Water-Data Report 2012

06040800 MADISON RIVER ABOVE POWERPLANT, NEAR MCALLISTER, MT

Missouri Headwaters Basin
Madison Subbasin

LOCATION.--Lat 45°29'12", long 111°38'02" referenced to North American Datum of 1983, in NW ¼ NE ¼ SW ¼ sec.17, T.4 S., R.1 E., Madison County, MT, Hydrologic Unit 10020007, on right bank 160 ft upstream from Madison powerplant, 1.4 mi downstream from Ennis Lake, 5.6 mi northeast of McAllister, and at river mile 38.9.

DRAINAGE AREA.--2,186 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 2002 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,690 ft, referenced to the National Geodetic Vertical Datum of 1929.

REMARKS.--Records are fair. Flow is regulated by Hebgen Lake (station number 06038000) and Ennis Lake (station number 06040500). Diversions for irrigation of about 23,000 acres occur upstream from station. Flow through Madison Powerplant bypasses the station. U.S. Geological Survey satellite telemeter is installed at station. Several unpublished observations of water temperature and specific conductance were made during the year.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	148	346	497	513	340	246	256	745	1,260	166	257	104
2	148	349	474	346	477	272	356	729	1,480	374	312	100
3	147	411	433	243	570	272	474	654	2,000	607	120	102
4	148	433	391	244	593	272	559	613	2,420	587	107	107
5	149	434	e300	247	576	273	575	477	3,080	360	204	105
6	151	434	199	294	478	271	524	393	3,350	200	388	103
7	334	459	197	331	252	251	458	395	2,610	172	366	103
8	590	567	170	332	161	234	428	366	2,120	201	176	102
9	537	712	152	339	142	234	346	345	2,050	251	104	101
10	448	816	169	344	144	258	307	351	2,480	292	97	100
11	445	854	272	262	166	293	274	594	2,040	289	97	99
12	443	893	385	154	233	287	259	940	1,830	287	100	99
13	441	958	466	130	374	273	262	861	1,840	227	102	99
14	424	924	428	130	376	269	266	843	1,730	183	105	99
15	410	789	408	119	315	271	255	885	1,580	359	102	99
16	381	568	389	114	233	272	348	1,160	1,360	607	99	98
17	369	448	338	122	202	290	543	1,420	1,310	488	99	97
18	370	432	283	124	204	340	507	1,420	1,300	175	99	96
19	370	e430	260	193	205	343	466	1,360	1,300	147	99	95
20	369	e400	303	389	182	407	608	1,070	1,160	240	100	95
21	407	416	349	641	193	368	703	870	901	325	101	94
22	483	438	299	932	196	281	813	975	861	324	103	96
23	503	456	169	757	290	207	1,050	1,220	1,020	197	103	97
24	495	495	139	466	382	185	1,470	1,380	1,020	125	107	97
25	446	493	140	256	321	280	1,650	1,080	1,020	120	106	95
26	425	491	293	211	179	510	1,560	929	1,090	115	103	96
27	422	452	484	236	153	529	1,450	865	1,730	116	105	96
28	409	478	462	289	166	530	1,460	937	1,450	187	103	96
29	397	488	454	266	189	494	1,070	976	1,230	263	102	96
30	383	491	518	252	---	413	803	1,060	335	280	101	96
31	346	---	569	254	---	300	---	1,140	---	254	102	---
Total	11,538	16,355	10,390	9,530	8,292	9,725	20,100	27,053	48,957	8,518	4,269	2,962
Mean	372	545	335	307	286	314	670	873	1,632	275	138	98.7
Max	590	958	569	932	593	530	1,650	1,420	3,350	607	388	107
Min	147	346	139	114	142	185	255	345	335	115	97	94
Ac-ft	22,890	32,440	20,610	18,900	16,450	19,290	39,870	53,660	97,110	16,900	8,470	5,880

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	220	234	161	173	170	164	288	832	1,668	695	174	319
Max	372	545	335	307	286	314	670	1,815	3,861	2,347	252	1,850
(WY)	(2012)	(2012)	(2012)	(2012)	(2012)	(2012)	(2012)	(2006)	(2011)	(2011)	(2011)	(2008)
Min	102	98.9	85.7	109	92.2	111	213	216	299	275	115	98.4
(WY)	(2008)	(2008)	(2003)	(2008)	(2011)	(2004)	(2005)	(2004)	(2007)	(2012)	(2005)	(2005)

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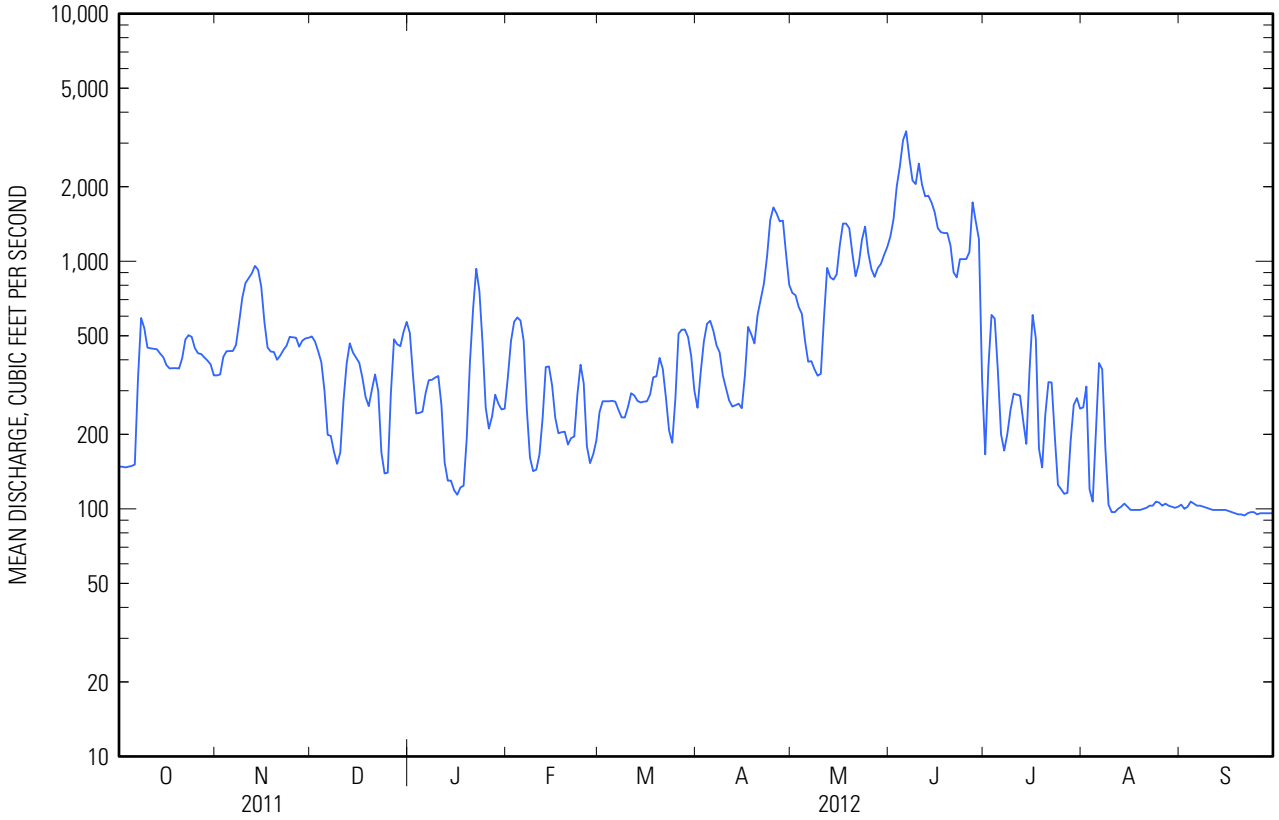
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 2002 - 2012	
Annual total	292,762		177,689			
Annual mean	802		485		435	
Highest annual mean					734	2011
Lowest annual mean					217	2004
Highest daily mean	5,690	Jun 25	3,350	Jun 6	5,690	Jun 25, 2011
Lowest daily mean	84	Feb 13	94	Sep 21	73	Dec 27, 2002
Annual seven-day minimum	86	Feb 9	96	Sep 19	77	Dec 22, 2002
Maximum peak flow			3,420	Jun 5	5,940	Jun 24, 2011
Maximum peak stage			8.80	Jun 5	10.80	Jun 24, 2011
Annual runoff (ac-ft)	580,700		352,400		314,900	
10 percent exceeds	2,680		1,080		1,060	
50 percent exceeds	293		344		200	
90 percent exceeds	95		102		98