

Water-Data Report 2013

## 14015000 MILL CREEK AT WALLA WALLA, WA

Middle Columbia Basin  
Walla Walla Subbasin

LOCATION.--Lat 46°04'35", long 118°16'21" referenced to North American Datum of 1927, in NE ¼ NW ¼ sec.23, T.7 N., R.6 E., Walla Walla County, WA, 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 mi<sup>2</sup>.

### SURFACE-WATER RECORDS

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.

REMARKS.--No estimated daily discharges during water year. Records fair, except those below 10 ft<sup>3</sup>/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.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--71 years (water years 1942-2013), 79.9 ft<sup>3</sup>/s, 57,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,190 ft<sup>3</sup>/s, Feb. 9, 1996, gage height, 6.89 ft (inside high-water mark), from rating curve extended above 1,500 ft<sup>3</sup>/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 ft<sup>3</sup>/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, 1,270 ft<sup>3</sup>/s, Apr. 20, gage height, 4.40 ft; minimum discharge, 0.22 ft<sup>3</sup>/s, Oct. 1-4, 6-9, gage height, 1.74 ft.

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.22	85	84	50	261	331	130	88	29	11	17	4.8
2	0.22	95	348	48	233	423	134	75	23	8.5	5.3	6.5
3	0.22	83	390	45	201	411	132	69	23	6.8	3.8	5.6
4	0.56	69	281	43	175	315	135	71	19	5.6	3.8	4.3
5	0.60	57	300	43	161	233	181	74	18	4.7	2.8	7.5
6	0.51	50	293	43	155	192	234	73	13	3.9	2.3	6.4
7	0.16	50	242	62	141	178	293	79	8.7	3.7	2.7	5.1
8	0.10	43	202	125	126	158	312	80	9.5	3.8	3.8	4.9
9	0.18	40	163	259	110	146	248	80	9.4	3.6	3.9	4.3
10	0.22	37	145	314	97	132	200	78	8.8	3.5	3.7	4.7
11	0.22	35	143	228	85	106	168	72	5.4	4.4	4.2	4.6
12	0.83	42	153	168	74	83	140	71	4.4	5.5	3.9	4.5
13	2.3	56	143	130	68	94	175	71	4.6	4.1	3.9	5.2
14	1.5	69	132	109	66	120	161	64	3.2	4.6	3.8	5.8
15	8.1	81	113	95	65	148	154	47	2.4	4.3	3.7	5.7
16	49	77	104	81	66	147	136	39	2.4	4.5	3.8	6.2
17	24	70	97	70	70	137	120	36	2.0	4.2	4.4	10
18	10	77	86	67	70	99	108	37	2.1	3.9	4.4	16
19	11	83	80	66	71	81	367	35	12	4.1	4.0	9.3
20	34	159	74	63	65	125	1,110	34	31	4.1	3.7	6.3
21	24	258	71	61	63	174	654	33	21	3.8	4.0	6.4
22	19	221	67	59	69	170	416	39	19	3.7	4.2	7.5
23	18	156	65	58	95	150	306	28	16	3.6	4.4	8.2
24	17	209	71	60	89	135	215	32	23	3.5	4.6	11
25	20	219	63	63	87	115	176	29	31	3.7	5.2	9.1
26	22	175	63	99	81	100	146	26	32	3.6	5.5	6.9
27	26	131	61	128	79	96	131	24	29	3.8	4.7	6.2
28	80	99	57	131	102	99	122	34	22	4.3	4.4	13
29	334	89	56	123	---	113	120	37	17	4.0	4.6	19
30	221	88	55	182	---	120	105	42	15	6.7	4.8	31
31	120	---	52	240	---	123	---	35	---	19	4.9	---
<b>Total</b>	1,044.94	3,003	4,254	3,313	3,025	5,054	7,029	1,632	455.9	158.5	140.2	246.0
<b>Mean</b>	33.7	100	137	107	108	163	234	52.6	15.2	5.11	4.52	8.20
<b>Max</b>	334	258	390	314	261	423	1,110	88	32	19	17	31
<b>Min</b>	0.10	35	52	43	63	81	105	24	2.0	3.5	2.3	4.3
<b>Ac-ft</b>	2,070	5,960	8,440	6,570	6,000	10,020	13,940	3,240	904	314	278	488

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2013, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	6.49	44.6	108	152	167	171	167	101	39.8	3.61	2.00	2.39
<b>Max</b>	96.0	233	433	372	627	393	399	344	179	18.4	7.64	11.5
<b>(WY)</b>	(1952)	(1996)	(1965)	(1974)	(1996)	(1997)	(2009)	(1948)	(1974)	(1981)	(1989)	(1971)
<b>Min</b>	0.00	0.14	4.81	15.8	12.0	3.21	9.70	1.10	0.00	0.00	0.00	0.00
<b>(WY)</b>	(1989)	(1988)	(1953)	(1944)	(1977)	(1947)	(1947)	(1968)	(1973)	(1973)	(1973)	(1985)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1941 - 2013	
<b>Annual total</b>	38,869.36		29,355.54			
<b>Annual mean</b>	106		80.4		79.9	
<b>Highest annual mean</b>					182	1974
<b>Lowest annual mean</b>					18.1	1977
<b>Highest daily mean</b>	731	Feb 22	1,110	Apr 20	3,070	Feb 9, 1996
<b>Lowest daily mean</b>	0.10	Oct 8	0.10	Oct 8	0.00	Nov 2, 1954
<b>Annual seven-day minimum</b>	0.28	Oct 5	0.28	Oct 5	0.00	Jul 27, 1963
<b>Annual runoff (ac-ft)</b>	77,100		58,230		57,900	
<b>10 percent exceeds</b>	294		195		218	
<b>50 percent exceeds</b>	64		56		30	
<b>90 percent exceeds</b>	1.8		3.8		0.10	

