

Water-Data Report 2013

06185500 MISSOURI RIVER NEAR CULBERTSON, MT

Missouri-Poplar Basin
Charlie-Little Muddy Subbasin

LOCATION.--Lat 48°07'25", long 104°28'24" referenced to North American Datum of 1983, in SE ¼ NW ¼ sec.3, T.27 N., R.56 E., Richland County, MT, Hydrologic Unit 10060005, On right bank at upstream side of bridge on State Highway 16, 2.5 mi southeast of Culbertson, 10 mi downstream from Big Muddy Creek, and at river mile 1,620.76.

DRAINAGE AREA.—88,386 mi², revised.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1941 to December 1951, April 1958 to current year.

REVISED RECORDS.--Water Supply Paper 1729: Drainage area. WDR MT-2013: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,883.4 ft, referenced to the National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). July 1 to Nov. 6, 1941, water-stage recorder at site 400 ft. upstream at elevation 0.11 ft. higher. Nov. 7, 1941, to Aug. 17, 1950, water-stage recorder at site 580 ft. downstream at present elevation. Aug. 18, 1950, to Dec. 31, 1951, nonrecording gage on bridge at present elevation. Apr. 1, 1958, to Nov. 1, 1967, water-stage recorder at site 580 ft. downstream at present elevation.

REMARKS.--Records are good except for estimated daily discharges, which are poor. Flow is partly regulated by Fort Peck Lake (station number 06131500) and many other reservoirs upstream from station. Diversions for irrigation of about 1,030,400 acres occur upstream from station. 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 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	10,000	10,900	11,200	e11,700	e10,500	e11,100	e9,500	10,500	13,600	11,100	8,200	8,810
2	10,100	11,100	11,300	e11,700	e10,800	e11,000	e10,700	10,000	15,400	11,600	8,110	8,670
3	10,200	11,200	11,300	e11,900	e11,000	e10,600	e10,900	9,050	14,600	11,500	7,980	8,490
4	10,300	11,200	11,100	e11,700	e11,200	e10,600	e12,300	9,010	15,900	11,400	8,110	8,370
5	10,300	11,100	11,300	e11,700	e11,200	e8,400	e14,400	10,400	17,300	11,100	8,350	8,200
6	10,200	11,300	11,300	e11,800	e11,200	e8,600	e14,800	10,100	17,900	10,900	8,840	8,440
7	10,300	11,200	11,500	e12,800	e11,200	e6,800	e15,700	9,980	18,500	10,600	8,440	8,430
8	10,300	10,900	e11,600	e13,400	e11,200	e6,800	16,900	9,690	19,100	10,100	8,370	8,460
9	10,200	11,000	e11,400	e13,200	e11,100	e6,750	17,000	9,530	19,000	10,200	8,440	8,460
10	10,000	11,200	e11,500	e12,800	e11,100	e6,600	15,400	9,500	18,900	9,640	8,640	8,590
11	10,000	11,200	e11,500	e13,100	e11,000	e6,800	14,500	9,400	18,500	9,450	8,630	8,690
12	10,200	11,200	e11,600	e13,100	e10,900	e6,400	13,400	9,280	18,700	9,400	8,620	8,500
13	9,990	10,900	11,700	e13,100	e10,900	e6,300	11,700	9,260	18,600	9,290	8,660	8,890
14	10,000	10,900	11,700	e13,200	e11,000	e6,200	10,300	9,130	18,700	9,310	8,590	9,080
15	10,200	10,900	11,600	e13,000	e11,100	e6,300	9,700	9,010	19,100	9,620	8,590	9,030
16	10,300	10,900	11,700	e13,000	e11,100	e6,800	9,230	9,120	19,100	9,310	8,630	9,090
17	10,500	10,800	e11,700	e12,600	e11,100	e7,500	8,750	9,080	18,900	9,470	8,600	9,120
18	10,400	11,000	e11,600	e13,000	e11,000	e7,150	8,330	8,980	18,600	9,550	8,630	8,930
19	10,300	11,200	e11,600	e13,000	e11,100	e7,900	7,970	9,110	17,800	9,100	8,690	7,790
20	10,100	11,100	e11,500	e13,000	e11,200	e8,500	7,910	9,270	17,400	8,800	8,720	6,850
21	10,300	11,000	e11,700	e13,000	e11,100	e7,900	8,110	9,030	16,700	8,460	8,680	6,720
22	10,200	11,300	e11,600	e13,000	e11,100	e8,400	8,160	9,100	16,600	8,490	8,790	6,550
23	10,500	11,300	e11,500	e13,000	e11,100	e8,100	8,710	9,020	15,700	8,450	8,670	6,480
24	10,600	11,300	e11,400	e10,500	e11,200	e7,800	9,560	8,960	14,300	8,220	8,800	6,420
25	10,700	11,300	e11,500	e10,500	e11,100	e7,100	9,880	8,810	13,400	8,450	9,140	6,380
26	10,600	11,300	e11,600	e11,000	e11,000	e6,800	9,830	8,930	12,900	8,470	8,870	6,390
27	10,400	11,300	e12,200	e10,500	e11,100	e6,500	9,770	9,050	12,200	8,080	8,420	6,380
28	10,700	11,300	e11,700	e10,200	e11,100	e6,500	9,610	9,350	11,800	7,860	8,460	6,320
29	10,900	11,200	e11,800	e10,000	---	e6,200	10,100	9,790	11,200	7,880	8,600	6,300
30	11,000	11,100	e11,700	e9,800	---	e6,450	10,500	9,580	10,700	7,900	9,080	6,250
31	10,900	---	e11,700	e10,000	---	e6,600	---	10,700	---	7,870	9,270	---
Total	320,690	333,600	358,100	374,300	309,700	235,450	333,620	291,720	491,100	291,570	266,620	235,080
Mean	10,340	11,120	11,550	12,070	11,060	7,595	11,120	9,410	16,370	9,405	8,601	7,836
Max	11,000	11,300	12,200	13,400	11,200	11,100	17,000	10,700	19,100	11,600	9,270	9,120
Min	9,990	10,800	11,100	9,800	10,500	6,200	7,910	8,810	10,700	7,860	7,980	6,250
Ac-ft	636,100	661,700	710,300	742,400	614,300	467,000	661,700	578,600	974,100	578,300	528,800	466,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2013, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	9,898	8,755	8,946	9,688	10,180	9,812	10,200	9,604	10,630	10,460	11,030	10,670
Max	28,570	22,440	13,280	14,400	17,450	20,690	32,840	26,220	73,890	50,180	27,910	26,590
(WY)	(1949)	(1952)	(1944)	(1986)	(1976)	(1976)	(1979)	(1979)	(2011)	(2011)	(2011)	(1948)
Min	1,237	1,126	1,061	1,010	1,167	2,674	1,965	1,353	1,366	1,273	3,823	3,771
(WY)	(1942)	(1942)	(1942)	(1943)	(1942)	(1950)	(1945)	(1945)	(1945)	(1945)	(1963)	(1992)

*During periods of operation (1941-52, 1958 to current year).

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1941 – 2013*	
Annual total	3,824,800		3,841,550			
Annual mean	10,450		10,520		9,985	
Highest annual mean					22,970	2011
Lowest annual mean					4,083	1942
Highest daily mean	14,800	Sep 10	19,100	Jun 8	97,200	Jun 21, 2011
Lowest daily mean	6,810	Apr 18	6,200	Mar 14	575	Nov 22, 1941
Annual seven-day minimum	6,940	Apr 16	6,350	Sep 24	709	Nov 19, 1941
Maximum peak flow			^a 19,500	Jun 8	^c 104,000	Jun 16, 2011
Maximum peak stage			^b 10.65	Apr 6	^b 19.66	Apr 14, 1979
Annual runoff (ac-ft)	7,586,000		7,620,000		7,234,000	
10 percent exceeds	12,100		13,100		15,500	
50 percent exceeds	10,800		10,400		8,980	
90 percent exceeds	7,890		7,900		4,570	

	Water Years 1941 – 1951**		Water Years 1958 – 2013***	
Annual mean	9,245		10,120	
Highest annual mean	14,520	1948	22,970	2011
Lowest annual mean	4,083	1942	5,741	2005
Highest daily mean	69,200	Mar 27, 1943	97,200	Jun 21, 2011
Lowest daily mean	575	Nov 22, 1941	2,000	Nov 20, 1964
Annual seven-day minimum	709	Nov 19, 1941	2,130	Nov 19, 1964
Maximum peak flow	^d 78,200	Mar 26, 1943	^c 104,000	Jun 16, 2011
Maximum peak stage	^b 15.12	Mar 26, 1943	^b 19.66	Apr 14, 1979
Annual runoff (ac-ft)	6,698,000		7,331,000	
10 percent exceeds	21,000		15,000	
50 percent exceeds	6,910		9,100	
90 percent exceeds	1,400		5,490	

*During periods of operation (1941-52, 1958 to current year).

**Before operational level of Fort Peck Lake was reached.

***After operational level of Fort Peck Lake was reached.

^aGage height, 7.52 ft.

^bBackwater from ice.

^cGage height, 17.50 ft.

^dGage height, 19.14 ft.

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