geological Survey telephone telemeter at station.

AVERAGE DISCHARGE.--63 years (water years 1942-2004), 80.0 ft³/s, 57,940 acre-ft/yr.

REMARKS.--Records fair except for estimated daily discharges and those below 10 ft³/s, which are poor. Some regulation at diversion dam 200 ft upstream from station where water is diverted into Yellowhawk and Garrison Creeks for stock and irrigation. Since Nov. 19, 1941, water has been diverted 1.0 mi upstream into Mill Creek Reservoir for flood control with release of stored water after flood into Russell Creek, and is also diverted as required to replenish losses from seepage and evaporation from small recreation pool maintained in the reservoir. City of Walla Walla diverts water for municipal supply about 11 mi upstream. Other small diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,190 ft³/s, Feb. 9, 1996, gage height, 6.89 ft (inside high-water mark), from rating curve extended above 1,500 ft³/s; no flow many days.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31 or Apr. 1, 1931, discharge not determined, was greatest since at least 1913. A discharge of about 11,000 ft³/s, based on a slope-area measurement, was determined for the 1931 peak at old City of Walla Walla diversion dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,600 ft³/s, Jan. 29, gage height, 4.76 ft; minimum discharge, no flow part or all of each day July 3 to Sept. 30.

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	2.3	2.9	78	36	366	94	101	85	221	0.05	0.00	0.00
2	2.2	2.9	66	36	273	87	81	84	147	0.05	0.00	0.00
3	2.4	2.9	64	34	201	83	74	88	113	0.05	0.00	0.00
4	2.3	2.9	54	e28	163	108	75	87	89	0.01	0.00	0.00
5	2.2	2.9	45	e20	133	133	81	79	75	0.03	0.00	0.00
6	2.2	2.9	64	e22	118	134	81	70	79	0.76	0.00	0.00
7	2.2	2.9	73	e24	119	126	76	62	71	2.4	0.00	0.00
8	2.8	2.9	61	e32	110	147	76	62	134	0.00	0.00	0.00
9	2.9	2.9	52	e70	100	220	74	59	164	0.00	0.00	0.00
10	2.9	3.1	45	185	92	250	69	56	290	0.00	0.00	0.15
11	2.9	18	38	172	85	193	65	62	394	0.00	0.00	0.00
12	2.9	3.9	34	150	84	150	66	77	288	0.13	0.00	0.00
13	2.9	2.9	107	122	79	133	73	67	203	0.00	0.00	0.00
14	2.9	2.9	281	114	73	121	79	60	164	0.00	0.00	0.00
15	2.9	2.9	179	113	76	110	98	57	116	0.00	0.00	0.00
16	3.1	2.9	127	188	94	101	82	76	87	0.44	0.00	0.00
17	3.3	3.4	94	176	279	92	73	74	71	0.00	0.00	0.00
18	2.9	2.9	77	141	418	96	79	92	59	0.00	0.00	0.00
19	2.9	5.0	69	117	475	108	76	97	49	0.00	0.00	0.00
20	2.9	10	67	96	360	90	72	127	42	0.00	0.00	0.00
21	2.9	7.1	72	86	256	76	110	124	33	0.00	0.00	0.00
22	2.9	5.6	79	78	202	83	118	149	28	0.00	0.00	0.00
23	2.9	4.5	76	98	165	104	112	190	23	0.00	3.6	0.00
24	2.9	6.0	78	447	151	112	119	238	20	0.00	0.00	0.00
25	2.9	4.9	91	437	144	101	108	217	16	0.42	0.22	0.00
26	2.9	6.2	87	280	137	107	100	205	13	0.05	1.6	0.00
27	3.1	5.7	76	205	129	117	97	253	13	0.31	0.00	0.00
28	3.0	5.1	67	312	117	110	115	377	13	0.19	0.00	0.00
29	2.9	118	59	1,230	105	100	99	474	15	0.02	0.00	0.00
30	2.9	118	47	1,040	---	108	87	391	8.1	0.00	0.00	0.00
31	2.9	---	40	569	---	123	---	297	---	0.00	0.00	---
TOTAL	86.2	365.1	2,447	6,658	5,104	3,717	2,616	4,436	3,038.1	4.91	5.42	0.15
MEAN	2.78	12.2	78.9	215	176	120	87.2	143	101	0.16	0.17	0.01
MAX	3.3	118	281	1,230	475	250	119	474	394	2.4	3.6	0.15
MIN	2.2	2.9	34	20	73	76	65	56	8.1	0.00	0.00	0.00
AC-FT	171	724	4,850	13,210	10,120	7,370	5,190	8,800	6,030	9.7	11	0.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

MEAN	6.04	44.5	110	150	177	172	162	99.2	36.3	3.36	1.93	2.29
MAX	96.0	233	433	372	627	393	381	344	179	18.4	7.64	11.5
(WY)	(1952)	(1996)	(1965)	(1974)	(1996)	(1997)	(1974)	(1948)	(1974)	(1981)	(1989)	(1971)
MIN	0.00	0.14	4.81	15.8	12.0	3.21	9.70	1.10	0.00	0.00	0.00	0.00
(WY)	(1989)	(1988)	(1953)	(1944)	(1977)	(1947)	(1947)	(1968)	(1973)	(1973)	(1973)	(1985)

14015000 MILL CREEK AT WALLA WALLA, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	32,658.46		28,477.88			
ANNUAL MEAN	89.5		77.8		80.0	
HIGHEST ANNUAL MEAN					182	1974
LOWEST ANNUAL MEAN					18.1	1977
HIGHEST DAILY MEAN	1,340	Feb 1	1,230	Jan 29	3,070	Feb 9, 1996
LOWEST DAILY MEAN	0.00	Jun 19	0.00	Jul 8	0.00	Nov 2, 1954
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 24	0.00	Jul 17	0.00	Jul 27, 1963
ANNUAL RUNOFF (AC-FT)	64,780		56,490		57,940	
10 PERCENT EXCEEDS	243		186		218	
50 PERCENT EXCEEDS	38		59		29	
90 PERCENT EXCEEDS	1.1		0.00		0.05	

e Estimated

14018500 WALLA WALLA RIVER NEAR TOUCHET, WA

LOCATION.--Lat 46°01'40", long 118°43'43", in NW¼SE¼, sec.6, T.6 N., R.33 E., Walla Walla County, Hydrologic Unit 17070102, on left bank 0.8 mi upstream from Gardena Creek, 2.8 mi southwest of Touchet, 3.4 mi downstream from Touchet River, and at mile 18.2.

DRAINAGE AREA.--1,657 mi².

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year.

REVISED RECORDS.--WSP 1935: Drainage area. WDR WA-96-1: 1992(M), 1993(M), 1995 (M,P).

GAGE.--Water-stage recorder. Elevation of gage is 405 ft above NGVD of 1929, from topographic map. Prior to Nov. 27, 1951, nonrecording gage at same site and datum. U.S. Geological Survey satellite telemeter at station.

REMARKS.--Records fair. Many diversions upstream from station for irrigation.

AVERAGE DISCHARGE.--53 years (water years 1952-2004), 574 ft³/s, 415,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s, Dec. 22, 1964, gage height, 18.90 ft, from rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 20.58 ft, Feb. 10, 1996, from high-water mark; no flow July 30 to Aug. 8, Aug. 12, 13, 1968, Oct. 5-7, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 25	0400	3,540	9.16	Feb 19	0500	3,040	8.54
Jan 30	0600	*7,280	*12.92				

Minimum discharge, 13 ft³/s, Aug. 13.

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	52	100	464	535	2,650	999	962	768	1,480	108	21	44
2	40	107	374	515	2,040	934	804	751	1,150	104	23	46
3	35	105	339	508	1,690	875	702	764	891	90	27	51
4	35	98	349	e400	1,470	905	671	747	724	86	28	51
5	35	85	316	e300	1,370	1,010	722	709	606	83	39	49
6	37	69	310	e340	1,220	1,020	759	638	577	72	37	45
7	30	68	430	e380	1,250	997	756	569	543	64	35	42
8	27	116	434	e440	1,180	1,070	699	535	771	69	43	41
9	28	109	370	518	1,090	1,280	609	513	1,220	66	43	38
10	28	104	335	1,060	1,020	1,570	582	478	1,570	71	35	39
11	35	95	331	1,350	957	1,550	566	502	2,510	65	30	43
12	41	165	324	1,230	905	1,370	574	721	1,960	64	21	55
13	47	138	359	1,030	886	1,280	602	843	1,540	56	17	73
14	50	108	1,220	920	849	1,200	660	710	1,270	49	18	82
15	54	102	1,290	879	854	1,120	766	611	988	45	18	99
16	64	99	887	1,130	860	1,030	780	668	771	39	21	96
17	84	110	705	1,450	1,550	969	655	745	602	33	18	101
18	85	134	604	1,250	2,340	1,010	617	688	484	37	21	109
19	62	121	546	1,060	2,820	1,100	592	927	399	43	24	104
20	54	111	520	956	2,370	1,030	551	1,010	354	48	25	108
21	45	132	526	869	1,930	901	625	1,180	294	49	20	104
22	42	116	554	807	1,670	844	916	1,180	235	41	20	96
23	40	103	582	804	1,490	909	869	1,370	189	36	36	83
24	46	102	579	1,670	1,400	990	880	1,900	158	36	85	69
25	39	111	687	2,960	1,360	960	818	1,750	135	27	107	62
26	42	111	746	1,950	1,300	936	752	1,520	115	25	147	64
27	43	113	678	1,560	1,230	893	745	1,740	103	24	146	60
28	54	117	620	1,460	1,150	896	844	2,020	102	19	106	56
29	63	136	598	3,980	1,070	799	932	2,380	118	20	90	57
30	91	554	577	6,660	---	781	831	2,200	112	26	77	56
31	90	---	541	4,190	---	1,030	---	1,810	---	22	55	---
TOTAL	1,518	3,739	17,195	43,161	41,971	32,258	21,841	32,947	21,971	1,617	1,433	2,023
MEAN	49.0	125	555	1,392	1,447	1,041	728	1,063	732	52.2	46.2	67.4
MAX	91	554	1,290	6,660	2,820	1,570	962	2,380	2,510	108	147	109
MIN	27	68	310	300	849	781	551	478	102	19	17	38
AC-FT	3,010	7,420	34,110	85,610	83,250	63,980	43,320	65,350	43,580	3,210	2,840	4,010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2004, BY WATER YEAR (WY)

MEAN	79.8	292	786	1,091	1,304	1,210	1,071	726	265	42.4	19.5	40.7
MAX	392	1,056	2,890	2,698	3,700	3,105	2,437	1,544	1,130	139	82.7	181
(WY)	(1952)	(1996)	(1965)	(1965)	(1996)	(1972)	(1974)	(1993)	(1974)	(1974)	(1976)	(1959)
MIN	9.20	55.3	190	306	286	339	242	60.6	21.2	5.85	3.07	3.07
(WY)	(1989)	(1988)	(1988)	(1979)	(1977)	(1977)	(1973)	(1968)	(1968)	(1968)	(1973)	(1994)

14018500 WALLA WALLA RIVER NEAR TOUCHET, WA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1952 - 2004	
ANNUAL TOTAL	221,567.0		221,674			
ANNUAL MEAN	607		606		574	
HIGHEST ANNUAL MEAN					1,212	1974
LOWEST ANNUAL MEAN					166	1977
HIGHEST DAILY MEAN	8,640	Feb 1	6,660	Jan 30	20,300	Dec 23, 1964
LOWEST DAILY MEAN	5.2	Aug 23	17	Aug 13	0.00	Jul 30, 1968
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 17	19	Aug 12	0.00	Jul 30, 1968
ANNUAL RUNOFF (AC-FT)	439,500		439,700		415,600	
10 PERCENT EXCEEDS	1,550		1,380		1,430	
50 PERCENT EXCEEDS	316		481		300	
90 PERCENT EXCEEDS	16		36		14	

e Estimated

14018500 WALLA WALLA RIVER NEAR TOUCHET, WA—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 2002 to current year.

INSTRUMENTATION.--Water-temperature sensor interfaced with a data-collection platform for satellite telemetry.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 28.8°C, Aug. 15, 2002, July 16, 24, 2004; minimum, 0.0°C, Dec. 30, 2003.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum 28.8°C, July 16, 24; minimum, 0.0°C, Dec. 30.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.9	15.0	16.4	4.5	3.2	3.8	6.4	5.8	6.1	0.8	0.3	0.6
2	18.0	14.5	16.2	4.0	3.0	3.5	6.0	5.6	5.8	1.8	0.6	1.2
3	17.6	14.3	16.0	4.6	3.3	3.8	6.2	5.5	5.9	1.9	0.8	1.4
4	17.5	14.3	16.0	4.8	3.2	3.9	5.6	3.8	4.6	---	---	---
5	18.4	15.0	16.6	3.4	1.5	2.6	4.5	3.9	4.2	---	---	---
6	18.3	15.2	16.7	2.2	0.8	1.4	5.4	4.1	4.8	---	---	---
7	17.1	15.6	16.3	1.3	0.2	0.8	5.0	4.2	4.6	---	---	---
8	17.4	14.5	15.7	2.2	0.8	1.5	5.2	4.3	4.8	---	---	---
9	15.3	13.0	14.3	2.8	1.6	2.1	5.3	4.6	4.9	---	---	---
10	14.1	11.6	12.8	5.0	1.8	3.4	4.7	3.9	4.5	---	---	---
11	12.7	11.7	12.3	7.3	5.0	6.3	4.4	3.9	4.2	---	---	---
12	12.4	11.2	11.8	7.4	6.1	6.7	4.4	3.7	4.0	2.0	0.8	1.4
13	12.7	10.2	11.5	6.1	4.0	5.0	4.9	4.3	4.7	2.1	1.5	1.7
14	13.5	11.5	12.4	4.1	3.2	3.5	5.6	4.8	5.2	2.2	1.4	1.9
15	12.5	11.0	11.5	4.2	3.2	3.7	4.9	4.2	4.6	2.0	1.3	1.6
16	11.1	10.5	10.9	5.1	3.9	4.5	5.1	4.3	4.7	2.9	1.9	2.4
17	12.7	10.0	11.3	6.0	4.8	5.4	5.0	4.5	4.8	2.9	2.1	2.4
18	13.3	11.1	12.1	8.5	6.0	7.5	4.9	4.0	4.4	4.0	2.3	2.9
19	14.2	11.9	13.0	8.3	6.4	7.7	4.3	3.6	3.9	4.2	3.5	3.8
20	14.2	13.2	13.7	6.4	5.0	5.7	4.2	3.4	3.8	4.5	3.6	4.0
21	15.8	13.4	14.6	5.2	3.7	4.6	4.4	3.9	4.2	4.9	4.1	4.5
22	15.9	13.9	15.0	3.9	2.6	3.4	4.8	4.2	4.5	4.9	4.2	4.5
23	15.3	13.1	14.1	2.8	2.0	2.4	4.8	4.1	4.5	4.4	3.8	4.1
24	13.6	11.8	12.7	3.4	2.1	2.7	4.9	4.0	4.4	4.5	3.7	4.1
25	11.9	10.1	11.0	3.9	2.7	3.3	5.1	4.7	5.0	4.3	3.1	3.6
26	11.0	9.1	10.1	4.5	3.3	3.9	5.0	4.2	4.5	4.8	3.8	4.3
27	10.5	8.8	9.8	4.1	3.2	3.6	4.3	2.8	3.4	5.3	4.4	4.8
28	13.9	9.9	12.1	4.3	3.1	3.7	3.6	2.9	3.2	6.2	5.2	5.6
29	13.0	11.0	12.0	6.6	4.3	5.7	3.5	2.0	2.6	6.9	6.2	6.5
30	11.0	7.5	9.7	7.7	6.1	6.8	2.0	0.0	0.6	7.0	5.4	6.4
31	7.5	4.2	6.2	---	---	---	0.7	0.1	0.5	5.5	4.1	4.7
MONTH	18.4	4.2	13.1	8.5	0.2	4.1	6.4	0.0	4.3	---	---	---

14018500 WALLA WALLA RIVER NEAR TOUCHET, WA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5.1	4.2	4.7	7.8	6.0	6.8	10.8	8.4	9.7	17.2	13.7	15.3
2	4.8	3.8	4.2	7.5	5.7	6.6	11.5	8.5	9.9	18.2	15.0	16.5
3	4.5	3.6	4.0	7.3	5.3	5.9	11.6	9.8	10.8	18.1	15.5	16.8
4	5.3	4.0	4.6	6.6	5.2	5.8	13.7	10.2	11.6	18.0	15.7	16.7
5	5.1	4.0	4.5	6.7	5.5	6.0	13.7	11.5	12.3	16.8	14.2	15.4
6	4.6	3.9	4.2	7.3	5.0	6.1	13.5	10.5	11.9	16.2	13.5	14.6
7	5.3	3.7	4.3	9.5	6.6	7.7	14.0	11.5	12.7	16.7	13.5	14.8
8	5.4	4.5	5.0	10.6	8.1	9.2	14.3	12.0	13.2	16.7	15.1	15.7
9	5.7	4.3	5.0	10.4	9.0	9.6	14.2	---	---	16.9	14.2	15.5
10	5.5	4.4	4.9	9.6	7.7	8.6	14.3	11.7	13.0	16.9	13.7	14.9
11	5.3	4.2	4.6	8.9	7.1	7.9	14.6	11.8	13.2	13.7	11.7	12.3
12	5.1	4.1	4.5	9.5	7.2	8.4	14.8	12.4	13.7	13.6	11.4	12.4
13	5.0	3.9	4.3	9.4	7.7	8.5	14.8	13.1	13.8	15.0	11.2	12.8
14	5.0	3.5	4.1	9.9	7.1	8.4	14.0	12.0	12.9	16.5	13.3	14.6
15	6.5	4.4	5.3	9.6	8.4	8.9	13.4	10.3	11.1	16.5	13.6	14.5
16	6.5	5.2	5.5	10.7	8.0	9.2	12.4	9.0	10.4	14.3	13.0	13.7
17	5.7	5.2	5.4	11.4	9.5	10.4	12.8	10.9	11.8	16.4	12.2	13.8
18	6.9	5.3	5.9	11.1	9.9	10.6	13.0	11.2	12.0	16.3	14.2	15.0
19	6.9	5.8	6.5	10.1	8.4	9.3	13.9	10.9	12.2	16.6	13.2	14.7
20	6.6	5.1	5.6	9.6	7.6	8.6	13.9	12.2	12.9	17.2	14.3	15.5
21	5.7	4.9	5.3	10.7	8.1	9.3	13.1	11.5	12.1	17.3	15.2	16.3
22	5.4	4.8	5.1	12.4	9.2	10.6	13.5	9.7	11.4	16.6	14.2	15.0
23	6.7	4.5	5.4	12.4	10.8	11.5	13.5	11.7	12.3	14.7	13.2	13.8
24	6.6	5.9	6.3	11.6	9.4	10.2	13.8	10.6	12.1	14.6	11.5	12.9
25	6.5	5.3	5.7	10.5	8.7	9.6	14.8	11.5	13.0	15.3	11.9	13.6
26	7.3	5.4	6.1	10.5	8.7	9.7	16.4	12.9	14.3	15.2	13.7	14.2
27	8.5	6.6	7.5	11.2	9.1	10.1	16.3	14.2	15.0	14.5	13.0	13.8
28	8.4	7.4	7.9	11.4	8.8	10.1	14.5	11.6	13.0	14.2	12.4	13.1
29	8.2	6.5	7.3	12.3	9.3	10.7	15.1	11.5	13.1	13.5	10.9	12.1
30	---	---	---	12.5	10.9	11.8	16.0	12.5	14.1	13.7	11.7	12.6
31	---	---	---	11.9	9.7	10.4	---	---	---	14.6	12.1	13.3
MONTH	8.5	3.5	5.3	12.5	5.0	8.9	16.4	---	---	18.2	10.9	14.4
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.1	12.7	14.2	27.2	24.4	25.7	28.7	23.4	26.0	22.6	19.5	21.5
2	17.9	14.1	15.8	26.2	23.2	24.7	28.2	23.4	25.5	20.5	17.3	19.0
3	19.6	15.9	17.5	25.7	22.3	23.8	25.6	20.5	23.1	20.5	17.3	18.8
4	21.4	17.5	19.2	26.3	21.8	24.0	26.5	21.4	23.9	21.0	17.2	19.0
5	21.4	18.5	19.4	27.0	23.0	24.9	25.7	22.3	24.0	21.5	17.2	19.3
6	19.1	16.3	17.5	26.6	23.7	24.9	24.4	21.9	23.1	21.6	17.2	19.3
7	17.9	15.3	16.8	24.8	21.7	23.3	24.5	20.2	22.4	21.6	17.0	19.3
8	17.9	15.6	16.6	24.4	20.4	22.4	25.1	20.4	22.9	21.6	17.4	19.4
9	16.2	14.0	14.6	24.8	20.7	22.6	25.9	21.1	23.6	20.2	17.5	18.9
10	15.2	12.9	13.9	24.3	20.6	22.1	26.6	21.6	24.3	20.9	17.1	19.1
11	13.8	11.8	12.9	24.7	20.3	22.3	27.7	22.4	25.0	20.2	18.2	19.1
12	15.0	12.4	13.5	25.5	20.8	23.1	27.9	22.7	25.3	20.0	17.3	18.5
13	16.9	14.1	15.4	27.0	22.2	24.4	27.9	22.6	25.4	18.2	16.2	17.2
14	16.8	14.4	15.6	27.7	23.0	25.2	25.5	23.2	24.2	17.4	14.7	16.1
15	18.1	14.6	16.2	28.6	23.0	25.7	27.6	22.5	25.0	18.4	15.7	17.0
16	19.1	15.4	17.1	28.8	23.1	26.0	27.0	24.1	25.4	18.2	15.7	17.0
17	20.7	16.7	18.4	28.6	24.6	26.5	25.2	22.4	23.6	17.3	16.2	16.7
18	21.2	18.4	19.8	27.0	24.3	25.7	26.4	21.5	24.1	17.6	15.2	16.4
19	21.5	19.3	20.5	27.3	23.5	25.3	26.8	23.2	25.0	16.9	14.7	15.7
20	22.1	20.2	21.2	26.6	22.9	24.8	27.3	23.4	25.3	16.1	14.5	15.3
21	23.3	21.2	22.3	27.3	22.6	24.9	26.8	22.9	24.5	17.1	14.3	15.6
22	25.4	22.4	23.9	27.1	22.5	24.9	23.4	19.3	22.0	17.2	14.3	15.8
23	26.6	23.1	24.9	28.0	22.6	25.4	21.7	17.8	19.9	18.2	15.3	16.7
24	27.6	24.0	25.7	28.8	23.7	26.3	21.0	19.3	19.8	18.8	15.7	17.1
25	27.2	24.3	25.6	28.2	24.2	26.1	19.9	18.4	19.3	18.7	15.5	17.1
26	25.6	22.5	24.1	27.0	20.9	24.1	20.9	17.6	19.2	18.9	15.7	17.2
27	25.9	21.8	23.9	27.4	22.6	25.1	22.1	18.6	20.3	18.8	15.6	17.2
28	27.1	23.5	25.2	28.5	22.4	25.4	22.9	19.6	21.2	19.0	15.6	17.2
29	26.6	24.5	25.5	28.7	23.3	26.0	23.4	20.2	21.8	19.1	15.9	17.4
30	26.8	24.2	25.5	28.1	23.3	25.7	24.2	20.7	22.3	18.7	15.9	17.1
31	---	---	---	28.2	23.1	25.5	24.4	20.8	22.5	---	---	---
MONTH	27.6	11.8	19.4	28.8	20.3	24.7	28.7	17.6	23.2	22.6	14.3	17.7