

Water-Data Report 2012

**06127500 MUSSEL SHELL RIVER AT MUSSEL SHELL, MT**

Musselshell Basin  
Middle Musselshell Subbasin

LOCATION.--Lat 46°31'21", long 108°06'32" referenced to North American Datum of 1983, in SE ¼ SW ¼ SW ¼ sec.20, T.9 N., R.29 E., Musselshell County, MT, Hydrologic Unit 10040202, on left bank 0.9 mi upstream from Hawk Creek, 1 mi west of Musselshell, and at river mile 164.5.

DRAINAGE AREA.--4,568 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--August 1928 to September 1932 (no records December to February for the water years 1930-31), August 1945 to September 1979, October 1982 to September 1983, October 1983 to current season (seasonal record only). Monthly discharge only for some periods, published in Water Supply Paper (WSP) 1309.

REVISED RECORDS.--Water Supply Paper 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 2,984.72 ft, referenced to the National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 8, 1949, nonrecording gage located at site 1 mi downstream at different elevations.

REMARKS.--Records are fair. Some regulation occurs by Bair (station number 06116500), Martinsdale (station number 06119000), and Deadman's Basin (station number 06122500) Reservoirs. Diversions for irrigation of about 44,600 acres occur upstream from station, of which about 39,400 acres is flood irrigated. 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 Several unpublished observations of water temperature and specific conductance were made during the year.

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**06127500 MUSSELSHELL RIVER AT MUSSELSHELL, MT—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**  
**DAILY MEAN VALUES**

<b>Day</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>1</b>	115						207	242	227	99	80	48
<b>2</b>	112						195	256	195	98	67	49
<b>3</b>	109						182	230	174	97	62	47
<b>4</b>	108						175	207	159	96	58	48
<b>5</b>	107						174	189	148	124	54	48
<b>6</b>	109						177	174	179	165	49	49
<b>7</b>	129						179	159	184	189	47	52
<b>8</b>	158						181	148	184	183	39	46
<b>9</b>	164						186	137	211	179	31	41
<b>10</b>	145						192	132	202	171	29	41
<b>11</b>	137						192	123	183	177	37	39
<b>12</b>	131						198	112	161	177	52	34
<b>13</b>	124						200	103	143	181	60	33
<b>14</b>	118						192	97	133	182	61	32
<b>15</b>	116						206	91	138	186	60	32
<b>16</b>	117						226	87	159	176	63	33
<b>17</b>	116						215	86	153	180	67	35
<b>18</b>	115						204	87	157	181	70	35
<b>19</b>	114						196	86	144	187	71	32
<b>20</b>	114						190	113	129	171	70	27
<b>21</b>	114						183	168	137	153	73	25
<b>22</b>	114						178	164	129	138	77	23
<b>23</b>	113						172	163	129	132	72	20
<b>24</b>	113						168	153	124	127	61	19
<b>25</b>	114						164	155	121	122	57	20
<b>26</b>	113						160	193	124	110	57	20
<b>27</b>	113						163	232	115	101	61	22
<b>28</b>	113						171	245	113	105	57	24
<b>29</b>	113						177	268	108	96	55	24
<b>30</b>	137						211	269	96	92	52	20
<b>31</b>	166						---	262	---	88	48	---
<b>Total</b>	3,781						5,614	5,131	4,559	4,463	1,797	1,018
<b>Mean</b>	122						187	166	152	144	58.0	33.9
<b>Max</b>	166						226	269	227	189	80	52
<b>Min</b>	107						160	86	96	88	29	19
<b>Ac-ft</b>	7,500						11,140	10,180	9,040	8,850	3,560	2,020

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2012, BY WATER YEAR (WY)\***

	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>
<b>Mean</b>	75.5	76.5	77.5	71.0	108	273	175	358	604	239	136	104
<b>Max</b>	328	236	269	222	460	1,356	859	2,578	5,519	1,376	534	477
(WY)	(1994)	(1976)	(1976)	(1976)	(1971)	(1979)	(1975)	(2011)	(2011)	(1975)	(1993)	(1993)
<b>Min</b>	0.00	0.00	0.00	0.00	0.04	12.7	1.05	0.36	0.49	0.00	0.00	0.00
(WY)	(1932)	(1932)	(1932)	(1932)	(1932)	(1932)	(2004)	(1931)	(1931)	(1930)	(1931)	(1931)

\*During periods of record 1928-29, 1931-32, 1945-79, 1982-83; seasonal records October 1983 to current year.

**06127500 MUSSELSHELL RIVER AT MUSSELSHELL, MT—Continued****SUMMARY STATISTICS**

	<b>Calendar Year 2011</b>		<b>Water Year 2012</b>		<b>Water Years 1928 – 2012*</b>	
<b>Annual mean</b>					215	
<b>Highest annual mean</b>					609	
<b>Lowest annual mean</b>					34.1	
<b>Highest daily mean</b>	14,900	May 27	269	May 30	14,900	May 27, 2011
<b>Lowest daily mean</b>	107	Oct 5	19	Sep 24	0.00	Sep 1, 1929
<b>Annual seven-day minimum</b>					0.00	
<b>Maximum peak flow</b>			275	May 29	16,200	May 27, 2011
<b>Maximum peak stage</b>			4.52	May 29	a13.23 May 27, 2011	
<b>Annual runoff (ac-ft)</b>					155,800	
<b>10 percent exceeds</b>					464	
<b>50 percent exceeds</b>					105	
<b>90 percent exceeds</b>					24	

\*During periods of record 1928-29, 1931-32, 1945-79, 1982-83; seasonal records October 1983 to current year.

aFrom floodmarks.

