

Water-Data Report 2006

06813500 MISSOURI RIVER AT RULO, NE

Missouri-Nishnabotna Basin
Tarkio-Wolf Subbasin

LOCATION.--Lat 40°03'13", long 95°25'19" referenced to North American Datum of 1927, in NW ¼ NW ¼ sec.17, T.1 N., R.18 E., Richardson County, NE, Hydrologic Unit 10240005, on right bank at downstream side of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Big Nemaha River, and 498.0 mi upstream from mouth.

DRAINAGE AREA.--414,900 mi², approximately. The 3,959 mi² in Great Divide basin are not included.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1949 to current year in reports of U.S. Geological Survey. Gage-height record collected at site 80 ft upstream January 1886 to December 1899 published in reports of Missouri River Commission; September 1929 to September 1950 in files of Kansas City office of U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft above NGVD of 1929. October 1949 to September 12, 1950, nonrecording gage at site 80 ft upstream, and September 13, 1950 to April 19, 1983, recording gage on downstream end of middle pier, all at same datum.

REMARKS.--Records are considered good. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. U.S. Army Corps of Engineers data collection platform with satellite telemetry at the station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft³/s, April 22, 1952, gage height, 25.60 ft; minimum daily discharge, 4,420 ft³/s, January 13, 1957; minimum gage height, -0.19 ft, December 25, 1990, result of freeze-up.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft, from floodmark, discharge not determined.

06813500 MISSOURI RIVER AT RULO, NE—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	33,700	18,300	20,200	23,800	21,400	24,800	37,000	39,500	36,300	33,100	32,100	32,600
2	34,000	18,000	18,900	23,300	21,500	23,500	40,900	40,000	34,500	32,600	32,800	31,500
3	33,300	18,400	17,500	23,300	21,600	22,800	45,800	40,000	32,200	32,300	33,600	31,100
4	32,900	18,100	17,900	23,700	22,400	22,300	44,600	41,500	33,000	32,100	34,500	31,400
5	32,800	17,800	17,900	23,400	22,900	21,700	42,800	41,300	32,400	31,700	35,100	31,500
6	33,300	17,600	17,700	23,000	22,800	21,100	42,600	41,500	31,400	31,400	34,900	32,200
7	33,800	17,500	17,400	23,200	22,400	21,200	42,400	41,400	32,500	30,900	35,500	32,300
8	33,700	17,600	17,700	23,300	22,500	21,000	42,500	40,400	32,300	30,700	37,000	32,200
9	32,800	18,200	18,500	23,000	22,900	20,900	43,300	39,800	31,300	30,800	43,500	31,800
10	30,900	18,600	19,700	22,800	22,600	20,500	43,900	38,700	32,100	30,400	40,800	32,900
11	28,900	18,500	20,700	22,600	22,400	20,100	44,600	37,400	32,200	30,500	38,500	35,700
12	26,900	18,300	22,700	22,500	22,900	20,200	44,500	36,200	32,600	31,300	37,900	37,000
13	25,300	17,600	23,700	22,100	23,600	20,300	45,200	34,800	32,300	31,300	37,400	37,400
14	23,900	17,000	25,400	22,400	24,200	20,600	47,700	33,700	32,300	31,900	36,400	38,600
15	23,100	17,500	26,300	22,500	23,100	20,400	47,300	33,400	32,000	32,700	35,500	37,800
16	22,200	18,000	25,300	21,900	24,000	20,100	45,800	33,400	32,100	32,000	35,500	35,800
17	22,200	18,500	24,500	21,300	25,800	20,000	43,700	35,100	32,100	31,500	35,900	38,200
18	21,600	18,400	23,700	21,500	25,100	20,100	41,500	38,200	32,400	31,000	37,300	45,700
19	21,300	18,300	22,900	21,300	21,900	19,800	40,200	38,600	34,300	30,500	37,400	48,000
20	20,700	18,100	22,800	20,800	19,900	19,600	40,000	36,900	35,500	30,100	37,800	42,400
21	20,400	18,900	22,700	21,000	19,300	20,100	38,700	35,700	36,100	29,700	38,000	39,100
22	20,000	19,700	22,400	21,300	19,800	22,100	37,100	35,100	36,200	30,100	36,000	39,100
23	19,900	19,500	22,700	21,400	21,500	24,300	35,700	35,500	36,600	29,900	35,100	40,400
24	19,700	18,400	24,100	21,600	22,600	27,900	34,500	33,900	36,400	29,700	34,400	41,600
25	19,300	18,600	24,700	21,200	23,700	30,500	33,900	33,800	36,100	29,700	34,000	40,700
26	19,200	18,500	24,100	20,500	25,800	30,100	34,000	35,300	36,000	29,400	34,200	38,600
27	19,400	18,700	23,000	20,300	27,600	30,000	34,300	34,300	35,200	29,300	33,800	37,100
28	19,100	18,900	22,600	20,000	26,700	29,700	34,300	33,300	34,800	29,800	33,600	36,800
29	18,600	19,000	22,500	19,900	---	30,200	35,000	35,000	34,400	31,400	35,100	36,200
30	18,500	19,900	23,800	21,000	---	30,700	37,200	36,100	33,700	31,800	34,100	35,000
31	18,400	---	24,800	21,500	---	33,200	---	37,200	---	31,700	33,300	---
Total	779,800	550,400	678,800	681,400	642,900	729,800	1,221,000	1,147,000	1,011,300	961,300	1,111,000	1,100,700
Mean	25,150	18,350	21,900	21,980	22,960	23,540	40,700	37,000	33,710	31,010	35,840	36,690
Max	34,000	19,900	26,300	23,800	27,600	33,200	47,700	41,500	36,600	33,100	43,500	48,000
Min	18,400	17,000	17,400	19,900	19,300	19,600	33,900	33,300	31,300	29,300	32,100	31,100
Ac-ft	1,547,000	1,092,000	1,346,000	1,352,000	1,275,000	1,448,000	2,422,000	2,275,000	2,006,000	1,907,000	2,204,000	2,183,000
Cfsm	6.35	4.63	5.53	5.55	5.80	5.95	10.3	9.35	8.51	7.83	9.05	9.27
In.	7.33	5.17	6.38	6.40	6.04	6.86	11.47	10.78	9.50	9.03	10.44	10.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	43,690	39,960	26,860	22,690	28,190	40,060	50,230	51,330	55,810	49,760	43,990	44,220
Max	80,050	83,880	57,380	42,280	53,140	79,590	106,100	97,280	130,600	164,800	78,730	76,410
(WY)	(1998)	(1998)	(1998)	(1973)	(1997)	(1979)	(1997)	(1997)	(1984)	(1993)	(1996)	(1997)
Min	25,150	17,000	9,953	10,800	13,220	15,380	21,820	33,790	33,710	29,650	29,320	31,510
(WY)	(2006)	(1962)	(1956)	(1957)	(1957)	(1957)	(1957)	(1956)	(1956)	(2002)	(2003)	(2005)

06813500 MISSOURI RIVER AT RULO, NE—Continued

SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1953 - 2006 ^a	
Annual total	11,032,000		10,615,400			
Annual mean	30,220		29,080		41,430	
Highest annual mean					71,880	1997
Lowest annual mean					26,340	1957
Highest daily mean	78,600	May 14	48,000	Sep 19	289,000	Jul 24, 1993
Lowest daily mean	16,900	Mar 20	17,000	Nov 14	4,420	Jan 13, 1957
Annual seven-day minimum	17,500	Mar 16	17,800	Dec 3	5,560	Nov 30, 1955
Maximum peak flow			49,200	Sep 19	307,000	Jul 24, 1993
Maximum peak stage			11.31	Apr 14	25.37	Jul 24, 1993
Instantaneous low flow			16,900	Nov 14		
Annual runoff (ac-ft)	21,880,000		21,060,000		30,020,000	
Annual runoff (cfsm)	7.63		7.35		10.5	
Annual runoff (inches)	103.66		99.75		142.19	
10 percent exceeds	45,700		39,300		65,700	
50 percent exceeds	30,500		30,700		38,100	
90 percent exceeds	18,400		18,900		19,100	

^a Post regulation.

