

Water-Data Report 2011

06132000 MISSOURI RIVER BELOW FORT PECK DAM, MT

Missouri-Poplar Basin
Prairie Elk-Wolf Subbasin

LOCATION.--Lat 48°02'39", long 106°21'21" referenced to North American Datum of 1927, in NW ¼ sec.6, T.26 N., R.42 E., McCone County, MT, Hydrologic Unit 10060001, on right bank 2 mi upstream from Milk River, 6 mi south of Nashua, 8 mi downstream from Fort Peck Dam, and at river mile 1,763.5.

DRAINAGE AREA.--57,556 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1934 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,018 ft, referenced to the National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Apr. 14, 1938, at site 0.7 mi upstream at different elevation; Apr. 14, 1938, to Sept. 30, 1963, at present site at elevation 2.00 ft higher, all water-stage recorders. Since Oct. 1, 1969, published discharge is determined by flow meters and spillway discharge at Fort Peck Dam.

COOPERATION.--Beginning Oct. 1, 1969, records have been furnished by the U.S. Army Corps of Engineers; 2 to 4 discharge measurements are made each year and the records are reviewed by the U.S. Geological Survey. Records for March 1934 to September 1969 collected and computed by the U.S. Geological Survey.

REMARKS.--Flow is completely regulated by Fort Peck Dam. Diversions for irrigation of about 880,400 acres occur upstream from station. Operational level in Fort Peck Lake was reached beginning 1944 water year. Several unpublished observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 65,900 ft³/s, June 15, 2011, furnished by U.S. Army Corps of Engineers; maximum gage height, 15.53 ft, June 13, 2011, at U.S.G.S. gaging station; maximum daily reverse flow, 400 ft³/s, Mar. 29, 1943, backwater from Milk River.

06132000 MISSOURI RIVER BELOW FORT PECK DAM, MT—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5,800	5,800	7,500	7,800	9,100	9,000	7,000	7,000	9,600	49,900	31,300	24,500
2	5,700	5,720	7,100	7,900	9,100	9,100	6,800	8,200	13,000	49,800	29,800	24,500
3	5,800	5,800	7,100	7,800	9,000	9,100	6,500	9,200	19,000	49,700	29,900	24,300
4	6,100	6,300	7,200	7,800	9,400	9,100	6,900	9,600	27,500	49,600	29,800	24,400
5	6,100	5,800	7,800	7,800	10,100	8,200	7,100	9,900	36,900	49,500	29,500	24,300
6	6,100	5,900	7,800	8,400	10,100	8,400	7,000	11,800	43,000	49,500	29,500	24,300
7	6,400	6,220	8,800	9,300	10,100	6,900	7,000	14,900	48,500	49,400	29,300	24,100
8	6,200	6,300	8,000	9,000	10,100	7,300	7,100	16,200	50,700	46,600	29,500	24,000
9	6,200	6,200	8,000	9,100	10,000	7,200	7,000	16,900	53,600	44,900	29,300	24,200
10	6,200	6,300	7,900	9,200	10,100	7,100	6,970	18,800	58,900	45,000	29,400	24,100
11	6,300	6,300	7,800	9,200	10,000	7,200	6,900	20,100	60,600	44,600	29,200	24,100
12	6,000	6,200	7,800	8,700	9,900	7,100	6,900	19,700	63,700	45,200	26,800	23,000
13	6,300	6,300	7,700	8,900	9,900	7,360	7,300	19,500	65,400	45,300	25,500	24,700
14	6,500	6,300	7,800	8,900	10,100	6,900	7,600	19,300	65,800	45,100	25,200	24,600
15	6,500	5,900	7,900	9,100	9,900	7,200	7,700	18,900	65,900	42,200	25,200	24,600
16	6,200	5,900	7,900	9,300	9,900	6,900	7,400	19,400	65,800	40,400	25,100	19,100
17	6,200	5,700	8,000	9,300	9,900	7,100	7,600	19,700	65,600	40,400	25,100	25,200
18	6,200	5,700	7,700	9,200	9,800	6,900	7,400	19,600	65,500	40,200	25,000	25,200
19	6,400	6,300	7,700	9,200	10,000	7,000	7,300	19,700	65,500	40,200	25,000	25,100
20	6,100	5,900	8,000	9,300	9,900	7,200	7,600	19,800	61,800	36,500	24,800	25,000
21	6,000	6,600	8,300	9,300	10,000	7,000	7,600	19,900	60,200	34,600	25,000	24,900
22	6,200	6,600	8,000	9,300	10,000	6,900	7,400	19,900	59,700	35,000	24,900	24,900
23	6,200	6,300	7,800	9,200	9,900	6,900	7,300	17,500	59,600	34,600	24,700	24,700
24	6,000	6,400	7,800	9,500	9,800	7,200	7,000	11,100	59,600	34,400	24,700	24,800
25	6,100	6,300	7,800	8,800	10,000	6,900	7,200	10,200	59,900	34,700	24,700	24,800
26	5,900	6,500	7,700	9,300	9,700	7,200	6,700	10,200	60,200	35,200	24,800	21,800
27	5,800	6,400	7,800	9,300	10,000	7,100	6,500	9,900	58,200	35,100	24,600	20,300
28	5,800	5,800	8,200	9,400	9,900	7,000	6,500	9,600	55,000	35,000	24,600	17,000
29	5,800	6,800	7,800	9,400	---	6,800	6,500	9,700	51,400	34,800	24,600	13,200
30	6,100	7,500	7,800	9,100	---	7,100	6,700	9,900	49,900	34,700	24,500	10,400
31	5,800	---	7,900	8,700	---	6,800	---	9,700	---	34,700	24,600	---
Total	189,000	186,040	242,400	276,500	275,700	229,160	212,470	455,800	1,580,000	1,286,800	825,900	690,100
Mean	6,097	6,201	7,819	8,919	9,846	7,392	7,082	14,700	52,670	41,510	26,640	23,000
Max	6,500	7,500	8,800	9,500	10,100	9,100	7,700	20,100	65,900	49,900	31,300	25,200
Min	5,700	5,700	7,100	7,800	9,000	6,800	6,500	7,000	9,600	34,400	24,500	10,400
Ac-ft	374,900	369,000	480,800	548,400	546,900	454,500	421,400	904,100	3,134,000	2,552,000	1,638,000	1,369,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2011, BY WATER YEAR (WY)*

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10,450	8,571	8,901	9,521	9,463	7,172	7,045	8,424	9,111	10,100	11,580	11,090
Max	28,800	21,150	13,330	14,010	15,240	13,390	17,230	18,830	52,670	41,510	26,640	27,120
(WY)	(1956)	(1998)	(1944)	(1971)	(1979)	(1982)	(1979)	(1979)	(2011)	(2011)	(2011)	(1948)
Min	3,016	2,085	1,490	1,390	1,180	1,050	856	950	832	1,163	3,449	2,997
(WY)	(1994)	(1947)	(1946)	(1946)	(1945)	(1944)	(1945)	(1944)	(1944)	(1945)	(1963)	(1992)

*Period of record after operational level in Fort Peck Lake was reached.

06132000 MISSOURI RIVER BELOW FORT PECK DAM, MT—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1944 – 2011*	
Annual total	2,052,340		6,449,870			
Annual mean	5,623		17,670		9,288	
Highest annual mean					17,670	2011
Lowest annual mean					5,004	2010
Highest daily mean	8,800	Dec 7	65,900	Jun 15	65,900	Jun 15, 2011
Lowest daily mean	3,300	Apr 11	5,700	Oct 2	16	Apr 6, 1978
Annual seven-day minimum	3,910	Apr 7	5,830	Oct 27	161	Mar 26, 1944
Annual runoff (ac-ft)	4,071,000		12,790,000		6,728,000	
10 percent exceeds	7,040		44,900		14,600	
50 percent exceeds	5,800		9,300		8,000	
90 percent exceeds	4,300		6,200		4,100	

*Period of record after operational level in Fort Peck Lake was reached.

