

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND

Little Missouri Basin Middle Little Missouri Subbasin

LOCATION.--Lat 46°55'10", long 103°31'40" referenced to North American Datum of 1927, in NE ¼ sec.27, T.140 N., R.102 W., Billings County, ND, Hydrologic Unit 10110203, on left bank 50 ft above bridge on U.S. Highway 10, one quarter of a mi west of Medora, and 1 ¼ mi upstream from Andrews Creek.

DRAINAGE AREA.--6,190 mi², approximately.

SURFACE-WATER RECORDS

- PERIOD OF RECORD.--DAILY DISCHARGE--May 1903 to October 1908, October to November 1921, April, May, and December 1922, May 1923 to September 1924, October 1928 to September 1934, October 1945 to September 1975, March 2001 to current year. Monthly discharge only for some periods, published in WSP 1309.
- PERIOD OF RECORD.--DAILY GAGE HEIGHT--August 2001 to current year.
- REVISED RECORDS.--WSP 546: Drainage area. WSP 1279: 1903-7, 1923-24, 1930-31, 1934(M). When the gage was re-established in March 2001, the base gage was incorrectly set 0.84 ft too low. All gage heights since October 1, 2002, and the 2001 peak stage have been corrected. Unit values and daily values data for water years 2001-02 have not been adjusted. Discharge data for those years are unaffected by this correction.
- GAGE.--Water-stage recorder on upstream side of highway bridge. Datum of gage is 2,246.75 ft above National Geodetic Vertical Datum of 1929. Prior to October 9, 1945, nonrecording gages at several sites within 0.2 mi upstream from present site at various datums. October 9, 1945, to August 22, 1951, nonrecording gage at current location at current datum. September 1951 to September 1975, recording gage 600 ft downstream at current datum.
- REMARKS.--Records fair except for estimated daily discharges, which are poor.

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

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

						[e, estimate	ed]					
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep
1	10	52	e41	e20	e19	e55	350	76	7,150	237	38	47
2	11	44	e42	e20	e19	e57	298	72	6,940	219	40	48
3	20	42	e42	e20	e19	e59	229	65	3,960	190	110	45
4	22	40	e43	e20	e19	e60	179	60	3,370	195	244	43
5	31	35	e45	e20	e20	e61	153	56	3,750	172	220	41
6	24	32	e45	e20	e20	e62	134	55	3,550	170	371	39
7	18	29	e43	e20	e20	e63	123	51	3,240	174	835	33
8	25	29	e40	e20	e20	e64	124	52	3,010	193	478	42
9	37	e26	e37	e19	e20	e66	123	48	2,500	278	359	639
10	32	e23	e34	e19	e20	e67	121	47	1,970	465	330	6,920
11	25	e20	e32	e19	e20	e71	110	45	1,350	429	293	4,800
12	21	e18	e30	e19	e20	e75	130	43	982	220	227	1,730
13	20	e18	e29	e19	e20	e80	135	42	872	157	250	859
14	19	e19	e29	e20	e20	e84	155	42	853	153	319	541
15	19	e20	e29	e20	e21	e88	145	38	625	244	231	e415
16	21	e22	e28	e20	e21	e90	155	44	484	160	164	e335
17	31	e24	e28	e20	e22	e91	141	45	411	115	159	307
18	24	e26	e28	e19	e22	e92	137	43	335	100	122	252
19	28	e29	e27	e18	e23	e90	146	118	287	85	257	219
20	32	e31	e27	e18	e25	e87	155	1,520	247	78	309	178
21	26	e33	e26	e18	e27	e84	177	2,080	218	72	219	155
22	36	e36	e25	e18	e30	e82	201	1,650	207	64	168	137
23	48	e38	e24	e18	e34	e80	171	1,060	273	59	137	125
24	51	e40	e23	e18	e40	e79	168	736	781	55	120	111
25	41	e41	e22	e19	e45	e80	150	501	632	50	108	95
26	33	e42	e22	e19	e49	e84	132	367	560	45	96	94
27	30	e43	e21	e20	e51	e91	116	363	371	41	88	87
28	40	e43	e20	e20	e52	e120	100	2,370	267	39	81	81
29	41	e43	e20	e20		e160	90	2,680	346	41	72	73
30	53	e42	e20	e20		e220	82	1,660	269	42	68	70
31	52		e20	e19		e400		3,490		41	55	
Total	921	980	942	599	738	2,942	4,630	19,519	49,810	4,583	6,568	18,561
Mean	29.7	32.7	30.4	19.3	26.4	94.9	154	630	1,660	148	212	619
Max	53	52	45	20	52	400	350	3,490	7,150	465	835	6,920
Min	10	18	20	18	19	55	82	38	207	39	38	33
Ac-ft	1,830	1,940	1,870	1,190	1,460	5,840	9,180	38,720	98,800	9,090	13,030	36,820

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2013, BY WATER YEAR (WY)

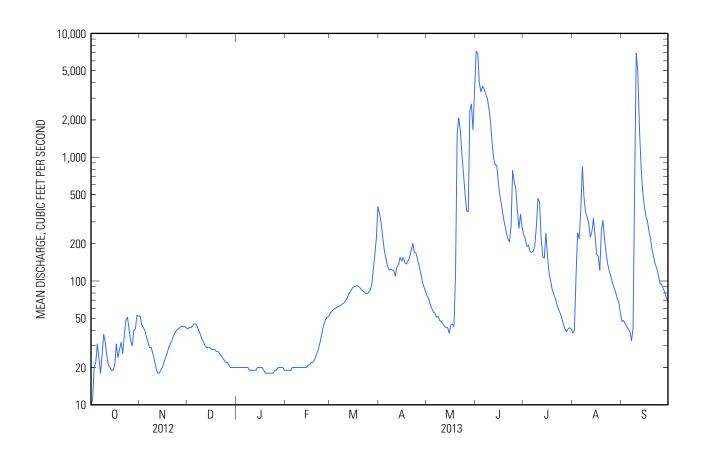
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	143	52.8	22.5	17.8	136	1,208	1,236	893	1,083	396	214	142
Max	2,226	369	127	213	1,075	6,831	9,847	8,579	4,692	3,541	2,521	1,314
(WY)	(1924)	(1947)	(1947)	(1974)	(1947)	(1972)	(1952)	(2011)	(1929)	(1905)	(1903)	(1903)
Min	1.67	1.97	0.02	0.00	0.00	32.8	8.12	3.94	41.7	11.4	0.75	0.29
(WY)	(1959)	(1956)	(1956)	(1950)	(1950)	(1964)	(1905)	(1931)	(2004)	(2002)	(1934)	(1934)

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		SOIMINART SI	A1191109			
	Calendar Ye	ar 2012	Water Year	r 2013	Water Year	s 1903 - 2013
Annual total	25,891.5		110,793			
Annual mean	70.7		304		^a 45	5
Highest annual mean					^a 1,5	80 2011
Lowest annual mean					^a 52	7 2002
Highest daily mean	685	Mar 13	7,150	Jun 1	39,600	Apr 8, 1952
Lowest daily mean	5.6	Sep 13	10	Oct 1	0.00	Feb 1, 1932
Annual seven-day minimum	6.1	Sep 11	18	Jan 18	0.00	Jan 21, 1933
Maximum peak flow			b _{8,4}	00Sep 10	65,000	Mar 23, 1947
Maximum peak stage			11.53	Jun 1	20.50	Mar 23, 1947
Annual runoff (ac-ft)	51,360		219,800		a33	0,300
10 percent exceeds	129		480		990	
50 percent exceeds	49		55		54	
90 percent exceeds	14		20		2.0	

SUMMARY STATISTICS

^a Based on complete water years only. ^b Gage height, 11.31 ft.

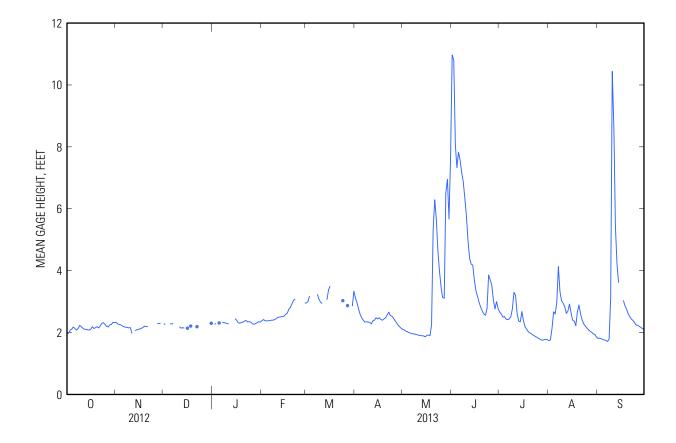


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					DAI	LY MEAN V	ALUES					
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep
1	1.96	2.33	2.29		2.39	2.96	3.11	2.10	10.97	2.66	1.74	1.81
2	1.98	2.28	2.26	2.28	2.42	3.00	2.96	2.08	10.80	2.60	1.76	1.82
3	2.08	2.26		2.28	2.38	3.18	2.75	2.04	8.08	2.50	2.14	1.80
4	2.11	2.25			2.38		2.58	2.02	7.33	2.52	2.67	1.78
5	2.18	2.21	2.28	2.31	2.38		2.47	1.99	7.83	2.43	2.60	1.76
6	2.13	2.19	2.28		2.39		2.39	1.98	7.57	2.42	2.97	1.75
7	2.08	2.17	2.29	2.33	2.40		2.34	1.96	7.17	2.44	4.13	1.71
8	2.13	2.17		2.32	2.40	3.24	2.35	1.96	6.87	2.51	3.33	1.78
9	2.23	2.15		2.31	2.42	3.07	2.34	1.94	6.34	2.77	3.03	3.12
10	2.19	2.16		2.29	2.45	2.98	2.33	1.93	5.75	3.30	2.95	10.44
11	2.14	1.97	2.19	2.28	2.49	2.94	2.28	1.91	4.96	3.20	2.84	8.67
12	2.11		2.14		2.50		2.38	1.90	4.40	2.60	2.62	5.41
13	2.10	2.06	2.16		2.51		2.40	1.90	4.21	2.37	2.69	4.21
14	2.09	2.09	2.14		2.52	3.06	2.48	1.89	4.18	2.35	2.92	3.61
15	2.08	2.10		2.45	2.53	3.38	2.44	1.86	3.69	2.68	2.64	
16	2.11	2.12	2.14	2.40	2.59	3.50	2.48	1.91	3.35	2.38	2.40	
17	2.19	2.14		2.32	2.63		2.42	1.92	3.17	2.18	2.37	3.04
18	2.13	2.17	2.21	2.30	2.76		2.40	1.90	2.97	2.11	2.22	2.87
19	2.16	2.21		2.33	2.82		2.44	2.25	2.82	2.03	2.67	2.76
20	2.19	2.19		2.34	2.94		2.48	5.31	2.69	1.99	2.89	2.61
21	2.15	2.20		2.37	3.04		2.57	6.29	2.60	1.96	2.60	2.52
22	2.22		2.19	2.39	3.08		2.66	5.67	2.56	1.92	2.41	2.44
23	2.30			2.34			2.55	4.64	2.78	1.89	2.28	2.39
24	2.32			2.35		3.03	2.53	3.98	3.86	1.86	2.21	2.33
25	2.26			2.34			2.46	3.47	3.70	1.83	2.15	2.24
26	2.20			2.28			2.38	3.13	3.53	1.80	2.09	2.24
27	2.18	2.29		2.27		2.87	2.31	3.11	3.06	1.77	2.04	2.20
28	2.25	2.29		2.29	2.95		2.23	6.52	2.76	1.75	2.01	2.17
29	2.26	2.30		2.32			2.18	6.95	3.00	1.77	1.96	2.13
30	2.33			2.35		2.85	2.13	5.67	2.77	1.78	1.94	2.11
31	2.32		2.30	2.34		3.34		7.69		1.77	1.86	
Mean	2.17						2.46	3.22	4.86	2.26	2.49	
Max	2.33						3.11	7.69	10.97	3.30	4.13	
Min	1.96						2.13	1.86	2.56	1.75	1.74	

GAGE HEIGHT, FEET WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013 DAILY MEAN VALUES

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WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD .--

WATER TEMPERATURE: March 1947 to September 1949, April to November 2013 (discontinued). SPECIFIC CONDUCTANCE: April to November 2013 (discontinued). PH: April to November 2013 (discontinued). DISSOLVED OXYGEN: April to November 2013 (discontinued).

INSTRUMENTATION .-- Multiparameter water-quality monitor.

REMARKS.--Records rated as follows:

WATER TEMPERATURE: Rated good: April 5-November 5.

SPECIFIC CONDUCTANCE: Rated good: May 14-August 12, September 17-November 5. Rated fair: April 5-May 13. Rated poor: August 13-September 16.

PH: Rated good: April 5-July 10, July 17-August 9, August 14-November 5. Rated fair: July 11-16, August 10-13. DISSOLVED OXYGEN: Rated good: April 5-November 5.

EXTREMES FOR CURRENT YEAR .--

WATER TEMPERATURE: Maximum recorded, 30.4°C, September 6; minimum recorded, -0.1°C, April 9, 15. SPECIFIC CONDUCTANCE: Maximum recorded, 2960 microsiemens, May 15; minimum recorded, 510 microsiemens, September 11. PH: Maximum recorded, 8.8 units on many days in May, July, and August; minimum recorded, 7.8 units, September 2, 3. DISSOLVED OXYGEN: Maximum recorded, 12.8 milligrams per liter, April 9, 15; minimum recorded, 3.0 milligrams per liter, September 10.

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

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

Day	Max	Min	Mean									
		October			Novembe	r		Decembe	r		January	
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06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

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

1 2 3 4 5	 February 		March						
2 3 4	 		march		April			May	
2 3 4	 			 			12.8	2.9	7.4
3 4		 		 			15.3	5.3	10.1
4		 		 			17.3	7.8	12.3
		 		 			17.9	9.2	13.3
	 	 		 			19.8	9.4	14.5
						10.0			
6	 	 		 14.0	7.3	10.3	21.4	11.4	16.3
7	 	 		 13.4	7.9	10.7	23.1	12.5	17.7
8	 	 		 10.9	2.4	5.4	22.2	14.1	18.0
9	 	 		 5.2	-0.1	2.4	20.8	12.2	16.3
10	 	 		 9.2	0.6	4.5	18.0	12.2	15.1
11	 	 		 9.2	2.5	5.9	19.5	8.7	13.9
12	 	 		 7.5	4.8	5.9	20.8	10.9	16.1
13	 	 		 8.1	1.9	5.0	24.4	15.5	19.6
14	 	 		 6.0	0.4	1.7	22.0	16.3	19.4
15	 	 		 5.3	-0.1	2.2	23.9	14.6	18.8
16	 	 		 6.3	2.2	4.2	19.9	15.2	16.9
17	 	 		 7.7	2.5	5.0	22.0	14.2	17.3
18	 	 		 9.3	1.8	5.6	24.8	14.2	20.2
19				9.3 11.0	5.0	5.0 7.6	24.8 20.6	17.4	16.3
20	 	 		 7.9	3.0 4.2	7.8 5.9	20.8 13.3	13.2	10.5
21	 	 		 7.6	4.6	5.9	11.3	10.9	11.1
22	 	 		 7.8	3.0	5.1	13.8	10.5	12.0
23	 	 		 10.0	2.2	5.8	15.6	12.7	14.1
24	 	 		 8.5	5.3	6.8			
25	 	 		 11.6	4.3	7.8			
26	 	 		 16.3	6.4	11.0			
27	 	 		 17.3	10.2	13.8			
28	 	 		 18.5	12.1	15.3			
29	 	 		 15.7	11.3	13.3	17.7	16.0	17.0
30	 	 		 12.5	5.8	8.4	17.6	15.3	16.8
31	 	 		 			15.3	13.5	14.2
	 		-	-	-		10.0	13.7	17.2
onth	 	 		 					

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

	WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013													
Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mear		
		June			July			August		:	Septembe	r		
1	14.1	12.7	13.4	26.8	21.4	24.1	25.0	18.7	21.9	25.5	18.1	21.5		
2	15.0	13.1	14.0	28.4	21.8	25.0	22.8	19.6	21.0	26.0	18.8	22.4		
3	15.0	14.0	14.4	28.9	22.4	25.7	25.3	18.0	21.4	27.5	21.4	23.9		
4	14.1	13.2	13.6	29.9	23.9	26.8	23.1	19.8	21.3	26.9	20.8	23.5		
5	14.4	12.9	13.6	28.5	24.1	26.0	25.3	18.6	21.6	29.1	21.1	24.8		
6	16.4	13.5	14.8	29.1	22.6	25.4	23.8	20.1	21.9	30.4	23.4	26.6		
7	17.9	15.7	16.8	26.8	21.6	24.2	22.7	20.4	21.5	27.2	21.3	24.5		
8	18.3	17.5	17.9	29.3	22.4	25.3	24.0	19.1	21.4	24.3	19.7	21.9		
9	20.4	17.0	18.5	25.4	22.0	23.7	24.5	19.9	22.1	24.1	19.9	22.1		
10	22.8	20.0	21.2	26.8	20.8	23.7	24.5	19.7	21.6	21.5	19.4	20.0		
11	23.4	21.0	22.2	28.5	23.1	25.5	24.5	19.1	21.6	20.8	19.4	20.1		
12	23.0	20.3	21.8	27.4	23.5	25.2	25.2	20.0	22.4	21.1	19.0	20.1		
13	22.6	20.1	21.4	28.8	22.1	25.3	24.4	20.2	22.4	21.3	18.9	20.1		
14	22.5	19.8	21.0	25.3	20.7	22.4	23.7	20.8	22.4	21.2	19.6	20.2		
15	21.9	18.4	20.2	25.3	20.4	22.4	27.0	20.4	23.4					
16	22.4	18.4	20.4	27.3	22.3	24.6	27.4	21.4	24.3					
17	23.0	18.6	20.8	28.0	21.3	24.3	26.7	21.5	24.1					
18	25.4	18.9	22.0	29.8	23.0	26.1	25.2	21.2	23.3					
19	26.4	21.2	23.7	30.0	21.3	25.6	25.8	19.8	22.9					
20	26.3	21.7	23.6	28.3	21.9	25.2	25.7	21.2	23.5	16.8	11.1	13.8		
21	23.9	19.4	21.0	28.9	21.4	25.1	25.6	20.9	23.0	18.3	12.2	15.1		
22	22.0	18.3	20.3	28.7	20.6	24.5	24.2	19.6	21.7	19.9	14.3	17.0		
23	22.7	17.0	19.5	28.0	21.1	24.7	27.4	20.5	23.6	18.6	16.2	17.2		
24	23.5	18.3	20.9	30.0	21.3	25.4	28.6	23.0	25.6	18.5	12.9	15.8		
25	24.5	21.2	22.8	26.6	22.2	24.5	27.1	21.4	24.5	17.9	14.0	16.0		
26	24.9	21.4	23.1	23.3	18.1	20.5	28.7	21.7	25.1	16.4	14.0	15.0		
27	25.4	21.3	23.4	24.4	16.8	20.5	26.6	23.8	24.9	14.0	11.9	12.5		
28	25.8	20.8	23.2	22.9	16.6	19.6	29.2	22.1	25.3	14.4	9.9	12.1		
29	25.3	20.8	23.1	23.8	18.2	20.4	29.4	23.1	26.2	15.5	10.6	13.0		
30	26.4	20.9	23.5	23.6	18.1	20.7	29.4	22.4	26.0	16.2	12.3	14.1		
31				26.7	18.9	22.8	26.6	21.4	23.7					
onth	26.4	12.7	19.9	30.0	16.6	24.0	29.4	18.0	23.1					

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

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

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

Day	Max	Min	Mean									
		October		I	Novembe	r	I	Decembe	r		January	
1												
2												
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06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—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
Buy	шил		moun	mux		moun	mux		moun	Hux		moun
		February			March			April			May	
1										2,400	2,320	2,350
2										2,430	2,400	2,420
3										2,450	2,420	2,430
4										2,530	2,450	2,480
5										2,580	2,530	2,550
6							2,020	1,960	1,980	2,640	2,560	2,600
7							2,090	2,020	2,060	2,690	2,640	2,670
8							2,100	2,040	2,070	2,730	2,670	2,700
9							2,090	2,030	2,060	2,780	2,730	2,750
10							2,080	1,860	2,050	2,820	2,780	2,800
11							1,980	1,870	1,930	2,870	2,820	2,840
12							2,050	1,970	2,020	2,930	2,860	2,890
13							2,060	2,000	2,030	2,920	2,900	2,910
14							2,040	1,910	1,970	2,940	2,900	2,910
15							1,980	1,910	1,950	2,960	2,900	2,930
16							2,000	1,800	1,920			
17							1,840	1,800	1,820	2,860	2,780	2,820
18							1,840	1,790	1,820	2,840	2,800	2,820
19							1,890	1,790	1,870	2,800	1,980	2,600
20							1,920	1,880	1,900			
21							1,920	1,750	1,850			
22							1,770	1,570	1,650	1,240	1,030	1,090
23							1,800	1,660	1,740			
24							1,800	1,740	1,770			
25							1,830	1,760	1,800			
26							1,890	1,810	1,850			
27							2,060	1,890	1,950			
28							2,190	2,060	2,130			
29							2,280	2,190	2,230	1,270	850	952
30							2,320	2,280	2,300	1,080	939	985
31										1,120	908	1,050
Month												

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—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	Мах	Min	Mean
		June			July			August			Septembe	r
1				1,560	1,510	1,530	2,430	2,390	2,410	1,600	1,530	1,560
2	912	835	870	1,620	1,560	1,580	2,450	2,420	2,430	1,680	1,600	1,640
3	1,080	900	1,000	1,680	1,620	1,640	2,450	2,410	2,440	1,740	1,680	1,700
4	1,130	1,080	1,100	1,730	1,680	1,710	2,410	1,790	2,170	1,810	1,740	1,780
5	1,100	974	1,040	1,740	1,700	1,730	2,050	1,750	1,880	1,880	1,810	1,850
6	991	892	940	1,700	1,600	1,650	1,840	1,600	1,780	1,920	1,880	1,900
7	942	865	900	1,600	1,570	1,590	1,600	1,500	1,550	1,980	1,920	1,950
8	865	825	844	1,610	1,580	1,600	1,500	1,310	1,390	1,970	1,960	1,960
9	927	859	882	1,620	1,560	1,600	1,310	1,100	1,160			
10	1,020	927	965	1,600	1,470	1,550	1,180	1,060	1,090			
11	1,090	1,020	1,050	1,470	1,230	1,310	1,320	1,180	1,250	694	510	591
12	1,200	1,090	1,130	1,380	1,290	1,330	1,460	1,320	1,390	674	581	606
13	1,260	1,190	1,240	1,490	1,310	1,420	1,580	1,460	1,520	682	610	641
14	1,240	1,170	1,200	1,520	1,480	1,500	1,500	1,350	1,390	753	682	714
15	1,400	1,160	1,230	1,660	1,510	1,580	1,350	1,280	1,310			
16	1,690	1,400	1,600	1,770	1,660	1,740	1,280	1,210	1,240			
17	1,660	1,500	1,570	1,800	1,550	1,730	1,220	1,200	1,210			
18	1,630	1,530	1,550	1,580	1,450	1,500	1,250	1,210	1,220			
19	1,610	1,540	1,570	1,760	1,580	1,680	1,340	1,250	1,310			
20	1,660	1,610	1,640	2,000	1,760	1,860	1,340	1,310	1,320	1,240	1,100	1,180
21	1,700	1,660	1,680	2,080	2,000	2,040	1,330	1,320	1,330	1,270	1,240	1,260
22	1,720	1,610	1,690	2,150	2,080	2,110	1,320	1,210	1,270	1,310	1,270	1,290
23	1,750	1,650	1,690	2,190	2,150	2,170	1,210	1,130	1,160	1,360	1,310	1,330
24	1,780	1,610	1,740	2,210	2,170	2,190	1,130	1,080	1,100	1,390	1,360	1,380
25	1,610	1,380	1,470	2,230	2,190	2,210	1,080	1,070	1,080	1,410	1,390	1,400
26	1,380	1,360	1,370	2,250	2,230	2,240	1,140	1,080	1,100	1,470	1,410	1,430
27	1,440	1,380	1,410	2,280	2,240	2,250	1,190	1,140	1,160	1,510	1,470	1,490
28	1,450	1,430	1,440	2,320	2,270	2,290	1,300	1,190	1,250	1,560	1,510	1,540
29	1,480	1,450	1,460	2,360	2,320	2,340	1,390	1,300	1,350	1,600	1,560	1,580
30	1,520	1,480	1,490	2,360	2,330	2,340	1,460	1,390	1,420	1,650	1,600	1,620
31				2,390	2,350	2,370	1,530	1,460	1,500			
Month				2,390	1,230	1,820	2,450	1,060	1,460			

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Mediar
		October			Novembe	er		Decembe	er		January	
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
23 24												
25												
26												
27												
28												
29												
30 31												
31												
x												
n												

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Мах	Min	Median	Max	Min	Median	Мах	Min	Median	Мах	Min	Mediar
		Februar	y		March			April			May	
1										8.7	8.7	8.7
2										8.7	8.7	8.7
3										8.7	8.7	8.7
4										8.8	8.7	8.8
5										8.8	8.7	8.7
6							8.5	8.5	8.5	8.7	8.6	8.7
7							8.6	8.5	8.5	8.6	8.6	8.6
8							8.6	8.6	8.6	8.6	8.6	8.6
9							8.6	8.6	8.6	8.6	8.6	8.6
10							8.6	8.6	8.6	8.7	8.6	8.6
11							8.6	8.6	8.6	8.7	8.6	8.7
12							8.6	8.6	8.6	8.7	8.6	8.6
13							8.6	8.6	8.6	8.6	8.6	8.6
14							8.7	8.6	8.7	8.7	8.6	8.6
15							8.7	8.6	8.7	8.7	8.6	8.6
16							8.7	8.6	8.7	8.7	8.6	8.7
17							8.6	8.6	8.6	8.7	8.7	8.7
18							8.6	8.6	8.6	8.7	8.7	8.7
19							8.6	8.6	8.6	8.8	8.4	8.7
20							8.6	8.6	8.6	8.4	8.2	8.3
21							8.6	8.6	8.6	8.3	8.2	8.2
22							8.6	8.6	8.6	8.3	8.2	8.3
23							8.6	8.6	8.6	8.2	8.2	8.2
24							8.6	8.6	8.6			
25							8.6	8.6	8.6			
26							8.6	8.5	8.6			
27							8.6	8.5	8.6			
28							8.6	8.6	8.6			
29							8.6	8.6	8.6	8.2	8.0	8.2
30							8.7	8.6	8.7	8.2	8.1	8.1
31										8.2	8.0	8.1
ах												
n												

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013

Day	Мах	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
		June			July			August		:	Septembo	er
1	8.1	8.0	8.1	8.4	8.3	8.4	8.5	8.5	8.5	8.3	8.0	8.2
2	8.1	8.0	8.1	8.5	8.4	8.4	8.5	8.5	8.5	8.1	7.8	8.0
3	8.1	8.0	8.0	8.5	8.4	8.5	8.6	8.5	8.6	8.1	7.8	7.9
4				8.5	8.5	8.5	8.6	8.2	8.6	8.2	7.9	8.1
5	8.1	8.1	8.1	8.6	8.5	8.5	8.3	8.1	8.2	8.3	8.1	8.2
6	8.1	8.0	8.0	8.6	8.5	8.5	8.4	8.2	8.4	8.3	8.2	8.3
7	8.0	8.0	8.0	8.6	8.5	8.6	8.2	8.0	8.1	8.6	8.3	8.5
8	8.0	8.0	8.0	8.6	8.5	8.6	8.1	8.0	8.0	8.6	8.5	8.5
9	8.0	8.0	8.0	8.6	8.4	8.5	8.2	8.0	8.2	8.6	8.0	8.4
10	8.0	8.0	8.0	8.5	8.3	8.4	8.4	8.2	8.2	8.0	8.0	8.0
11	8.1	8.0	8.0	8.3	8.2	8.3	8.3	8.1	8.2	8.1	8.0	8.0
12	8.1	8.1	8.1	8.3	8.3	8.3	8.5	8.2	8.3	8.1	8.0	8.0
13	8.2	8.1	8.2	8.3	8.2	8.3	8.7	8.5	8.6	8.2	8.1	8.1
14	8.2	8.2	8.2	8.4	8.3	8.3	8.6	8.4	8.5	8.2	8.2	8.2
15	8.3	8.2	8.2	8.4	8.3	8.4	8.4	8.4	8.4			
16	8.3	8.2	8.3	8.6	8.3	8.4	8.6	8.4	8.5			
17	8.3	8.3	8.3	8.8	8.5	8.6	8.6	8.5	8.5			
18	8.4	8.3	8.4	8.7	8.6	8.6	8.6	8.5	8.6			
19	8.5	8.4	8.4	8.6	8.4	8.5	8.6	8.4	8.5			
20	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.3	8.4	8.4	8.3	8.4
21	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.4	8.5	8.5	8.3	8.4
22	8.6	8.5	8.5	8.5	8.5	8.5	8.5	8.4	8.4	8.4	8.4	8.4
23	8.5	8.4	8.5	8.5	8.5	8.5	8.6	8.4	8.5	8.5	8.4	8.4
24	8.4	8.2	8.3	8.5	8.4	8.5	8.8	8.6	8.7	8.6	8.5	8.5
25	8.2	8.1	8.1	8.5	8.4	8.5	8.8	8.6	8.7	8.5	8.5	8.5
26	8.3	8.1	8.2	8.5	8.5	8.5	8.6	8.5	8.6	8.5	8.4	8.5
27	8.3	8.3	8.3	8.5	8.4	8.5	8.6	8.5	8.5	8.5	8.5	8.5
28	8.3	8.2	8.3	8.5	8.5	8.5	8.6	8.5	8.5	8.5	8.4	8.5
29	8.4	8.3	8.3	8.5	8.5	8.5	8.6	8.5	8.6	8.4	8.4	8.4
30	8.4	8.3	8.3	8.5	8.5	8.5	8.6	8.5	8.6	8.4	8.4	8.4
31				8.5	8.4	8.5	8.6	8.3	8.4			
lax				8.8	8.6	8.6	8.8	8.6	8.7			
1in				8.3	8.2	8.3	8.1	8.0	8.0			

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

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

Day	Max	Min	Mean									
		October			Novembe			Decembe			January	
1												
2												
3												
4												
5												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
Month												

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

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

Day 1 2 3 4 5 6	Max 	Min February 	Mean / 	Max	Min March	Mean	Max	Min	Mean	Max	Min	Mean
2 3 4 5	 				March						May	
2 3 4 5	 					March			April			
3 4 5										11.8	10.0	11.0
4 5										11.4	9.5	10.6
5										10.8	9.2	10.0
										10.8	9.1	9.8
c										10.6	8.7	9.7
0							10.2	9.2	9.8	10.0	8.2	9.2
7							9.9	9.2	9.6	9.4	7.7	8.6
8							11.8	9.3	10.8	9.2	7.7	8.4
9							12.8	11.6	12.3	9.6	8.0	8.8
10							12.5	10.9	11.9	9.3	8.2	8.8
11							11.7	10.5	11.2	10.3	8.7	9.5
12							11.2	10.4	10.9	9.7	8.0	9.0
13							11.7	10.6	11.2	8.9	7.2	8.1
14							12.5	10.7	11.8	8.6	7.1	7.8
15							12.8	11.6	12.4	9.3	7.6	8.4
16							12.0	11.4	11.7	8.9	7.5	8.2
17							11.9	11.0	11.5	9.9	8.0	8.9
18							11.9	10.6	11.3	9.4	7.5	8.3
19							11.0	10.2	10.7			
20							11.3	10.2	10.9			
21							11.3	10.8	11.1			
22							11.7	11.0	11.4	8.8	8.3	8.6
23							11.8	10.6	11.3	8.5	8.3	8.4
24							11.0	10.6	10.8			
25							11.2	9.9	10.6			
26							10.4	8.8	9.8			
27							9.4	8.3	9.0			
28							9.1	8.3	8.7			
29							9.3	8.3	8.9	7.0	5.3	6.6
30							10.7	8.9	10.1	7.9	6.9	7.4
31										7.9	6.8	7.6
Month												

06336000 LITTLE MISSOURI RIVER AT MEDORA, ND—Continued

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			Septembe	r
1				7.2	5.8	6.5	8.4	7.0	7.7	8.9	7.1	7.9
2	7.8	7.3	7.7	7.8	6.7	7.2	8.3	7.1	7.7	8.8	7.0	7.8
3	8.2	7.8	8.0	7.8	6.6	7.2	8.5	7.2	7.9	8.5	6.7	7.5
4	8.4	8.1	8.3	7.2	6.4	6.8	7.5	6.5	7.2	8.6	6.6	7.4
5	8.4	8.2	8.3	7.2	6.2	6.7	7.4	6.5	6.9	8.7	6.6	7.4
6	8.4	8.1	8.3							8.7	6.2	7.1
7	8.1	7.8	8.0							8.4	6.1	7.0
8	7.8	7.6	7.7							9.2	6.6	7.8
9	7.8	7.4	7.7				7.4	6.6	7.1			
10	7.4	7.1	7.3	7.0	6.2	6.7	7.6	6.8	7.2			
11	7.2	7.0	7.1	6.3	6.1	6.2				6.9	5.8	6.4
12	7.4	7.0	7.3	6.5	6.0	6.3				7.4	6.9	7.2
13	7.6	7.2	7.4	6.8	6.0	6.5	7.8	6.6	7.3	7.6	7.3	7.5
14	7.5	7.2	7.4	7.5	6.4	7.3	7.8	7.1	7.4	7.6	7.4	7.5
15	7.8	7.2	7.5	7.6	7.0	7.4	7.6	6.8	7.3			
16	7.8	7.4	7.6	8.3	6.9	7.6	8.1	6.8	7.5			
17	7.9	7.4	7.6	10.3	7.3	8.5	7.9	7.0	7.4			
18	8.2	7.2	7.7	7.9	6.7	7.3	8.3	7.0	7.6			
19	7.5	6.9	7.2	7.7	6.6	7.1	8.2	6.9	7.4			
20	7.5	6.9	7.2	7.7	6.6	7.1	7.4	6.8	7.1	9.1	8.5	8.9
21	8.0	7.0	7.5	7.6	6.6	7.0	7.6	6.9	7.3	9.2	8.2	8.7
22	7.9	7.4	7.7	7.7	6.6	7.1	7.9	7.2	7.5	8.4	7.8	8.2
23	8.2	7.2	7.8	7.6	6.7	7.1	8.0	7.0	7.6	8.9	7.8	8.2
24	7.6	6.6	7.1	7.7	6.5	7.1	9.4	6.9	7.8	9.6	8.2	8.8
25	6.7	6.5	6.6	7.6	6.4	7.1	8.0	6.8	7.3	9.0	8.1	8.5
26	7.0	6.5	6.7	8.4	7.1	7.8	7.8	6.6	7.2	9.1	8.1	8.5
27	7.4	6.5	7.0	8.4	7.4	7.9	7.6	6.5	7.0	9.5	8.6	9.0
28	7.5	6.7	7.1	8.6	7.3	7.9	8.0	6.5	7.2	9.6	8.9	9.2
29	7.4	6.3	7.0	8.4	7.4	7.9	8.4	6.4	7.3	9.3	8.5	9.0
30	7.4	6.3	6.9	8.6	7.4	7.9	8.5	6.4	7.3	9.0	8.4	8.6
31				8.4	7.1	7.7	8.4	6.4	7.3			
lonth												

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