Water-Data Report 2012

06033000 BOULDER RIVER NEAR BOULDER, MT

Missouri Headwaters Basin
Boulder Subbasin

LOCATION.--Lat 46°12'40", long 112°05'30" referenced to North American Datum of 1983, in SE ¼ NE ¼ SW ¼ sec.3, T.5 N., R.4 W., Jefferson County, MT, Hydrologic Unit 10020006, on left bank 40 ft downstream from county bridge, 1.1 mile downstream from Muskrat Creek, 2.0 mi southeast of Boulder, and at river mile 44.1.

DRAINAGE AREA.--381 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1929 to December 1932, March 1934 to September 1972, October 1984 to current year. Monthly discharge only for some periods, published in Water Supply Paper (WSP) 1309.

REVISED RECORDS.--WSP 1279: 1931.

GAGE.--Water-stage recorder. Elevation of gage is 4,810 ft, referenced to the National Geodetic Vertical Datum of 1929. Prior to Aug. 29, 1946, nonrecording gage at present site and elevation.

REMARKS.--Records are good. Diversions for irrigation of about 3,500 acres occur upstream from station. U.S. Geological Survey satellite telemeter is located at the station. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 22, 1981, reached a discharge of 7,000 ft^3/s, gage height, 12.3 ft, from floodmarks.

Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 06033000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/06033000.2012.pdf

06033000 BOULDER RIVER NEAR BOULDER, MT—Continued

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	34	58	43	46	41	38	298	510	461	93	36	16
2	31	35	46	47	42	38	252	437	490	97	34	16
3	28	43	46	46	38	38	189	397	539	85	33	16
4	28	54	44	46	38	41	176	391	463	72	33	14
5	39	61	34	45	37	48	186	393	470	67	33	15
6	51	34	35	44	37	48	165	349	570	66	33	15
7	52	30	40	42	37	38	132	314	468	67	32	16
8	64	47	41	43	37	40	124	323	394	68	29	16
9	63	43	40	44	38	44	132	388	404	59	26	15
10	56	39	37	43	38	51	154	472	379	52	27	17
11	49	44	36	39	39	57	197	411	400	50	29	15
12	58	51	36	38	39	57	312	393	352	45	24	15
13	56	51	35	37	40	55	321	404	394	42	23	14
14	54	54	35	38	40	49	281	433	365	45	22	14
15	56	47	37	38	38	54	266	494	301	118	21	14
16	66	37	39	37	39	67	236	572	274	127	23	16
17	74	44	41	36	40	63	228	611	255	160	22	14
18	66	47	42	34	39	68	232	543	237	109	21	14
19	59	41	42	35	38	51	228	453	233	81	20	13
20	59	38	43	37	39	35	222	400	216	69	20	14
21	60	44	44	39	39	77	296	392	195	66	20	13
22	60	49	42	40	53	100	382	505	184	54	23	13
23	59	52	42	40	47	113	494	460	175	52	22	13
24	62	52	41	39	44	118	654	377	160	46	19	14
25	74	50	42	40	42	142	819	341	147	42	18	14
26	59	45	42	40	40	163	959	326	132	40	18	14
27	59	49	43	39	39	214	1,060	327	123	42	18	16
28	49	51	44	39	36	198	788	349	115	50	18	16
29	60	51	47	41	39	140	636	433	108	48	16	15
30	57	51	49	43	---	140	551	452	101	45	16	16
31	60	---	49	42	---	198	---	387	---	40	15	---
Total	1,702	1,392	1,277	1,257	1,153	2,583	10,970	13,037	9,105	2,097	744	443
Mean	54.9	46.4	41.2	40.5	39.8	83.3	366	421	304	67.6	24.0	14.8
Max	74	61	49	47	53	214	1,060	611	570	160	36	17
Min	28	30	34	34	36	35	124	314	101	40	15	13
Ac-ft	3,380	2,760	2,530	2,490	2,290	5,120	21,760	25,860	18,060	4,160	1,480	879

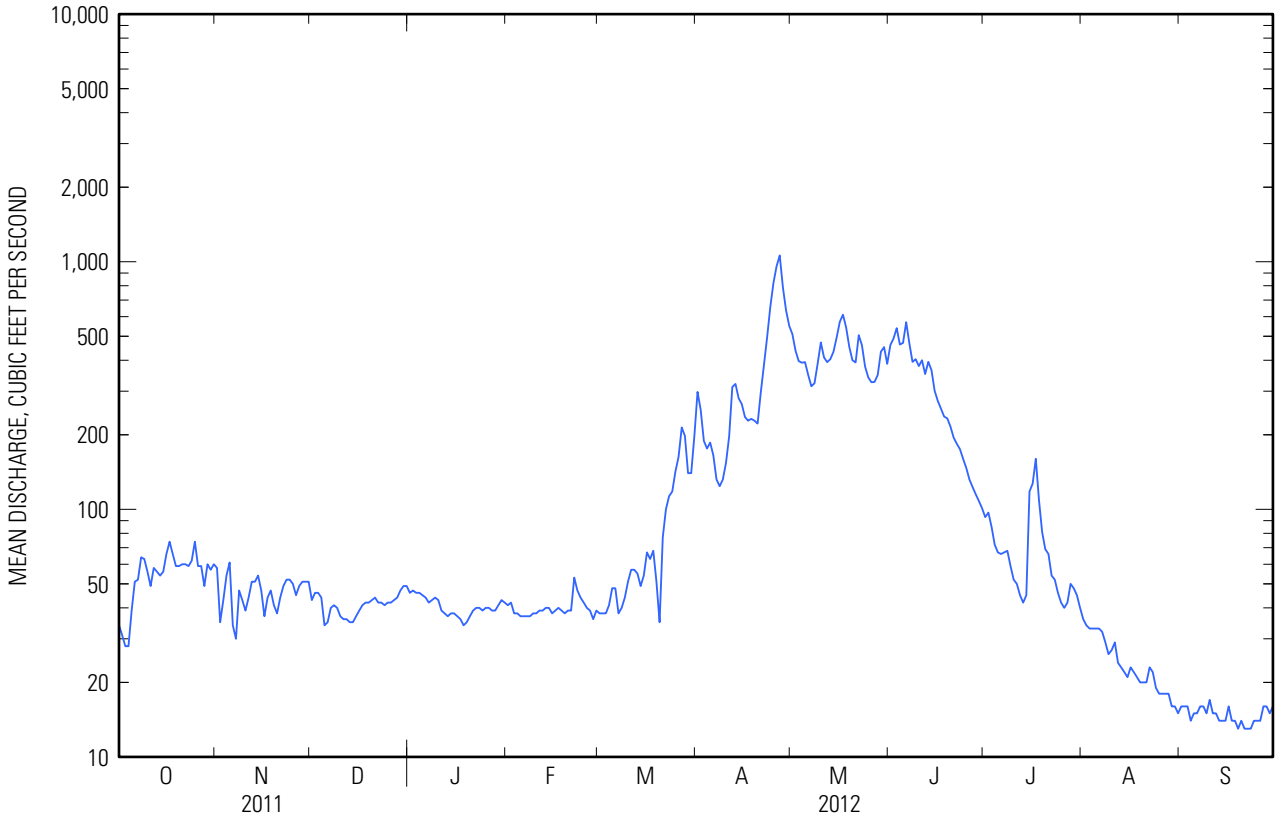
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2012, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	37.1	36.0	29.0	27.0	30.5	48.6	167	465	430	98.1	32.6	28.7
Max	113	82.1	53.0	55.3	68.5	121	511	961	1,530	374	194	156
(WY)	(1966)	(2009)	(1996)	(2011)	(1971)	(1986)	(1930)	(1948)	(2011)	(1938)	(1993)	(1993)
Min	5.85	9.09	7.45	10.1	7.71	20.7	46.0	126	70.4	10.9	7.11	5.69
(WY)	(1936)	(1936)	(1936)	(1937)	(1937)	(1937)	(1967)	(1992)	(2000)	(1931)	(1931)	(1935)

*During periods of operation (May 1929 to December 1932, March 1934 to September 1972, October 1984 to current year).

06033000 BOULDER RIVER NEAR BOULDER, MT—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1929 – 2012*	
Annual total	98,483		45,760			
Annual mean	270		125		120	
Highest annual mean					272	2011
Lowest annual mean					48.2	2000
Highest daily mean	2,950	Jun 8	1,060	Apr 27	2,950	Jun 8, 2011
Lowest daily mean	28	Oct 3	13	Sep 19	0.00	Jul 15, 1931
Annual seven-day minimum	30	Sep 28	13	Sep 17	1.0	Jan 21, 1930
Maximum peak flow			1,180	Apr 27	3,520	Jun 7, 2011
Maximum peak stage			7.78	Apr 27	10.90	Jun 9, 1964
Instantaneous low flow			[a]12	Sep 19	0.00	Jul 15, 1931
Annual runoff (ac-ft)	195,300		90,760		86,670	
10 percent exceeds	1,080		393		343	
50 percent exceeds	54		47		37	
90 percent exceeds	36		18		16	

*During periods of operation (May 1929 to December 1932, March 1934 to September 1972, October 1984 to current year).
[a]Gage height, 4.77 ft.