Water-Data Report 2012

06126500 MUSSELSHELL RIVER NEAR ROUNDUP, MT

Musselshell Basin
Middle Musselshell Subbasin

LOCATION.--Lat 46°25'41", long 108°34'21" referenced to North American Datum of 1983, in NW ¼ SE ¼ SE ¼ sec.22, T.8 N., R.25 E., Musselshell County, MT, Hydrologic Unit 10040202, on left bank 20 ft downstream from Halfbreed Creek, 0.1 mi upstream from bridge on U.S. Highway 87, 2.0 mi southwest of Roundup, and at river mile 211.6.

DRAINAGE AREA.--4,023 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1946 to current year. Monthly discharge only from October 1947 to September 1949, published in Water Supply Paper (WSP) 1309.

REVISED RECORDS.--WSP 1086: 1946. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,188.15 ft, referenced to the National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Sept. 26, 1949, nonrecording gage at present site and elevation.

REMARKS.--Records are good except for estimated daily discharges, which are poor. Some regulation occurs by Bair (station number 06116500), Martinsdale (station number 06119000) and Deadmans Basin (station number 06122500) Reservoirs. Diversions for irrigation include about 39,100 acres upstream from station, of which about 35,900 acres are flood irrigated. Several unpublished observations of water temperature made during the year. U.S. Army Corps of Engineers satellite telemeter is located at the station.

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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	92	171	e170	e160	e180	e160	166	249	208	134	108	59
2	91	166	e150	e150	e190	e160	145	225	176	139	99	57
3	89	169	e130	e160	e190	e150	136	196	154	149	101	55
4	88	172	e110	e160	e170	e160	133	175	142	166	98	54
5	87	182	e80	e170	e170	e180	131	160	177	193	94	53
6	91	e180	e90	e160	e160	e190	131	147	202	217	86	53
7	130	e170	e110	e150	e150	e200	135	137	206	231	82	49
8	157	e160	e120	e150	e150	e210	142	128	221	232	78	43
9	133	e180	e120	e150	e150	e200	149	122	242	230	71	41
10	119	e180	e140	e150	e150	e210	154	109	225	225	76	37
11	115	200	e160	e130	e150	231	155	102	195	227	91	36
12	109	210	e160	e120	e140	216	158	89	162	221	102	34
13	99	210	e160	e120	e150	208	156	78	150	224	107	33
14	95	208	e150	e100	e150	214	158	71	148	223	107	32
15	95	201	e150	e90	e150	212	202	69	161	212	107	32
16	94	e170	e150	e80	e150	202	187	67	166	201	112	32
17	95	e160	e150	e90	e150	191	167	68	166	202	117	32
18	95	e160	e160	e80	e150	184	154	73	158	213	119	28
19	94	e150	e160	e70	e150	195	146	99	126	197	118	26
20	94	e140	e160	e90	e150	209	140	174	138	171	118	25
21	95	e160	e170	e120	e160	209	133	203	142	152	118	25
22	95	e180	e150	e140	e160	208	130	195	141	146	113	23
23	93	e200	e150	e150	e170	204	128	182	130	147	94	24
24	93	e210	e160	e150	e170	195	124	165	125	152	87	24
25	93	e220	e150	e160	e170	195	119	180	127	142	83	27
26	92	e190	e150	e160	e170	197	116	203	134	131	80	28
27	92	e170	e150	e170	e160	213	116	223	133	137	76	27
28	91	e180	e160	e160	e150	196	118	248	132	130	75	24
29	127	e170	e170	e170	e160	181	160	276	118	125	73	25
30	166	e180	e160	e180	---	178	212	279	125	128	66	26
31	171	---	e170	e180	---	175	---	265	---	124	61	---
Total	3,270	5,399	4,520	4,270	4,620	6,033	4,401	4,957	4,830	5,521	2,917	1,064
Mean	105	180	146	138	159	195	147	160	161	178	94.1	35.5
Max	171	220	170	180	190	231	212	279	242	232	119	59
Min	87	140	80	70	140	150	116	67	118	124	61	23
Ac-ft	6,490	10,710	8,970	8,470	9,160	11,970	8,730	9,830	9,580	10,950	5,790	2,110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	77.0	72.2	63.4	61.1	89.1	179	167	421	684	292	183	122
Max	335	242	283	222	414	1,281	788	2,809	5,095	1,308	563	504
(WY)	(1994)	(1994)	(1976)	(1976)	(1971)	(1978)	(1975)	(2011)	(2011)	(1975)	(1993)	(1993)
Min	1.43	3.99	3.65	5.29	5.82	6.81	1.77	30.0	36.6	14.5	2.11	0.01
(WY)	(2002)	(2002)	(2002)	(2002)	(1985)	(2002)	(2002)	(2002)	(2001)	(2002)	(2001)	(2002)

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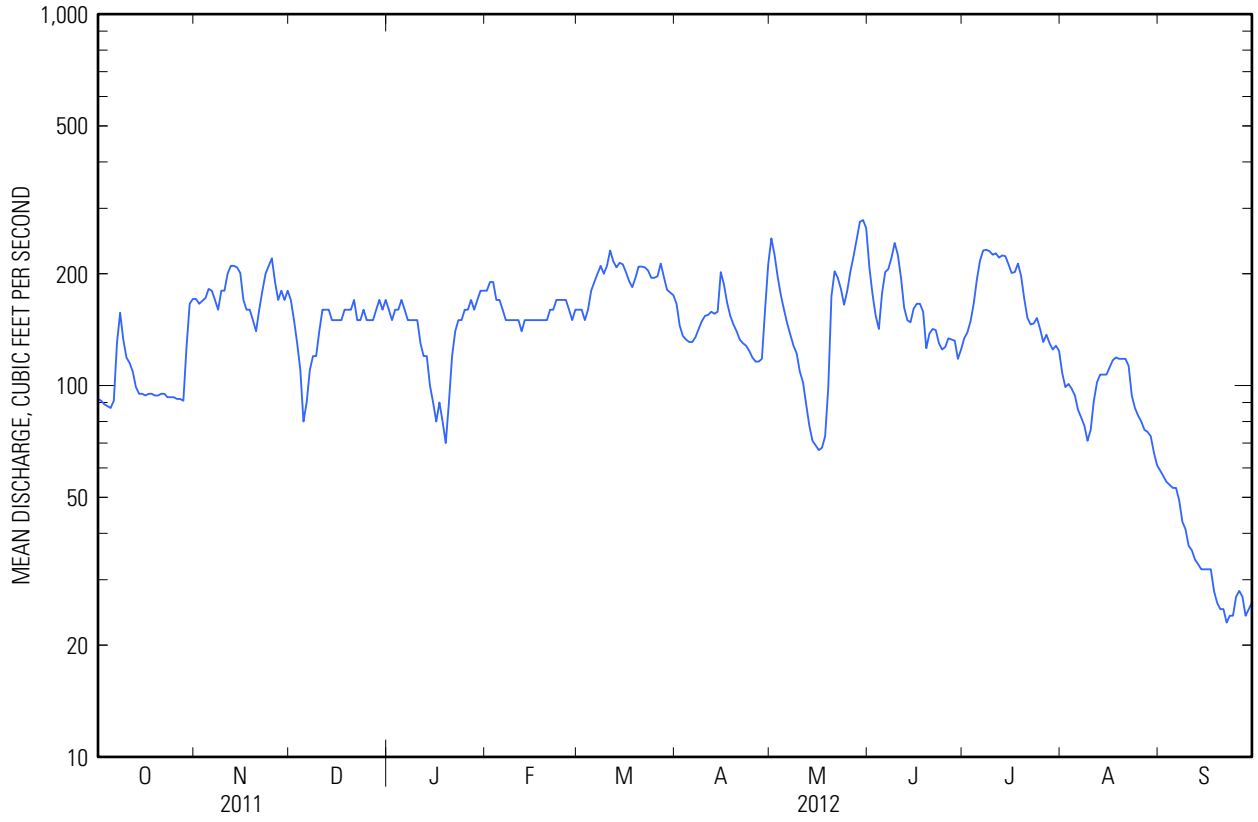
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1947 - 2012	
Annual total	317,965		51,802			
Annual mean	871		142		[c]201	
Highest annual mean					851	2011
Lowest annual mean					17.6	2002
Highest daily mean	14,000	May 26	279	May 30	14,000	May 26, 2011
Lowest daily mean	75	Jan 11	23	Sep 22	0.00	Sep 4, 2002
Annual seven-day minimum	85	Jan 9	25	Sep 19	0.00	Sep 11, 2002
Maximum peak flow			[a]280	May 30	15,000	May 26, 2011
Maximum peak stage			[b]3.07	Nov 24	14.78	May 26, 2011
Annual runoff (ac-ft)	630,700		102,700		145,700	
10 percent exceeds	2,560		208		403	
50 percent exceeds	200		150		94	
90 percent exceeds	95		71		16	

[a]Gage height, 2.97 ft.
[b]Backwater from ice.
[c]Median of yearly mean discharges, 161 ft³/s, 116,600 ac-ft/yr.