Water-Data Report 2011

14018500 WALLA WALLA RIVER NEAR TOUCHET, WA

Middle Columbia Basin
Walla Walla Subbasin

LOCATION.--Lat 46°01′40″, long 118°43′43″ referenced to North American Datum of 1927, in NW ¼ SE ¼ sec.6, T.6 N., R.33 E., Walla Walla County, WA, 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 mi^2.

SURFACE-WATER 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). WDR US-2008: 1995 (daily discharge).

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. Water temperature records August 2002 to September 2005.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--60 years (water years 1952-2011), 581 ft^3/s, 420,800 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft^3/s, Dec. 22, 1964, gage height, 18.90 ft, from rating curve extended above 15,000 ft^3/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 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 14	0230	3,420	9.02
Dec 29	1815	3,040	8.33
Jan 17	1000	*8,020	*13.54
Mar 11	1245	4,030	9.74
Apr 6	0700	7,360	12.99
May 16	1815	3,560	9.19
Jun 3	0515	3,750	9.42

Minimum discharge, 18 ft^3/s, Sept. 14, 15.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 14018500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/14018500.2011.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	55	190	552	1,600	1,230	1,040	3,610	1,050	1,550	338	60	43
2	48	190	727	1,440	1,100	1,100	3,680	999	1,860	308	51	48
3	41	172	829	1,380	1,060	1,600	4,430	1,090	3,410	283	48	51
4	37	166	713	1,270	1,020	1,840	3,500	1,040	2,810	255	44	53
5	50	151	598	1,210	1,020	1,760	4,700	1,000	2,430	242	45	52
6	56	156	537	1,240	986	1,920	6,550	1,070	2,230	220	52	45
7	54	146	492	1,360	993	1,910	4,340	1,310	2,100	192	60	37
8	85	194	489	1,660	1,010	1,730	3,180	1,500	1,930	166	63	33
9	100	211	744	1,780	970	1,580	2,550	1,490	1,790	155	46	36
10	74	180	1,040	1,660	931	1,970	2,170	1,390	1,590	161	41	31
11	96	179	1,280	1,510	913	3,640	1,950	1,350	1,460	149	45	34
12	114	182	1,240	1,420	910	2,960	2,050	1,470	1,380	139	51	32
13	91	178	1,970	1,410	926	2,430	1,890	1,510	1,300	137	49	28
14	85	181	3,180	1,800	961	2,690	1,810	1,570	1,190	155	46	23
15	81	236	2,910	2,450	1,070	2,870	1,680	2,180	1,070	141	42	22
16	75	290	2,260	3,330	1,390	3,270	1,790	2,980	1,020	128	42	25
17	80	288	1,810	7,380	1,460	3,270	2,210	3,330	920	128	44	35
18	91	275	1,580	5,120	1,440	2,610	2,250	2,790	856	152	41	48
19	90	291	1,420	3,410	1,400	2,210	1,970	2,320	974	119	39	56
20	85	286	1,330	2,550	1,350	1,950	1,710	2,050	903	105	40	51
21	83	338	1,230	2,200	1,280	1,770	1,570	1,900	806	120	42	45
22	83	422	1,150	4,090	1,210	1,910	1,480	1,800	724	103	41	42
23	79	471	1,080	3,490	1,170	1,880	1,360	1,670	664	98	35	46
24	87	395	1,040	2,710	1,120	1,800	1,320	1,560	612	92	29	37
25	125	446	998	2,410	1,030	1,700	1,310	1,440	549	88	30	36
26	214	491	1,000	2,250	881	1,590	1,370	2,170	501	84	31	42
27	218	483	1,040	2,010	966	1,550	1,260	2,500	462	80	34	43
28	173	479	1,120	1,800	969	1,490	1,180	2,250	416	72	41	46
29	157	466	2,500	1,640	---	1,450	1,180	2,000	387	71	40	49
30	164	460	2,570	1,510	---	2,030	1,120	1,780	367	71	41	64
31	167	---	1,970	1,400	---	3,080	---	1,640	---	66	42	---
Total	3,038	8,593	41,399	70,490	30,766	64,600	71,170	54,199	38,261	4,618	1,355	1,233
Mean	98.0	286	1,335	2,274	1,099	2,084	2,372	1,748	1,275	149	43.7	41.1
Max	218	491	3,180	7,380	1,460	3,640	6,550	3,330	3,410	338	63	64
Min	37	146	489	1,210	881	1,040	1,120	999	367	66	29	22
Ac-ft	6,030	17,040	82,110	139,800	61,020	128,100	141,200	107,500	75,890	9,160	2,690	2,450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	77.1	285	776	1,118	1,253	1,212	1,114	768	305	43.6	19.8	40.3
Max	392	1,056	2,890	2,698	3,700	3,105	2,811	1,868	1,275	149	82.7	181
(WY)	(1952)	(1996)	(1965)	(1965)	(1996)	(1972)	(2009)	(2009)	(2011)	(2011)	(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)

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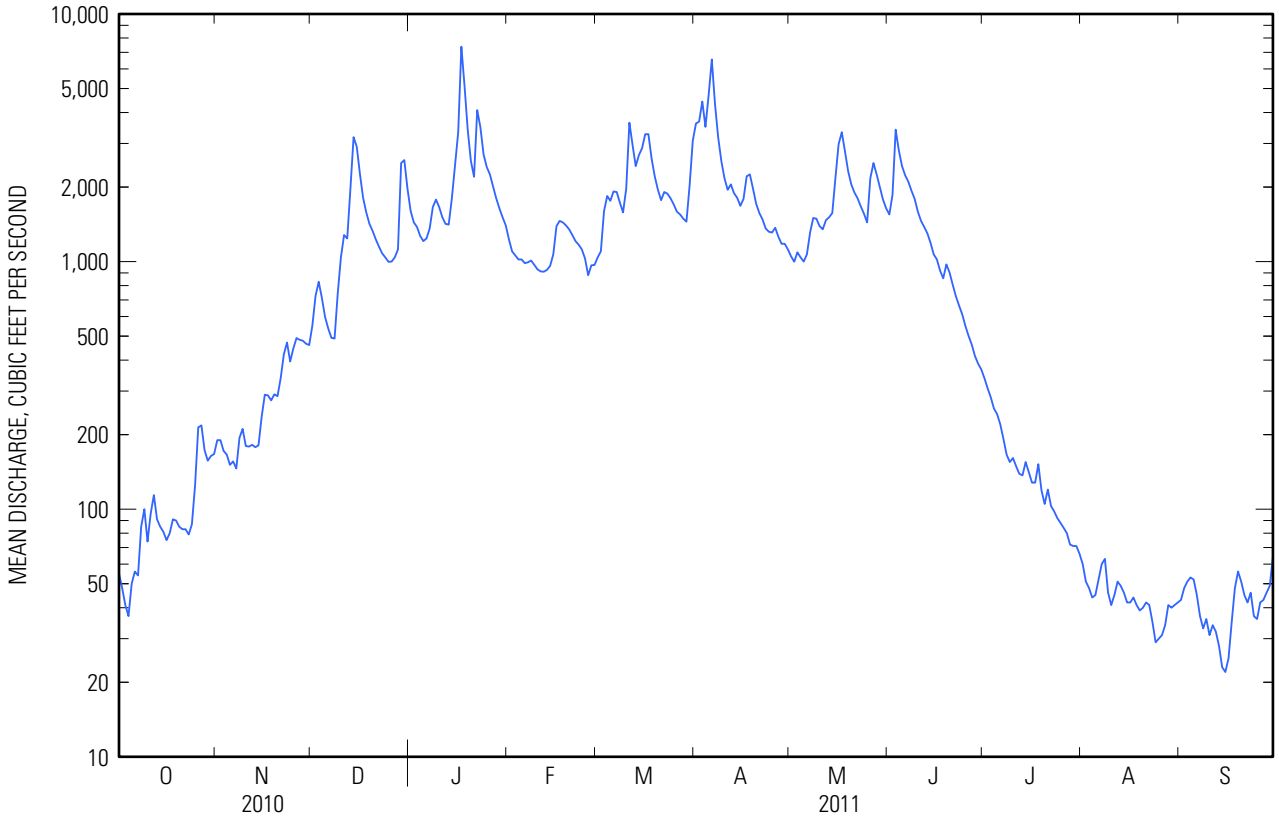
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1952 - 2011	
Annual total	201,874		389,722			
Annual mean	553		1,068		581	
Highest annual mean					1,212	1974
Lowest annual mean					166	1977
Highest daily mean	3,670	Jun 4	7,380	Jan 17	20,300	Dec 23, 1964
Lowest daily mean	11	Aug 21	22	Sep 15	0.00	Jul 30, 1968
Annual seven-day minimum	14	Aug 18	28	Sep 10	0.00	Jul 30, 1968
Annual runoff (ac-ft)	400,400		773,000		420,800	
10 percent exceeds	1,130		2,440		1,460	
50 percent exceeds	469		969		304	
90 percent exceeds	25		44		15