

13215000 MALHEUR RIVER BELOW WARMSPRINGS RESERVOIR, NEAR RIVERSIDE, OR

Middle Snake-Boise Basin
Upper Malheur Subbasin

LOCATION.--Lat 43°34'28", long 118°12'35" referenced to North American Datum of 1983, in NW ¼ SW ¼ sec.17, T.23 S., R.37 E., Malheur County, OR, Hydrologic Unit 17050116, on left bank, 0.9 mi downstream from Warm Springs Dam, 3.0 mi upstream from South Fork, 4.0 mi northwest of Riverside and at mile 113.

DRAINAGE AREA.--1,100 mi², approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1906 to March 1907 and December 1908 (gage heights only), January 1909 to September 1910, December 1914 to July 1917, March 1919 to current year. Monthly discharge only for some periods, published in WSP 1317. Figures of discharge for January 1906 to March 1907, published in WSP 272 and 370, are unreliable and should not be used. Published as Middle Fork of Malheur River at Riverside 1906-7, as Middle Fork of Malheur River above South Fork, at Riverside 1909-10, as Malheur River above South Fork, at Riverside in WSP 370, 1906-10 and as Malheur River at Warm Springs reservoir site, near Riverside 1914-17.

REVISED RECORDS.--WSP 833: 1936. WSP 1063: 1942-45. WSP 1397: 1909-10, 1917. WSP 1447: 1955. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,305 ft above NGVD of 1929, by barometer. See WSP 1317 or 1737 for history of changes prior to Sept. 29, 1949.

REMARKS.--No estimated daily discharges. Records good above 40 ft³/s and poor below. Flow completely regulated since November 1919 by Warm Springs Reservoir (active capacity, 191,100 acre-ft). Diversions for irrigation upstream from station.

AVERAGE DISCHARGE FOR PERIOD OF RECORD.--1 year (water year 1916), 356 ft³/s, 4.39 in/yr, 258,500 acre-ft/yr. 94 years (water years 1916, 1920-2012), 190 ft³/s, 137,600 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 7,200 ft³/s Mar. 1, 1910, gage height, 10.7 ft, site and datum then in use, from rating curve extended above 820 ft³/s; maximum discharge since storage began November 1919, 3,150 ft³/s Mar. 22, 1984, gage height, 9.70 ft, from floodmark; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 599 ft³/s July 17; minimum daily discharge, 0.09 ft³/s on many days.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	194	0.21	0.15	0.20	0.14	0.09	0.09	120	387	564	537	463
2	191	0.21	0.15	0.21	0.11	0.09	0.09	176	401	564	536	465
3	191	0.21	0.15	0.16	0.11	0.09	0.09	253	407	567	534	463
4	191	0.26	0.15	0.15	0.11	0.09	0.09	288	416	568	534	461
5	177	0.24	0.13	0.13	0.10	0.10	0.09	288	420	574	534	436
6	141	0.24	0.11	0.11	0.10	0.10	0.09	288	420	589	528	424
7	130	0.21	0.10	0.11	0.10	0.09	0.09	288	420	595	525	411
8	131	0.21	0.10	0.11	0.10	0.09	0.09	287	406	595	525	393
9	131	0.21	0.10	0.10	0.10	0.09	0.09	313	399	592	519	387
10	118	0.19	0.10	0.10	0.10	0.09	0.09	327	399	589	509	385
11	85	0.17	0.09	0.10	0.10	0.09	101	345	411	587	506	369
12	69	0.17	0.09	0.10	0.10	0.09	150	355	424	587	505	348
13	69	0.15	0.09	0.10	0.10	0.09	165	355	454	589	504	343
14	31	0.15	0.09	0.10	0.10	0.10	165	387	472	589	501	320
15	0.15	0.15	0.09	0.10	0.10	0.10	165	403	495	584	519	262
16	0.22	0.17	0.09	0.10	0.09	0.10	165	403	518	593	519	235
17	0.28	0.21	0.09	0.10	0.10	0.10	163	402	525	599	512	235
18	0.22	0.25	0.09	0.10	0.10	0.10	161	417	523	598	515	234
19	0.21	0.24	0.09	0.09	0.10	0.10	168	424	524	594	516	235
20	0.21	0.21	0.09	0.10	0.10	0.10	194	425	545	590	513	235
21	0.23	0.21	0.09	0.11	0.10	0.10	206	425	558	590	512	235
22	0.28	0.25	0.09	0.15	0.10	0.09	206	424	558	588	498	233
23	0.28	0.21	0.09	0.15	0.10	0.09	206	424	572	522	491	231
24	0.28	0.21	0.09	0.15	0.10	0.09	206	416	581	490	491	197
25	0.28	0.21	0.09	0.15	0.10	0.09	206	395	575	484	491	157
26	0.28	0.21	0.09	0.21	0.10	0.09	160	363	571	522	491	115
27	0.28	0.21	0.09	0.21	0.10	0.09	38	351	570	542	491	89
28	0.25	0.21	0.09	0.21	0.10	0.09	38	351	573	544	491	83
29	0.21	0.16	0.10	0.21	0.09	0.09	38	351	568	542	479	82
30	0.22	0.15	0.11	0.17	---	0.09	64	278	566	538	470	82
31	0.24	---	0.15	0.15	---	0.09	---	379	---	538	464	---
Total	1,853.12	6.09	3.22	4.24	2.95	2.89	2,965.90	10,701	14,658	17,607	15,760	8,608
Mean	59.8	0.20	0.10	0.14	0.10	0.09	98.9	345	489	568	508	287
Max	194	0.26	0.15	0.21	0.14	0.10	206	425	581	599	537	465
Min	0.15	0.15	0.09	0.09	0.09	0.09	0.09	120	387	484	464	82
Ac-ft	3,680	12	6.4	8.4	5.9	5.7	5,880	21,230	29,070	34,920	31,260	17,070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	34.0	1.74	7.56	17.9	41.2	84.6	338	432	348	428	350	190
Max	138	55.6	323	452	763	1,440	1,603	1,162	570	677	575	398
(WY)	(1953)	(1916)	(1984)	(1971)	(1983)	(1983)	(1984)	(1958)	(2000)	(1945)	(1946)	(1999)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.4	65.9	4.55	0.00	0.00
(WY)	(1934)	(1933)	(1933)	(1933)	(1933)	(1933)	(1935)	(1932)	(1919)	(1919)	(1919)	(1988)

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SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1916 - 2012	
Annual total	104,816.34		72,172.41			
Annual mean	287		197		190	
Highest annual mean					566	1983
Lowest annual mean					46.8	1930
Highest daily mean	2,040	May 19	599	Jul 17	3,300	Mar 21, 1916
Lowest daily mean	0.07	Jan 1	0.09	Dec 11	0.00	Aug 1, 1919
Annual seven-day minimum	0.07	Jan 1	0.09	Dec 11	0.00	Aug 1, 1919
Annual runoff (ac-ft)	207,900		143,200		137,600	
10 percent exceeds	720		539		505	
50 percent exceeds	31		51		4.1	
90 percent exceeds	0.07		0.09		0.00	

