

Water-Data Report 2013

06610000 Missouri River at Omaha, NE

Missouri-Little Sioux Basin
Big Papillion-Mosquito Subbasin

LOCATION.--Lat 41°15'32", long 95°55'20" referenced to North American Datum of 1927, in SE ¼ NW ¼ sec.23, T.15 N., R.13 E., Douglas County, NE, Hydrologic Unit 10230006, on right bank on right side of concrete floodwall at foot of Douglas Street, 275 ft downstream from bridge on U.S. Interstate 480 in Omaha, and 615.9 mi upstream from mouth. Water-quality samples collected by boat, 8.5 mi downstream from gage.

DRAINAGE AREA.--322,800 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Discharge records from September 1928 to current year. Stage-only records from April 1872 to December 1899 in reports of the Missouri River Commission, and since January 1875 in reports of the U.S. National Weather Service.

REVISED RECORDS.--WSP 761: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 948.24 ft above National Geodetic Vertical Datum of 1929. April 10, 1872, to August 31, 1928, non-recording gage at several sites within 0.6 mi of current site at datum not more than 10.43 ft below current datum; September 1, 1928, to November 30, 1929, non-recording gage attached to Illinois Central Railroad bridge at site 2.0 mi upstream at datum 12.97 ft higher; December 1, 1929, to October 18, 1931, non-recording gage at same site at datum 10.00 ft higher; October 19, 1931, to September 30, 1936, water-stage recorder at site 0.4 mi downstream at datum 10.00 ft higher; October 1, 1936, to September 30, 1982, at same site at datum 10.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. 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. Geological Survey data collection platform with satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Minimum discharge, about 2,200 ft³/s, January 6, 1937; minimum gage height, 6.85 ft, February 5, 1989, at current datum, result of freeze-up.

EXTREMES FOR PERIOD PRIOR TO REGULATION.--Maximum discharge, 396,000 ft³/s, April 18, 1952, gage height, 40.20 ft, at current datum.

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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	37,700	37,500	22,700	19,000	15,800	15,800	31,500	23,000	45,200	34,500	31,900	35,900
2	37,900	37,400	21,500	19,000	14,400	15,700	31,100	25,000	39,600	34,000	31,500	36,000
3	37,900	37,300	21,300	18,900	13,100	15,700	30,000	26,000	35,800	33,600	30,300	36,100
4	37,600	37,300	21,000	19,000	17,900	15,700	28,500	25,800	33,300	33,400	30,100	36,200
5	38,200	37,400	20,800	19,000	18,600	15,700	28,000	25,400	31,500	33,100	29,400	36,300
6	38,500	37,300	20,400	17,700	18,000	15,700	27,700	25,300	30,100	32,700	28,300	36,300
7	38,700	37,600	19,800	17,200	16,600	15,700	27,800	24,800	31,600	32,400	27,000	35,800
8	38,700	37,700	19,000	17,100	16,300	15,500	28,000	25,100	33,500	32,100	25,600	35,800
9	38,700	37,700	18,900	17,200	16,100	16,200	28,400	25,700	34,300	31,900	25,000	35,500
10	38,500	38,000	18,700	17,400	16,000	17,000	30,500	25,900	34,600	31,600	24,700	35,300
11	38,200	38,200	17,700	17,300	16,000	19,800	31,700	25,800	36,700	30,700	24,600	35,600
12	38,100	38,500	17,100	16,800	16,100	20,700	29,000	25,200	41,100	30,000	24,600	35,200
13	38,200	38,400	17,200	16,700	16,100	20,800	25,900	25,000	42,200	29,400	24,700	35,100
14	38,300	38,200	17,000	16,200	15,800	23,300	25,100	24,800	41,900	29,000	24,700	35,300
15	38,000	37,800	17,100	15,700	15,900	23,700	24,800	24,800	41,900	28,600	26,200	35,300
16	37,800	37,100	17,000	16,000	15,800	22,200	24,500	24,800	41,700	28,300	26,800	35,400
17	37,800	36,900	17,000	16,600	15,700	23,400	24,400	25,900	43,100	28,100	26,500	35,700
18	37,500	37,000	16,600	16,700	15,800	23,700	24,600	26,100	43,300	28,000	26,700	35,400
19	37,600	37,000	16,300	16,300	15,800	22,600	25,500	25,200	40,400	28,400	26,500	34,600
20	38,000	36,900	16,300	16,100	15,500	21,800	24,200	26,000	39,100	29,200	26,500	34,000
21	37,700	36,900	16,100	16,000	15,000	22,400	21,500	25,900	37,700	29,800	26,600	33,200
22	37,200	37,300	17,100	15,700	14,900	24,000	20,900	25,600	36,500	29,800	27,300	32,900
23	e37,200	37,400	18,100	15,400	15,300	24,300	20,600	26,000	35,600	30,200	29,500	32,200
24	37,400	37,100	19,000	15,100	15,800	24,800	20,700	28,200	35,400	30,400	31,100	31,700
25	38,000	36,300	19,200	15,400	16,200	26,900	21,500	31,200	34,700	30,500	31,300	31,800
26	38,000	34,600	18,900	15,400	16,000	28,200	21,400	33,100	35,500	30,900	32,100	32,100
27	37,800	32,100	18,500	15,200	15,800	28,700	21,100	34,500	36,700	31,000	32,300	31,800
28	37,700	29,700	18,500	16,200	15,700	28,900	21,100	47,300	37,100	31,200	32,600	31,500
29	37,400	27,400	18,900	16,200	---	29,400	21,100	67,000	37,000	31,400	33,400	31,400
30	37,400	24,700	19,200	16,400	---	29,600	21,200	66,000	35,800	31,300	34,100	31,400
31	37,400	---	19,100	16,200	---	30,800	---	54,900	---	31,400	34,800	---
Total	1,175,100	1,084,700	576,000	519,100	446,000	678,700	762,300	945,300	1,122,900	956,900	886,700	1,030,800
Mean	37,910	36,160	18,580	16,750	15,930	21,890	25,410	30,490	37,430	30,870	28,600	34,360
Max	38,700	38,500	22,700	19,000	18,600	30,800	31,700	67,000	45,200	34,500	34,800	36,300
Min	37,200	24,700	16,100	15,100	13,100	15,500	20,600	23,000	30,100	28,000	24,600	31,400
Ac-ft	2,331,000	2,152,000	1,142,000	1,030,000	884,600	1,346,000	1,512,000	1,875,000	2,227,000	1,898,000	1,759,000	2,045,000
Cfsm	0.12	0.11	0.06	0.05	0.05	0.07	0.08	0.09	0.12	0.10	0.09	0.11
In.	0.14	0.13	0.07	0.06	0.05	0.08	0.09	0.11	0.13	0.11	0.10	0.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2013, BY WATER YEAR (WY)

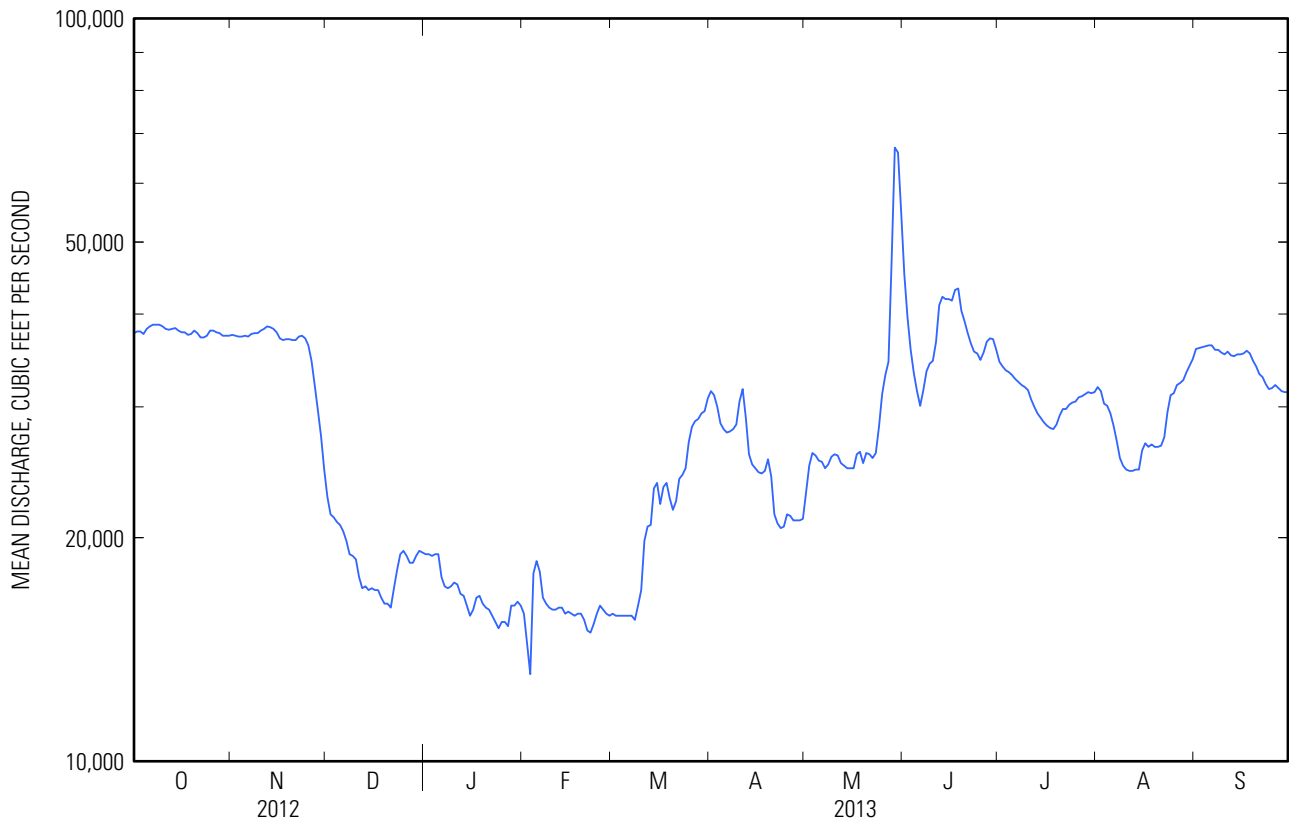
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	37,630	32,970	21,020	17,950	19,820	27,940	37,960	38,700	43,260	42,240	40,450	39,200
Max	74,070	75,040	44,260	33,250	40,410	56,530	93,840	87,620	154,700	193,400	166,300	98,080
(WY)	(1998)	(1998)	(1998)	(1987)	(1997)	(2010)	(1997)	(1997)	(2011)	(2011)	(2011)	(2011)
Min	16,920	8,324	8,296	8,425	8,162	10,170	16,480	26,450	26,890	26,830	26,780	24,560
(WY)	(1962)	(1962)	(1962)	(1964)	(1963)	(1957)	(1957)	(1961)	(1961)	(2008)	(2003)	(2008)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1953 - 2013 ^a	
Annual total	12,323,000		10,184,500			
Annual mean	33,670		27,900		33,310	
Highest annual mean					86,370	2011
Lowest annual mean					20,490	1957
Highest daily mean	50,200	Jun 2	67,000	May 29	212,000	Jul 2, 2011
Lowest daily mean	16,100	Dec 21	13,100	Feb 3	2,440	Dec 14, 1961
Annual seven-day minimum	16,600	Dec 15	15,400	Feb 17	4,300	Nov 28, 1955
Maximum peak flow			70,400	May 29	217,000	Jul 2, 2011
Maximum peak stage			23.97	May 29	36.29	Jul 2, 2011
Instantaneous low flow			12,400	Feb 3		
Annual runoff (ac-ft)	24,440,000		20,200,000		24,130,000	
Annual runoff (cfsm)	0.104		0.086		0.103	
Annual runoff (inches)	1.42		1.17		1.40	
10 percent exceeds	39,500		37,800		52,700	
50 percent exceeds	36,000		28,300		31,800	
90 percent exceeds	26,500		16,100		14,900	

^a Post regulation.



06610000 Missouri River at Omaha, NE—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-1976, 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Daily instantaneous values collected in conjunction with suspended-sediment samples, October 1972 to September 1976, January 1978 to September 1981, October 1991 to September 2003, October 2008 to September 2010, records fragmentary for some periods. Beginning in October 2010, daily instantaneous values published in combined water-quality table.

WATER TEMPERATURE: Daily instantaneous values collected in conjunction with suspended-sediment samples, October 1971 to September 1976, January 1978 to September 1981, October 1991 to September 2003, October 2008 to September 2010, records fragmentary for some periods. Beginning in October 2010, daily instantaneous values published in combined water-quality table. Daily mean, October 2011 to current year, records fragmentary.

SUSPENDED-SEDIMENT CONCENTRATION AND DISCHARGE: April 1939 to December 1959, April to November 1960, April to November 1961, March to November 1962, March to October 1963, April to October 1964, April to December 1965, February 1966 to January 1967, March to December 1967, April to December 1968, March 1969 to September 1971, October 1971 to September 1976, October 1991 to September 2003, October 2008 to current year. Prior to October 1971, suspended-sediment discharge records only, provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE (for period October 2011 to current year): Maximum daily mean, 29.9°C, July 20, 2012, July 25, 2012; minimum daily mean, 0.5°C, January 21-22, 2012, February 12-13, 2012.

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 8,180 mg/L, May 19, 1974; minimum daily mean, 66 mg/L, February 22, 2013.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 8,500,000 tons/day, June 16, 1941; minimum daily, 1,780 tons/day, December 10-11, 1958.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum daily mean, 29.2°C, August 31, 2013; minimum daily mean, 0.2°C, January 3 and 5, 2013.

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 2,620 mg/L, May 29, 2013; minimum daily mean, 66 mg/L, February 22, 2013.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 473,000 tons/day, May 29, 2013; minimum daily, 2,490 tons/day, February 3, 2013.

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	18.5	10.0	5.3	---	---	2.3	7.1	14.4	19.1	25.1	23.9	28.8
2	18.6	9.7	---	---	---	2.3	6.7	11.6	18.6	25.0	24.3	28.4
3	18.4	9.3	---	0.2	---	2.7	6.1	10.8	18.7	25.2	25.0	27.6
4	17.8	9.2	---	0.3	---	2.8	6.2	9.4	18.5	25.4	24.2	26.9
5	16.8	9.4	---	0.2	1.1	2.6	7.3	9.5	19.1	25.3	23.5	26.6
6	15.4	9.9	---	---	1.9	2.4	8.8	10.6	19.6	25.3	23.6	26.3
7	14.0	9.8	---	---	2.3	2.9	9.4	12.1	19.7	25.6	24.8	26.4
8	13.4	9.3	---	---	2.2	3.1	10	13.3	19.1	26.4	25.6	26.3
9	13.0	9.4	---	0.5	2.5	3.7	10.8	14.4	18.6	27.4	25.7	26.9
10	13.0	10.1	---	1.0	3.2	3.4	9.2	15.3	18.5	28.2	25.4	26.8
11	13.1	10.1	---	1.7	2.6	2.7	7.8	15.3	18.9	28.3	25.4	27.1
12	12.4	8.5	---	1.5	2.3	2.2	6.0	15.1	20.2	27.8	25.7	26.9
13	12.4	7.2	---	0.5	2.8	1.9	5.8	15.6	21.6	27.0	25.4	26.0
14	13.0	6.1	3.0	---	2.9	2.1	6.9	16.8	21.8	26.8	25.1	25.2
15	13.1	6.5	4.4	---	2.5	3.0	7.6	18.3	21.8	27.0	24.1	24.0
16	14.0	7.0	4.3	---	2.4	3.8	7.8	19.5	22.4	27.5	23.4	22.8
17	14.1	7.3	3.9	0.7	2.6	4.5	7.9	20.3	23.3	27.9	23.0	21.9
18	13.5	7.0	3.6	1.2	2.4	4.8	7.0	20.7	23.4	28.3	23.0	22.0
19	12.3	6.8	3.2	2.0	1.2	4.0	6.1	20.8	23.9	28.5	23.7	22.2
20	11.2	7.1	1.9	1.7	0.7	3.3	6.0	20.3	24.8	28.5	24.7	21.6
21	11.1	7.6	1.3	0.7	---	2.7	6.5	20.1	25.7	28.5	25.7	21.8
22	12.1	8.1	0.9	---	---	2.3	7.6	18.7	25.8	28.4	26.4	20.6
23	13.1	7.7	---	---	---	2.6	7.0	18.0	25.3	27.8	26.8	19.6
24	13.1	7.1	---	---	0.6	2.7	6.8	18.0	24.8	27.8	26.7	20.0
25	12.3	6.2	---	---	1.4	2.4	7.6	17.7	24.7	27.5	26.9	20.3
26	11.1	5.5	---	---	1.9	2.4	9.0	18.3	25.6	26.6	27.0	20.5
27	10.0	5.4	---	0.5	2.1	2.6	11.0	18.1	25.8	26.1	27.3	21.1
28	9.3	5.3	---	1.3	2.5	3.6	12.6	18.2	26.2	25.3	27.9	20.8
29	9.8	5.0	---	2.0	---	4.7	14.3	17.3	25.9	24.0	28.4	20.3
30	9.7	5.0	---	1.8	---	6.0	15.4	17.9	25.5	23.6	29.0	19.7
31	9.7	---	---	0.9	---	7.0	---	18.9	---	24.0	29.2	---
Mean	13.2	7.8	---	---	---	3.2	8.3	16.3	22.2	26.6	25.5	23.8
Max	18.6	10.1	---	---	---	7.0	15.4	20.8	26.2	28.5	29.2	28.8
Min	9.3	5.0	---	---	---	1.9	5.8	9.4	18.5	23.6	23.0	19.6

06610000 Missouri River at Omaha, NE—Continued

SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Mean	Sediment	Mean	Sediment	Mean	Sediment	Mean	Sediment	Mean	Sediment	Mean	Sediment
	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)	concentration (mg/L)	discharge (tons/day)
	October		November		December		January		February		March	
1	132	13,300	179	18,100	134	8,230	137	7,000	79	3,380	78	3,310
2	149	15,200	162	16,400	145	8,380	137	7,050	75	2,940	76	3,200
3	153	15,700	152	15,300	153	8,820	137	6,980	70	2,490	75	3,170
4	168	17,000	155	15,600	149	8,450	138	7,090	98	4,740	75	3,170
5	194	20,000	161	16,200	143	8,060	138	7,070	100	5,040	75	3,170
6	205	21,200	151	15,200	129	7,100	128	6,090	98	4,790	79	3,350
7	214	22,300	134	13,600	112	6,000	125	5,800	92	4,140	79	3,380
8	197	20,600	114	11,600	112	5,740	124	5,710	90	3,960	92	3,850
9	152	15,900	132	13,500	113	5,770	133	6,190	90	3,920	137	6,000
10	140	14,500	152	15,600	113	5,690	141	6,610	91	3,920	183	8,440
11	142	14,600	173	17,900	111	5,340	139	6,500	92	3,990	365	19,600
12	168	17,200	188	19,600	112	5,160	123	5,570	99	4,290	412	23,000
13	157	16,200	173	17,900	121	5,600	116	5,230	98	4,260	422	23,700
14	166	17,100	183	18,900	123	5,670	100	4,390	89	3,770	548	34,500
15	131	13,500	196	20,000	125	5,740	84	3,560	90	3,860	542	34,700
16	126	12,900	207	20,800	124	5,680	93	4,010	89	3,800	469	28,100
17	131	13,300	172	17,100	126	5,770	100	4,490	87	3,700	530	33,500
18	141	14,300	158	15,800	127	5,670	81	3,630	88	3,740	551	35,400
19	189	19,200	157	15,700	123	5,420	78	3,450	89	3,780	486	29,600
20	246	25,200	152	15,200	122	5,380	78	3,380	81	3,400	339	19,900
21	266	27,100	158	15,800	119	5,160	77	3,300	68	2,770	243	14,700
22	250	25,100	164	16,600	124	5,710	74	3,150	66	2,670	269	17,400
23	177	17,800	167	16,900	130	6,370	71	2,960	76	3,120	282	18,500
24	144	14,600	161	16,100	137	6,990	69	2,800	80	3,420	284	19,100
25	168	17,300	149	14,600	138	7,140	76	3,150	83	3,620	289	20,900
26	181	18,500	141	13,200	136	6,970	75	3,120	82	3,520	282	21,400
27	174	17,800	131	11,300	134	6,680	68	2,810	78	3,320	274	21,200
28	163	16,500	128	10,300	134	6,700	75	3,270	76	3,240	252	19,600
29	151	15,200	128	9,450	137	6,980	72	3,140	---	---	213	16,900
30	153	15,500	128	8,540	138	7,150	82	3,630	---	---	208	16,600
31	161	16,300	---	---	138	7,110	81	3,570	---	---	269	22,400
Total	---	540,900	---	462,790	---	200,630	---	144,700	---	103,590	---	531,740

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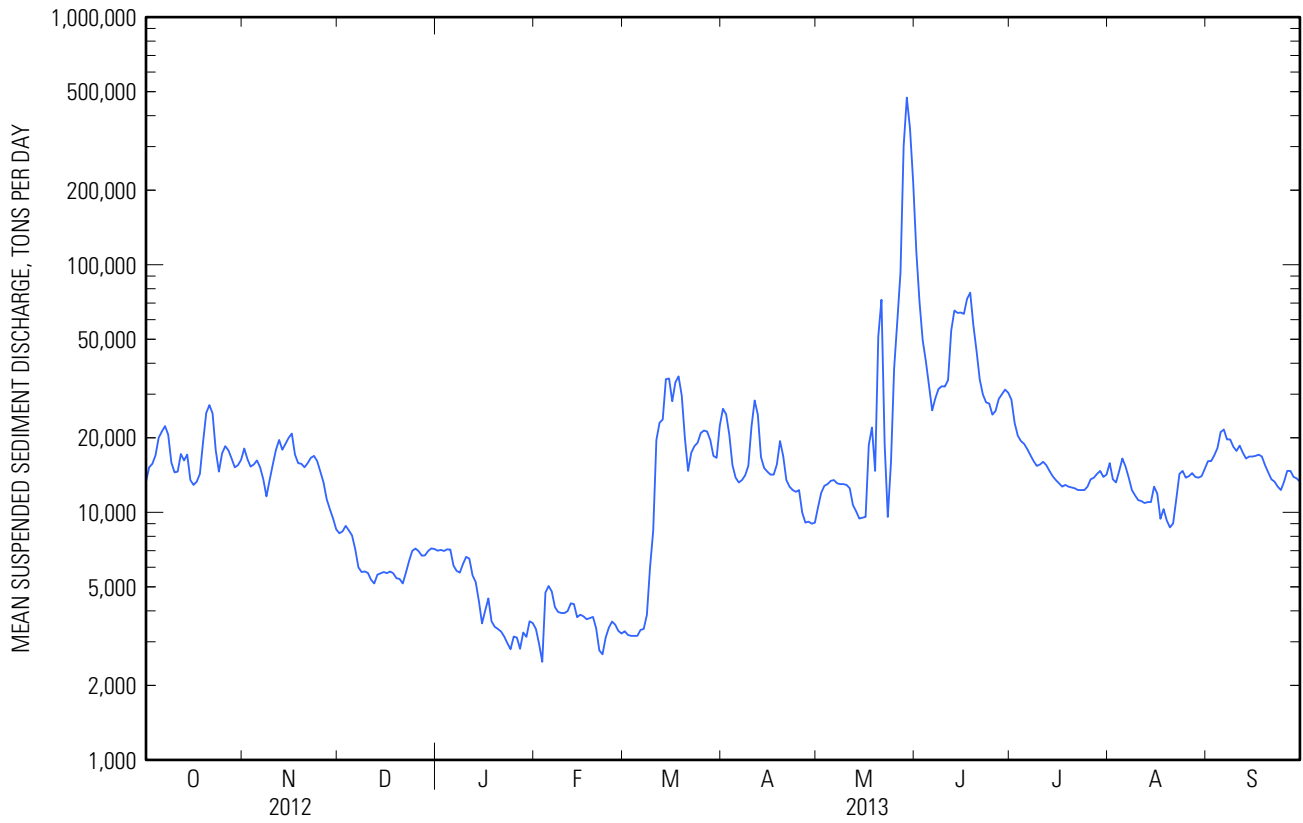
SUSPENDED-SEDIMENT
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean concentration (mg/L)	Sediment discharge (tons/day)
	April		May		June		July		August		September	
1	308	26,200	169	10,500	920	113,000	306	28,500	183	15,800	166	16,100
2	296	24,900	178	12,000	660	70,800	250	23,000	160	13,600	166	16,100
3	254	20,600	183	12,800	512	49,600	225	20,400	162	13,200	174	17,000
4	201	15,500	186	13,000	454	40,800	215	19,400	181	14,700	186	18,200
5	183	13,800	195	13,400	381	32,500	211	18,900	208	16,500	215	21,100
6	177	13,200	198	13,500	318	25,800	204	18,000	200	15,300	221	21,600
7	180	13,500	196	13,100	338	28,900	195	17,000	190	13,800	204	19,700
8	187	14,100	192	13,000	348	31,500	185	16,100	179	12,300	203	19,700
9	201	15,400	187	13,000	349	32,300	178	15,400	173	11,700	192	18,400
10	269	22,200	185	12,900	344	32,200	183	15,600	169	11,200	186	17,700
11	330	28,300	179	12,500	345	34,200	193	16,000	167	11,100	193	18,600
12	315	24,800	158	10,700	487	54,100	192	15,500	164	10,900	183	17,400
13	239	16,700	149	10,100	574	65,300	185	14,700	165	11,000	174	16,500
14	223	15,100	141	9,440	565	63,900	178	14,000	165	11,000	177	16,800
15	218	14,600	142	9,510	567	64,100	175	13,500	180	12,700	176	16,800
16	215	14,200	143	9,590	562	63,300	172	13,100	165	11,900	176	16,900
17	217	14,200	261	18,700	624	72,800	167	12,700	132	9,420	178	17,100
18	235	15,600	309	22,000	659	77,100	170	12,900	142	10,300	175	16,800
19	281	19,400	216	14,700	520	56,800	166	12,700	129	9,270	166	15,500
20	259	16,900	719	51,400	425	44,800	160	12,600	122	8,690	158	14,500
21	233	13,500	1,030	72,200	337	34,400	156	12,500	126	9,020	152	13,600
22	225	12,700	273	18,900	304	29,900	152	12,300	153	11,300	150	13,300
23	221	12,300	136	9,580	290	27,800	150	12,300	179	14,300	146	12,700
24	217	12,100	206	15,900	288	27,500	150	12,300	175	14,700	144	12,300
25	212	12,300	453	38,200	265	24,800	155	12,700	164	13,800	154	13,300
26	172	9,980	662	59,200	268	25,700	163	13,600	162	14,000	169	14,700
27	159	9,090	990	92,900	290	28,700	165	13,800	165	14,400	171	14,700
28	161	9,170	2,310	302,000	300	30,000	170	14,300	158	13,900	163	13,900
29	158	9,000	2,620	473,000	313	31,300	174	14,700	153	13,800	162	13,700
30	158	9,080	1,980	355,000	315	30,400	165	13,900	152	14,000	162	13,300
31	---	---	1,450	216,000	---	---	167	14,200	160	15,000	---	---
Total	---	468,420	---	1,948,720	---	1,344,300	---	476,600	---	392,600	---	488,000

**Total
suspended
sediment
discharge
(tons)**

Year 7,102,990

06610000 Missouri River at Omaha, NE—Continued



WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
 [mm, millimeters]

Sample date-time	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.0625 mm (80164)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.125 mm (80165)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.25 mm (80166)	Bed sediment, dry sieved, sieve diameter, percent smaller than 0.5 mm (80167)	Bed sediment, dry sieved, sieve diameter, percent smaller than 1 mm (80168)	Bed sediment, dry sieved, sieve diameter, percent smaller than 2 mm (80169)	Bed sediment, dry sieved, sieve diameter, percent smaller than 4 mm (80170)	Bed sediment, dry sieved, sieve diameter, percent smaller than 8 mm (80171)
10-12-2012 1125	0.0	0.0	9	63	88	97	99	100
01-09-2013 1445	.0	.0	21	66	87	97	99	100
04-12-2013 1230	.0	.0	30	89	97	99	100	--
07-09-2013 1315	.0	.0	16	70	91	98	100	--

06610000 Missouri River at Omaha, NE—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 1 of 6

[CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units per cm (50624)	Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, units per cm (61726)	Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, field, standard units (00400)	pH, water, unfiltered, laboratory, standard units (00403)	Specific conductance, water, unfiltered, laboratory, µS/cm at 25°C (90095)
10-01-2012 0930	734	18.0	0.089	0.059	37,700	9.2	8.4	8.4	826
12-04-2012 1030	741	10.0	.082	.055	E 21,100	11.7	8.3	8.2	862
02-05-2013 1000	733	8.7	.101	.074	18,500	13.0	8.2	8.2	840
03-12-2013 1000	737	2.0	.180	.134	20,900	12.5	8.2	8.0	770
03-25-2013 1130	739	-1.0	.111	.078	26,800	12.5	8.2	8.2	745
04-08-2013 1030	728	17.6	.100	.070	28,700	11.1	8.4	8.3	804
04-22-2013 1100	734	9.5	.097	.068	20,900	11.5	8.3	8.2	803
05-07-2013 0930	738	18.5	.101	.070	24,700	10.5	8.4	8.2	794
05-22-2013 1045	731	18.6	.095	.065	25,200	8.1	8.3	8.2	817
06-04-2013 1100	734	19.9	.128	.092	32,900	8.0	8.2	8.2	779
06-19-2013 1000	740	27.0	.137	.101	40,700	7.2	8.4	8.3	762
07-01-2013 1030	742	28.0	.114	.080	34,400	7.3	8.4	8.4	793
07-23-2013 0945	734	22.1	.100	.069	30,200	7.2	8.3	8.4	832
08-26-2013 0930	743	30.5	.093	.064	32,000	7.8	8.4	8.4	801

06610000 Missouri River at Omaha, NE—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 2 of 6

[CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Gage height, ft (00065)	Dissolved solids dried at 180°C, water, filtered, mg/L (70300)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)
10-01-2012 0930	816	17.9	22	15.51	536	57.7	26.2	5.95	87.9
12-04-2012 1030	866	5.8	E 16	10.10	580	70.1	29.5	6.06	80.9
02-05-2013 1000	854	.5	E 12	8.89	538	70.1	27.8	5.98	74.6
03-12-2013 1000	779	1.9	160	9.92	508	62.6	24.2	7.12	60.4
03-25-2013 1130	738	2.2	31	12.46	486	60.7	23.2	6.08	62.7
04-08-2013 1030	804	9.5	22	12.80	544	62.7	27.2	6.22	76.1
04-22-2013 1100	808	7.0	48	10.07	537	70.3	29.1	6.46	67.4
05-07-2013 0930	800	11.5	34	11.70	528	70.7	29.6	6.38	64.1
05-22-2013 1045	816	16.7	110	11.82	542	68.7	29.5	6.42	71.1
06-04-2013 1100	787	18.2	170	14.51	531	78.5	30.3	6.14	44.6
06-19-2013 1000	778	23.6	180	16.35	517	74.8	28.8	5.67	52.6
07-01-2013 1030	801	24.7	69	15.08	541	71.9	28.8	5.86	58.6
07-23-2013 0945	826	27.4	44	13.78	552	63.0	28.3	6.40	74.5
08-26-2013 0930	808	28.2	30	14.23	533	59.1	25.3	6.56	75.9

06610000 Missouri River at Omaha, NE—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 3 of 6

[CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as CaCO ₃ (29801)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Carbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00452)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO ₂ (00955)
10-01-2012 0930	175	165	197	2.35	1.7	12.1	0.39	0.10	8.08
12-04-2012 1030	207	202	243	1.53	1.7	14.8	.44	.10	8.53
02-05-2013 1000	198	186	226	1.03	.9	14.5	.41	.09	10.6
03-12-2013 1000	178	175	211	11.8	.9	20.7	.38	.15	10.3
03-25-2013 1130	169	160	193	3.26	1.0	13.9	--	.13	10.7
04-08-2013 1030	181	174	209	2.03	1.7	13.5	.41	.07	8.41
04-22-2013 1100	193	187	225	5.03	1.7	20.3	.45	.32	8.77
05-07-2013 0930	190	182	217	4.32	2.4	17.9	.44	.13	9.12
05-22-2013 1045	186	180	215	5.97	2.1	17.2	.54	< .03	7.72
06-04-2013 1100	187	179	216	7.92	1.2	20.5	.43	< .03	12.9
06-19-2013 1000	183	174	208	5.96	2.1	16.7	.49	< .03	11.3
07-01-2013 1030	192	189	227	4.26	1.8	16.4	.47	< .03	11.6
07-23-2013 0945	184	177	209	3.40	3.2	14.8	.50	.29	10.1
08-26-2013 0930	171	166	196	3.73	3.4	13.7	.48	.15	8.67

06610000 Missouri River at Omaha, NE—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 4 of 6

[CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phosphorus, water, filtered, mg/L as P (00666)
10-01-2012 0930	244	0.23	0.43	0.018	0.140	0.003	0.016	0.190	0.018
12-04-2012 1030	239	.28	.47	.065	.333	.004	.033	.156	.039
02-05-2013 1000	252	.40	.51	.137	.573	.006	.041	.086	.045
03-12-2013 1000	196	.91	2.1	.263	1.35	.023	.091	1.16	.107
03-25-2013 1130	197	.53	.84	.164	.736	.012	.088	.232	.097
04-08-2013 1030	234	.34	.53	.014	.551	.005	.043	.193	.053
04-22-2013 1100	212	.44	1.0	.069	1.35	.010	.076	.470	.082
05-07-2013 0930	217	.37	.82	.016	1.47	.008	.041	.446	.047
05-22-2013 1045	224	.52	1.3	.038	.847	.012	.049	.761	.053
06-04-2013 1100	188	.60	1.6	.048	5.63	.055	.133	.833	.129
06-19-2013 1000	192	.42	1.6	.022	3.78	.029	.100	.628	.106
07-01-2013 1030	210	.51	1.1	.011	3.31	.015	.091	.406	.090
07-23-2013 0945	239	.35	.78	.024	.652	.008	.055	.353	.057
08-26-2013 0930	246	.30	.69	< .010	.101	.004	.026	.364	.032

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 5 of 6

[CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Phosphorus, water, unfiltered, mg/L as P (00665)	Iron, water, filtered, μg/L (01046)	Lithium, water, filtered, μg/L (01130)	Strontium, water, filtered, μg/L (01080)	Vanadium, water, filtered, μg/L (01085)	Arsenic, water, filtered, μg/L (01000)	Boron, water, filtered, μg/L (01020)	Selenium, water, filtered, μg/L (01145)	Organic carbon, suspended sediment, total, mg/L (00689)
10-01-2012 0930	0.124	8.8	41.8	594	2.4	2.5	129	1.5	2.25
12-04-2012 1030	.138	7.2	51.9	647	2.0	2.0	130	1.8	1.43
02-05-2013 1000	.109	7.7	51.1	664	1.2	2.0	122	1.9	.94
03-12-2013 1000	.696	42.0	32.9	549	2.1	2.5	101	2.4	11.7
03-25-2013 1130	.264	25.9	40.0	521	1.7	2.3	108	1.9	3.13
04-08-2013 1030	.172	53.8	43.5	562	1.9	2.3	118	1.8	1.96
04-22-2013 1100	.315	13.6	43.8	608	1.7	2.2	101	2.8	4.71
05-07-2013 0930	.228	4.0	39.7	531	2.1	2.5	103	2.9	4.18
05-22-2013 1045	.419	12.6	40.6	521	2.2	2.9	98	2.2	5.96
06-04-2013 1100	.614	15.1	28.8	447	3.6	3.4	80	4.3	7.91
06-19-2013 1000	.580	14.7	35.5	461	3.5	3.2	98	2.7	5.93
07-01-2013 1030	.307	5.8	40.6	494	3.8	3.5	104	2.5	4.26
07-23-2013 0945	.221	4.0	46.9	540	3.6	3.6	118	2.0	3.11
08-26-2013 0930	.199	< 4.0	50.3	538	3.3	3.1	117	2.1	3.58

06610000 Missouri River at Omaha, NE—Continued**WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**

Part 6 of 6

[CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; μS/cm, microsiemens per centimeter; μg/L, micrograms per liter; --, no data; <, less than; E, estimated]

Sample date-time	Suspended sediment, sieve			
	Organic carbon, water, filtered, mg/L (00681)	diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
10-01-2012 0930	4.33	42	124	12,600
12-04-2012 1030	3.95	51	146	E 8,320
02-05-2013 1000	4.08	38	140	6,990
03-12-2013 1000	7.75	81	534	30,100
03-25-2013 1130	5.55	35	241	17,400
04-08-2013 1030	3.99	35	174	13,500
04-22-2013 1100	4.39	43	121	6,830
05-07-2013 0930	4.26	50	184	12,300
05-22-2013 1045	3.99	85	377	25,700
06-04-2013 1100	4.28	85	497	44,100
06-19-2013 1000	4.24	83	527	57,900
07-01-2013 1030	4.40	71	289	26,800
07-23-2013 0945	4.03	64	170	13,900
08-26-2013 0930	4.13	50	147	12,700

06610000 Missouri River at Omaha, NE—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 1 of 3

[ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; A, average]

Sample date-time	Discharge, instantaneous, ft ³ /s (00061)	Specific conductance, unfiltered, laboratory, µS/cm at 25°C (90095)	Temperature, water, °C (00010)	Gage height, ft (00065)	Number of sampling points, count (00063)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concentration, mg/L (80154)
10-01-2012 0939	37,700	A 829	18.7	15.50	4	--	A 126
10-04-2012 1123	37,600	A 827	18.2	15.31	4	--	A 172
10-09-2012 1533	38,700	A 828	12.6	15.45	4	--	A 139
10-12-2012 1118	38,000	A 828	13.0	15.31	4	--	A 182
10-15-2012 1348	38,000	A 825	13.9	15.41	4	--	A 121
10-18-2012 0933	37,400	A 831	12.9	15.18	4	--	A 138
10-22-2012 1303	37,200	A 824	12.7	15.11	4	--	A 254
10-25-2012 1152	38,100	A 826	12.7	15.44	3	--	A 167
10-29-2012 1008	37,300	A 825	10.0	15.19	4	--	A 153
11-01-2012 1208	37,400	A 834	10.1	15.24	4	A 16	A 189
11-05-2012 1033	37,400	A 827	9.6	15.23	4	--	A 167
11-08-2012 1203	37,700	A 832	10.0	15.28	2	--	A 107
11-13-2012 1418	38,400	A 837	7.1	15.39	4	--	A 165
11-16-2012 1003	37,100	A 824	7.4	14.97	4	--	A 210
11-19-2012 0953	37,000	A 828	7.3	14.98	4	--	A 154
11-21-2012 1427	37,000	A 831	8.5	14.99	4	--	A 165
11-27-2012 1323	32,000	A 827	5.8	13.79	3	--	A 129
11-30-2012 1428	24,400	A 856	5.7	11.42	4	--	A 127
12-03-2012 1330	21,300	A 879	7.0	10.17	3	A 32	A 156
12-07-2012 1435	19,700	A 869	6.5	9.68	4	--	A 109
12-12-2012 1408	17,100	A 877	1.7	8.49	4	--	A 112
12-18-2012 1023	16,500	A 846	4.1	8.58	4	--	A 128
01-09-2013 1433	17,300	A 885	1.5	8.88	4	A 21	A 139
01-18-2013 1123	16,700	A 870	1.5	8.47	4	--	A 80
01-29-2013 0943	16,100	A 854	2.6	8.23	4	--	A 69
02-05-2013 1213	18,500	A 853	.3	8.89	4	A 34	A 100
02-12-2013 0945	16,100	A 838	2.5	8.24	4	--	A 99
02-19-2013 1533	15,700	A 831	2.1	8.03	4	--	A 88
02-25-2013 1553	16,200	A 818	2.5	8.18	4	--	A 82
03-05-2013 1017	15,700	A 836	3.3	7.99	4	A 38	A 74
03-08-2013 1253	15,500	A 861	4.3	7.89	4	--	A 91
03-11-2013 1418	20,000	A 807	2.2	9.57	4	--	A 391
03-15-2013 1333	23,700	A 662	3.4	11.10	4	--	A 539
03-19-2013 1303	22,600	A 671	5.0	10.83	4	--	A 491
03-22-2013 1318	24,200	A 710	2.1	11.47	4	--	A 268
03-26-2013 1343	28,200	A 737	4.3	12.97	4	--	A 280
03-29-2013 1253	29,400	A 776	6.8	13.27	4	--	A 203
04-02-2013 1313	31,100	A 792	7.8	13.67	4	A 37	A 296
04-05-2013 1303	28,000	A 797	9.3	12.66	4	--	A 180
04-09-2013 1313	28,300	A 829	11.8	12.95	4	--	A 196

06610000 Missouri River at Omaha, NE—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Part 2 of 3

[ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; A, average]

Sample date-time	Discharge, instantaneous, ft ³ /s (00061)	Specific conductance, unfiltered, laboratory, µS/cm at 25°C (90095)	Temperature, water, °C (00010)	Gage height, ft (00065)	Number of sampling points, count (00063)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concentration, mg/L (80154)
04-12-2013 1218	28,900	A 807	6.8	13.09	4	--	A 330
04-16-2013 1323	24,500	A 801	10.0	11.40	4	--	A 214
04-19-2013 1213	25,700	A 826	7.8	11.82	3	--	A 289
04-23-2013 1357	20,600	A 821	7.6	9.93	4	--	A 223
04-26-2013 1351	21,400	A 828	11.0	10.26	4	--	A 166
04-30-2013 1233	21,100	A 845	17.4	10.21	4	--	A 157
05-03-2013 1413	26,100	A 795	10.5	12.12	4	A 52	A 184
05-07-2013 1343	24,700	A 813	14.3	11.70	3	--	A 196
05-10-2013 1233	26,000	A 800	16.3	12.16	4	--	A 185
05-14-2013 1433	24,800	A 828	19.0	11.68	4	--	A 140
05-17-2013 1248	25,500	A 838	21.5	11.91	4	--	A 151
05-21-2013 1323	25,600	A 802	20.9	11.94	4	--	A 1,120
05-24-2013 1253	28,500	A 836	20.1	12.68	4	--	A 187
05-28-2013 1328	47,700	A 713	20.3	18.90	4	--	A 2,490
05-31-2013 1249	54,100	A 530	19.9	20.88	4	--	A 1,460
06-04-2013 1348	32,900	A 799	20.4	14.51	4	A 87	A 455
06-07-2013 0933	31,400	A 855	21.1	13.99	4	--	A 340
06-11-2013 1303	36,600	A 797	20.6	15.86	4	--	A 341
06-14-2013 1353	41,700	A 773	23.6	17.24	3	--	A 558
06-18-2013 1333	43,500	A 777	23.2	17.31	4	--	A 667
06-21-2013 1223	37,700	A 835	27.0	15.66	4	--	A 332
06-25-2013 1303	34,700	A 835	26.2	15.12	4	--	A 263
06-28-2013 1227	37,000	A 807	27.7	15.97	4	--	A 298
07-01-2013 1303	34,400	A 824	26.7	15.05	4	A 62	A 308
07-05-2013 1225	33,000	A 819	26.9	14.58	4	--	A 212
07-09-2013 1308	32,000	A 834	28.9	14.23	4	--	A 177
07-12-2013 1337	30,000	A 858	29.4	13.50	3	--	A 191
07-16-2013 1303	28,400	A 858	29.0	12.94	4	--	A 172
07-18-2013 1017	27,700	A 851	29.4	12.78	4	--	A 172
07-23-2013 1033	30,200	A 845	29.0	13.79	4	--	A 150
07-26-2013 1227	30,900	A 832	28.1	14.01	4	--	A 164
07-29-2013 1323	31,500	A 828	25.4	14.20	4	--	A 175
08-02-2013 1417	31,400	A 836	25.9	14.16	4	A 54	A 155
08-05-2013 1323	29,300	A 843	25.2	13.40	4	--	A 212
08-09-2013 0823	25,100	A 832	26.6	11.88	4	--	A 174
08-12-2013 1318	24,500	A 848	27.2	11.70	4	--	A 163
08-16-2013 1243	26,700	A 816	24.9	12.43	4	--	A 167
08-20-2013 1303	26,500	A 833	26.3	12.25	4	--	A 121
08-23-2013 0853	29,100	A 830	28.0	13.19	4	--	A 183
08-27-2013 1008	32,300	A 822	28.5	14.32	4	--	A 166

06610000 Missouri River at Omaha, NE—Continued**WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**

Part 3 of 3

[ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm, millimeters; °C, degrees Celsius; μS/cm, microsiemens per centimeter; A, average]

Sample date-time	Discharge, instanta- neous, ft³/s (00061)	Specific conduc- tance, water, unfiltered, laboratory, μS/cm at 25°C (90095)	Tempera- ture, water, °C (00010)	Gage height, ft (00065)	Number of sampling points, count (00063)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concen- tration, mg/L (80154)
08-30-2013 1308	34,100	A 836	30.5	14.70	4	--	A 152
09-03-2013 1257	34,700	A 835	29.1	15.34	4	A 42	A 173
09-06-2013 1323	36,300	A 843	27.8	15.54	4	--	A 221
09-10-2013 1308	35,300	A 857	28.5	15.39	4	--	A 184
09-12-2013 1428	35,200	A 855	28.7	15.31	4	--	A 182
09-17-2013 1308	35,700	A 869	23.4	15.42	4	--	A 178
09-20-2013 1007	34,000	A 868	22.0	14.89	4	--	A 159
09-24-2013 1353	31,700	A 873	20.9	14.19	4	--	A 143
09-27-2013 0923	31,700	A 858	21.8	14.20	4	--	A 173