Water-Data Report 2007

04121970 MUSKEGON RIVER NEAR CROTON, MI

Northeastern Lake Michigan Basin
Muskegon Subbasin

LOCATION.--Lat 43°26′05″, long 85°39′55″ referenced to North American Datum of 1927, in SE ¼ NE ¼ sec.18, T.12 N., R.11 W., Newaygo County, MI, Hydrologic Unit 04060102, on right bank 75 ft downstream from Croton Drive, 0.4 mi southwest of Croton.

DRAINAGE AREA.--2,313 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 675.62 ft above sea level (Consumers Energy bench mark).

REMARKS.--Records good. Flow completely regulated by Croton Dam 1,000 ft upstream. Gage-height telemeter at station.

04121970 MUSKEGON RIVER NEAR CROTON, MI—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,450	2,290	3,950	3,010	2,170	2,050	5,210	4,200	1,620	1,090	928	1,120
2	1,450	2,280	3,910	3,200	2,200	2,090	5,030	4,790	1,650	1,090	910	1,090
3	1,760	2,240	3,610	3,280	2,200	2,090	5,180	4,530	1,820	1,190	894	1,070
4	2,820	2,140	3,310	3,220	2,100	2,070	5,330	3,780	2,280	1,620	892	1,060
5	3,740	2,080	2,860	3,210	1,950	1,990	5,350	3,140	2,590	1,690	894	1,060
6	3,070	2,010	2,510	3,170	1,800	1,930	5,190	3,090	2,450	1,380	899	1,070
7	2,270	2,000	2,580	3,120	1,680	1,910	5,010	3,040	2,310	1,230	976	1,100
8	2,200	2,010	2,520	3,060	1,690	2,020	4,640	2,770	2,170	1,150	1,000	1,090
9	2,290	2,010	2,240	2,990	1,750	2,060	4,130	2,700	2,020	1,170	944	1,070
10	2,200	1,990	2,380	2,890	1,960	2,220	3,740	2,630	2,120	1,340	921	1,060
11	2,140	2,370	2,720	2,800	2,040	2,450	3,490	2,530	2,080	1,280	878	1,180
12	2,210	2,610	3,030	2,720	2,010	2,660	3,470	2,530	1,900	1,120	1,020	1,170
13	2,340	2,660	4,100	2,680	2,010	2,990	3,470	2,440	1,860	1,100	1,080	1,150
14	2,360	2,570	4,750	2,720	2,010	4,610	3,470	2,430	1,790	1,210	1,020	1,120
15	2,450	2,380	4,550	2,740	2,020	5,530	3,470	2,360	1,710	1,320	907	1,120
16	2,540	2,340	4,190	2,640	2,020	5,390	3,470	2,430	1,600	1,200	862	1,090
17	2,600	2,310	3,930	2,200	2,000	5,100	3,470	2,420	1,540	1,060	868	1,020
18	2,950	2,330	3,530	1,970	2,000	4,860	3,460	2,450	1,480	1,050	876	1,000
19	3,090	2,320	3,270	2,090	2,050	4,590	3,460	2,450	1,600	1,060	1,020	975
20	3,110	2,250	3,120	2,190	2,120	4,370	3,460	2,420	1,470	1,070	1,650	969
21	2,970	2,150	3,090	2,160	2,150	4,340	3,460	2,400	1,420	1,020	1,710	991
22	2,880	2,120	3,230	2,060	2,080	4,900	3,460	2,290	1,400	984	1,580	999
23	3,010	2,180	3,990	2,010	2,010	5,500	3,400	2,130	1,390	976	1,580	1,010
24	3,030	2,010	4,530	2,180	1,960	5,900	3,210	2,120	1,350	985	1,400	1,010
25	3,030	1,940	4,040	2,200	1,930	5,780	3,060	2,100	1,290	993	1,460	1,050
26	2,950	1,950	3,790	2,180	1,900	5,690	3,050	2,200	1,270	1,060	1,520	1,090
27	2,810	2,050	3,550	2,190	1,850	5,660	3,380	2,200	1,220	1,090	1,560	1,110
28	2,620	2,150	3,330	2,180	1,960	5,660	3,980	2,050	1,180	1,050	1,400	1,090
29	2,660	2,940	3,130	2,200	---	5,530	4,100	1,840	1,170	1,010	1,260	1,070
30	2,560	3,650	3,070	2,150	---	5,360	3,930	1,740	1,170	1,000	1,170	1,020
31	2,350	---	2,990	2,140	---	5,310	---	1,640	---	966	1,130	---
Total	79,910	68,330	105,800	79,550	55,620	122,610	118,530	81,840	50,920	35,554	35,209	32,024
Mean	2,578	2,278	3,413	2,566	1,986	3,955	3,951	2,640	1,697	1,147	1,136	1,067
Max	3,740	3,650	4,750	3,280	2,200	5,900	5,350	4,790	2,590	1,690	1,710	1,180
Min	1,450	1,940	2,240	1,970	1,680	1,910	3,050	1,640	1,170	966	862	969
Cfsm	1.11	0.98	1.48	1.11	0.86	1.71	1.71	1.14	0.73	0.50	0.49	0.46
In.	1.29	1.10	1.70	1.28	0.89	1.97	1.91	1.32	0.82	0.57	0.57	0.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	1,475	1,834	1,926	2,147	2,252	2,965	2,888	2,724	1,882	1,263	1,183	1,106
Max	2,578	2,554	3,413	3,050	3,046	4,432	3,951	5,535	2,946	1,661	1,382	1,357
(WY)	(2007)	(2004)	(2007)	(2005)	(1997)	(2004)	(2007)	(2004)	(1996)	(2004)	(1996)	(2006)
Min	1,058	1,229	1,201	1,211	1,169	1,338	1,900	1,373	1,060	848	836	817
(WY)	(2004)	(2003)	(2003)	(2003)	(2003)	(2003)	(2000)	(1999)	(1998)	(1998)	(1998)	(1998)

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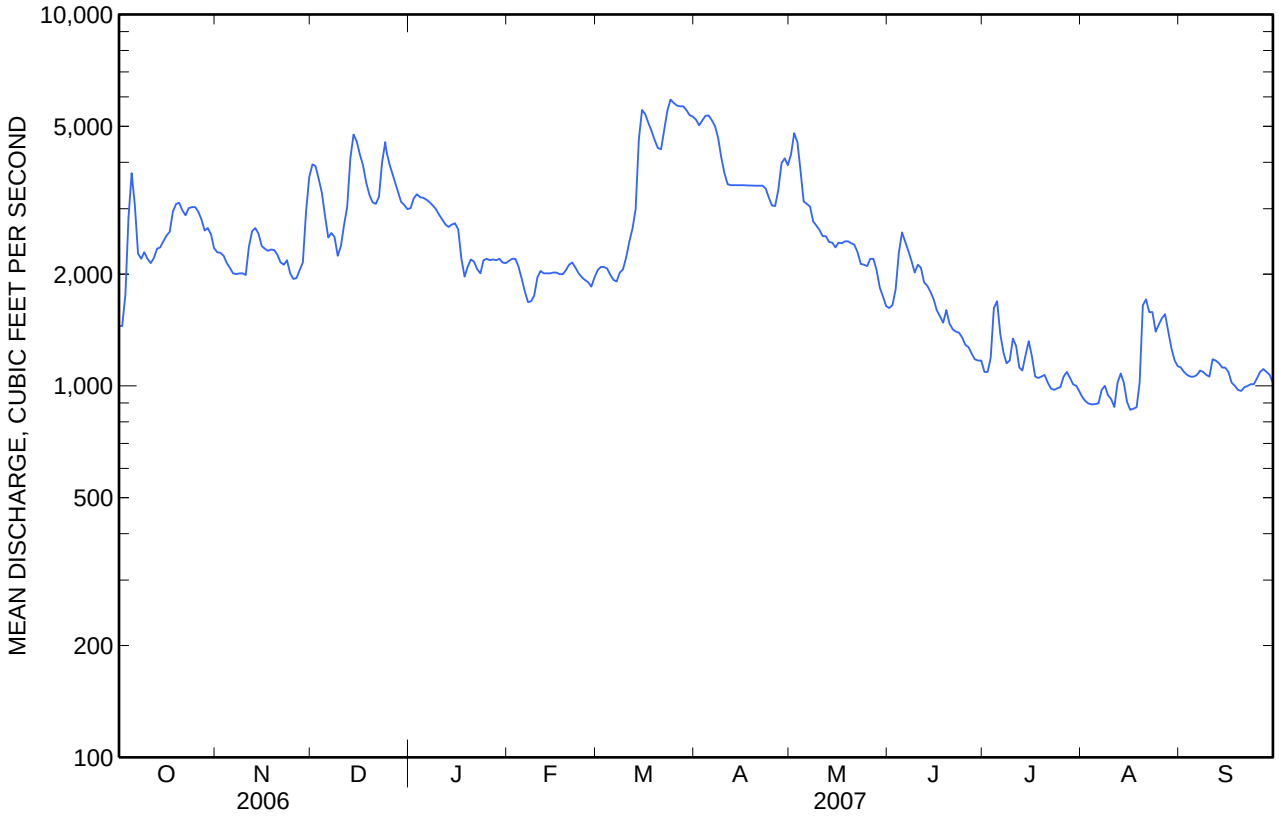
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1996 - 2007	
Annual total	921,590		865,897			
Annual mean	2,525		2,372		1,969	
Highest annual mean					2,431	2004
Lowest annual mean					1,295	2003
Highest daily mean	7,540	Mar 15	5,900	Mar 24	9,210	May 24, 2004
Lowest daily mean	1,030	Aug 24	862	Aug 16	720	Sep 11, 1998
Annual seven-day minimum	1,070	Aug 20	912	Jul 31	723	Sep 7, 1998
Maximum peak flow			6,020	Mar 24	9,580	May 24, 2004
Maximum peak stage			8.45	Mar 24	10.45	May 24, 2004
Instantaneous low flow			851	Aug 16	684	Jul 6, 2000[a]
Annual runoff (cfsm)	1.09		1.03		0.851	
Annual runoff (inches)	14.82		13.93		11.56	
10 percent exceeds	3,920		4,060		3,280	
50 percent exceeds	2,340		2,160		1,710	
90 percent exceeds	1,300		1,050		1,000	

[a] Also occurred Aug. 22, 2003.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1996 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1995 to current year.
DISSOLVED OXYGEN: October 1995 to current year.

INSTRUMENTATION.--Water-quality monitor telemeter, set for one-hour measurement interval.

REMARKS.--Water temperature records rated excellent. Dissolved oxygen records rated excellent except the following periods: Oct. 1-4, 21-27, Nov. 10-16, Apr. 26 to May 1, June 30 to July 13, Aug. 5-13, Sept. 8-12 rated good; and Nov. 17-27, May 2-8, July 14-17 rated fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 25.0°C, Aug. 10, 2001; minimum recorded, 0.5°C, on many days during winter periods, but may have been lower during instrument malfunction Jan. 3-29, Feb. 19, 1996.
DISSOLVED OXYGEN: Maximum, 14.7 mg/L, Mar. 31, 2005; minimum, 2.3 mg/L, Aug. 24, Sept. 3, 2003.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 24.6°C, Aug. 10; minimum, 0.8°C, Mar. 1.
DISSOLVED OXYGEN: Maximum, 13.4 mg/L, Mar. 15, 20; minimum, 2.7 mg/L, Aug. 14, Sept. 7.

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	16.3	15.4	15.8	9.3	8.8	9.1	6.7	5.9	6.2	3.3	3.2	3.3
2	16.0	15.2	15.7	8.8	8.4	8.6	5.9	5.5	5.7	3.3	3.1	3.2
3	16.6	15.7	16.2	8.4	8.0	8.2	5.5	4.9	5.2	3.2	3.1	3.2
4	17.0	16.2	16.7	8.0	7.4	7.7	5.0	4.4	4.7	3.2	3.0	3.1
5	16.3	15.6	15.9	7.8	7.2	7.6	4.4	4.1	4.2	3.4	3.1	3.2
6	15.7	15.1	15.5	8.0	7.3	7.6	4.1	3.6	3.9	3.4	3.3	3.3
7	15.5	14.9	15.2	8.4	7.7	8.1	3.6	3.1	3.3	3.4	3.2	3.3
8	15.4	14.9	15.1	8.4	8.0	8.1	3.7	2.8	3.3	3.4	3.1	3.2
9	15.5	15.1	15.3	9.1	7.8	8.5	3.5	2.5	3.1	3.2	2.8	2.9
10	15.3	14.7	15.0	8.7	8.1	8.4	3.3	2.2	3.0	2.8	2.6	2.7
11	14.8	14.1	14.6	8.4	7.8	8.0	3.4	2.3	3.1	2.7	2.4	2.6
12	14.1	13.2	13.6	7.9	7.2	7.5	3.6	2.7	3.4	2.5	2.4	2.4
13	13.2	12.4	12.8	7.5	7.1	7.3	3.9	3.5	3.7	2.5	2.3	2.4
14	12.4	11.6	12.1	7.3	6.9	7.1	4.0	3.7	3.9	2.5	2.4	2.4
15	11.7	11.3	11.5	7.2	6.7	7.0	4.0	3.8	3.9	2.4	2.1	2.2
16	11.9	11.1	11.6	7.1	6.5	6.8	4.0	3.9	3.9	2.1	1.7	1.9
17	12.4	11.6	12.1	6.8	6.2	6.6	4.0	4.0	4.0	2.1	1.7	1.9
18	12.4	11.7	12.0	6.9	6.2	6.6	4.0	3.8	3.9	2.1	1.8	1.9
19	12.5	11.9	12.2	6.9	6.2	6.5	3.9	3.7	3.8	1.9	1.6	1.8
20	12.0	11.4	11.7	6.5	5.8	6.3	3.7	3.4	3.5	1.9	1.5	1.7
21	11.6	11.1	11.5	6.4	5.8	6.1	3.5	3.3	3.4	1.8	1.5	1.6
22	11.5	11.0	11.2	6.3	5.8	6.1	3.5	3.3	3.4	1.8	1.4	1.6
23	11.0	10.4	10.7	6.3	5.6	6.0	3.6	3.5	3.5	1.9	1.4	1.6
24	10.5	9.8	10.2	6.2	5.6	6.0	3.6	3.3	3.4	1.8	1.4	1.6
25	10.2	9.3	9.9	6.4	5.8	6.1	3.4	3.2	3.3	1.8	1.3	1.6
26	9.9	9.0	9.6	6.6	5.9	6.3	3.3	3.1	3.2	1.8	1.3	1.6
27	9.9	9.2	9.7	6.7	6.1	6.4	3.3	3.0	3.1	1.9	1.4	1.7
28	9.8	9.3	9.6	7.0	6.4	6.7	3.1	2.8	3.0	1.8	1.3	1.6
29	9.5	8.7	9.2	7.1	6.6	6.8	3.1	2.9	3.0	1.8	1.2	1.6
30	9.3	8.4	9.0	7.1	6.7	7.0	3.1	3.0	3.0	1.9	1.3	1.6
31	9.6	8.6	9.2	---	---	---	3.3	3.1	3.1	1.8	1.3	1.6
Month	17.0	8.4	12.6	9.3	5.6	7.2	6.7	2.2	3.7	3.4	1.2	2.3

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	1.7	1.3	1.6	1.3	0.8	1.1	6.7	5.8	6.3	11.6	10.3	10.9
2	1.7	1.2	1.5	1.5	1.0	1.2	7.1	6.1	6.4	11.9	10.7	11.3
3	1.6	1.2	1.5	1.5	1.0	1.2	7.1	6.5	6.9	11.9	11.0	11.5
4	1.6	1.1	1.4	1.4	0.9	1.2	7.0	6.0	6.4	11.8	11.3	11.5
5	1.5	1.1	1.4	1.4	0.9	1.1	6.1	5.6	5.8	11.9	11.5	11.6
6	1.5	1.0	1.2	1.3	0.9	1.1	5.6	5.2	5.4	11.6	11.2	11.4
7	1.4	0.9	1.1	1.5	1.0	1.2	5.2	5.0	5.1	11.6	11.2	11.4
8	1.4	0.9	1.1	1.4	1.0	1.2	5.2	4.9	5.0	12.1	11.5	11.9
9	1.4	0.9	1.2	1.4	0.9	1.2	5.2	4.8	5.0	12.8	11.7	12.2
10	1.4	1.0	1.2	1.5	0.9	1.2	5.6	4.7	5.1	13.5	11.9	12.5
11	1.4	1.0	1.2	1.5	1.0	1.3	5.6	4.8	5.2	15.1	11.9	13.3
12	1.4	1.0	1.2	1.6	1.3	1.4	5.2	4.5	4.8	15.0	13.5	14.3
13	1.4	1.0	1.2	1.9	1.5	1.7	5.4	4.4	4.9	13.9	12.6	13.1
14	1.5	0.9	1.3	1.8	1.7	1.8	5.5	4.7	5.1	13.6	12.1	12.8
15	1.5	1.0	1.3	1.9	1.6	1.7	6.3	5.0	5.7	15.0	13.2	14.1
16	1.4	1.0	1.2	1.7	1.4	1.5	6.4	5.6	6.1	14.9	13.9	14.4
17	1.4	1.0	1.2	1.5	1.3	1.4	7.2	6.2	6.6	14.5	13.8	14.1
18	1.4	1.0	1.2	1.4	1.3	1.4	7.1	6.9	7.0	14.1	13.2	13.6
19	1.5	1.0	1.2	1.5	1.3	1.4	7.6	6.8	7.2	13.8	13.1	13.5
20	1.5	1.0	1.3	1.7	1.3	1.5	7.9	7.4	7.6	15.1	13.7	14.7
21	1.5	1.1	1.3	2.0	1.4	1.6	8.0	7.2	7.6	14.6	14.0	14.4
22	1.6	1.1	1.3	2.2	1.7	2.0	8.4	7.4	7.9	15.0	13.8	14.5
23	1.8	1.1	1.5	2.7	1.9	2.3	9.6	8.0	8.7	15.6	14.0	14.9
24	1.7	1.3	1.5	2.9	2.3	2.6	9.6	8.9	9.3	15.9	13.9	15.0
25	1.6	1.2	1.4	3.2	2.5	2.9	9.1	8.1	8.6	17.1	15.3	16.4
26	1.5	1.2	1.4	5.4	3.0	3.6	9.5	8.5	8.9	16.6	15.9	16.2
27	1.6	1.1	1.3	6.3	5.3	5.8	9.5	8.6	9.0	16.4	15.1	15.6
28	1.4	0.9	1.2	6.2	4.9	5.4	9.6	8.6	9.1	16.8	15.7	16.3
29	---	---	---	5.5	4.5	5.0	9.8	9.2	9.4	17.1	15.9	16.4
30	---	---	---	6.1	5.2	5.7	11.1	9.7	10.5	17.4	16.5	16.9
31	---	---	---	6.2	5.6	5.9	---	---	---	18.0	16.0	17.2
Month	1.8	0.9	1.3	6.3	0.8	2.2	11.1	4.4	6.9	18.0	10.3	13.8

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	18.2	17.0	17.7	22.3	21.1	21.7	23.5	21.8	22.5	22.2	21.3	21.7
2	18.5	17.1	17.7	21.4	20.9	21.2	23.2	21.6	22.4	21.9	21.1	21.5
3	18.4	17.3	17.9	21.0	20.1	20.5	24.3	22.4	23.2	22.9	21.4	22.0
4	18.4	16.9	17.6	21.0	20.1	20.4	23.3	22.4	22.9	22.5	21.6	22.0
5	17.9	16.9	17.5	22.3	20.1	21.0	22.9	22.2	22.6	22.8	21.6	22.0
6	16.9	16.1	16.4	22.5	20.1	21.2	22.7	21.8	22.3	22.2	21.2	21.7
7	17.2	16.1	16.6	21.5	20.4	20.8	23.0	22.0	22.5	21.8	20.8	21.2
8	18.5	17.2	17.9	21.5	20.4	21.1	24.2	22.7	23.4	22.7	21.4	22.1
9	18.1	17.3	17.7	23.2	21.2	22.2	23.7	22.5	23.2	23.4	22.0	22.6
10	18.4	17.5	17.9	23.0	20.6	22.1	24.6	22.6	23.3	22.5	21.2	21.8
11	19.8	17.9	18.7	23.3	21.7	22.3	23.4	22.3	22.8	21.2	20.3	20.8
12	19.9	18.3	19.1	22.4	21.1	21.7	24.1	22.5	23.3	20.4	19.8	20.1
13	20.9	18.8	19.6	22.3	21.1	21.6	24.3	23.0	23.5	20.1	19.4	19.7
14	20.4	18.8	19.6	21.4	20.1	20.9	23.0	22.2	22.6	19.8	19.0	19.4
15	20.3	19.0	19.6	21.7	20.4	20.9	23.0	22.5	22.8	19.0	18.4	18.8
16	20.1	18.9	19.5	21.5	20.6	21.0	23.9	22.4	23.0	18.7	18.1	18.3
17	20.9	19.1	19.9	21.2	20.5	20.9	23.4	22.1	22.7	18.7	17.9	18.2
18	20.2	18.1	19.3	21.8	20.5	21.1	22.3	21.6	21.9	19.0	18.1	18.4
19	20.8	18.5	19.9	23.5	21.2	22.2	21.6	21.0	21.3	19.5	18.5	19.1
20	21.5	19.4	20.4	22.3	20.9	21.6	21.0	20.3	20.7	20.0	19.0	19.5
21	22.0	19.5	20.9	22.4	20.8	21.5	20.3	20.0	20.1	20.4	19.0	19.7
22	22.0	20.3	21.0	22.3	21.2	21.6	20.6	20.0	20.2	20.7	19.3	19.9
23	20.9	20.0	20.4	22.4	21.1	21.8	21.1	20.0	20.6	20.1	19.4	19.7
24	21.2	20.1	20.7	22.1	21.4	21.6	21.1	20.2	20.7	20.4	19.5	19.7
25	21.2	20.3	20.8	22.4	21.1	21.7	22.5	21.1	21.7	19.8	19.4	19.6
26	21.6	20.1	20.7	21.8	21.3	21.6	22.1	20.7	21.4	20.5	19.6	20.0
27	22.1	20.1	21.1	22.9	21.6	22.1	21.7	20.9	21.3	19.8	19.1	19.5
28	23.0	21.3	22.4	23.7	22.3	22.9	21.7	20.7	21.2	19.9	18.9	19.4
29	22.6	21.2	21.9	23.3	22.1	22.7	23.2	21.6	22.4	19.3	18.6	18.9
30	23.2	20.4	21.7	23.7	22.2	22.9	22.9	21.9	22.4	19.0	18.3	18.6
31	---	---	---	23.9	22.0	22.8	22.6	21.5	21.9	---	---	---
Month	23.2	16.1	19.4	23.9	20.1	21.6	24.6	20.0	22.2	23.4	17.9	20.2

	Max	Min	Mean
Year	24.6	0.8	11.2

04121970 MUSKEGON RIVER NEAR CROTON, MI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	7.2	6.9	7.0	8.9	8.6	8.7	11.2	10.5	10.8	11.8	11.6	11.7
2	7.4	7.0	7.2	9.0	8.6	8.8	11.3	10.9	11.1	11.8	11.7	11.8
3	7.5	7.2	7.4	9.0	8.8	8.9	11.3	10.5	10.9	11.8	11.6	11.7
4	7.6	7.1	7.5	9.2	8.9	9.1	10.7	10.5	10.6	11.8	11.6	11.7
5	7.6	7.3	7.5	9.2	8.8	9.0	10.9	10.7	10.8	11.8	11.6	11.7
6	7.5	7.0	7.3	9.3	8.8	9.0	11.1	10.7	10.8	11.8	11.6	11.7
7	7.3	7.0	7.2	9.1	8.7	8.9	11.3	11.0	11.2	11.8	11.6	11.7
8	7.5	7.0	7.3	9.2	8.8	8.9	11.5	10.9	11.1	11.8	11.5	11.6
9	7.6	7.2	7.5	9.1	8.7	8.9	11.6	11.0	11.2	11.8	11.6	11.7
10	7.7	7.3	7.5	9.3	8.8	9.1	11.9	11.3	11.5	11.9	11.7	11.8
11	7.5	7.1	7.3	9.5	9.1	9.3	12.0	11.4	11.5	12.0	11.7	11.8
12	7.4	7.2	7.3	9.6	9.3	9.5	11.8	11.3	11.5	12.1	11.9	12.0
13	7.7	7.2	7.5	9.6	9.3	9.4	12.3	11.5	12.1	12.1	11.9	12.0
14	8.0	7.6	7.8	9.7	9.3	9.5	12.3	12.1	12.2	12.1	11.9	12.0
15	8.2	8.0	8.1	9.7	9.4	9.5	12.3	12.1	12.2	12.1	11.9	12.0
16	8.1	7.9	8.0	9.8	9.4	9.7	12.3	12.0	12.1	12.1	12.0	12.1
17	8.0	7.8	7.9	9.9	9.6	9.8	12.1	11.7	11.9	12.2	11.8	12.1
18	8.1	7.8	7.9	10.1	9.6	9.8	11.9	11.2	11.4	12.2	11.8	12.1
19	8.1	7.8	7.9	10.1	9.7	9.9	11.3	11.1	11.2	12.3	12.0	12.1
20	8.1	7.8	8.0	10.1	9.7	9.9	11.3	11.1	11.3	12.3	12.0	12.1
21	8.1	7.7	7.9	10.1	9.8	10	11.4	11.3	11.4	12.2	11.9	12.1
22	8.1	7.7	7.9	10.2	9.8	10.0	11.5	11.2	11.4	12.2	11.9	12.0
23	8.3	8.0	8.1	10.2	9.9	10.0	12.5	11.4	11.9	12.2	11.9	12.1
24	8.4	8.1	8.2	10.2	9.8	10.0	12.5	12.0	12.3	12.2	11.9	12.1
25	8.5	8.0	8.1	10.2	9.9	10.1	12.3	12.1	12.2	12.2	11.9	12.0
26	8.4	8.0	8.2	10.3	9.9	10.1	12.3	11.8	12.0	12.1	11.8	12.0
27	8.4	8.1	8.2	10.3	9.9	10.1	12.0	11.7	11.8	12.1	11.8	11.9
28	8.4	8.1	8.2	10.3	9.9	10.1	11.9	11.5	11.7	12.1	11.8	12.0
29	8.6	8.4	8.5	10.3	9.9	10.1	11.8	11.6	11.7	12.1	11.7	11.9
30	8.8	8.4	8.5	10.6	10.1	10.3	11.8	11.7	11.7	12.1	11.8	11.9
31	8.9	8.5	8.7	---	---	---	11.8	11.7	11.7	12.1	11.8	12.0
Month	8.9	6.9	7.8	10.6	8.6	9.5	12.5	10.5	11.5	12.3	11.5	11.9

04121970 MUSKEGON RIVER NEAR CROTON, MI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	12.1	11.8	11.9	11.8	11.6	11.7	11.8	11.1	11.5	10.3	9.8	10.1
2	12.1	11.8	12.0	11.7	11.4	11.6	11.7	11.1	11.5	10.4	9.5	10.2
3	12.1	11.8	12.0	11.7	11.4	11.6	11.6	10.9	11.3	10.4	10.0	10.2
4	12.1	11.8	11.9	11.8	11.4	11.6	11.7	11.2	11.5	10.2	9.9	10.1
5	12.1	11.8	11.9	11.8	11.4	11.6	11.8	11.5	11.7	10.2	9.7	9.9
6	12.1	11.8	12.0	11.8	11.4	11.6	11.9	11.6	11.8	10.0	9.7	9.8
7	12.1	11.7	12.0	11.7	11.4	11.6	12.1	11.7	12.0	10.1	9.6	9.9
8	12.2	11.8	11.9	11.7	11.4	11.6	12.1	11.8	12.0	9.9	9.3	9.7
9	12.1	11.7	11.9	11.7	11.3	11.6	12.1	10.7	11.8	9.8	9.3	9.6
10	12.0	11.7	11.9	11.7	11.1	11.5	11.9	10.6	11.1	9.8	9.3	9.6
11	11.9	11.6	11.8	11.5	11.2	11.4	11.0	10.5	10.7	10.0	8.2	9.5
12	11.9	11.6	11.8	11.5	11.2	11.3	10.9	10.5	10.7	9.8	9.0	9.5
13	11.9	11.6	11.8	11.6	10.7	11.2	10.9	10.6	10.7	9.5	7.4	9.2
14	11.9	11.6	11.8	13.1	11.2	12.5	10.9	10.5	10.7	9.2	8.6	9.0
15	11.9	11.6	11.8	13.4	12.9	13.1	10.8	10.5	10.6	9.3	8.2	8.9
16	11.9	11.7	11.8	13.2	12.5	13.0	10.8	10.4	10.6	9.4	8.2	8.8
17	11.9	11.7	11.8	13.3	12.9	13.1	10.5	10.3	10.4	9.4	8.3	8.9
18	11.9	11.6	11.8	13.2	12.9	13.1	10.4	10.0	10.2	9.1	8.2	8.7
19	11.9	11.5	11.8	13.2	12.8	13.0	10.3	10.0	10.2	8.9	8.2	8.5
20	11.9	11.5	11.7	13.4	12.8	13.2	10.2	9.5	10.1	9.3	8.3	8.8
21	11.8	11.6	11.7	13.3	12.5	12.9	10.3	10.0	10.2	9.1	8.2	8.6
22	11.9	11.6	11.7	12.9	12.4	12.7	10.3	10.0	10.1	9.0	8.0	8.4
23	11.8	11.5	11.7	13.0	12.3	12.7	10.2	9.7	10.1	8.7	7.9	8.3
24	11.8	11.6	11.7	13.0	12.3	12.7	10.3	9.9	10.1	8.4	7.6	8.0
25	11.8	11.6	11.7	13.0	12.3	12.7	10.4	10.0	10.2	8.4	7.6	8.0
26	11.9	11.6	11.7	12.7	11.8	12.4	10.4	9.9	10.2	8.2	7.3	7.8
27	11.9	11.6	11.8	11.9	11.5	11.7	10.5	10.0	10.3	7.7	7.0	7.4
28	11.9	11.6	11.8	12.3	11.5	12.0	10.7	10.2	10.5	8.1	7.2	7.6
29	---	---	---	12.5	11.7	12.2	10.8	10.2	10.5	8.2	7.2	7.5
30	---	---	---	12.2	11.8	11.9	10.5	10.1	10.3	7.9	7.0	7.4
31	---	---	---	12.0	11.5	11.7	---	---	---	7.7	7.0	7.3
Month	12.2	11.5	11.8	13.4	10.7	12.1	12.1	9.5	10.8	10.4	7.0	8.9

04121970 MUSKEGON RIVER NEAR CROTON, MI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	7.9	6.9	7.4	6.6	5.7	6.1	6.6	4.5	5.5	5.8	4.7	5.3
2	7.6	6.8	7.1	6.2	5.9	6.0	6.4	3.7	5.2	6.4	3.2	5.1
3	7.0	6.6	6.8	6.0	4.6	5.3	6.2	4.7	5.4	6.5	4.3	5.8
4	7.0	6.3	6.5	6.1	4.8	5.4	6.0	4.7	5.5	6.4	4.7	5.8
5	7.1	6.4	6.8	6.7	5.0	5.7	6.0	4.3	5.3	6.4	4.3	5.7
6	6.4	5.9	6.3	6.6	5.1	5.8	5.5	3.0	4.4	6.0	2.8	4.2
7	6.8	6.1	6.4	6.2	4.9	5.6	5.3	3.4	4.4	4.5	2.7	3.2
8	7.6	6.3	7.0	6.3	4.7	5.7	6.2	4.5	5.2	6.3	4.5	5.5
9	7.2	6.4	6.8	6.9	5.3	6.1	5.9	4.2	5.1	7.2	6.1	6.5
10	7.5	6.4	7.0	6.9	4.3	5.6	6.4	4.3	5.3	6.5	5.8	6.3
11	8.3	6.9	7.5	7.1	5.3	6.1	5.3	4.0	4.5	6.0	5.2	5.7
12	8.0	6.7	7.4	6.4	4.9	5.6	5.5	4.2	4.9	5.5	4.9	5.2
13	8.0	7.0	7.5	7.1	4.9	5.9	6.1	4.6	5.3	5.6	4.6	5.1
14	7.3	6.9	7.2	6.3	3.9	5.1	4.8	2.7	3.7	6.0	4.8	5.5
15	7.2	6.6	6.9	6.4	5.2	5.7	4.8	3.7	4.3	6.5	5.7	6.0
16	7.0	6.4	6.6	7.0	5.7	6.3	6.3	4.2	5.0	6.2	5.4	5.8
17	6.7	6.2	6.5	6.5	4.8	5.8	6.5	3.8	5.4	6.3	5.4	5.8
18	6.6	5.5	6.1	6.5	5.0	5.9	5.6	4.7	5.1	6.5	5.9	6.2
19	6.5	5.6	6.1	8.2	5.7	6.9	5.0	4.6	4.8	7.2	6.2	6.7
20	6.8	5.5	6.1	7.3	5.4	6.6	5.3	4.4	5.0	7.8	6.7	7.3
21	7.1	5.5	6.3	6.8	6.0	6.4	5.1	4.4	5.0	8.3	6.6	7.6
22	6.9	5.7	6.3	6.5	5.4	6.1	5.0	4.3	4.8	8.1	6.8	7.5
23	6.2	5.6	5.8	6.8	5.5	6.2	5.3	4.4	4.9	8.3	7.2	7.7
24	6.2	5.3	5.9	6.2	5.2	5.8	4.9	4.4	4.6	8.4	7.4	7.8
25	6.3	5.5	5.8	6.6	4.5	5.8	6.4	4.9	5.7	7.6	5.8	6.8
26	6.2	5.3	5.7	5.9	5.0	5.5	6.3	4.6	5.8	7.9	6.0	7.1
27	6.2	5.2	5.8	6.2	5.3	5.7	6.5	3.8	5.6	8.0	6.2	7.3
28	7.0	6.0	6.5	6.9	5.3	6.2	5.7	3.1	4.5	7.4	6.0	6.8
29	6.6	5.7	6.2	6.1	5.1	5.7	7.1	4.7	6.1	7.6	6.6	7.1
30	7.4	5.2	6.5	6.1	5.0	5.6	7.0	5.9	6.6	7.1	6.4	6.8
31	---	---	---	6.3	4.8	5.6	6.2	5.1	5.8	---	---	---
Month	8.3	5.2	6.6	8.2	3.9	5.9	7.1	2.7	5.1	8.4	2.7	6.2

	Max	Min	Mean
Year	13.4	2.7	9.0