

06934500 MISSOURI RIVER AT HERMANN, MO

Missouri River Main Stem

LOCATION.--Lat 38°42'35.3", long 91°26'18.6" referenced to North American Datum of 1983, in SW ¼ sec.25, T.46 N., R.5 W., Montgomery County, MO, Hydrologic Unit 10300200, on downstream side of third pier from right abutment of bridge on State Highway 19 at Hermann, 7 miles downstream from Gasconade River, and at mile 97.9.

DRAINAGE AREA.--522,500 mi², the 3,959 mi² in Great Divide basin are not included.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1897 to current year. Prior to August 1928 monthly discharge only published in WSP 1310. Gage-height records 1873-99 collected at site 480 ft downstream are contained in reports of Missouri River Commission; since 1900 in reports of the National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 481.50 ft above North American Vertical Datum of 1988. Prior to Sept. 26, 1930, nonrecording gage at site 480 ft downstream at datum 0.07 ft lower; Sept. 26, 1930, to Mar. 27, 1932, nonrecording gage; Mar. 28, 1932, to June 12, 1945, water-stage recorder; June 13, 1945, to Apr. 2, 1946, May 13 to Sept. 30, 1978, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharges. Water-discharge records good. Some regulation from many upstream reservoirs.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1844 reached a stage of 35.5 ft, discharge, about 700,000 ft³/s, computed by the U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 457,000 ft³/s, June 1, gage height, 33.14 ft; minimum discharge, 26,600 ft³/s, Jan. 29, gage height, 0.93 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	44,500	47,700	45,200	28,500	50,800	48,100	63,800	116,000	401,000	97,300	44,300	53,300
2	44,600	47,300	44,000	28,800	50,400	47,400	65,500	104,000	435,000	99,100	45,100	48,800
3	44,500	46,800	42,200	28,400	45,600	42,300	74,900	98,300	397,000	94,400	47,600	46,700
4	44,200	46,500	40,900	27,800	38,500	38,100	75,100	105,000	361,000	86,900	51,700	45,400
5	44,100	46,100	39,800	27,700	34,400	39,500	73,900	105,000	304,000	81,500	54,300	45,700
6	45,100	46,000	38,400	27,800	32,700	43,900	72,800	129,000	246,000	74,600	68,500	46,100
7	44,800	45,900	36,900	28,000	31,800	48,100	69,600	149,000	195,000	67,200	104,000	46,300
8	43,900	46,000	35,800	28,100	30,700	54,600	69,600	138,000	167,000	63,300	171,000	47,300
9	43,900	46,100	34,900	28,100	31,600	55,500	72,600	121,000	147,000	61,500	213,000	47,200
10	43,800	45,500	34,100	28,200	34,400	84,200	81,700	111,000	139,000	68,000	203,000	47,100
11	44,000	45,100	33,400	28,300	33,600	154,000	125,000	107,000	132,000	69,700	176,000	50,700
12	45,200	45,800	32,900	28,400	33,000	183,000	157,000	102,000	131,000	64,300	145,000	57,200
13	45,400	47,400	32,600	28,900	35,200	161,000	162,000	97,500	136,000	55,900	132,000	56,900
14	45,900	49,400	32,200	29,100	38,400	135,000	137,000	95,500	133,000	52,900	119,000	53,500
15	46,800	49,900	31,900	28,900	37,100	112,000	117,000	94,700	126,000	51,500	89,200	46,600
16	47,900	48,800	31,400	28,900	35,600	95,800	133,000	95,100	123,000	50,300	77,800	44,500
17	47,500	48,200	31,100	28,900	35,700	76,800	141,000	88,600	139,000	49,600	79,200	44,300
18	47,200	48,000	30,600	29,100	34,400	75,000	148,000	83,900	160,000	49,000	78,100	44,700
19	47,700	48,000	29,800	29,200	33,600	86,900	237,000	79,900	163,000	48,500	75,000	44,400
20	48,600	47,800	29,200	28,800	32,700	84,100	247,000	79,000	153,000	48,200	74,900	44,700
21	48,700	47,200	28,600	28,200	32,000	82,800	237,000	93,800	134,000	50,100	75,500	45,800
22	47,400	46,400	28,600	27,700	36,000	78,900	231,000	115,000	124,000	48,700	78,600	46,600
23	46,500	45,700	28,900	27,400	36,600	73,600	214,000	111,000	116,000	45,900	78,400	49,400
24	47,600	45,200	29,200	27,200	33,600	64,800	200,000	98,100	112,000	47,900	79,100	49,500
25	50,700	45,100	29,700	27,200	31,100	56,300	171,000	86,800	113,000	48,200	70,700	46,700
26	49,000	45,000	30,000	27,300	32,000	57,200	140,000	77,600	105,000	45,800	63,200	45,000
27	47,000	45,300	29,700	27,100	42,400	61,100	121,000	80,700	100,000	44,700	57,000	44,000
28	46,000	45,800	29,000	27,100	46,500	69,600	125,000	114,000	99,700	44,300	50,600	42,900
29	46,000	46,200	28,400	26,900	---	74,000	126,000	154,000	101,000	44,200	48,500	42,200
30	46,400	46,000	27,900	34,000	---	69,900	122,000	182,000	100,000	44,100	54,300	41,700
31	47,300	---	28,000	45,600	---	66,200	---	258,000	---	44,200	53,200	---
Mean	46,200	46,670	33,070	28,890	36,440	78,050	133,700	112,000	176,400	59,410	88,960	47,170
Max	50,700	49,900	45,200	45,600	50,800	183,000	247,000	258,000	435,000	99,100	213,000	57,200
Min	43,800	45,000	27,900	26,900	30,700	38,100	63,800	77,600	99,700	44,100	44,300	41,700
In.	0.10	0.10	0.07	0.06	0.07	0.17	0.29	0.25	0.38	0.13	0.20	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2013^a, BY WATER YEAR (WY)

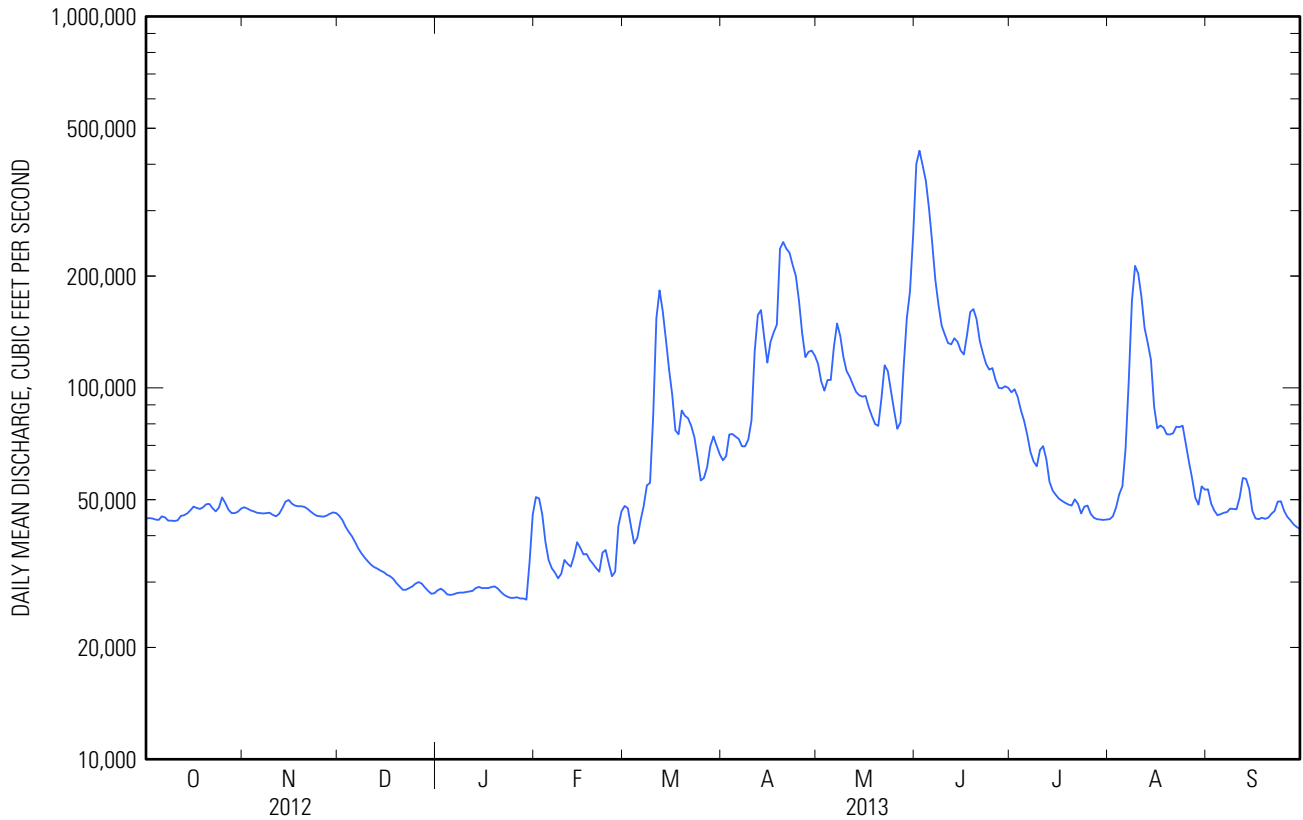
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	76,550	75,570	60,900	51,940	67,620	96,710	119,300	125,000	125,300	101,600	76,950	76,970
Max	286,700	174,800	178,900	129,000	136,800	267,500	333,400	313,000	282,300	376,300	306,600	243,500
(WY)	(1987)	(1999)	(1983)	(1973)	(1982)	(1973)	(1973)	(1995)	(1995)	(1993)	(1993)	(1993)
Min	35,230	24,820	17,060	17,350	19,250	22,810	45,800	47,710	46,150	40,970	37,920	37,800
(WY)	(2007)	(2007)	(1964)	(1963)	(1964)	(1964)	(1963)	(1989)	(1988)	(2006)	(2003)	(1963)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1958 - 2013 ^a	
Annual mean	61,890		73,920		87,890	
Highest annual mean					181,800	1993
Lowest annual mean					41,690	2006
Highest daily mean	186,000	Mar 25	435,000	Jun 2	739,000	Jul 31, 1993
Lowest daily mean	27,900	Dec 30	26,900	Jan 29	6,210	Dec 23, 1963
Annual seven-day minimum	29,000	Dec 25	27,200	Jan 23	7,400	Dec 20, 1963
Maximum peak flow			457,000	Jun 1	750,000	Jul 31, 1993
Maximum peak stage			33.14	Jun 1	36.97	Jul 31, 1993
Instantaneous low flow			26,600	Jan 29	602	Dec 23, 1963
Annual runoff (inches)	1.61		1.92		2.29	
10 percent exceeds	105,000		139,000		167,000	
50 percent exceeds	50,400		48,200		67,600	
90 percent exceeds	44,100		29,200		36,400	

^a Period of Regulated Streamflow



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GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
OBSERVATION AT 0800
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5.02	5.55	5.11	1.40	e5.92	5.64	8.17	14.76	30.88	12.39	5.09	6.83
2	5.07	5.44	4.91	1.50	6.19	e5.66	8.28	13.52	32.85	12.69	5.20	5.88
3	5.03	5.37	4.56	1.45	5.39	e4.68	9.57	12.34	31.74	12.24	5.65	5.46
4	4.99	5.32	4.27	1.26	3.94	3.72	9.88	13.51	30.72	11.28	6.41	5.15
5	4.95	5.25	4.03	1.21	2.94	3.74	9.77	13.17	28.46	10.68	6.83	5.13
6	5.12	5.23	3.77	1.25	2.52	4.71	9.45	15.22	25.15	9.96	8.27	5.23
7	5.14	5.19	3.44	1.29	2.27	5.26	8.98	17.64	21.59	8.78	12.23	5.26
8	4.92	5.22	3.20	1.33	2.02	6.82	9.05	16.94	19.47	8.22	19.10	5.42
9	4.90	5.23	2.98	1.34	2.04	6.60	9.27	15.20	17.45	7.77	22.29	5.47
10	4.91	5.14	2.79	1.32	2.86	9.31	10.27	14.11	16.87	8.53	22.14	5.37
11	4.93	5.03	2.63	1.38	2.70	17.41	14.81	13.74	16.20	9.00	20.32	5.76
12	5.13	5.13	2.51	1.40	2.50	20.59	17.67	13.24	15.82	8.59	17.63	7.04
13	5.19	5.39	2.44	1.49	2.80	18.90	19.10	12.61	16.49	7.12	16.39	7.17
14	5.29	5.77	2.37	1.58	3.75	16.66	16.99	12.34	16.31	6.59	15.44	6.88
15	5.40	5.98	2.29	1.54	3.50	14.41	14.81	12.18	15.56	6.36	12.03	5.38
16	5.65	5.77	2.16	e1.52	3.16	12.67	15.67	12.38	15.01	6.19	10.20	4.93
17	5.54	5.64	2.08	1.52	3.18	10.27	17.38	11.62	16.28	6.10	10.50	4.89
18	5.50	5.59	1.97	1.56	2.90	9.39	15.42	10.97	18.46	5.98	10.46	4.95
19	5.54	5.59	1.78	1.63	2.69	11.33	23.86	10.47	18.81	5.92	9.91	4.91
20	5.73	5.56	1.66	1.55	2.52	11.00	24.90	10.12	18.36	5.77	9.84	4.94
21	5.76	5.47	1.45	1.37	2.21	10.73	24.11	11.35	16.51	6.31	9.81	5.17
22	5.54	5.31	1.44	1.24	3.11	10.54	23.79	14.35	15.50	6.02	10.26	5.29
23	5.28	5.17	1.52	1.15	3.48	9.64	22.56	14.19	14.58	5.46	10.29	5.74
24	5.42	5.10	1.58	1.09	2.76	8.67	21.97	12.73	14.07	5.78	10.59	5.95
25	6.09	5.05	1.72	1.09	2.18	7.07	19.94	11.52	14.39	5.96	9.59	5.41
26	5.85	5.03	1.81	1.11	1.92	7.00	17.26	10.20	13.48	5.42	8.43	5.07
27	5.44	5.07	1.74	1.09	4.37	7.58	15.12	10.05	12.89	5.19	7.49	4.87
28	5.25	5.15	1.59	1.06	5.19	8.91	15.21	13.82	12.73	5.11	6.39	4.66
29	5.21	5.27	1.41	0.97	---	9.64	15.65	17.57	12.88	5.09	5.46	4.48
30	5.26	5.23	1.29	1.95	---	9.14	15.27	19.54	12.91	5.06	6.96	4.41
31	5.43	---	1.28	4.84	---	8.68	---	24.11	---	5.06	6.59	---
Mean	5.31	5.34	2.51	1.47	3.25	9.56	15.47	13.73	18.75	7.44	10.90	5.44
Max	6.09	5.98	5.11	4.84	6.19	20.59	24.90	24.11	32.85	12.69	22.29	7.17
Min	4.90	5.03	1.28	0.97	1.92	3.72	8.17	10.05	12.73	5.06	5.09	4.41

06934500 MISSOURI RIVER AT HERMANN, MO—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--July 1969 to current year. National Stream-Quality Accounting Network station September 1989 to current year. Discrete suspended and bed material sediments October 1988 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1996, February 2006 to current year (Seasonally).

pH: February 2006 to September 2007.

WATER TEMPERATURE: October 1974 to September 1996, February 2006 to September 2010 (Seasonally), October 2010 to current year.

DISSOLVED OXYGEN: June to September 1984, April to September 1985, April to September 1986, February 2006 to current year (Seasonally).

TURBIDITY: February 2006 to September 2010 (Seasonally), October 2010 to current year.

SUSPENDED-SEDIMENT CONCENTRATION: October 2008 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 2008 to current year.

INSTRUMENTATION.--Water-quality monitor, February 2006 to current year. U.S.G.S. satellite telemeter at station.

REMARKS.--Interruptions in the record are generally due to malfunction or fouling of the sensors. Detailed records of the procedures employed for specific periods of record have been included with the station analysis and are kept on file. The magnitude of extreme turbidity values has been found to vary depending on the probe used. The manufacturer's specified range for turbidity sensors used is 0 to 1,000 FNU. Values >1,000 FNU have been maintained in some cases for continuity of the record and/or have been flagged as greater than (>). All values greater than the manufacturer's specified limit should be considered as >1,000 FNU. In some cases partial daily maximum or minimum values were included with the record and were rated poor because no corresponding daily mean values were reported for these days. These values were reported because they are representative of stream conditions at the time and are a valid part of the record.

SPECIFIC CONDUCTANCE: Record good except Nov. 28, Apr. 9, Jul. 19, 20, 25, Aug 5 which are fair.

WATER TEMPERATURE: Record good.

DISSOLVED OXYGEN: Record good except Nov. 28, Apr. 9, Aug. 22, 26 which are fair.

TURBIDITY: Record rated good except Dec. 26, Jan. 10, Feb. 6-8, Aug. 22, 26 which are fair. Data collected using a YSI 6136 turbidity sensor.

Interruptions or periods of missing record may be due to instrument failure, low-flow conditions, ice conditions, extreme biofouling, siltation, or data corrections exceeding allowable criteria, which were deleted.

SUSPENDED SEDIMENT: Record fair except for estimated days, which are poor.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,150 $\mu\text{S}/\text{cm}$ (once daily measurement), Dec. 9, 1978; minimum recorded 119 $\mu\text{S}/\text{cm}$, Mar. 22, 2008.

pH: Maximum recorded, 8.8 standard units, Sep. 14-16, 2006; minimum recorded 7.3 standard units, May 12-16, and 18, 2007.

WATER TEMPERATURE: Maximum recorded, 32.5 $^{\circ}\text{C}$ (once daily measurement), Jul. 31, 1987; minimum recorded, -0.2 $^{\circ}\text{C}$, Jan. 12-13, 2011.

DISSOLVED OXYGEN: Maximum recorded 14.6 mg/L, Mar. 26, 2006; minimum recorded, 1.7 mg/L, May 9, 2007.

TURBIDITY: Maximum recorded, 1,430 FNU, Jun. 10, 2008, but may have been higher during periods of missing record; minimum recorded, 2.1 FNU, Feb. 2, 3, 2012.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 865 $\mu\text{S}/\text{cm}$, Aug. 28, 2012; minimum daily, 126 $\mu\text{S}/\text{cm}$, Mar. 22, 2008.

pH: Maximum daily 8.7 standard units, Sep. 15, 16, 2006; minimum daily, 7.3 standard units, May 15, 2007.

WATER TEMPERATURE: Maximum daily, 31.5 $^{\circ}\text{C}$, Jul. 20, 2006; minimum daily, -0.1 $^{\circ}\text{C}$, Dec. 14, 2010, Jan. 12, 17, 18, 2011.

DISSOLVED OXYGEN: Maximum daily, 14.1 mg/L, Mar. 26, 2006; minimum daily, 2.4 mg/L, May 10, 2007.

TURBIDITY: Maximum daily, 1240 FNU, Jun. 10, 2008, but may have been higher during periods of missing record; minimum daily, 2.4 FNU, Feb. 2, 2012.

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily, 2,480 mg/L, Apr. 30, 2009; minimum daily, 37 mg/L, Feb. 1, 2, 2012.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,130,000 tons, Jun. 1, 2013; minimum daily, 4,900 tons, Jan. 28, 31, 2012.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 852 $\mu\text{S}/\text{cm}$, Sep. 19; minimum recorded 269 $\mu\text{S}/\text{cm}$, Apr. 20.

WATER TEMPERATURE: Maximum recorded, 30.6 $^{\circ}\text{C}$, Jul. 19; minimum recorded, 0.2 $^{\circ}\text{C}$, Jan. 3.

DISSOLVED OXYGEN: Maximum recorded 11.9 mg/L, Nov. 27, 28; minimum recorded, 3.4 mg/L, Jun. 2, 3.

TURBIDITY: Maximum recorded, 930 FNU, Apr. 21; minimum recorded, 7.5 FNU, Jan. 27.

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily, 1,970 mg/L, Jun. 1; minimum daily, 91 mg/L, Jan. 26-28.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 2,130,000 tons, Jun. 1; minimum daily, 6,650 tons, Jan. 28.

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	832	824	829	786	782	784	---	---	---	---	---	---
2	828	821	824	787	781	783	---	---	---	---	---	---
3	826	819	822	783	779	781	---	---	---	---	---	---
4	822	817	819	785	780	783	---	---	---	---	---	---
5	819	811	816	785	778	781	---	---	---	---	---	---
6	814	794	804	780	775	777	---	---	---	---	---	---
7	802	792	797	776	773	775	---	---	---	---	---	---
8	810	801	808	779	773	776	---	---	---	---	---	---
9	809	803	806	780	776	779	---	---	---	---	---	---
10	804	796	801	783	778	780	---	---	---	---	---	---
11	798	791	795	783	774	780	---	---	---	---	---	---
12	793	782	786	776	770	773	---	---	---	---	---	---
13	789	782	786	776	771	774	---	---	---	---	---	---
14	784	776	780	771	758	763	---	---	---	---	---	---
15	780	774	777	762	757	760	---	---	---	---	---	---
16	776	752	762	757	746	751	---	---	---	---	---	---
17	761	752	757	756	747	752	---	---	---	---	---	---
18	765	759	763	760	755	758	---	---	---	---	---	---
19	767	761	764	761	757	759	---	---	---	---	---	---
20	770	766	768	762	759	761	---	---	---	---	---	---
21	767	748	758	761	758	759	---	---	---	---	---	---
22	752	743	747	760	756	759	---	---	---	---	---	---
23	750	743	746	758	751	754	---	---	---	---	---	---
24	776	746	761	760	752	756	---	---	---	---	---	---
25	775	731	755	766	758	762	---	---	---	---	---	---
26	745	725	732	776	766	771	---	---	---	---	---	---
27	767	744	757	778	774	777	---	---	---	---	---	---
28	776	766	770	779	---	---	---	---	---	---	---	---
29	777	772	775	---	---	---	---	---	---	---	---	---
30	781	775	778	---	---	---	---	---	---	---	---	---
31	784	780	782	---	---	---	---	---	---	---	---	---
Month	832	725	781	---	---	---	---	---	---	---	---	---

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**

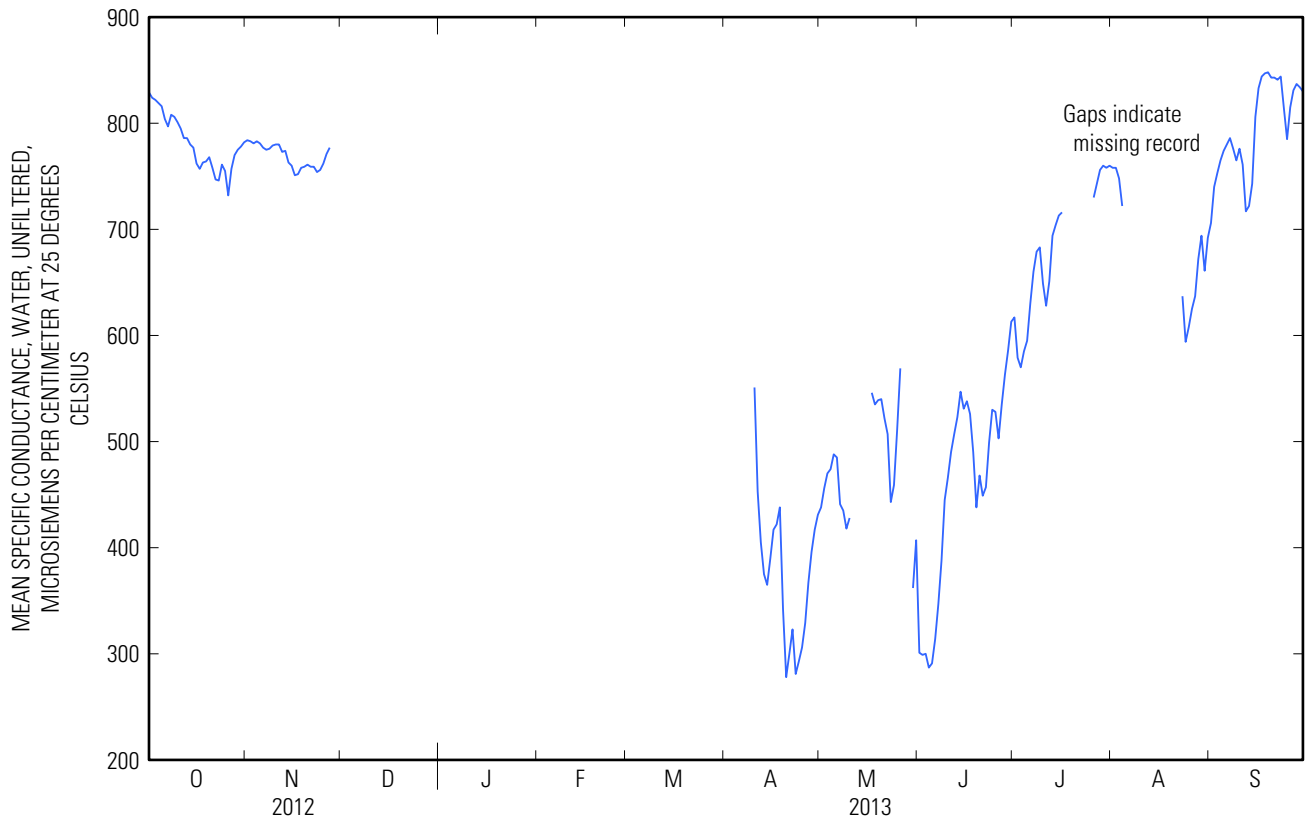
Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	457	421	438
2	---	---	---	---	---	---	---	---	---	473	436	456
3	---	---	---	---	---	---	---	---	---	483	460	470
4	---	---	---	---	---	---	---	---	---	490	461	474
5	---	---	---	---	---	---	---	---	---	498	476	488
6	---	---	---	---	---	---	---	---	---	497	468	485
7	---	---	---	---	---	---	---	---	---	471	429	441
8	---	---	---	---	---	---	---	---	---	447	421	435
9	---	---	---	---	---	---	588	---	---	426	410	418
10	---	---	---	---	---	---	589	504	551	446	413	428
11	---	---	---	---	---	---	516	385	453	---	---	---
12	---	---	---	---	---	---	428	380	405	---	---	---
13	---	---	---	---	---	---	400	362	375	---	---	---
14	---	---	---	---	---	---	375	359	365	---	---	---
15	---	---	---	---	---	---	418	370	390	---	---	---
16	---	---	---	---	---	---	435	405	417	---	---	---
17	---	---	---	---	---	---	442	404	422	560	532	546
18	---	---	---	---	---	---	478	371	438	550	523	535
19	---	---	---	---	---	---	371	282	342	549	525	539
20	---	---	---	---	---	---	287	269	278	557	519	540
21	---	---	---	---	---	---	336	282	300	540	499	522
22	---	---	---	---	---	---	344	289	323	565	446	507
23	---	---	---	---	---	---	290	277	281	454	435	443
24	---	---	---	---	---	---	301	283	293	479	445	459
25	---	---	---	---	---	---	315	299	306	551	472	511
26	---	---	---	---	---	---	347	315	329	590	544	569
27	---	---	---	---	---	---	388	346	367	---	---	---
28	---	---	---	---	---	---	416	384	396	---	---	---
29	---	---	---	---	---	---	430	404	417	---	---	---
30	---	---	---	---	---	---	445	415	431	366	359	362
31	---	---	---	---	---	---	---	---	---	447	361	407
Month	---	---	---	---	---	---	---	---	---	---	---	---

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	390	278	301	633	594	617	771	745	758	728	691	706
2	313	282	299	612	551	579	763	752	758	758	719	740
3	314	289	300	583	555	570	758	739	748	761	743	753
4	291	283	287	599	567	585	743	708	722	772	754	765
5	300	284	291	626	535	595	719	---	---	781	770	774
6	330	298	314	653	611	630	---	---	---	787	774	780
7	364	327	347	678	605	660	---	---	---	791	779	786
8	422	362	388	684	673	679	---	---	---	793	758	776
9	459	421	445	691	670	683	---	---	---	774	759	765
10	484	453	466	670	616	649	---	---	---	783	767	776
11	509	473	490	643	614	628	---	---	---	780	712	761
12	517	495	507	678	622	651	---	---	---	736	693	717
13	544	507	523	711	675	694	---	---	---	744	695	722
14	559	534	547	714	683	704	---	---	---	791	709	743
15	546	515	531	721	686	713	---	---	---	824	773	806
16	549	523	538	727	661	716	---	---	---	845	820	833
17	556	505	526	---	---	---	---	---	---	850	837	844
18	536	437	490	---	---	---	---	---	---	850	844	847
19	450	430	438	---	687	---	---	---	---	852	845	848
20	482	449	468	---	667	---	---	---	---	850	837	843
21	465	438	449	---	---	---	---	---	---	849	838	843
22	481	442	457	---	---	---	---	---	---	848	836	841
23	517	475	499	---	---	---	661	608	637	848	837	844
24	552	509	530	---	---	---	623	572	594	843	773	814
25	558	490	528	728	---	---	629	582	608	800	774	785
26	524	486	503	749	713	730	646	610	625	827	799	815
27	558	516	535	759	732	743	655	616	637	835	824	831
28	580	541	563	763	749	756	694	650	672	840	834	837
29	607	558	586	764	753	760	720	644	694	838	829	834
30	625	596	613	770	745	758	688	638	661	835	826	830
31	---	---	---	771	744	760	714	665	692	---	---	---
Month	625	278	459	---	---	---	---	---	---	852	691	795

06934500 MISSOURI RIVER AT HERMANN, MO—Continued



06934500 MISSOURI RIVER AT HERMANN, MO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	20.1	19.8	20.0	11.8	11.3	11.6	7.7	6.9	7.2	1.2	0.9	1.1
2	20.1	19.4	19.8	11.8	11.4	11.6	8.4	7.7	8.1	1.0	0.5	0.7
3	20.0	19.6	19.7	11.4	11.0	11.2	9.1	8.3	8.7	0.7	0.2	0.5
4	19.7	19.3	19.5	11.1	10.7	10.9	9.2	9.0	9.1	0.8	0.3	0.5
5	19.5	18.1	18.8	10.8	10.3	10.5	9.0	8.5	8.7	0.7	0.3	0.5
6	18.1	17.1	17.6	10.3	10.1	10.1	8.6	8.2	8.3	1.1	0.6	0.8
7	17.1	16.6	16.8	10.1	10.0	10.0	8.3	8.2	8.2	1.4	0.7	1.0
8	16.6	16.0	16.3	10.2	9.7	10.0	8.3	8.2	8.3	2.0	1.2	1.6
9	16.2	15.6	15.9	10.8	10.0	10.4	8.2	8.0	8.1	2.7	2.0	2.3
10	16.1	15.6	15.8	11.7	10.8	11.2	8.0	6.4	7.2	3.1	2.6	2.8
11	15.8	15.2	15.4	12.2	11.7	12.0	6.4	5.6	5.9	4.2	3.0	3.5
12	15.3	14.9	15.1	11.8	10.7	11.2	5.6	5.2	5.4	4.6	4.1	4.4
13	15.7	15.1	15.4	10.7	10.1	10.3	5.4	4.9	5.2	4.4	3.5	4.0
14	16.0	15.7	15.8	10.1	9.7	9.9	5.4	5.1	5.2	3.5	2.5	2.9
15	16.0	15.4	15.7	9.8	9.4	9.6	6.3	5.4	5.9	2.5	1.9	2.1
16	16.0	15.4	15.7	9.9	9.5	9.7	6.6	6.2	6.4	2.1	1.6	1.9
17	15.9	15.5	15.7	9.8	9.4	9.6	6.4	6.1	6.3	2.3	1.8	2.1
18	15.5	14.7	15.1	9.6	9.2	9.5	6.2	5.7	6.0	2.6	1.9	2.3
19	14.7	14.0	14.3	9.6	9.4	9.5	6.0	5.6	5.7	3.3	2.5	2.9
20	14.2	13.8	14.0	9.8	9.3	9.6	6.0	4.7	5.5	3.4	3.0	3.2
21	14.5	13.8	14.1	9.7	9.4	9.6	4.7	3.8	4.1	3.2	2.5	2.8
22	15.2	14.5	14.7	9.7	9.2	9.4	3.8	3.3	3.6	2.5	1.6	2.0
23	16.0	15.2	15.6	9.6	8.8	9.3	3.8	3.4	3.6	1.8	1.1	1.5
24	16.7	16.0	16.3	8.8	8.1	8.4	3.7	3.0	3.4	1.7	0.9	1.1
25	17.0	16.5	16.7	8.2	7.8	8.0	3.0	2.4	2.6	1.5	0.9	1.2
26	16.6	15.4	15.9	8.0	7.3	7.6	2.4	2.1	2.3	1.7	1.1	1.4
27	15.4	14.4	14.8	7.3	6.9	7.1	2.2	1.9	2.0	2.3	1.5	1.7
28	14.4	13.6	13.9	6.9	6.5	6.7	1.9	1.7	1.8	4.1	2.3	3.1
29	13.6	12.8	13.1	6.7	6.2	6.5	1.8	1.3	1.6	5.8	4.1	5.1
30	12.8	12.2	12.4	7.0	6.5	6.7	1.3	0.9	1.1	6.2	5.5	6.0
31	12.2	11.8	12.0	---	---	---	1.2	1.1	1.2	5.5	4.6	5.2
Month	20.1	11.8	15.9	12.2	6.2	9.6	9.2	0.9	5.4	6.2	0.2	2.3

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	4.6	4.0	4.3	3.1	2.7	2.8	9.4	8.5	8.9	15.4	14.4	14.9
2	4.1	3.4	3.7	3.1	2.5	2.8	9.5	8.8	9.2	15.7	15.2	15.5
3	3.6	3.0	3.2	3.3	2.7	3.0	9.3	8.8	9.0	15.3	13.8	14.6
4	3.6	2.9	3.2	4.3	3.2	3.6	9.6	8.8	9.2	13.8	13.4	13.6
5	3.9	3.1	3.5	4.8	4.2	4.5	9.8	9.1	9.4	13.5	12.9	13.2
6	4.2	3.4	3.8	4.7	4.3	4.5	10.4	9.6	10	12.9	12.5	12.7
7	4.3	4.0	4.1	5.0	4.3	4.7	11.5	10.3	10.9	13.1	12.4	12.7
8	4.3	4.1	4.2	5.5	4.8	5.1	12.4	11.5	11.9	13.8	13.1	13.5
9	4.6	4.0	4.3	6.5	5.5	5.9	13.1	12.3	12.7	14.1	13.7	13.8
10	5.4	4.6	5.0	6.6	5.9	6.4	13.5	12.8	13.2	14.5	14.1	14.4
11	5.5	4.9	5.2	5.9	4.8	5.4	13.3	12.3	12.9	15.2	14.4	14.8
12	5.3	4.9	5.1	4.9	4.3	4.5	12.4	11.5	11.9	15.7	15.0	15.3
13	5.7	5.0	5.3	4.5	4.1	4.3	11.5	10.9	11.1	16.2	15.4	15.8
14	6.2	5.5	5.8	4.8	4.2	4.4	11.3	10.8	11.0	17.3	16.2	16.6
15	6.3	5.8	6.0	5.6	4.6	5.0	11.3	11.2	11.3	18.4	17.2	17.7
16	6.0	5.4	5.6	6.2	5.5	5.9	11.3	10.8	11.0	19.4	18.2	18.8
17	5.9	5.2	5.6	6.3	6.2	6.3	11.4	10.7	11.0	19.8	19.2	19.5
18	6.0	5.7	5.9	6.7	6.3	6.5	12.3	11.4	11.9	20.6	19.6	20.0
19	5.8	4.9	5.3	6.8	6.3	6.6	12.2	10.8	11.4	21.5	20.4	21.0
20	4.9	3.8	4.3	6.9	6.5	6.7	10.9	10.1	10.5	21.8	21.3	21.5
21	3.8	1.8	2.7	6.7	6.2	6.3	10.2	9.8	9.9	21.4	20.8	21.1
22	2.1	1.8	1.9	6.2	5.8	6.0	10.3	9.7	10.0	21.3	20.4	21.0
23	2.3	1.6	2.0	6.1	5.7	5.8	10.6	10.2	10.5	20.6	20.0	20.3
24	2.7	1.8	2.3	6.0	5.2	5.7	10.8	10.3	10.5	20.5	19.8	20.1
25	2.9	2.4	2.7	5.2	4.8	4.9	11.2	10.6	10.9	20.3	19.9	20.1
26	2.8	2.1	2.3	5.3	4.6	5.0	11.3	11.1	11.2	21.4	20.2	20.8
27	2.3	2.1	2.2	5.6	5.0	5.3	11.3	11.2	11.3	21.4	20.8	21.2
28	2.9	2.2	2.5	6.4	5.5	5.9	11.7	11.2	11.4	20.8	20.2	20.4
29	---	---	---	7.4	6.3	6.8	13.0	11.7	12.2	20.5	20.1	20.3
30	---	---	---	7.8	7.4	7.6	14.4	13.0	13.7	20.6	20.2	20.4
31	---	---	---	8.7	7.7	8.1	---	---	---	20.7	20.3	20.5
Month	6.3	1.6	4.0	8.7	2.5	5.4	14.4	8.5	11.0	21.8	12.4	17.6

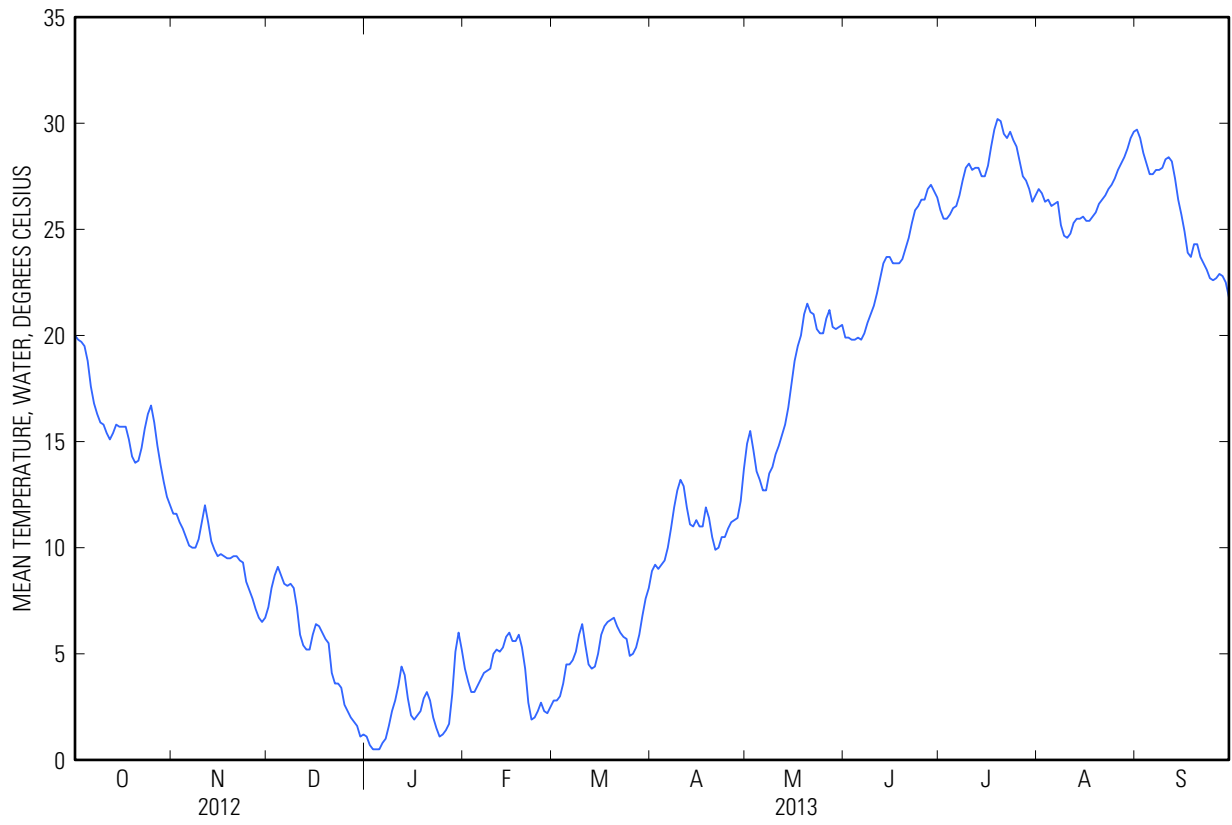
06934500 MISSOURI RIVER AT HERMANN, MO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	20.3	19.7	19.9	26.2	25.7	25.9	27.3	26.5	26.9	29.9	29.6	29.7
2	19.9	19.8	19.9	25.8	25.3	25.5	27.1	26.4	26.7	29.7	29.0	29.3
3	19.9	19.6	19.8	25.8	25.2	25.5	26.7	26.0	26.3	29.1	28.3	28.6
4	19.9	19.6	19.8	26.0	25.4	25.7	26.6	26.2	26.4	28.5	27.7	28.1
5	20.0	19.7	19.9	26.5	25.6	26.0	26.4	26.0	26.1	28.0	27.3	27.6
6	20.0	19.7	19.8	26.4	25.7	26.1	26.5	25.8	26.2	28.0	27.2	27.6
7	20.4	19.8	20.1	27.2	26.1	26.6	26.5	26.1	26.3	28.2	27.3	27.8
8	21.0	20.4	20.6	27.8	26.9	27.3	26.3	24.6	25.2	28.1	27.6	27.8
9	21.2	20.9	21.0	28.4	27.5	27.9	25.2	24.2	24.7	28.3	27.5	27.9
10	21.8	21.2	21.4	28.4	27.8	28.1	25.1	24.0	24.6	28.7	27.9	28.3
11	22.3	21.7	22.0	28.1	27.5	27.8	25.5	24.2	24.8	28.7	28.0	28.4
12	23.2	22.3	22.7	28.3	27.5	27.9	25.9	24.8	25.3	28.5	27.9	28.2
13	23.7	23.1	23.4	28.1	27.5	27.9	25.9	25.1	25.5	27.9	26.8	27.4
14	23.9	23.6	23.7	27.9	27.1	27.5	25.8	25.2	25.5	26.8	26.1	26.4
15	23.9	23.5	23.7	27.8	27.2	27.5	25.8	25.4	25.6	26.1	25.5	25.7
16	23.5	23.3	23.4	28.6	27.5	28.0	25.6	25.2	25.4	25.6	24.3	24.9
17	23.5	23.3	23.4	29.6	28.2	28.9	25.7	25.1	25.4	24.3	23.6	23.9
18	23.6	23.3	23.4	30.3	29.2	29.7	25.9	25.3	25.6	24.1	23.4	23.7
19	23.9	23.3	23.6	30.6	29.7	30.2	26.2	25.5	25.8	24.6	23.9	24.3
20	24.4	23.8	24.1	30.5	30.0	30.1	26.4	25.9	26.2	24.6	24.1	24.3
21	25.0	24.3	24.6	30.0	29.3	29.5	26.7	26.1	26.4	24.1	23.5	23.7
22	25.7	24.9	25.3	29.8	28.9	29.3	26.8	26.4	26.6	23.6	23.0	23.4
23	26.2	25.6	25.9	30.1	29.2	29.6	27.2	26.6	26.9	23.4	22.8	23.1
24	26.5	25.8	26.1	29.7	28.9	29.2	27.4	26.8	27.1	23.0	22.4	22.7
25	26.6	26.2	26.4	29.2	28.5	28.9	27.8	27.1	27.4	22.8	22.5	22.6
26	26.8	26.1	26.4	28.8	27.8	28.2	28.2	27.4	27.8	23.1	22.4	22.7
27	27.2	26.6	26.9	27.8	27.2	27.5	28.5	27.7	28.1	23.2	22.5	22.9
28	27.4	26.9	27.1	27.6	26.8	27.3	28.9	28.0	28.4	23.1	22.7	22.8
29	27.1	26.7	26.8	27.4	26.6	26.9	29.4	28.3	28.8	22.8	22.2	22.5
30	26.7	26.2	26.5	26.6	26.0	26.3	29.7	28.9	29.3	22.3	21.7	21.8
31	---	---	---	27.1	26.3	26.6	30.0	29.2	29.6	---	---	---
Month	27.4	19.6	23.3	30.6	25.2	27.7	30.0	24.0	26.5	29.9	21.7	25.6

	Max	Min	Mean
Year	30.6	0.2	14.6

06934500 MISSOURI RIVER AT HERMANN, MO—Continued



06934500 MISSOURI RIVER AT HERMANN, MO—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	9.0	8.2	8.6	10.2	9.8	10	---	---	---	---	---	---
2	9.2	8.4	8.8	10.3	10.0	10.1	---	---	---	---	---	---
3	8.9	8.4	8.7	10.5	10.1	10.3	---	---	---	---	---	---
4	9.0	8.4	8.7	10.6	10.3	10.4	---	---	---	---	---	---
5	8.7	8.3	8.4	10.6	10.4	10.5	---	---	---	---	---	---
6	8.7	8.2	8.4	10.6	10.4	10.5	---	---	---	---	---	---
7	9.2	8.4	8.8	10.7	10.4	10.5	---	---	---	---	---	---
8	9.3	8.7	9.0	11.0	10.5	10.7	---	---	---	---	---	---
9	9.4	8.9	9.1	11.1	10.6	10.9	---	---	---	---	---	---
10	9.5	8.9	9.2	11.1	10.6	10.8	---	---	---	---	---	---
11	9.5	9.1	9.3	10.8	10.3	10.5	---	---	---	---	---	---
12	9.6	9.0	9.3	10.8	10.2	10.4	---	---	---	---	---	---
13	9.4	9.1	9.2	10.9	10.5	10.7	---	---	---	---	---	---
14	9.2	8.9	9.0	10.9	10.5	10.7	---	---	---	---	---	---
15	9.4	8.8	9.1	11.0	10.7	10.8	---	---	---	---	---	---
16	9.1	8.8	8.9	11.0	10.6	10.7	---	---	---	---	---	---
17	8.9	8.7	8.8	11.2	10.7	11.0	---	---	---	---	---	---
18	9.0	8.6	8.8	11.4	10.9	11.2	---	---	---	---	---	---
19	9.2	8.8	9.0	11.3	11.0	11.1	---	---	---	---	---	---
20	9.5	9.0	9.2	11.4	10.9	11.2	---	---	---	---	---	---
21	9.5	9.1	9.3	11.4	11.0	11.2	---	---	---	---	---	---
22	9.4	9.1	9.2	11.4	11.1	11.3	---	---	---	---	---	---
23	9.3	8.9	9.1	11.5	11.0	11.2	---	---	---	---	---	---
24	9.3	8.9	9.1	11.6	11.2	11.3	---	---	---	---	---	---
25	9.2	8.2	8.6	11.6	11.2	11.4	---	---	---	---	---	---
26	8.8	8.2	8.5	11.6	11.2	11.4	---	---	---	---	---	---
27	9.3	8.8	9.0	11.9	11.5	11.7	---	---	---	---	---	---
28	9.7	9.2	9.4	---	11.7	---	---	---	---	---	---	---
29	9.9	9.5	9.7	---	---	---	---	---	---	---	---	---
30	9.9	9.6	9.7	---	---	---	---	---	---	---	---	---
31	9.9	9.6	9.7	---	---	---	---	---	---	---	---	---
Month	9.9	8.2	9.0	---	---	---	---	---	---	---	---	---

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

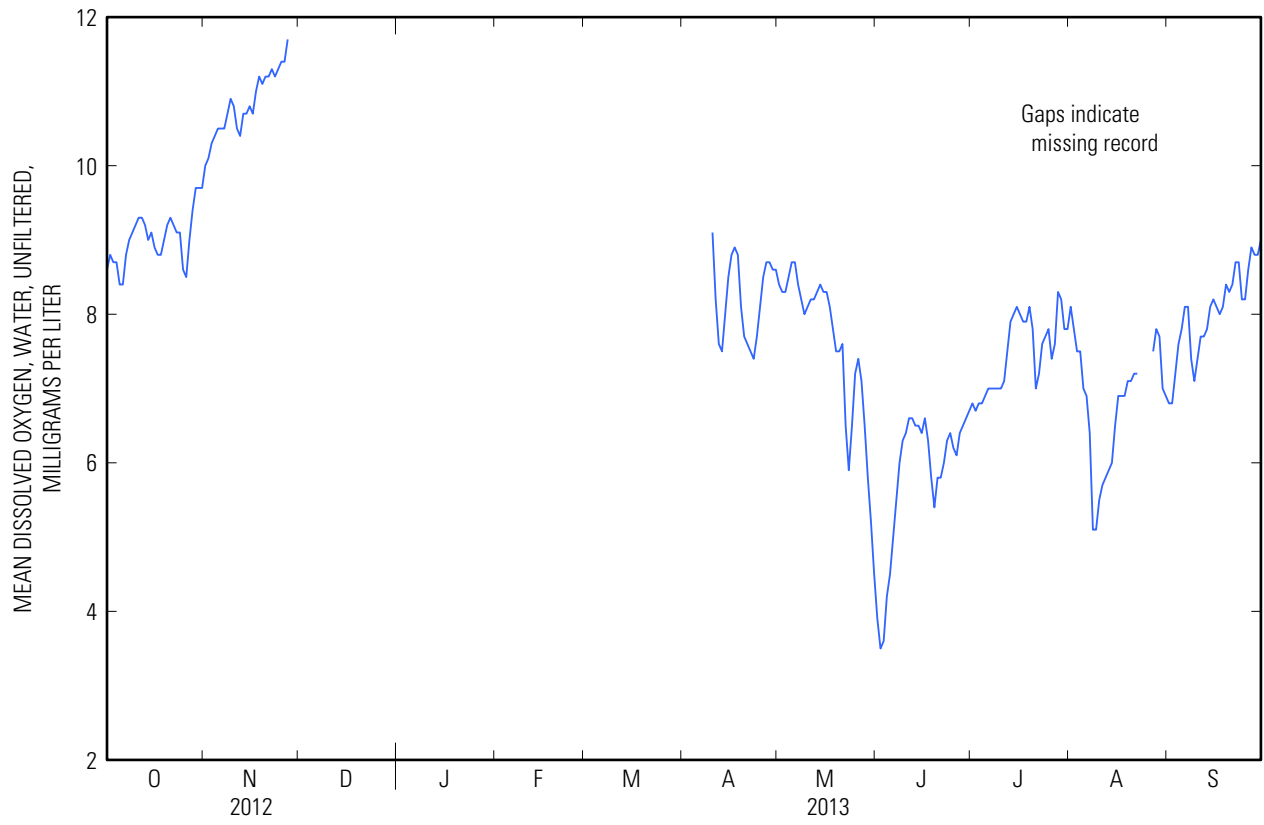
Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	8.5	8.3	8.4
2	---	---	---	---	---	---	---	---	---	8.4	8.2	8.3
3	---	---	---	---	---	---	---	---	---	8.4	8.2	8.3
4	---	---	---	---	---	---	---	---	---	8.6	8.3	8.5
5	---	---	---	---	---	---	---	---	---	8.8	8.6	8.7
6	---	---	---	---	---	---	---	---	---	8.8	8.5	8.7
7	---	---	---	---	---	---	---	---	---	8.5	8.3	8.4
8	---	---	---	---	---	---	---	---	---	8.3	8.0	8.2
9	---	---	---	---	---	---	---	9.6	---	8.0	7.9	8.0
10	---	---	---	---	---	---	9.6	8.8	9.1	8.1	8.0	8.1
11	---	---	---	---	---	---	8.8	7.8	8.2	8.3	8.1	8.2
12	---	---	---	---	---	---	7.8	7.5	7.6	8.3	8.2	8.2
13	---	---	---	---	---	---	7.8	7.4	7.5	8.4	8.2	8.3
14	---	---	---	---	---	---	8.3	7.7	8.0	8.6	8.4	8.4
15	---	---	---	---	---	---	8.7	8.2	8.5	8.5	8.3	8.3
16	---	---	---	---	---	---	8.9	8.7	8.8	8.5	8.2	8.3
17	---	---	---	---	---	---	9.0	8.8	8.9	8.3	7.9	8.1
18	---	---	---	---	---	---	8.9	8.3	8.8	7.9	7.6	7.8
19	---	---	---	---	---	---	8.4	7.8	8.1	7.6	7.4	7.5
20	---	---	---	---	---	---	7.8	7.5	7.7	7.7	7.4	7.5
21	---	---	---	---	---	---	7.7	7.5	7.6	7.7	7.5	7.6
22	---	---	---	---	---	---	7.7	7.2	7.5	7.6	5.7	6.5
23	---	---	---	---	---	---	7.7	7.2	7.4	6.1	5.7	5.9
24	---	---	---	---	---	---	7.9	7.6	7.7	6.9	6.0	6.5
25	---	---	---	---	---	---	8.3	7.9	8.1	7.5	6.9	7.2
26	---	---	---	---	---	---	8.6	8.3	8.5	7.4	7.2	7.4
27	---	---	---	---	---	---	8.8	8.6	8.7	7.3	6.9	7.1
28	---	---	---	---	---	---	8.8	8.6	8.7	7.0	6.1	6.5
29	---	---	---	---	---	---	8.7	8.6	8.6	6.1	5.3	5.8
30	---	---	---	---	---	---	8.7	8.4	8.6	5.4	5.0	5.2
31	---	---	---	---	---	---	---	---	---	5.0	4.0	4.5
Month	---	---	---	---	---	---	---	---	---	8.8	4.0	7.6

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	4.2	3.6	3.9	6.8	6.8	6.8	8.7	7.6	8.1	7.1	6.6	6.8
2	3.7	3.4	3.5	6.8	6.7	6.7	8.3	7.6	7.8	7.3	6.4	6.8
3	3.9	3.4	3.6	6.8	6.7	6.8	7.9	7.2	7.5	7.8	6.7	7.2
4	4.4	3.9	4.2	6.9	6.8	6.8	7.8	7.2	7.5	8.2	7.1	7.6
5	4.7	4.4	4.5	6.9	6.9	6.9	7.4	6.9	7.0	8.3	7.3	7.8
6	5.3	4.7	5.0	7.0	6.9	7.0	7.1	6.7	6.9	8.8	7.5	8.1
7	5.8	5.3	5.5	7.0	7.0	7.0	6.9	5.5	6.4	8.7	7.6	8.1
8	6.2	5.8	6.0	7.1	7.0	7.0	5.5	4.9	5.1	8.1	7.1	7.4
9	6.4	6.2	6.3	7.1	6.9	7.0	5.3	4.9	5.1	7.6	6.8	7.1
10	6.5	6.4	6.4	7.1	6.9	7.0	5.6	5.3	5.5	7.9	7.0	7.4
11	6.6	6.5	6.6	7.4	6.9	7.1	5.8	5.5	5.7	8.3	7.2	7.7
12	6.6	6.6	6.6	7.9	7.2	7.5	6.0	5.7	5.8	8.0	7.3	7.7
13	6.6	6.5	6.5	8.4	7.5	7.9	6.0	5.7	5.9	8.4	7.3	7.8
14	6.5	6.5	6.5	8.5	7.6	8.0	6.3	5.7	6.0	8.8	7.6	8.1
15	6.5	6.4	6.4	8.5	7.7	8.1	6.9	6.1	6.5	8.6	7.8	8.2
16	6.6	6.5	6.6	8.6	7.6	8.0	7.1	6.7	6.9	8.4	7.8	8.1
17	6.6	6.0	6.3	8.4	7.4	7.9	7.1	6.7	6.9	8.2	7.7	8.0
18	6.2	5.4	5.8	8.6	7.4	7.9	7.1	6.7	6.9	8.5	7.7	8.1
19	5.6	5.4	5.4	8.9	7.5	8.1	7.4	6.9	7.1	8.9	8.0	8.4
20	5.8	5.6	5.8	8.4	7.4	7.8	7.3	7.0	7.1	8.6	8.0	8.3
21	5.9	5.8	5.8	7.6	6.6	7.0	7.4	7.0	7.2	9.0	8.0	8.4
22	6.2	5.9	6.0	7.8	6.6	7.2	7.4	7.1	7.2	9.2	8.2	8.7
23	6.5	6.2	6.3	8.4	6.9	7.6	---	---	---	9.1	8.3	8.7
24	6.5	6.4	6.4	8.5	7.0	7.7	---	---	---	8.6	8.0	8.2
25	6.4	6.0	6.2	8.4	7.3	7.8	---	---	---	8.6	7.9	8.2
26	6.3	6.0	6.1	7.9	7.1	7.4	7.5	---	---	9.1	8.3	8.6
27	6.4	6.3	6.4	8.3	7.0	7.6	8.0	7.1	7.5	9.4	8.4	8.9
28	6.6	6.4	6.5	9.2	7.5	8.3	8.4	7.3	7.8	9.0	8.6	8.8
29	6.6	6.5	6.6	8.8	7.9	8.2	8.1	7.3	7.7	9.4	8.3	8.8
30	6.8	6.6	6.7	8.2	7.4	7.8	7.4	6.7	7.0	9.3	8.6	9.0
31	---	---	---	8.4	7.3	7.8	7.4	6.5	6.9	---	---	---
Month	6.8	3.4	5.8	9.2	6.6	7.5	---	---	---	9.4	6.4	8.0

06934500 MISSOURI RIVER AT HERMANN, MO—Continued



06934500 MISSOURI RIVER AT HERMANN, MO—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	38	35	37	38	34	36	17	14	15	---	---	---
2	38	35	37	34	30	32	17	14	15	---	---	---
3	37	35	36	31	27	29	18	14	15	---	---	---
4	38	35	36	28	25	26	19	14	15	---	---	---
5	41	36	38	26	23	24	19	13	15	---	---	---
6	39	36	37	24	22	23	20	15	16	---	---	---
7	40	36	37	23	21	22	21	15	17	---	---	---
8	40	36	37	22	19	21	23	15	18	---	---	---
9	38	36	37	20	19	19	24	17	19	---	---	---
10	39	35	36	20	18	19	24	17	19	---	10	---
11	40	33	36	20	18	19	22	16	18	13	9.4	11
12	39	36	37	21	19	20	22	15	17	12	9.7	11
13	38	36	37	22	18	20	22	14	16	13	9.7	11
14	39	35	36	26	22	25	19	14	16	13	9.7	11
15	40	35	37	28	23	24	22	15	17	13	9.9	11
16	48	39	45	27	23	24	22	15	18	13	9.6	11
17	46	38	41	25	22	23	22	15	18	13	9.0	10
18	40	36	38	24	21	22	22	16	18	12	8.5	9.8
19	40	36	38	24	22	22	21	15	17	11	8.8	9.5
20	40	37	38	25	21	22	22	15	18	12	8.7	9.6
21	38	35	37	23	21	22	24	19	21	11	8.8	9.8
22	38	34	36	23	20	21	22	16	19	11	8.5	9.7
23	37	34	36	22	20	21	22	16	17	10	7.8	9.2
24	38	32	34	23	20	21	21	16	17	9.7	8.1	8.8
25	64	33	54	22	20	21	21	16	18	9.0	7.8	8.4
26	62	44	54	22	19	20	---	16	---	9.5	7.6	8.2
27	44	32	37	22	18	20	---	---	---	8.7	7.5	8.0
28	34	29	31	22	16	18	---	---	---	8.7	7.6	8.1
29	32	29	30	18	15	16	---	---	---	12	8.2	8.8
30	36	30	33	18	14	16	---	---	---	110	9.0	58
31	39	36	37	---	---	---	---	---	---	190	46	120
Month	64	29	38	38	14	22	---	---	---	---	---	---

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

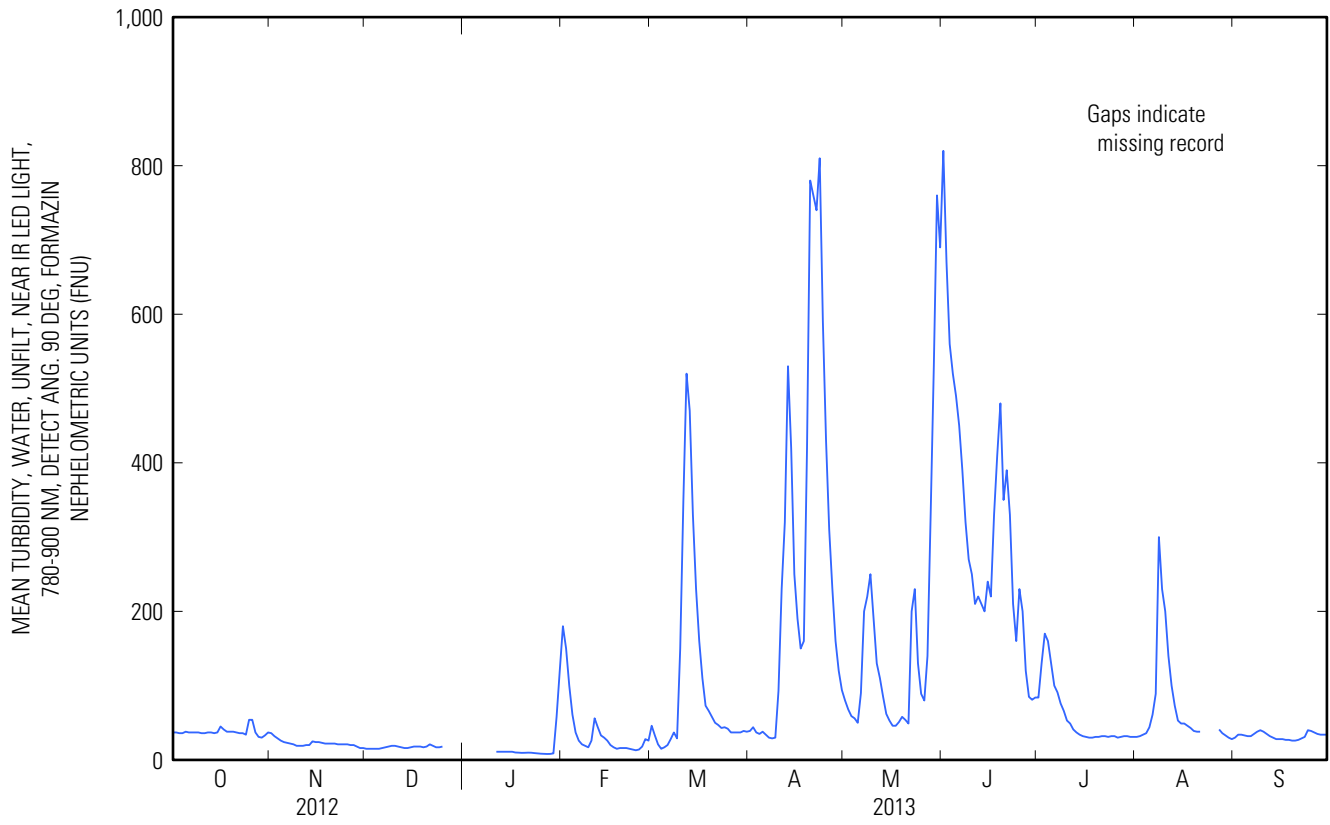
Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	200	170	180	56	36	46	46	35	39	91	72	80
2	170	130	150	44	23	33	48	40	44	76	62	68
3	140	77	100	27	16	21	41	35	37	64	54	59
4	77	47	61	17	14	15	37	34	35	60	50	56
5	47	29	37	21	14	17	43	35	38	60	47	50
6	30	23	26	22	19	20	38	30	34	150	59	90
7	23	20	21	47	20	28	32	29	30	230	150	200
8	21	17	19	49	27	37	32	28	29	260	200	220
9	18	16	17	60	23	29	40	28	30	280	230	250
10	51	17	26	290	60	150	120	40	93	240	150	190
11	59	49	56	430	280	350	330	120	230	160	110	130
12	54	38	44	570	410	520	430	270	320	120	98	110
13	38	30	33	540	370	470	580	420	530	100	70	85
14	31	28	30	400	250	330	530	320	420	73	56	62
15	29	22	26	280	180	230	330	190	250	59	48	53
16	23	18	20	200	120	160	230	160	190	53	42	46
17	18	15	17	130	89	110	190	130	150	50	43	46
18	16	15	15	91	61	73	290	89	160	56	46	51
19	17	15	16	71	62	66	660	260	420	61	54	58
20	16	15	16	68	53	58	900	620	780	60	47	54
21	16	15	16	58	47	50	930	600	760	55	43	49
22	16	14	15	52	44	47	910	590	740	310	54	200
23	15	13	14	48	41	43	920	650	810	280	170	230
24	14	12	13	47	42	44	730	490	590	180	99	130
25	14	13	14	46	38	42	550	370	430	100	78	89
26	36	13	18	40	35	37	380	260	310	100	71	80
27	33	25	28	38	35	37	270	190	230	210	100	140
28	47	21	26	39	36	37	200	130	160	380	200	330
29	---	---	---	40	36	37	130	99	120	700	370	530
30	---	---	---	41	37	39	100	86	94	850	650	760
31	---	---	---	41	36	38	---	---	---	820	640	690
Month	200	12	38	570	14	100	930	28	270	850	42	170

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	900	740	820	89	80	84	34	30	31	34	27	30
2	780	580	670	170	86	130	34	31	32	36	30	34
3	590	520	560	180	160	170	36	32	34	36	30	34
4	550	490	520	170	140	160	40	33	36	35	30	33
5	510	470	490	150	110	130	50	38	44	34	29	32
6	490	420	450	110	99	100	73	49	61	34	29	32
7	420	350	390	100	82	91	160	64	89	38	32	35
8	370	280	320	83	71	76	360	160	300	41	35	38
9	290	250	270	71	59	66	270	210	230	44	38	40
10	270	230	250	60	50	53	240	150	200	42	34	38
11	230	200	210	64	42	49	160	110	140	38	31	35
12	220	200	220	43	38	41	120	84	100	36	26	32
13	230	200	210	40	35	37	89	58	73	33	26	30
14	210	190	200	36	32	34	63	45	53	33	25	28
15	250	210	240	33	31	32	54	46	49	32	25	28
16	240	210	220	33	30	31	54	46	49	30	24	28
17	400	220	330	32	29	30	49	43	46	30	23	27
18	540	290	410	32	29	30	47	40	43	29	24	27
19	530	420	480	35	29	31	43	36	39	27	24	26
20	420	310	350	33	29	31	41	36	38	28	24	26
21	420	340	390	38	30	32	41	36	38	30	25	27
22	400	260	330	40	29	32	---	36	---	31	26	29
23	270	160	210	35	28	31	---	---	---	37	28	31
24	160	150	160	36	27	32	---	---	---	44	35	40
25	280	150	230	42	28	32	---	---	---	48	37	39
26	280	140	200	31	28	30	---	42	---	42	33	37
27	150	97	120	33	30	31	50	38	41	39	33	35
28	99	74	85	34	31	32	45	32	36	36	32	34
29	85	73	81	34	30	32	35	30	33	38	28	34
30	87	80	84	32	30	31	35	26	30	41	31	34
31	---	---	---	33	29	31	29	23	28	---	---	---
Month	900	73	320	180	27	57	---	---	---	48	23	32

06934500 MISSOURI RIVER AT HERMANN, MO—Continued



06934500 MISSOURI RIVER AT HERMANN, MO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
[e, estimated; $\times 10^6$, million]

Day	Mean	Mean	Sediment	Mean	Mean	Sediment	Mean	Mean	Sediment
	discharge	concentration	discharge	discharge	concentration	discharge	discharge	concentration	discharge
	(ft ³ /s)	(mg/L)	(tons/day)	(ft ³ /s)	(mg/L)	(tons/day)	(ft ³ /s)	(mg/L)	(tons/day)
	October			November			December		
1	44,500	157	18,900	47,700	155	20,000	45,200	107	13,100
2	44,600	157	18,900	47,300	147	18,800	44,000	106	12,600
3	44,500	156	18,700	46,800	140	17,700	42,200	107	12,200
4	44,200	157	18,800	46,500	134	16,800	40,900	108	11,900
5	44,100	160	19,000	46,100	129	16,100	39,800	108	11,600
6	45,100	159	19,400	46,000	125	15,500	38,400	110	11,400
7	44,800	158	19,100	45,900	122	15,100	36,900	111	11,100
8	43,900	158	18,700	46,000	121	15,000	35,800	113	10,900
9	43,900	158	18,700	46,100	117	14,600	34,900	116	10,900
10	43,800	157	18,600	45,500	115	14,100	34,100	115	10,600
11	44,000	157	18,700	45,100	116	14,100	33,400	114	10,300
12	45,200	158	19,300	45,800	118	14,600	32,900	110	9,770
13	45,400	157	19,200	47,400	118	15,100	32,600	109	9,600
14	45,900	156	19,400	49,400	129	17,200	32,200	109	9,490
15	46,800	158	20,000	49,900	129	17,400	31,900	111	9,570
16	47,900	176	22,800	48,800	129	17,000	31,400	113	9,590
17	47,500	168	21,500	48,200	126	16,400	31,100	114	9,560
18	47,200	160	20,400	48,000	124	16,100	30,600	114	9,420
19	47,700	160	20,600	48,000	124	16,100	29,800	112	9,020
20	48,600	161	21,100	47,800	124	16,000	29,200	115	9,060
21	48,700	158	20,800	47,200	123	15,700	28,600	121	9,340
22	47,400	156	19,900	46,400	121	15,200	28,600	117	9,040
23	46,500	155	19,500	45,700	121	14,900	28,900	113	8,810
24	47,600	152	19,500	45,200	121	14,800	29,200	112	8,830
25	50,700	197	27,000	45,100	120	14,600	29,700	114	9,140
26	49,000	197	26,000	45,000	120	14,600	30,000	e119	e9,640
27	47,000	159	20,200	45,300	118	14,400	29,700	e119	e9,520
28	46,000	144	17,900	45,800	114	14,100	29,000	e119	e9,300
29	46,000	141	17,500	46,200	110	13,700	28,400	e119	e9,090
30	46,400	149	18,700	46,000	108	13,400	27,900	e119	e8,950
31	47,300	158	20,200	---	---	---	28,000	e119	e8,970
Total	1,432,200	---	619,000	1,400,200	---	469,100	1,025,300	---	312,310

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
[e, estimated; $\times 10^6$, million]

Day	Mean	Mean	Sediment	Mean	Mean	Sediment	Mean	Mean	Sediment
	discharge	concentration	discharge	discharge	concentration	discharge	discharge	concentration	discharge
	(ft ³ /s)	(mg/L)	(tons/day)	(ft ³ /s)	(mg/L)	(tons/day)	(ft ³ /s)	(mg/L)	(tons/day)
	January			February			March		
1	28,500	e119	e9,120	50,800	497	68,200	48,100	179	23,300
2	28,800	e119	e9,220	50,400	428	58,300	47,400	150	19,200
3	28,400	e119	e9,100	45,600	314	38,700	42,300	121	13,800
4	27,800	e119	e8,900	38,500	215	22,400	38,100	108	11,100
5	27,700	e119	e8,870	34,400	159	14,800	39,500	113	12,000
6	27,800	e119	e8,900	32,700	e121	e10,700	43,900	120	14,200
7	28,000	e119	e8,970	31,800	e120	e10,300	48,100	137	17,800
8	28,100	e119	e9,000	30,700	e119	e9,900	54,600	157	23,200
9	28,100	e119	e9,000	31,600	111	9,460	55,500	140	21,000
10	28,200	e119	e9,020	34,400	133	12,300	84,200	429	97,500
11	28,300	97	7,420	33,600	202	18,300	154,000	890	371,000
12	28,400	98	7,530	33,000	175	15,600	183,000	1,290	637,000
13	28,900	98	7,640	35,200	149	14,200	161,000	1,160	504,000
14	29,100	99	7,770	38,400	142	14,700	135,000	830	302,000
15	28,900	98	7,660	37,100	132	13,200	112,000	603	183,000
16	28,900	98	7,640	35,600	119	11,400	95,800	435	112,000
17	28,900	96	7,490	35,700	111	10,700	76,800	328	68,100
18	29,100	95	7,460	34,400	107	9,950	75,000	242	49,000
19	29,200	95	7,500	33,600	108	9,800	86,900	225	52,800
20	28,800	95	7,400	32,700	109	9,620	84,100	208	47,200
21	28,200	95	7,230	32,000	109	9,430	82,800	189	42,200
22	27,700	95	7,100	36,000	107	10,400	78,900	182	38,800
23	27,400	94	6,950	36,600	105	10,400	73,600	173	34,400
24	27,200	93	6,830	33,600	102	9,260	64,800	174	30,400
25	27,200	92	6,770	31,100	104	8,740	56,300	170	25,900
26	27,300	91	6,700	32,000	114	9,850	57,200	157	24,200
27	27,100	91	6,670	42,400	138	15,800	61,100	158	26,100
28	27,100	91	6,650	46,500	133	16,700	69,600	157	29,500
29	26,900	93	6,760	---	---	---	74,000	159	31,800
30	34,000	207	19,000	---	---	---	69,900	163	30,800
31	45,600	345	42,500	---	---	---	66,200	160	28,600
Total	895,600	---	288,770	1,020,400	---	473,110	2,419,700	---	2,921,900

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
[e, estimated; $\times 10^6$, million]

Day	Mean discharge (ft ³ /s)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/L)	Sediment discharge (tons/day)
	April			May			June		
1	63,800	164	28,200	116,000	258	80,900	401,000	1,970	2,130,000
2	65,500	175	31,000	104,000	230	64,700	435,000	1,620	1,900,000
3	74,900	159	32,200	98,300	209	55,400	397,000	1,370	1,470,000
4	75,100	154	31,200	105,000	202	57,200	361,000	1,270	1,240,000
5	73,900	161	32,100	105,000	189	53,500	304,000	1,210	993,000
6	72,800	151	29,700	129,000	282	97,800	246,000	1,110	736,000
7	69,600	143	26,900	149,000	548	220,000	195,000	987	519,000
8	69,600	141	26,500	138,000	584	217,000	167,000	823	370,000
9	72,600	143	28,000	121,000	664	217,000	147,000	700	278,000
10	81,700	289	63,700	111,000	519	155,000	139,000	646	243,000
11	125,000	600	202,000	107,000	372	108,000	132,000	569	203,000
12	157,000	818	346,000	102,000	323	89,300	131,000	574	203,000
13	162,000	1,300	569,000	97,500	271	71,400	136,000	564	208,000
14	137,000	1,050	389,000	95,500	217	55,900	133,000	538	193,000
15	117,000	655	207,000	94,700	196	50,100	126,000	624	212,000
16	133,000	514	185,000	95,100	180	46,200	123,000	590	197,000
17	141,000	432	165,000	88,600	179	42,800	139,000	829	311,000
18	148,000	440	176,000	83,900	190	43,000	160,000	1,020	441,000
19	237,000	1,060	679,000	79,900	207	44,700	163,000	1,200	528,000
20	247,000	1,880	1,250,000	79,000	197	42,000	153,000	875	363,000
21	237,000	1,840	1,180,000	93,800	186	47,100	134,000	973	353,000
22	231,000	1,790	1,120,000	115,000	536	166,000	124,000	847	284,000
23	214,000	1,950	1,130,000	111,000	601	180,000	116,000	554	174,000
24	200,000	1,450	785,000	98,100	380	101,000	112,000	433	131,000
25	171,000	1,080	499,000	86,800	280	65,600	113,000	599	183,000
26	140,000	801	304,000	77,600	258	54,000	105,000	544	154,000
27	121,000	600	195,000	80,700	407	88,600	100,000	348	94,100
28	125,000	436	147,000	114,000	843	260,000	99,700	271	73,000
29	126,000	341	116,000	154,000	1,290	535,000	101,000	260	70,600
30	122,000	290	95,500	182,000	1,840	902,000	100,000	268	72,400
31	---	---	---	258,000	1,690	1,180,000	---	---	---
Total	4,010,500	---	10.06 $\times 10^6$	3,470,500	---	5,391,200	5,292,700	---	14.32 $\times 10^6$

06934500 MISSOURI RIVER AT HERMANN, MO—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
[e, estimated; $\times 10^6$, million]

Day	Mean discharge (ft ³ /s)	Mean concentration (mg/L)	Sediment discharge (tons/day)	Mean discharge (ft ³ /s)	Mean concentration (mg/L)	Sediment discharge (tons/day)			
							Mean discharge (ft ³ /s)	Mean concentration (mg/L)	Sediment discharge (tons/day)
July			August			September			
1	97,300	267	70,200	44,300	145	17,300	53,300	142	20,400
2	99,100	368	98,400	45,100	147	17,900	48,800	151	19,900
3	94,400	464	118,000	47,600	150	19,300	46,700	150	18,900
4	86,900	442	104,000	51,700	155	21,600	45,400	149	18,300
5	81,500	372	81,900	54,300	175	25,700	45,700	147	18,200
6	74,600	316	63,700	68,500	214	39,600	46,100	146	18,200
7	67,200	283	51,300	104,000	280	78,900	46,300	153	19,100
8	63,300	250	42,700	171,000	762	351,000	47,300	161	20,600
9	61,500	225	37,400	213,000	615	353,000	47,200	166	21,100
10	68,000	196	36,000	203,000	541	297,000	47,100	161	20,500
11	69,700	186	35,000	176,000	396	188,000	50,700	153	20,900
12	64,300	167	29,000	145,000	311	122,000	57,200	146	22,600
13	55,900	159	24,000	132,000	242	86,300	56,900	141	21,700
14	52,900	152	21,700	119,000	196	63,000	53,500	138	19,900
15	51,500	147	20,400	89,200	185	44,500	46,600	138	17,300
16	50,300	145	19,700	77,800	186	39,000	44,500	137	16,500
17	49,600	143	19,200	79,200	178	38,100	44,300	136	16,300
18	49,000	142	18,800	78,100	172	36,300	44,700	134	16,200
19	48,500	144	18,900	75,000	164	33,200	44,400	132	15,800
20	48,200	144	18,800	74,900	160	32,300	44,700	133	16,100
21	50,100	147	19,900	75,500	161	32,800	45,800	135	16,700
22	48,700	147	19,300	78,600	e193	e41,000	46,600	140	17,600
23	45,900	145	18,000	78,400	e192	e40,700	49,400	145	19,300
24	47,900	146	18,900	79,100	e195	e41,500	49,500	166	22,200
25	48,200	147	19,100	70,700	e167	e32,000	46,700	164	20,700
26	45,800	141	17,400	63,200	e143	e24,500	45,000	157	19,100
27	44,700	144	17,400	57,000	168	25,800	44,000	154	18,300
28	44,300	147	17,600	50,600	156	21,300	42,900	151	17,500
29	44,200	146	17,400	48,500	149	19,500	42,200	152	17,300
30	44,100	144	17,100	54,300	141	20,700	41,700	151	17,000
31	44,200	144	17,200	53,200	136	19,500	---	---	---
Total	1,841,800	---	1,128,400	2,757,800	---	2,223,300	1,415,200	---	564,200

	Total discharge (ft ³ /s)	Total suspended sediment discharge (tons)
Year	26,981,900	38,787,390