



Water-Data Report 2009

14033500 UMATILLA RIVER NEAR UMATILLA, OR

Middle Columbia Basin
Umatilla Subbasin

LOCATION.--Lat 45°54'11", long 119°19'33" referenced to North American Datum of 1927, in SW ¼ NW ¼ sec.21, T.5 N., R.28 E., Umatilla County, OR, Hydrologic Unit 17070103, on left bank, 1.2 mi southeast of Umatilla, 1.6 mi downstream from West Extension main canal of Umatilla project and at mile 2.1.

DRAINAGE AREA.--2,290 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1903 to current year.

REVISED RECORDS.--WSP 794: Drainage area. WSP 1398: 1909, 1911, 1914, 1928, 1935.

GAGE.--Water-stage recorder. Datum of gage is 330.47 ft above NGVD of 1929. Oct. 21, 1903 to Jan. 25, 1931, nonrecording gage.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Some regulation since 1927 by McKay Reservoir (active capacity, 71,500 acre-ft). Many diversions upstream from station for irrigation of lands upstream and downstream from station; Brownell Canal diverts downstream from station. Diversions since 1908 to Cold Springs Reservoir (active capacity, 44,600 acre-ft), an off-channel reservoir. Continuous water-quality records for period October 1962 to September 1969 have been collected at this location.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--23 years (water years 1905-27), 552 ft³/s, 3.27 in/yr, 399,900 acre-ft/yr. 105 years (water years 1905-2009), 494 ft³/s, 357,900 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,800 ft³/s Jan. 30, 1965, gage height, 10.75 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,100 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 3	0045	3,580	5.31
Jan 9	1100	4,210	5.59
Mar 30	0115	4,230	5.60
Apr 9	0100	3,350	5.20
Apr 14	0800	3,290	5.17
Apr 22	2245	4,140	5.56
May 7	1945	*5,580	*6.11

Minimum discharge, 51 ft³/s, Aug. 18, gage height, 2.24 ft.

14033500 Umatilla River near Umatilla, OR—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	190	272	166	605	389	617	2,060	1,470	280	159	105	105
2	195	271	167	1,540	381	577	1,930	1,460	265	158	104	100
3	205	271	172	2,810	373	653	2,380	2,030	263	141	107	108
4	224	278	176	1,590	367	864	2,340	3,020	238	122	108	111
5	221	281	181	1,080	372	938	1,990	3,340	306	123	109	109
6	230	298	185	817	395	922	1,890	4,860	293	118	114	121
7	215	289	186	1,490	389	798	2,100	5,470	242	113	124	137
8	206	283	189	2,730	398	737	2,710	5,130	256	109	161	131
9	194	287	219	3,770	407	628	3,310	3,630	236	108	134	127
10	191	281	265	2,390	397	566	2,910	2,880	226	107	117	126
11	190	285	263	1,640	345	499	2,470	2,470	228	100	115	125
12	201	300	254	1,480	324	416	2,290	2,360	229	102	108	127
13	214	322	251	1,860	315	367	2,370	2,080	229	124	114	133
14	226	421	279	1,880	332	361	3,150	1,640	228	108	111	137
15	217	430	e289	1,510	330	412	2,600	1,740	279	105	110	131
16	226	384	e320	1,180	327	634	1,960	1,630	272	95	120	127
17	234	357	e300	938	336	1,090	1,550	1,510	251	96	92	127
18	233	324	e280	770	327	1,040	1,460	1,590	248	95	63	131
19	229	296	e260	633	326	925	1,660	1,610	262	100	134	141
20	229	269	e240	528	322	869	2,090	1,460	273	109	111	140
21	228	244	e245	452	322	1,010	2,870	1,140	258	114	110	136
22	229	223	e250	389	323	1,420	3,560	915	261	105	113	126
23	229	198	e255	346	326	1,740	3,790	786	266	101	117	120
24	229	192	e258	329	338	1,590	3,070	721	246	99	111	129
25	229	188	e260	333	472	1,390	2,230	677	242	99	109	134
26	228	185	e270	328	686	1,410	1,780	607	242	107	100	145
27	229	175	e290	398	786	1,300	1,400	513	213	106	100	164
28	235	169	312	385	698	1,190	1,370	409	218	109	102	170
29	254	167	427	338	---	2,360	1,750	341	209	105	103	164
30	254	166	977	336	---	3,610	1,650	304	189	105	104	161
31	257	---	885	391	---	2,430	---	306	---	103	109	---
Total	6,871	8,106	9,071	35,266	11,103	33,363	68,690	58,099	7,448	3,445	3,439	3,943
Mean	222	270	293	1,138	397	1,076	2,290	1,874	248	111	111	131
Max	257	430	977	3,770	786	3,610	3,790	5,470	306	159	161	170
Min	190	166	166	328	315	361	1,370	304	189	95	63	100
Ac-ft	13,630	16,080	17,990	69,950	22,020	66,180	136,200	115,200	14,770	6,830	6,820	7,820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	106	249	519	713	953	1,175	1,273	686	174	31.2	30.5	51.9
Max	481	1,302	1,948	2,402	3,786	3,678	4,339	4,673	1,688	220	122	171
(WY)	(1928)	(1928)	(1974)	(1918)	(1996)	(1972)	(1917)	(1917)	(1906)	(1913)	(2008)	(2006)
Min	4.18	22.6	31.2	89.3	80.8	154	4.56	1.55	1.33	0.42	0.00	0.17
(WY)	(1978)	(1924)	(1919)	(1930)	(1911)	(1977)	(1968)	(1977)	(1979)	(1907)	(1906)	(1909)

14033500 Umatilla River near Umatilla, OR—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1905 - 2009	
Annual total	192,929		248,844			
Annual mean	527		682		494	
Highest annual mean					1,065	1917
Lowest annual mean					77.5	1977
Highest daily mean	2,850	Apr 15	5,470	May 7	15,600	Jan 30, 1965
Lowest daily mean	96	Jul 27	63	Aug 18	0.00	Jul 9, 1905
Annual seven-day minimum	105	Jul 22	101	Jul 14	0.00	Jul 9, 1905
Annual runoff (ac-ft)	382,700		493,600		357,900	
10 percent exceeds	1,310		2,010		1,380	
50 percent exceeds	289		272		160	
90 percent exceeds	121		109		7.2	

