



Water-Data Report 2013

14097100 WARM SPRINGS RIVER NEAR KAHNEETA HOT SPRINGS, OR

Deschutes Basin
Lower Deschutes Subbasin

LOCATION.--Lat 44°51'24", long 121°08'55" referenced to North American Datum of 1927, in SE ¼ SW ¼ sec.23, T.8 S., R.13 E., Wasco County, OR, Hydrologic Unit 17070306, Warm Springs Indian Reservation, on right bank, 25 ft upstream from bridge, 2.5 mi east of Kahneeta Hot Springs and at mile 4.6.

DRAINAGE AREA.--526 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,394.96 ft above NGVD of 1929 (levels by West Consultants).

REMARKS.--No estimated daily discharges. Records good. No regulation. Small diversions for irrigation upstream from station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--41 years (water years 1973-2013), 432 ft³/s, 11.17 in/yr, 313,200 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,600 ft³/s Feb. 7, 1996, gage height, 14.32 ft, from inside highwater mark, on basis of slope-area measurement of peak flow; minimum discharge recorded, 149 ft³/s Dec. 20, 1990, but may have been less during period of ice effect Dec. 20, 1990 to Jan. 10, 1991.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 5	1500	*1,010	*3.02

Minimum discharge, 229 ft³/s, Sept. 16, gage height, 1.03 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	268	297	405	308	357	341	476	495	343	276	248	242
2	268	298	495	299	350	356	503	468	331	272	248	240
3	266	296	484	297	344	361	545	451	322	268	246	240
4	268	291	520	307	343	359	564	432	313	264	245	240
5	269	288	892	333	346	355	621	428	307	264	244	243
6	269	285	792	305	351	363	761	428	302	265	242	251
7	271	283	608	324	348	357	857	427	295	265	240	249
8	271	283	527	480	340	350	851	422	291	263	240	244
9	271	284	473	562	335	344	756	417	287	262	241	242
10	271	283	438	432	332	338	695	410	284	260	270	241
11	270	280	420	380	327	341	680	402	281	256	261	238
12	271	283	403	321	327	352	653	397	280	256	250	238
13	274	291	385	294	332	361	631	393	280	257	247	237
14	275	290	370	336	336	376	609	392	281	256	244	237
15	280	286	356	350	340	392	580	384	279	255	243	239
16	316	284	359	335	340	410	560	379	278	255	246	238
17	313	287	465	326	339	428	531	384	277	255	246	237
18	288	289	444	321	336	423	504	373	274	253	243	238
19	283	295	391	318	333	413	495	361	272	251	242	238
20	289	426	386	313	329	452	564	350	272	250	241	238
21	292	575	380	304	329	559	580	346	274	246	240	243
22	297	469	379	298	326	534	553	347	272	244	242	251
23	299	391	378	307	331	510	533	347	274	245	256	252
24	288	392	358	311	325	489	514	343	301	244	251	253
25	283	441	357	319	326	472	503	336	323	243	254	256
26	280	408	355	321	330	459	496	340	331	242	262	252
27	283	372	338	319	324	449	497	334	306	241	254	246
28	297	351	329	315	325	446	503	338	291	242	248	249
29	317	340	331	333	---	454	510	351	285	244	246	341
30	313	359	328	338	---	454	517	371	278	244	246	470
31	303	---	312	350	---	461	---	362	---	244	243	---
Total	8,803	9,997	13,458	10,456	9,401	12,759	17,642	12,008	8,784	7,882	7,669	7,623
Mean	284	333	434	337	336	412	588	387	293	254	247	254
Max	317	575	892	562	357	559	857	495	343	276	270	470
Min	266	280	312	294	324	338	476	334	272	241	240	237
Ac-ft	17,460	19,830	26,690	20,740	18,650	25,310	34,990	23,820	17,420	15,630	15,210	15,120
Cfs/m	0.54	0.63	0.83	0.64	0.64	0.78	1.12	0.74	0.56	0.48	0.47	0.48
In.	0.62	0.71	0.95	0.74	0.66	0.90	1.25	0.85	0.62	0.56	0.54	0.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	258	312	464	585	685	613	585	531	384	280	256	251
Max	358	570	1,216	1,773	2,894	1,285	975	889	803	407	344	334
(WY)	(1998)	(1985)	(1997)	(1997)	(1996)	(1986)	(2012)	(2009)	(1974)	(1999)	(1999)	(1997)
Min	206	229	242	201	239	274	278	278	235	198	196	197
(WY)	(2006)	(1994)	(1994)	(1979)	(1994)	(1977)	(1977)	(1977)	(1994)	(1994)	(1994)	(1994)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1973 - 2013	
Annual total	187,637		126,482			
Annual mean	513		347		432	
Highest annual mean					786	1997
Lowest annual mean					246	1994
Highest daily mean	2,620	Mar 31	892	Dec 5	15,800	Feb 7, 1996
Lowest daily mean	266	Oct 3	237	Sep 13	160	Jan 1, 1979
Annual seven-day minimum	268	Sep 29	238	Sep 11	174	Dec 31, 1978
Annual runoff (ac-ft)	372,200		250,900		313,200	
Annual runoff (cfs)	0.975		0.659		0.822	
Annual runoff (inches)	13.27		8.95		11.17	
10 percent exceeds	893		499		720	
50 percent exceeds	390		321		319	
90 percent exceeds	275		244		229	

