Water-Data Report 2012

06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT

Missouri Headwaters Basin
Madison Subbasin

LOCATION.--Lat 44°39'26", long 111°04'05" referenced to North American Datum of 1983, in NE ¼ NW ¼ SW ¼ sec.36, T.13 S., R.5 E., Gallatin County, MT, Hydrologic Unit 10020007, Yellowstone National Park, on left bank 0.7 mi downstream from Montana-Wyoming stateline, 1.5 mi east of West Yellowstone, 16.4 mi downstream from Gibbon River, and at river mile 132.7.

DRAINAGE AREA.--420 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1913 to December 1917, July 1918 to October 1921, June 1922 to September 1973, August 1983 to September 1986, October 1988 to current year. Monthly discharge only for some periods, published in Water Supply Paper 1309.

GAGE.--Water-stage recorder. Elevation of gage is 6,650 ft, referenced to the National Geodetic Vertical Datum of 1929. Prior to Oct. 20, 1918, nonrecording gage, and Oct. 20, 1918 to June 29, 1930, nonrecording gage or water-stage recorder at sites 2.5 mi upstream at different elevations. Supplementary nonrecording gage at site 0.3 mi downstream at different elevation used at time during 1927-30.

REMARKS.--Records are good except for estimated daily discharges, which are fair. No regulation or diversions occur upstream from station. U.S. Geological Survey satellite telemeter is located at the station. Several observations of water temperature and specific conductance were made during the year.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	446	491	446	442	433	436	657	803	749	482	424	461
2	449	456	436	439	436	426	549	776	777	476	422	487
3	453	454	445	444	427	425	508	715	825	471	420	432
4	463	464	448	439	417	431	514	696	825	465	420	420
5	493	468	e420	442	421	430	537	732	818	468	419	415
6	570	458	e430	446	420	444	530	708	826	487	419	415
7	549	458	e440	444	417	432	506	665	747	471	427	414
8	503	455	445	438	416	415	489	669	695	473	421	412
9	501	449	439	437	417	421	496	735	912	468	418	411
10	488	442	436	440	421	422	507	860	856	459	421	409
11	518	447	439	e420	424	427	548	825	749	456	439	405
12	561	474	438	e410	429	432	612	807	682	466	422	406
13	496	457	437	436	427	432	580	832	672	457	418	405
14	484	457	438	431	426	451	533	882	695	477	415	406
15	477	458	437	433	422	466	524	934	674	504	414	406
16	477	453	437	441	409	542	503	944	639	486	413	406
17	542	462	436	419	420	637	511	968	625	520	412	413
18	496	489	437	e430	422	626	558	957	628	470	409	408
19	478	482	437	e440	429	538	575	885	616	456	409	407
20	473	466	432	449	418	485	528	821	589	450	415	405
21	469	471	444	463	425	466	588	813	567	446	422	406
22	479	466	e420	453	434	464	661	859	558	445	415	406
23	468	467	e410	447	421	497	705	979	552	466	413	405
24	465	464	e420	443	424	508	781	891	540	449	409	411
25	506	462	431	434	437	543	923	819	528	441	406	449
26	469	446	432	444	434	564	1,020	840	521	437	407	452
27	463	445	430	442	424	519	1,110	954	511	437	421	447
28	455	454	435	423	435	495	931	832	501	441	411	427
29	458	453	448	439	435	495	796	780	493	434	405	422
30	455	461	456	438	---	486	722	753	487	429	403	415
31	464	---	466	436	---	614	---	730	---	426	405	---
Total	15,068	13,829	13,545	13,582	12,320	14,969	19,002	25,464	19,857	14,313	12,894	12,583
Mean	486	461	437	438	425	483	633	821	662	462	416	419
Max	570	491	466	463	437	637	1,110	979	912	520	439	487
Min	446	442	410	410	409	415	489	665	487	426	403	405
Ac-ft	29,890	27,430	26,870	26,940	24,440	29,690	37,690	50,510	39,390	28,390	25,580	24,960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2012, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	430	421	413	402	397	405	495	842	806	495	430	423
Max	710	697	641	586	572	539	671	1,725	1,479	917	759	704
(WY)	(1914)	(1914)	(1997)	(1997)	(1914)	(1917)	(1925)	(1997)	(1997)	(1913)	(1913)	(1913)
Min	297	297	304	304	303	313	369	388	341	282	273	282
(WY)	(1935)	(1932)	(1932)	(1932)	(1932)	(1943)	(1941)	(1934)	(1931)	(1931)	(1934)	(1934)

*During periods of operation (June 1913 to December 1917, July 1918 to October 1921, June 1922 to September 1973, August 1983 to September 1986, and October 1988 to current year).

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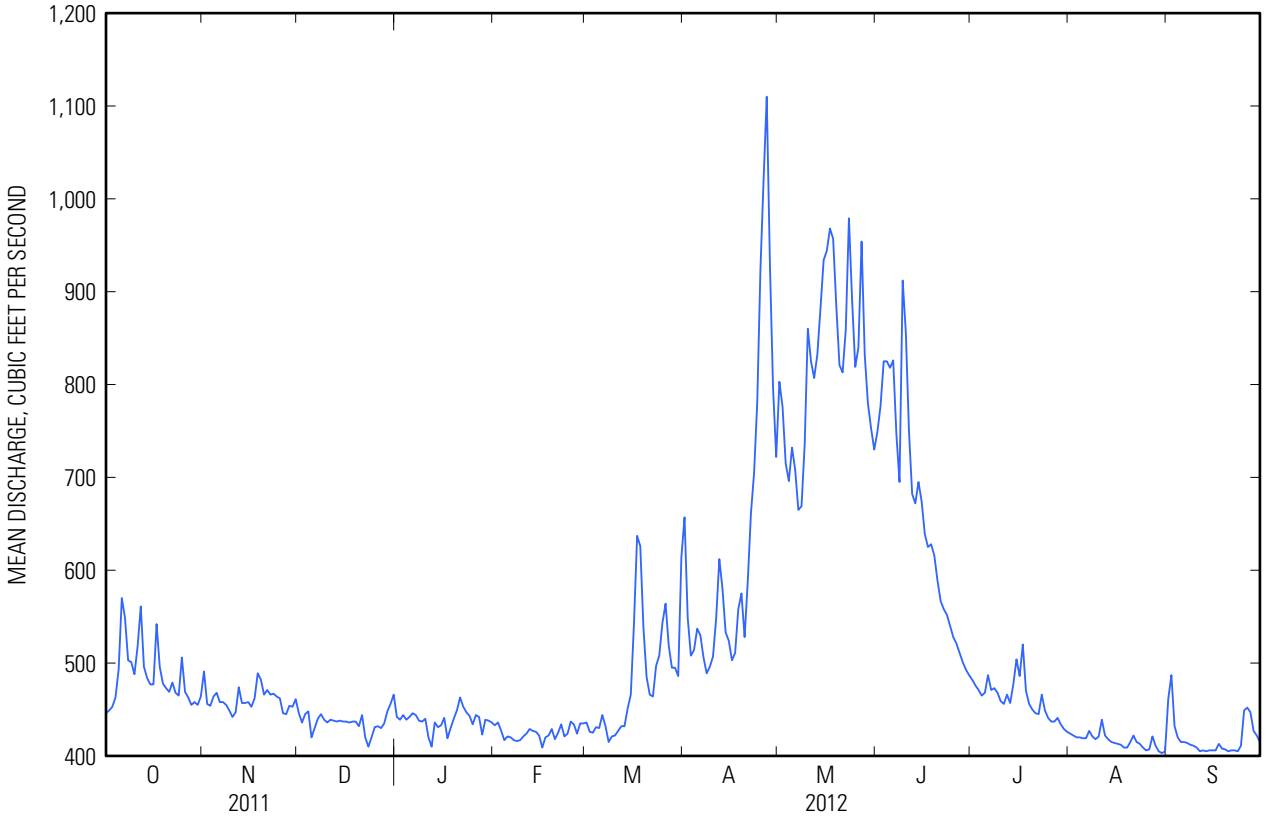
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1913 – 2012*	
Annual total	204,151		187,426			
Annual mean	559		512		495	
Highest annual mean					789	1997
Lowest annual mean					337	1934
Highest daily mean	2,270	Jun 8	1,110	Apr 27	2,750	May 18, 1996
Lowest daily mean	300	Feb 2	403	Aug 30	245	Jan 1, 1942
Annual seven-day minimum	338	Feb 1	406	Sep 10	267	Aug 6, 1931
Maximum peak flow			1,210	Apr 27	[a]2,820	May 18, 1996
Maximum peak stage			2.62	Apr 27	[b]10.00	Jan 8, 1937
Instantaneous low flow					[c]100	Feb 7, 1933
Annual runoff (ac-ft)	404,900		371,800		358,900	
10 percent exceeds	987		750		737	
50 percent exceeds	457		454		427	
90 percent exceeds	364		415		341	

*During periods of operation (June 1913 to December 1917, July 1918 to October 1921, June 1922 to September 1973, August 1983 to September 1986, and October 1988 to current year).

[a]Gage height, 3.78 ft.

[b]About, backwater from ice.

[c]Result of freezeup.