Water-Data Report 2013

06019500 RUBY RIVER ABOVE RESERVOIR, NEAR ALDER, MT

Missouri Headwaters Basin
Ruby Subbasin

LOCATION.--Lat 45°11'32", long 112°08'34" referenced to North American Datum of 1983, in NW ¼ SE ¼ SW ¼ sec.30, T.7 S., R.4 W., Madison County, MT, Hydrologic Unit 10020003, on right bank at county road bridge, 0.7 mi downstream from Mormon Creek, 4.2 mi upstream from Ruby Dam, 9.3 mi south of Alder, and at river mile 52.1.

DRAINAGE AREA.--534 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1938 to current year; seasonal record for water year 2007. Monthly discharge only for May 1938, published in Water Supply Paper (WSP) 1309.

REVISED RECORDS.--WSP 1309: 1938, maximum discharge. WSP 1559: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,400 ft, referenced to the North American Vertical Datum of 1988. Prior to Oct. 1, 1938, nonrecording gage was located at bridge 2.0 mi upstream at different elevation. Oct. 1, 1938, to Aug. 5, 1955, water-stage recorder was located at site 2.2 mi upstream at a different elevation. Aug. 6, 1955 to Sept. 30, 1997, water-stage recorder was located 2.3 mi upstream at a different elevation.

REMARKS.--Records are good except for estimated daily discharges, which are poor. Diversion for irrigation of about 3,000 acres occurs upstream from the 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 Several unpublished observations of water temperature and specific conductance were made during the year.

Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 06019500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/06019500.2013.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	110	119	115	e85	102	106	129	130	271	133	98	69
2	111	119	114	e85	102	107	132	124	279	123	96	69
3	110	117	110	e85	104	107	135	123	312	117	93	72
4	112	116	108	e90	105	105	136	129	293	113	93	74
5	115	116	115	e100	105	100	139	136	282	114	93	73
6	113	116	110	117	104	108	138	143	297	119	90	78
7	113	116	110	121	103	106	132	153	305	127	80	75
8	116	114	101	117	104	105	131	179	327	145	73	76
9	124	120	96	107	104	105	116	215	328	127	77	77
10	125	113	98	105	104	105	117	212	321	115	83	77
11	126	e90	101	e90	100	109	123	247	317	114	85	76
12	125	e100	105	e75	103	107	122	277	293	117	85	78
13	127	109	105	e70	105	110	123	313	264	112	84	85
14	128	115	105	e75	103	112	122	411	259	115	81	88
15	125	115	109	e85	103	114	117	377	228	118	77	88
16	128	112	107	e85	103	115	113	321	184	123	73	88
17	130	114	106	e90	103	114	108	334	168	125	74	90
18	125	118	e95	e90	103	105	110	378	162	143	75	92
19	122	117	e90	e90	102	110	119	364	158	125	71	94
20	125	118	97	e85	105	110	116	366	157	120	61	93
21	124	119	104	e85	106	113	115	350	153	117	62	94
22	123	111	112	e90	105	104	118	333	161	110	62	93
23	125	103	114	e90	105	109	113	342	166	109	63	97
24	120	111	107	e95	105	104	115	323	155	107	68	98
25	114	115	104	e95	103	105	114	296	148	106	67	102
26	118	102	103	104	106	110	118	273	146	103	67	108
27	121	98	102	104	103	109	124	277	146	99	65	104
28	125	108	103	103	106	114	130	287	135	104	66	101
29	125	113	e100	102	---	118	139	347	134	101	70	99
30	125	113	e95	103	---	120	142	357	142	101	71	103
31	121	---	e90	103	---	122	---	308	---	103	70	---
Total	3,751	3,367	3,231	2,921	2,906	3,388	3,706	8,425	6,691	3,605	2,373	2,611
Mean	121	112	104	94.2	104	109	124	272	223	116	76.5	87.0
Max	130	120	115	121	106	122	142	411	328	145	98	108
Min	110	90	90	70	100	100	108	123	134	99	61	69
Ac-ft	7,440	6,680	6,410	5,790	5,760	6,720	7,350	16,710	13,270	7,150	4,710	5,180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2013, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	123	122	111	103	102	110	163	413	473	195	120	115
Max	185	177	170	158	135	181	288	1,010	1,117	482	235	171
(WY)	(1984)	(1984)	(1948)	(1948)	(1971)	(1960)	(1962)	(1984)	(1984)	(1975)	(1975)	(1984)
Min	83.4	87.8	80.3	69.8	79.2	84.3	94.6	187	136	74.8	59.3	73.3
(WY)	(1940)	(1940)	(1940)	(1943)	(1942)	(1945)	(1945)	(2002)	(1987)	(1961)	(1940)	(1988)

*May 1938 to current year; seasonal record only for water year 2007.

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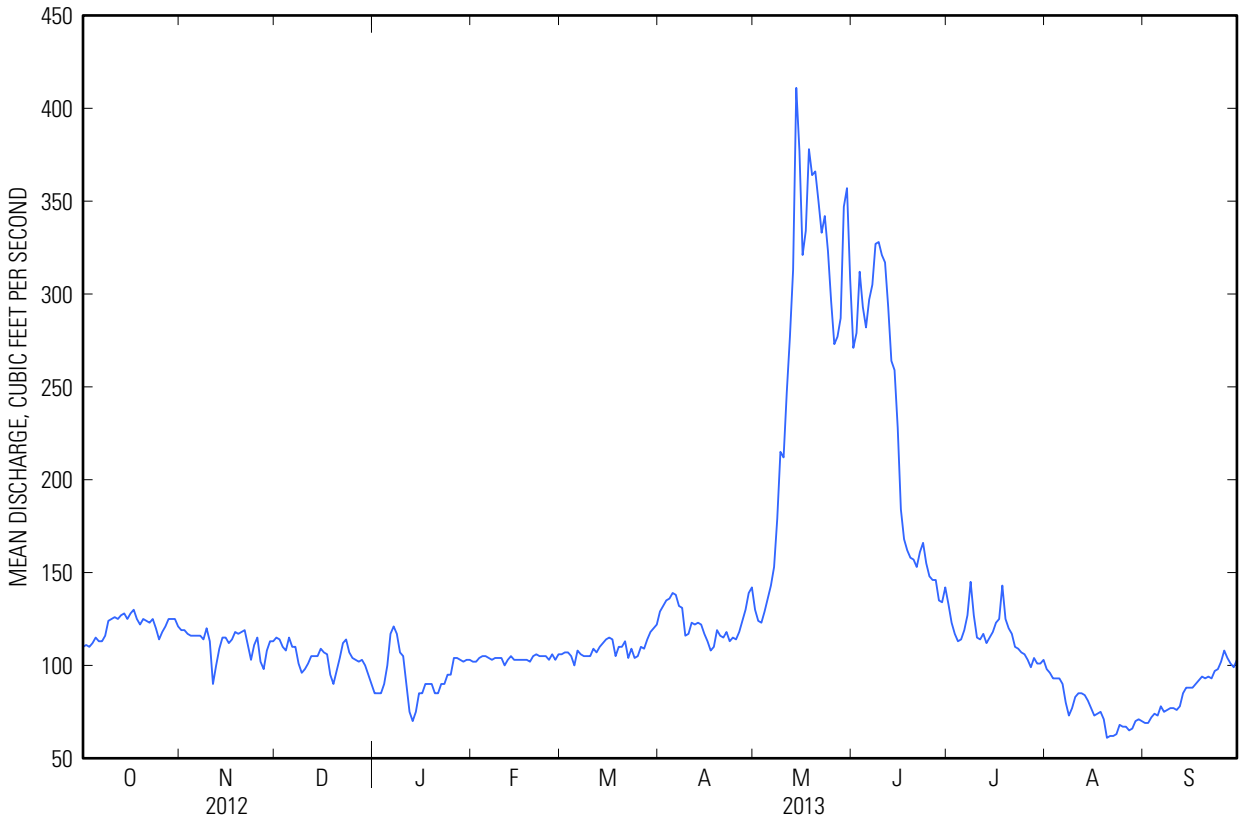
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1938 – 2013*	
Annual total	58,503		46,975			
Annual mean	160		129		180	
Highest annual mean					336	1984
Lowest annual mean					119	1961
Highest daily mean	659	Apr 27	411	May 14	2,940	May 16, 1984
Lowest daily mean	89	Aug 15	61	Aug 20	35	Jan 23, 1962
Annual seven-day minimum	92	Aug 14	64	Aug 20	38	Aug 14, 1992
Maximum peak flow			[a]541	May 14	[c]3,810	May 16, 1984
Maximum peak stage			[b]6.25	Jan 18	[b]6.25	Jan 18, 2013
Instantaneous low flow					[d]34	Aug 14, 1992
Annual runoff (ac-ft)	116,000		93,170		130,500	
10 percent exceeds	296		220		352	
50 percent exceeds	119		110		119	
90 percent exceeds	103		82		90	

*May 1938 to current year; seasonal record only for water year 2007.
[a]Gage height 4.17 ft.
[b]Backwater from ice.
[c]Gage height 6.24 ft, site and datum then in use.
[b]Backwater from ice.
[d]Gage height, 1.99 ft, site and datum then in use.