

## 06909000 MISSOURI RIVER AT BOONVILLE, MO

Missouri River Main Stem

LOCATION.--Lat 38°58′42″, long 92°45′13″ referenced to North American Datum of 1927, in sec.26, T.49 N., R.17 W., Cooper County, MO, Hydrologic Unit 10300102, near mid-span of the Highways 40 and 5 bridge just north of Boonville, 5.4 mi below Lamine River, and at mile 196.6.

DRAINAGE AREA .-- 500,700 mi<sup>2</sup>, the 3,959 mi<sup>2</sup> in Great Divide basin are not included.

#### SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1925 to current year. Gage-height records collected at same site 1893-99 are in reports of the 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 565.42 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1928, nonrecording gage on old Highway 40 bridge, at datum 3.14 ft lower; Oct. 1, 1928, to May 9, 1931, nonrecording gage at site .4 mile upstream at the old Missouri/Kansas/Texas Railroad bridge at present datum; May 10, 1931, to Apr. 12, 1934, water-stage recorder on old Highway 40 bridge at present datum; Apr. 12, 1934 to Apr. 8, 2003, water-stage recorder at site .4 mile upstream at the Missouri/Kansas/Texas Railroad Bridge at present datum; Apr. 8, 2003 to present, water-stage recorder 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 21, 1844, reached a stage of 32.7 ft, discharge, about 710,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers. Flood of June 6, 1903, reached a stage of 30.5 ft, discharge, about 612,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers.
- EXTREMES FOR CURRENT YEAR.--Maximum discharge, 275,000 ft<sup>3</sup>/s, Apr. 30, gage height, 26.94 ft; minimum discharge, 32,500 ft<sup>3</sup>/s, Jan. 29, 30, 31, gage height, 4.59 ft.

# 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	45,000	70,900	41,000	95,800	33,000	44,000	96,600	269,000	67,800	83,400	61,900	78,300
2	45,300	67,400	40,600	74,700	33,300	43,000	87,100	256,000	63,600	80,700	58,900	68,300
3	45,300	64,100	40,500	60,900	34,000	41,200	78,200	224,000	66,600	78,700	56,800	63,400
4	44,200	60,400	40,200	54,800	34,500	40,100	69,900	178,000	78,600	88,100	55,500	60,000
5	43,400	57,200	39,600	51,700	34,400	38,500	66,800	134,000	85,300	89,300	55,400	58,300
6	43,800	59,900	39,000	49,100	34,300	35,700	64,500	101,000	82,000	86,500	56,300	57,600
7	43,700	86,300	38,200	46,400	34,500	33,500	62,700	90,800	71,300	88,300	56,300	56,900
8	43,700	97,900	37,500	44,300	35,100	33,000	61,900	89,000	64,700	94,300	56,800	58,200
9	44,500	80,500	37,300	43,200	35,800	64,600	60,500	90,700	79,000	85,700	55,800	57,500
10	46,900	65,600	39,900	42,000	36,600	121,000	66,000	91,300	116,000	77,000	55,900	55,000
11	48,200	56,400	41,600	40,900	38,100	164,000	97,800	87,700	155,000	85,900	57,900	55,100
12	47,700	52,300	40,100	39,700	47,400	159,000	110,000	83,600	171,000	91,200	59,400	54,600
13	46,000	51,000	39,200	39,300	60,000	139,000	92,400	80,300	154,000	97,200	58,800	52,800
14	45,800	50,200	38,800	39,100	77,500	123,000	84,000	79,000	127,000	95,400	57,700	51,400
15	48,800	49,400	38,500	37,400	74,900	102,000	82,800	87,300	111,000	94,400	54,400	49,900
16	60,200	50,100	38,400	36,300	65,000	77,000	79,500	156,000	146,000	95,000	52,700	50,100
17	61,500	52,100	37,400	34,700	58,400	61,700	74,300	229,000	210,000	90,100	59,600	51,200
18	59,700	51,700	36,700	33,800	53,400	54,000	68,200	227,000	231,000	81,800	122,000	51,000
19	58,800	50,100	37,400	34,300	49,900	49,900	69,800	196,000	192,000	77,200	160,000	50,400
20	59,300	48,300	40,300	34,700	48,000	50,500	83,700	168,000	155,000	72,900	164,000	49,400
21	59,600	46,600	40,000	34,400	46,800	53,700	83,900	150,000	143,000	70,100	150,000	49,300
22	63,700	45,600	37,700	34,500	45,700	52,500	71,200	133,000	133,000	69,700	122,000	49,600
23	70,800	44,800	35,900	35,200	44,700	49,100	64,400	106,000	128,000	72,500	97,300	52,300
24	112,000	44,100	34,200	36,100	43,400	48,900	61,000	81,700	134,000	71,600	81,500	52,800
25	133,000	43,600	34,600	36,100	41,900	77,500	59,400	71,400	127,000	68,600	70,600	50,800
26	131,000	43,000	36,200	34,900	40,900	105,000	57,800	77,000	115,000	67,600	64,200	50,000
27	111,000	42,500	48,400	33,900	40,500	114,000	72,500	87,300	111,000	65,200	60,600	52,000
28	97,200	42,200	95,600	33,000	41,100	119,000	180,000	92,300	105,000	62,200	69,800	55,000
29	84,800	42,000	117,000	32,700		133,000	250,000	101,000	94,500	61,400	96,200	53,700
30	77,600	41,700	112,000	32,600		126,000	269,000	88,000	87,800	61,900	102,000	51,600
31	74,200		107,000	32,700		109,000		74,200		62,700	93,800	
Mean	64,410	55,260	47,770	42,230	45,110	79,430	90,860	128,400	120,200	79,570	78,200	54,880
Max	133,000	97,900	117,000	95,800	77,500	164,000	269,000	269,000	231,000	97,200	164,000	78,300
Min	43,400	41,700	34,200	32,600	33,000	33,000	57,800	71,400	63,600	61,400	52,700	49,300
ln.	0.15	0.12	0.11	0.10	0.09	0.18	0.20	0.30	0.27	0.18	0.18	0.12

### DISCHARGE, CUBIC FEET PER SECOND WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009 DAILY MEAN VALUES

	STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2009 <sup>a</sup> , by water year (wy)														
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Mean	63,170	58,590	43,720	35,760	48,360	68,900	87,480	93,540	96,270	82,000	62,880	64,790			
Max	187,800	139,100	106,200	90,150	106,300	183,900	212,700	234,700	212,400	375,200	213,600	165,900			
(WY)	(1974)	(1999)	(1983)	(1973)	(1982)	(1973)	(1973)	(1995)	(2008)	(1993)	(1993)	(1993)			
Min	32,680	22,610	13,840	14,770	17,620	19,460	39,060	40,770	41,990	37,000	33,550	36,730			
(WY)	(2007)	(2007)	(1964)	(1963)	(1964)	(1964)	(1989)	(1989)	(1988)	(2006)	(2003)	(1991)			

## 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

Calendar Y	ear 2008	Water Yea	nr 2009	Water Years	<b>1958 - 2009</b> <sup>a</sup>
87,150		74,020		67,160	
				140,500	1993
				36,880	2006
277,000	Sep 16	269,000	Apr 30 <sup>b</sup>	721,000	Jul 30, 1993
34,200	Dec 24	32,600	Jan 30	5,000	Dec 21, 1963
36,800	Jan 24	33,000	Jan 27	5,730	Dec 19, 1963
		275,000	Apr 30	755,000	Jul 29, 1993
		26.94	Apr 30	37.10	Jul 29, 1993
		32,500	Jan 29 <sup>c</sup>	5,500	Jan 22, 1963
2.37	,	2.01		1.82	
177,000		127,000		122,000	
nt exceeds 62,800		60,400		53,400	
40,100		37,400		28,300	
	Calendar Y 87,150 277,000 34,200 36,800 2.37 177,000 62,800 40,100	Calendar Year 2008   87,150   277,000 Sep 16   34,200 Dec 24   36,800 Jan 24   2.37 177,000   62,800 40,100	Calendar Year 2008 Water Year   87,150 74,020   277,000 Sep 16 269,000   34,200 Dec 24 32,600   36,800 Jan 24 33,000   275,000 26.94   32,500 2.37   2.37 2.01   177,000 127,000   62,800 60,400   40,100 37,400	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Calendar Year 2008 Water Year 2009 Water Years   87,150 74,020 67,160   140,500 36,880   277,000 Sep 16 269,000 Apr 30 <sup>b</sup> 721,000   34,200 Dec 24 32,600 Jan 30 5,000   36,800 Jan 24 33,000 Jan 27 5,730   275,000 Apr 30 755,000 26.94 Apr 30 37.10   22,500 Jan 29 <sup>c</sup> 5,500 2.37 2.01 1.82   177,000 127,000 122,000 62,800 60,400 53,400   40,100 37,400 28,300 28,300 28,300

### SUMMARY STATISTICS

<sup>a</sup> Period of Regulated Streamflow

<sup>b</sup> Also May 1

<sup>c</sup> Also Jan 30, 31



#### 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

#### WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD .--

SPECIFIC CONDUCTANCE: February 2006 to current year (Seasonally). pH: February 2006 to September 2007 (Seasonally). WATER TEMPERATURE: February 2006 to current year (Seasonally). DISSOLVED OXYGEN: February 2006 to current year (Seasonally). TURBIDITY: February 2006 to current year (Seasonally).

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.

Specific Conductance record rated excellent except Sep. 04-12, 15, which are good, and Feb. 26, Jun. 11, Sep. 03 and 13, which are poor. Water temperature record rated excellent except Mar. 19-26, which is good, and Nov. 4, Feb. 26, Sep. 15, 23 rated poor. Dissolved oxygen record rated excellent except Feb. 27-Mar. 18 which is good, and Nov. 4, Feb. 26, Aug. 27, 28, Sep. 14, 23 rated poor. Turbidity record rated excellent except Sep. 4-13, which is good, Sep. 14, 15, which is fair, and Feb. 27-Mar. 18 which is poor.

Interruptions or periods of missing record may be due to seasonal installation, instrument out of service, instrument failure, or data corrections exceeding allowable criteria, which were deleted.

#### EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 839 µS/cm, Aug. 10, 2007; minimum recorded 243 µS/cm, Sep. 17, 2008, but may have been lower during periods of missing record.

pH: Maximum recorded, 8.8 standard units, Aug. 5-6, 2006, but may have been higher during periods of missing record; minimum recorded, 7.6 standard units, Apr. 29-30, May 29, 2007, but may have been lower during periods of missing record.

WATER TEMPERATURE: Maximum recorded, 32.0 °C, Jul. 19, 2006; minimum recorded, 2.2 °C, Feb. 23, 2006, Mar. 8, 2008.

DISSOLVED OXYGEN: Maximum recorded, 15.6 mg/L, Feb. 22, 2006; minimum recorded, 2.9 mg/L, Aug. 12, 2007, but may have been lower during periods of missing record.

TURBIDITY: Maximum recorded, 1,810 FNU, April 29, 30, 2009, minimum recorded, 15 FNU, Feb. 27-Mar. 1, 2006.

#### EXTREMES FOR PERIOD OF DAILY RECORD .--

SPECIFIC CONDUCTANCE: Maximum daily, 825 µS/cm, Feb. 28, 2006, Aug. 10, 2007; minimum daily 253 µS/cm, Sep. 17, 2008, but may have been lower during periods of missing record.

pH: Maximum daily, 8.7 standard units, Aug. 5, 6, 2006, but may have been higher during periods of missing record; minimum daily, 7.6 standard units, Apr. 29-30, 2007, but may have been lower during periods of missing record.

WATER TEMPERATURE: Maximum daily, 31.5 °C, Jul. 19, 20, 2006; minimum daily, 2.4 °C, Mar. 8, 2008.

DISSOLVED OXYGEN: Maximum daily, 13.9 mg/L, Feb. 23, 2006; minimum daily, 3.3 mg/L, Aug. 12, 2007, but may have been lower during periods of missing record.

TURBIDITY: Maximum daily, 1510 FNU, April 30, 2009; minimum daily, 15 FNU, Feb. 28, 2006.

#### EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 755 µS/cm, Sept. 29; minimum recorded 313 µS/cm, May 19. WATER TEMPERATURE: Maximum recorded, 29.3 °C, June 28; minimum recorded, 2.8 °C, Mar. 3 and 4. DISSOLVED OXYGEN: Maximum recorded, 12.4 mg/L, Mar. 5; minimum recorded, 3.2 mg/L, Aug. 18. TURBIDITY: Maximum recorded, 1,810 FNU, April 29, 30; minimum recorded, 33 FNU, Oct. 10.

## 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Мах	Min	Mean	Max	Min	Mean	Max	Min	Mean	Мах	Min	Mean
		October			Novembe	r	I	Decembe	r		January	
1	658	630	642	578	544	562						
2	683	658	673	584	578	581						
3	696	683	690	591	584	587						
4	720	696	707									
5	721	690	710									
6	690	679	682									
7	690	680	685									
8	697	690	694									
9	718	696	708									
10	725	716	719									
11	733	725	730									
12	727	676	698									
13	685	673	678									
14	689	681	684									
15	696	666	689									
16	666	575	599									
17	601	578	590									
18	635	587	610									
19	665	635	656									
20	661	636	646									
21	636	628	633									
22	635	607	626									
23	607	561	578									
24	562	470	516									
25	470	426	438									
26	451	428	441									
27	469	451	456									
28	476	464	470									
29	480	464	470									
30	514	480	496									
31	544	514	530									
Month	733	426	618									

## 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Мах	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			Мау	
1				673	658	663	510	476	495	338	323	332
2				681	658	669	549	510	528	360	324	342
3				702	681	690	570	548	559	381	357	369
4				714	702	710	598	569	583	417	379	398
5				717	713	715	619	598	610	474	416	443
6				725	716	721	630	617	623	540	474	507
7				727	724	725	641	630	636	584	540	566
8				730	726	728	638	634	637	590	583	588
9				734	443	572	651	638	645	607	590	596
10				494	434	466	651	549	626	612	604	609
11				453	390	427	549	497	512	615	609	612
12				390	339	358	498	463	476	632	615	625
13				340	330	334	516	463	489	632	629	631
14				351	333	341	534	516	524	633	630	631
15				394	350	369	560	533	546	633	567	612
16				463	394	429	579	560	572	568	444	497
17				518	463	493	594	578	587	455	374	414
18				555	518	539	611	594	599	374	339	354
19				574	555	562	617	590	607	340	313	320
20				612	574	592	596	581	588	338	316	324
21				650	612	629	600	565	583	372	338	355
22				663	649	658	618	566	590	411	372	391
23				655	638	644	657	616	636	457	410	432
24				642	623	637	682	657	671	536	457	497
25				623	444	546	691	681	687	585	536	563
26	680			471	418	438	695	689	692	592	523	560
27	693	680	687	500	471	492	692	502	654	573	526	547
28	696	673	689	489	415	442	548	465	511	595	557	579
29				417	400	409	470	351	406	558	522	532
30				430	399	416	360	323	335	554	535	544
31				476	430	456				595	554	574
Month				734	330	544	695	323	574	633	313	495

## 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Мах	Min	Mean	Max	Min	Mean
		June			July			August		;	Septembe	r
1	629	595	613	640	616	628	738	728	733			
2	651	629	643	662	640	650	729	714	722			
3	652	619	638	681	662	673	714	708	712	628		
4	621	611	615	682	595	632	722	707	715	659	628	646
5	627	591	617	669	631	657	736	722	731	671	657	666
6	591	434	479	663	614	630	741	734	738	676	670	673
7	441	430	437	644	619	635	736	732	734	686	671	678
8	440	427	435	648	630	642	739	732	736	706	685	697
9				647	608	631	735	717	730	714	701	709
10				608	574	585	717	685	698	701	689	692
11		422		620	572	599	713	696	706	715	693	708
12	422	405	413	628	606	616	713	703	707	708	683	693
13	417	371	396	642	625	636	721	699	711		682	
14	412	370	390	636	580	604	701	681	689			
15	455	412	436	615	579	598	689	673	677	722	707	716
16	455	422	439	623	607	614	712	689	704			
17	461	434	444	623	614	619	721	590	706			
18	458	358	405	614	604	607	590	432	459			
19	369	354	363	623	606	611	454	375	423			
20	407	356	371	672	623	650	375	331	351			
21	484	407	446	683	672	678	345	334	339			
22	507	482	498	699	678	689	393	345	367			
23	515	494	506	717	699	708	498	392	441			
24	562	515	538	725	706	719	572	498	545	744	732	741
25	560	502	528	709	699	704	586	569	579	739	731	735
26	526	502	512	724	709	716	615	577	593	740	732	736
27	547	526	536	733	724	730				744	735	740
28	583	547	572	735	724	732				748	735	739
29	578	565	569	724	720	722				755	748	752
30	616	578	597	722	710	716				752	737	746
31				732	711	722						
Month				735	572	657						



# 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

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Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			Novembe	er		Decembe	r		January	,
1	22.4	21.8	22.0	11.6	10.9	11.2						
2	21.8	21.2	21.4	12.0	11.4	11.7						
3	21.3	20.8	21.1	12.7	11.9	12.3						
4	21.1	20.7	20.9		12.7							
5	21.0	20.5	20.8									
6	20.9	20.7	20.8									
7	20.8	20.2	20.6									
8	20.2	19.7	19.9									
9	19.7	19.3	19.5									
10	19.6	19.1	19.3									
11	19.6	19.0	19.3									
12	19.9	19.3	19.6									
13	20.4	19.8	20.1									
14	20.4	19.6	20.0									
15	19.6	18.6	19.2									
16	18.6	17.3	17.8									
17	17.3	16.3	16.7									
18	16.3	15.9	16.1									
19	16.0	15.6	15.8									
20	15.8	15.5	15.7									
21	15.7	15.0	15.3									
22	15.0	14.3	14.6									
23	14.3	13.8	14.0									
24	13.9	12.8	13.3									
25	12.8	12.2	12.4									
26	12.2	11.7	12.1									
27	11.7	11.1	11.4									
28	11.1	10.7	10.8									
29	10.7	10.3	10.5									
30	10.7	10.2	10.4									
31	11.0	10.5	10.7									
Month	22.4	10.2	16.8									

## TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

# 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

Day	Max	Min	Mean	Мах	Min	Mean	Мах	Min	Mean	Max	Min	Mean
		February	,		March			April			May	
1				3.6	3.1	3.4	8.5	8.0	8.2	15.6	15.4	15.5
2				3.4	2.9	3.2	8.6	8.4	8.6	15.6	15.2	15.4
3				3.2	2.8	3.0	8.7	8.1	8.4	15.8	15.5	15.6
4				3.7	2.8	3.2	9.1	8.3	8.7	16.4	15.7	16.0
5				5.6	3.7	4.5	9.1	8.8	9.0	16.8	16.1	16.5
6				7.0	5.6	6.2	8.8	8.2	8.5	17.5	16.8	17.1
7				8.4	7.0	7.7	8.6	7.8	8.2	18.2	17.3	17.7
8				8.8	8.4	8.6	9.2	8.3	8.7	19.0	18.1	18.5
9				8.5	7.4	7.9	9.1	8.8	8.9	19.5	18.7	19.1
10				7.6	7.3	7.4	8.8	8.4	8.6	19.3	18.9	19.1
11				7.3	6.6	7.0	9.1	8.1	8.6	19.7	18.9	19.3
12				6.6	5.3	6.0	9.2	8.9	9.1	19.5	19.1	19.3
13				5.3	4.7	5.0	9.4	9.2	9.3	19.5	19.1	19.3
14				5.0	4.4	4.7	9.2	8.9	9.0	19.8	19.0	19.4
15				5.5	4.8	5.1	10.1	9.1	9.5	19.9	19.5	19.7
16				6.5	5.4	5.9	11.2	10.0	10.5	19.5	18.1	18.7
17				8.0	6.5	7.1	12.3	11.1	11.6	18.1	17.4	17.7
18				8.7	8.0	8.3	13.2	12.3	12.6	17.4	17.2	17.3
19				9.1	8.3	8.7	13.7	13.2	13.4	17.7	17.2	17.4
20				9.5	8.8	9.1	14.2	13.6	13.9	18.4	17.5	17.9
21				10.3	9.4	9.7	14.1	13.7	13.9	19.3	18.3	18.8
22				11.3	10.3	10.8	14.6	13.7	14.1	20.3	19.2	19.7
23				12.4	11.3	11.7	15.6	14.5	14.9	21.5	20.2	20.8
24				12.7	12.4	12.6	16.8	15.5	16.0	22.5	21.4	21.9
25				12.7	12.2	12.4	17.4	16.8	17.0	22.4	22.3	22.4
26	5.0			12.2	11.7	11.8	18.2	17.2	17.6	22.3	21.8	22.0
27	5.0	4.5	4.7	11.9	11.1	11.6	18.4	17.7	18.2	22.0	21.7	21.8
28	4.5	3.6	4.1	11.1	9.1	10.2	17.7	17.0	17.4	22.1	21.6	21.9
29				9.1	7.6	8.3	17.0	15.9	16.3	21.6	21.0	21.4
30				7.8	7.2	7.5	15.9	15.5	15.7	22.1	21.3	21.6
31				8.1	7.7	7.9				22.6	21.7	22.1
Nonth				12.7	2.8	7.6	18.4	7.8	11.8	22.6	15.2	19.1

## TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		luno			luby			August			Sontombo	-
		Julie			July			August			Schreinne	1
1	23.4	22.3	22.8	28.8	28.2	28.5	26.9	26.3	26.5	23.3	22.5	22.9
2	23.8	23.1	23.5	28.8	28.1	28.5	26.5	25.9	26.2	23.4	22.7	23.0
3	23.5	22.7	23.0	28.6	27.8	28.1	26.6	25.7	26.1	23.3	22.7	23.0
4	23.0	22.3	22.7	27.8	26.4	26.9	26.8	26.3	26.5	23.2	22.9	23.0
5	22.9	22.3	22.6	26.7	26.3	26.5	27.3	26.6	26.9	22.9	22.6	22.7
6	22.9	22.2	22.6	26.5	26.0	26.2	27.3	26.7	27.0	22.7	22.4	22.6
7	23.5	22.7	23.0	26.7	26.1	26.4	27.3	26.7	27.0	22.9	22.4	22.6
8	24.0	23.3	23.6	26.8	26.1	26.5	27.8	26.9	27.3	23.3	22.7	23.0
9	23.9	22.5	23.5	26.8	26.3	26.6	28.3	27.5	27.8	23.3	23.0	23.2
10	22.7	22.0	22.3	26.8	26.1	26.4	28.2	27.4	27.7	23.7	23.1	23.3
11	22.5	21.3	22.0	27.4	26.6	27.0	28.0	27.2	27.5	24.1	23.4	23.7
12	21.4	20.9	21.2	27.3	26.7	26.9	28.3	27.6	27.9	24.3	23.8	24.0
13	21.4	21.2	21.3	27.0	26.4	26.7	28.7	28.0	28.3	24.2	23.8	24.0
14	21.8	21.4	21.6	26.8	26.2	26.4	28.8	28.2	28.5	24.1	23.4	23.9
15	22.1	21.6	21.8	26.7	26.1	26.3	28.6	28.0	28.2	24.2	23.8	24.0
16	22.1	21.7	21.9	27.0	26.4	26.7	28.2	27.8	27.9			
17	22.7	22.0	22.3	26.8	26.1	26.4	27.8	26.3	27.4			
18	23.4	22.7	23.0	26.1	25.6	25.8	26.3	24.5	24.9			
19	24.4	23.4	23.9	26.1	25.4	25.7	24.8	24.3	24.7			
20	25.0	24.4	24.7	26.1	25.6	25.8	24.3	24.0	24.2			
21	25.7	24.8	25.2	25.9	25.5	25.7	24.2	23.9	24.0			
22	26.5	25.7	26.1	25.7	25.1	25.4	24.2	23.7	23.9			
23	27.4	26.5	26.9	25.9	25.2	25.5	24.6	23.8	24.2	22.2	22.1	22.1
24	27.7	27.3	27.5	26.2	25.4	25.8	25.1	24.4	24.7	22.4	22.0	22.2
25	28.1	27.5	27.7	26.6	25.7	26.1	25.4	24.6	25.0	22.8	22.1	22.4
26	28.8	27.9	28.3	26.9	26.1	26.5	25.7	24.9	25.3	22.5	22.0	22.2
27	29.2	28.5	28.8	27.3	26.4	26.8				22.1	21.7	21.9
28	29.3	28.9	29.1	27.3	27.1	27.2				21.8	20.7	21.2
29	29.0	28.6	28.8	27.4	26.8	27.1	24.4	23.6	23.8	20.7	20.0	20.2
30	29.0	28.5	28.7	27.2	26.7	27.0	23.6	23.0	23.2	20.0	19.5	19.8
31				27.2	26.6	26.9	23.0	22.7	22.8			
Month	29.3	20.9	24.3	28.8	25.1	26.6						

## TEMPERATURE, WATER, DEGREES CELSIUS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009



# 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean									
		October			Novembe	r		Decembe	r		January	,
1	8.8	7.5	8.2	9.7	9.4	9.5						
2	9.4	8.2	8.8	9.6	9.4	9.5						
3	9.5	8.4	9.0	9.6	9.3	9.5						
4	9.8	8.6	9.2		9.2							
5	9.6	8.7	9.2									
6	9.4	8.7	9.0									
7	9.0	8.3	8.6									
8	9.1	8.0	8.5									
9	9.2	8.3	8.7									
10	9.1	8.3	8.7									
11	8.8	8.3	8.5									
12	8.5	7.8	8.0									
13	8.4	7.8	8.1									
14	8.2	7.8	8.0									
15	8.0	7.7	7.9									
16	7.7	7.1	7.4									
17	7.7	7.5	7.6									
18	8.4	7.6	7.9									
19	8.9	8.3	8.6									
20	8.8	8.4	8.6									
21	8.8	8.4	8.5									
22	8.9	8.8	8.9									
23	8.9	8.7	8.8									
24	8.8	7.6	8.2									
25	7.8	7.4	7.6									
26	7.9	7.6	7.8									
27	8.3	7.8	8.1									
28	8.6	8.2	8.3									
29	9.1	8.4	8.8									
30	9.4	8.9	9.2									
31	9.6	9.4	9.5									
Month	9.8	7.1	8.5									

# 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1				11.7	11.4	11.5	10.5	10.2	10.3	6.0	5.2	5.7
2				11.9	11.6	11.8	10.5	10.2	10.3	6.5	6.0	6.3
3				12.1	11.9	12.0	10.6	10.3	10.4	6.9	6.5	6.7
4				12.3	12.1	12.2	10.7	10.4	10.6	7.2	6.9	7.1
5				12.4	12.2	12.3	10.6	10.4	10.5	7.5	7.2	7.4
6				12.3	12.0	12.2	10.7	10.5	10.6	7.7	7.5	7.6
7				12.0	11.6	11.9	10.8	10.7	10.8	7.8	7.7	7.8
8				11.6	11.3	11.5	10.8	10.7	10.7	7.8	7.7	7.8
9				11.3	9.7	10.4	10.9	10.7	10.7	7.8	7.6	7.7
10				10.0	9.3	9.7	10.8	10.6	10.7	7.8	7.7	7.7
11				9.3	9.2	9.3	10.8	10.3	10.5	7.8	7.7	7.7
12				9.9	9.3	9.6	10.6	9.9	10.1	8.0	7.7	7.9
13				10.8	9.8	10.2	10.1	9.9	10	8.0	7.8	7.9
14				11.0	10.3	10.6	10.2	10.0	10.1	7.8	7.7	7.7
15				11.4	10.6	10.8	10.1	10.0	10.1	7.8	7.5	7.6
16				11.3	10.7	10.9	10.2	10.0	10.1	7.5	6.6	6.9
17				11.1	10.6	10.8	10.0	9.8	9.9	6.6	5.7	6.2
18				10.9	10.5	10.7	9.8	9.5	9.6	6.0	5.6	5.7
19				10.7	10.5	10.6	9.5	9.1	9.3	6.1	5.7	5.8
20				10.6	10.5	10.5	9.1	8.9	9.0	6.6	6.0	6.4
21				10.5	10.3	10.4	9.0	8.6	8.8	6.8	6.6	6.7
22				10.3	10.2	10.2	9.0	8.6	8.8	6.8	6.7	6.8
23				10.2	10.0	10.2	9.1	8.9	9.0	6.7	6.5	6.7
24				10.0	9.6	9.9	9.3	9.0	9.1	6.8	6.5	6.6
25				9.6	8.8	9.2	9.2	9.0	9.1	7.0	6.7	6.8
26	11.5			8.8	8.2	8.3	9.0	8.7	8.8	7.0	6.5	6.8
27	11.7	11.5	11.6	8.6	8.3	8.5	8.7	7.1	8.3	6.9	6.5	6.7
28	11.7	11.4	11.5	9.2	8.5	8.7	7.1	5.2	6.6	6.9	6.3	6.7
29				10.1	9.2	9.6	5.2	4.6	4.8	6.6	6.2	6.4
30				10.6	10.0	10.3	5.2	4.6	5.0	6.8	6.5	6.7
31				10.6	10.4	10.5				7.2	6.7	6.9
Month				12.4	8.2	10.5	10.9	4.6	9.4	8.0	5.2	6.9

# 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Мах	Min	Mean
		June			July			August			Septembe	er
1	7.6	7.1	7.4	6.0	5.9	6.0	6.6	6.4	6.5	6.9	6.2	6.6
2	7.6	7.4	7.5	6.2	6.0	6.1	7.0	6.6	6.8	7.1	6.9	7.0
3	7.5	7.1	7.3	6.3	6.2	6.3	7.3	6.9	7.0	7.2	7.0	7.1
4	7.2	6.8	7.0	6.5	5.9	6.2	7.4	6.9	7.1	7.4	7.2	7.3
5	6.8	6.2	6.7	6.2	6.0	6.2	7.6	7.0	7.3	7.5	7.3	7.4
6	6.2	5.9	6.0	6.0	5.6	5.7	7.7	7.1	7.4	7.5	7.3	7.4
7	6.4	6.1	6.2	6.2	5.8	6.0	8.0	7.1	7.5	7.6	7.3	7.4
8	6.7	6.4	6.6	6.1	5.9	6.0	8.0	7.2	7.6	8.0	7.6	7.8
9	6.8	5.7	6.5	5.9	5.7	5.8	7.6	6.6	7.0	7.8	7.5	7.7
10	5.9	5.6	5.7	6.1	5.8	5.9	6.6	6.1	6.3	7.5	7.2	7.4
11	5.7	4.5	5.1	6.2	5.8	5.9	6.4	6.1	6.3	7.6	7.3	7.5
12	5.1	4.6	5.0	5.8	5.6	5.7	6.3	5.9	6.1	7.5	7.2	7.3
13	5.1	5.0	5.0	5.9	5.7	5.8	6.2	6.0	6.1	7.7	7.3	7.5
14	5.7	5.0	5.3	5.7	5.4	5.5	6.1	5.9	6.0	7.7	7.4	7.5
15	6.3	5.7	6.0	5.7	5.5	5.6	6.2	5.9	6.0	7.9	7.4	7.6
16	6.4	6.2	6.3	5.7	5.5	5.6	6.4	6.2	6.3			
17	6.2	5.1	5.6	6.0	5.6	5.8	6.6	4.6	6.3			
18	5.1	4.4	4.6	6.2	6.0	6.1	4.6	3.2	4.1			
19	4.6	4.4	4.5	6.2	6.1	6.1	4.5	3.8	4.1			
20	5.1	4.6	4.8	6.5	6.2	6.3	4.7	4.1	4.5			
21	5.5	5.1	5.3	6.6	6.5	6.5	4.9	4.7	4.8			
22	5.4	5.1	5.3	6.8	6.6	6.7	5.1	4.9	5.0			
23	5.1	5.0	5.1	6.8	6.6	6.7	5.7	5.1	5.4	7.9		
24	5.2	4.8	5.0	6.7	6.6	6.6	6.2	5.7	6.0	7.9	7.5	7.7
25	4.9	4.8	4.8	6.7	6.5	6.6	6.3	6.2	6.3	8.3	7.7	8.0
26	5.0	4.7	4.9	6.9	6.6	6.7	6.6	6.3	6.4	8.5	7.9	8.2
27	5.3	5.0	5.1	6.8	6.6	6.7		6.5		8.7	8.1	8.4
28	5.3	5.1	5.2	6.8	6.5	6.6		4.7		8.6	8.1	8.4
29	5.5	5.2	5.4	6.7	6.4	6.5	5.5	4.7	5.3	8.7	8.2	8.5
30	5.9	5.5	5.7	6.6	6.3	6.4	5.8	5.5	5.7	8.7	8.3	8.5
31				6.6	6.3	6.4	6.2	5.8	5.9			
Month	7.6	4.4	5.7	6.9	5.4	6.2		3.2				



## 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	78	36	52	220	170	190						
2	96	41	56	220	150	180						
3	79	42	51	160	130	140						
4	85	36	52									
5	95	34	66									
6	98	49	71									
7	98	54	72									
8	100	60	84									
9	87	41	59									
10	85	33	55									
11	130	49	66									
12	200	48	100									
13	140	60	77									
14	83	60	67									
15	130	52	75									
16	210	110	150									
17	150	100	130									
18	120	73	92									
19	97	64	72									
20	130	66	93									
21	150	120	130									
22	180	120	150									
23	200	160	170									
24	530	170	370									
25	640	450	520									
26	580	450	510									
27	530	400	450									
28	460	370	410									
29	450	300	350									
30	340	230	280									
31	250	190	220									
Month	640	33	160									

## 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1				220	160	190	420	300	360	1,490	880	1,160
2				180	110	150	300	210	260	1,030	730	880
3				110	72	91	220	180	200	760	550	630
4				74	59	65	190	160	170	580	460	510
5				61	55	58	170	140	150	480	320	380
6				59	44	51	150	120	130	340	250	290
7				47	41	43	130	100	120	260	180	210
8				44	40	42	110	98	100	210	160	180
9				1,110	42	790	100	85	93	170	130	150
10				1,110	1,100	1,110	270	85	130	140	130	130
11				1,100	920	1,040	360	260	310	140	120	130
12				1,090	840	950	390	300	360	130	110	110
13				1,080	790	940	300	210	250	120	100	110
14				930	590	740	220	190	210	120	100	110
15				730	430	560	210	150	180	350	100	170
16				490	320	410	160	130	140	1,090	350	800
17				400	240	310	150	130	140	1,250	900	1,060
18				260	200	230	150	120	140	1,320	860	1,090
19				240	200	220	230	110	140	1,220	980	1,070
20				200	150	170	170	130	160	1,100	640	860
21				150	120	140	210	140	180	690	420	520
22				130	100	120	210	120	160	440	290	360
23				110	89	99	120	82	100	310	240	270
24				160	86	100	87	64	74	260	180	220
25				1,300	160	550	68	57	62	190	120	160
26				1,490	1,080	1,320	61	50	57	330	110	200
27	58	50	54	1,080	840	910	1,000	52	180	260	140	190
28	200	53	87	1,030	850	950	1,260	640	840	420	120	180
29				1,010	690	850	1,810	990	1,330	550	340	450
30				730	470	600	1,810	1,270	1,510	340	300	310
31				510	380	430				300	180	240
Month				1,490	40	460	1,810	50	270	1,490	100	420

## 06909000 MISSOURI RIVER AT BOONVILLE, MO—Continued

## TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Мах	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	
		June			July			August			September		
1	180	110	140	230	160	190	91	75	82	310	160	220	
2	110	89	100	180	140	160	87	67	76	170	140	150	
3	240	91	140	150	110	130	80	67	73	160	130	140	
4	270	180	210	370	110	230	72	53	62	130	92	110	
5	320	170	220	180	130	150	67	51	55	98	77	83	
6	570	320	490	210	140	190	58	50	54	81	73	77	
7	490	290	380	290	150	190	63	48	54	81	64	72	
8	290	170	220	290	250	270	62	51	57	66	56	61	
9	830	150	350	450	270	370	82	54	63	69	53	58	
10	850	520	650	470	360	420	150	82	110	83	65	76	
11	1,020	540	720	390	270	320	86	68	74	77	66	72	
12	1,040	830	940	300	220	260	110	73	91	75	69	72	
13	1,010	730	840	230	170	190	95	71	81	71	60	65	
14	980	580	780	350	210	300	100	82	89	82	60	70	
15	640	440	550	300	260	270	130	98	110	75	55	64	
16	660	410	520	320	270	290	98	61	77				
17	780	560	650	320	280	300	600	56	110				
18	1,010	580	780	360	290	310	1,120	510	760				
19	1,040	820	920	460	330	400	730	480	600				
20	960	660	820	380	220	280	670	450	570				
21	710	400	520	220	160	190	490	360	430				
22	490	350	400	170	130	150	380	240	310				
23	540	470	500	140	120	130	260	160	200				
24	610	450	520	130	110	120	180	140	150	51	44	48	
25	680	530	610	130	110	120	160	120	140	55	45	50	
26	650	410	520	120	91	100	120	110	120	59	49	53	
27	430	360	400	100	79	90	110			64	48	53	
28	410	310	350	89	77	83	1,080			68	60	64	
29	490	380	440	91	72	82	1,080	570	750	65	58	61	
30	400	220	290	86	69	77	630	420	490	71	64	68	
31				88	67	76	460	290	370				
Month	1,040	89	500	470	67	210	1,120						

