

Water-Data Report 2012

04166500 RIVER ROUGE AT DETROIT, MI

St. Clair-Detroit Basin
Detroit Subbasin

LOCATION.--Lat 42°22'23", long 83°15'17" referenced to North American Datum of 1927, in SW ¼ sec.27, T.1 S., R.10 E., Wayne County, MI, Hydrologic Unit 04090004, on right bank 500 ft upstream from bridge on Plymouth Road in Detroit, 4 mi upstream from Middle River Rouge.

DRAINAGE AREA.--187 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1930 to current year.

REVISED RECORDS.--WSP 1034: 1933(M). WSP 1054: 1939, 1943, 1945(M). WSP 1437: 1931-32, 1934, 1936(M), 1937-38, 1944(M), 1945. WSP 2112: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 584.00 ft above NGVD 29. Prior to Oct. 16, 1948, nonrecording gage at site 1 mi downstream at datum 4.6 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are fair. Regulation by water retention structure upstream from station and some diversion by pumping for sprinkler irrigation. Gage-height telemeter at station.

04166500 RIVER ROUGE AT DETROIT, MI—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	134	67	1,180	267	252	505	175	251	96	23	37	26
2	111	65	432	196	228	329	126	126	110	22	33	26
3	82	63	321	151	177	602	113	97	64	78	29	25
4	69	61	336	113	155	312	110	492	52	261	28	38
5	62	58	535	131	144	209	97	348	47	297	97	60
6	59	55	580	114	131	168	87	159	45	129	35	35
7	55	56	366	116	123	152	80	281	42	54	27	30
8	53	58	267	114	117	152	80	309	41	41	24	105
9	50	92	215	108	107	169	75	177	39	50	291	62
10	50	195	198	100	101	135	73	180	38	45	478	37
11	48	99	160	100	101	119	71	120	37	32	252	31
12	49	74	147	153	105	219	70	96	38	28	130	27
13	54	64	135	202	110	776	68	106	37	26	76	26
14	71	110	203	138	112	526	69	125	35	25	306	68
15	84	351	646	104	105	267	481	90	34	23	144	76
16	104	152	489	101	231	220	412	80	32	24	73	41
17	72	91	263	454	294	195	159	74	55	23	57	33
18	59	73	204	602	187	168	107	65	132	24	49	28
19	124	64	176	257	144	152	93	63	75	74	45	30
20	820	60	158	e154	120	138	91	59	44	92	39	35
21	585	58	154	e151	117	130	191	56	36	41	39	37
22	213	93	214	e136	161	122	117	55	39	30	43	37
23	127	619	190	365	141	146	86	54	33	27	36	34
24	151	262	158	548	189	137	78	53	31	25	31	30
25	134	128	140	260	285	125	72	49	29	25	29	28
26	97	99	130	190	170	108	67	58	29	45	27	26
27	101	243	137	388	142	95	68	59	27	307	49	29
28	92	532	216	381	129	94	64	49	27	710	45	26
29	80	1,440	152	277	352	89	65	54	24	106	30	26
30	78	2,700	167	190	---	171	103	50	25	53	29	25
31	71	---	434	185	---	370	---	43	---	43	26	---
Total	3,939	8,082	9,103	6,746	4,730	7,100	3,548	3,878	1,393	2,783	2,634	1,137
Mean	127	269	294	218	163	229	118	125	46.4	89.8	85.0	37.9
Max	820	2,700	1,180	602	352	776	481	492	132	710	478	105
Min	48	55	130	100	101	89	64	43	24	22	24	25
Cfsm	0.68	1.44	1.57	1.16	0.87	1.22	0.63	0.67	0.25	0.48	0.45	0.20
In.	0.78	1.61	1.81	1.34	0.94	1.41	0.71	0.77	0.28	0.55	0.52	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2012, BY WATER YEAR (WY)

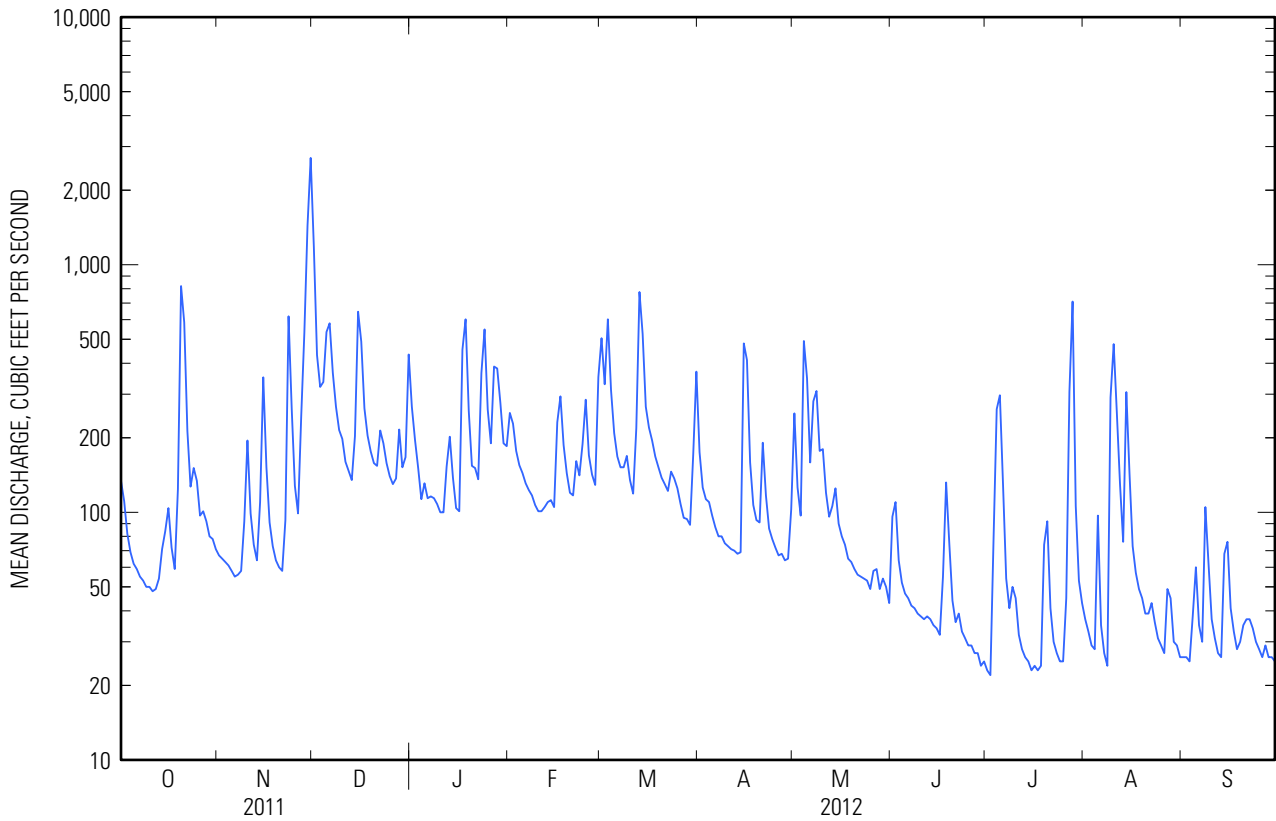
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	74.7	96.8	123	128	174	239	228	181	119	76.1	66.7	68.9
Max	450	322	321	456	519	488	965	701	478	385	280	284
(WY)	(1982)	(1993)	(1968)	(1950)	(1938)	(1950)	(1947)	(2011)	(1968)	(1957)	(1998)	(2000)
Min	8.35	16.3	16.6	13.6	18.2	59.5	49.3	23.9	7.92	6.46	5.58	7.03
(WY)	(1964)	(1954)	(1940)	(1961)	(1963)	(1931)	(1931)	(1934)	(1934)	(1934)	(1931)	(1931)

04166500 RIVER ROUGE AT DETROIT, MI—Continued

SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1931 - 2012	
Annual total	90,139		55,073			
Annual mean	247		150		131	
Highest annual mean					222	1968
Lowest annual mean					25.7	1931
Highest daily mean	5,090	May 26	2,700	Nov 30	7,380	Apr 6, 1947
Lowest daily mean	29	Jul 27	22	Jul 2	1.8	Aug 1, 1964
Annual seven-day minimum	32	Jul 21	25	Jul 12	2.7	Aug 2, 1963
Maximum peak flow			3,030	Nov 30	13,000	Apr 5, 1947
Maximum peak stage			16.40	Nov 30	21.40	Jun 26, 1968
Instantaneous low flow			20	Jul 2	1.8	Aug 1, 1964 ^a
Annual runoff (cfsm)	1.32		0.805		0.701	
Annual runoff (inches)	17.93		10.96		9.52	
10 percent exceeds	582		315		280	
50 percent exceeds	121		97		68	
90 percent exceeds	43		29		18	

^a Also occurred Aug. 2, 1964.



04166500 RIVER ROUGE AT DETROIT, MI—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960, 1967, 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 2011 to current year.

PH: March 2011 to current year.

WATER TEMPERATURE: April 1999 to October 2005 (not operated during winter months), March 2007 to October 2008 (not operated during winter months), March 2011 to current year.

DISSOLVED OXYGEN: April 1999 to October 2005 (not operated during winter months), March 2007 to October 2008 (not operated during winter months), March 2011 to current year.

TURBIDITY: March 2011 to current year.

INSTRUMENTATION.--Water-quality monitor telemeter, set for 15-minute measurement interval.

REMARKS.--Specific conductance records rated excellent except for the following periods: Oct. 30 to Nov. 9, Dec. 15-20, Jan. 31 to Feb. 17, Mar. 3-15, Apr. 6-18, May 7, 8, 10-14, May 29 to June 7, June 12-20, July 1-19, 26-30, Aug. 9-13, Aug. 21 to Sept. 6, Sept. 27-30, rated good; Feb. 18-22, May 15, 16, Sept. 7-18, rated fair. pH, water temperature, and dissolved oxygen records rated excellent. Turbidity records rated excellent except for the following periods: Jan. 31 to Feb. 7, Mar. 2, 4-7, 13, 14, Apr. 16, May 23-27, May 30 to June 2, 8, 9, rated good; Feb. 8-13, Mar. 8-12, 15, Apr. 15, May 28, 29, June 3-7, 10, rated fair; Nov. 2, Feb. 14-22, Apr. 9-14, 17, 18, May 7, 8, June 11-14, 17, rated poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 5,030 microsiemens, Feb. 25, 2012; minimum recorded, 207 microsiemens, Aug. 9, 2011.

pH: Maximum recorded, 8.4 std. units, Apr. 18, 2011, and on several days in 2012; minimum recorded, 7.3 std. units, July 19, 2011.

WATER TEMPERATURE: Maximum recorded during period of operation, 28.0°C, July 21, 2011; minimum recorded, -0.01°C, on several days during the 2012 winter period.

DISSOLVED OXYGEN: Maximum recorded during period of operation, 16.9 mg/L, Mar. 28, 2001; minimum recorded, 0.1 mg/L, June 9, 2005.

TURBIDITY: Maximum recorded, 300 FNU, July 28, 2012; minimum, 3.1 FNU, Feb. 19, 2012.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 5,030 microsiemens, Feb. 25; minimum recorded, 223 microsiemens, July 27.

pH: Maximum recorded, 8.4 std. units, on several days during winter period; minimum recorded, 7.4 std. units, on several days during summer period.

WATER TEMPERATURE: Maximum recorded, 27.7°C, July 17; minimum recorded, -0.01°C, on several days during winter period.

DISSOLVED OXYGEN: Maximum recorded, 15.7 mg/L, Feb. 28; minimum recorded, 2.8 mg/L, July 4.

TURBIDITY: Maximum recorded, 300 FNU, July 28; minimum recorded, 3.1 FNU, Feb. 19.

04166500 RIVER ROUGE AT DETROIT, MI—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	1,330	1,060	1,100	1,520	1,410	1,420	1,100	554	796	1,580	1,260	1,310
2	1,620	1,120	1,190	1,980	1,410	1,460	1,390	920	1,020	1,840	1,350	1,420
3	1,830	1,190	1,240	1,580	1,430	1,450	1,740	1,110	1,270	1,540	1,440	1,480
4	1,970	1,240	1,310	2,090	1,440	1,510	1,700	1,180	1,270	2,020	1,470	1,550
5	1,790	1,330	1,370	2,040	1,470	1,520	1,360	984	1,110	2,110	1,510	1,550
6	2,040	1,380	1,430	1,520	1,470	1,500	1,380	942	1,030	1,540	1,530	1,540
7	2,020	1,400	1,460	2,030	1,470	1,530	1,500	1,080	1,180	2,100	1,520	1,560
8	2,010	1,410	1,460	1,700	1,460	1,490	1,540	1,190	1,240	2,000	1,510	1,550
9	2,110	1,440	1,490	2,030	1,240	1,570	1,640	1,250	1,310	1,960	1,460	1,530
10	2,110	1,440	1,490	1,480	1,070	1,250	2,310	1,440	1,740	1,500	1,450	1,480
11	1,470	1,450	1,460	1,180	1,120	1,140	2,310	1,640	1,850	2,220	1,480	1,530
12	2,110	1,440	1,500	1,680	1,180	1,270	2,280	1,580	1,650	2,150	1,480	1,670
13	2,060	1,460	1,530	1,920	1,280	1,340	2,060	1,560	1,600	1,970	1,570	1,710
14	1,950	1,490	1,560	1,920	887	1,320	2,060	1,400	1,620	2,230	1,540	1,660
15	2,130	1,420	1,520	1,090	746	875	1,520	983	1,180	2,360	1,680	1,770
16	1,460	1,220	1,350	1,040	839	941	1,290	995	1,030	2,240	1,780	1,850
17	1,530	1,170	1,220	1,170	1,030	1,120	1,610	1,090	1,200	2,440	1,130	1,650
18	1,800	1,170	1,240	1,760	1,170	1,250	1,680	1,250	1,300	1,170	1,040	1,100
19	1,790	685	1,240	1,960	1,260	1,330	1,730	1,320	1,350	1,610	1,170	1,280
20	852	526	611	1,760	1,330	1,360	1,770	1,360	1,390	2,800	1,350	1,710
21	815	631	743	2,020	1,370	1,430	1,840	1,390	1,440	2,670	1,490	2,020
22	1,320	815	925	1,480	841	1,340	1,740	1,350	1,430	3,360	1,820	2,220
23	1,270	1,010	1,090	841	573	677	1,630	1,320	1,360	4,410	2,140	2,660
24	1,720	1,070	1,200	1,150	724	865	1,690	1,340	1,360	2,190	1,510	1,650
25	1,350	1,110	1,180	1,140	991	1,080	1,880	1,350	1,420	1,820	1,540	1,600
26	1,620	1,130	1,190	1,590	1,140	1,220	1,920	1,420	1,470	2,040	1,630	1,670
27	1,690	1,230	1,290	1,660	832	1,170	2,650	1,460	1,560	2,190	1,530	1,790
28	1,470	1,270	1,320	860	730	775	2,690	1,780	2,190	2,910	2,080	2,450
29	1,730	1,310	1,340	963	386	531	2,290	1,800	2,020	3,430	2,400	2,680
30	1,800	1,310	1,380	554	399	457	2,310	1,630	1,860	3,140	2,460	2,600
31	1,880	1,340	1,390	---	---	---	1,690	1,280	1,430	3,600	2,520	2,860
Month	2,130	526	1,280	2,090	386	1,210	2,690	554	1,410	4,410	1,040	1,780

04166500 RIVER ROUGE AT DETROIT, MI—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	3,680	2,540	2,890	2,310	1,750	1,910	1,280	1,140	1,230	1,240	903	1,090
2	2,580	2,030	2,240	1,910	1,410	1,760	1,660	1,280	1,350	1,190	1,060	1,120
3	2,030	1,920	1,980	1,520	1,260	1,340	1,800	1,380	1,420	1,600	906	1,250
4	2,290	1,850	1,900	1,560	1,370	1,490	1,470	1,410	1,440	1,170	692	886
5	2,360	1,800	1,860	1,930	1,560	1,610	1,810	1,450	1,480	998	725	919
6	2,200	1,770	1,800	2,060	1,630	1,660	1,940	1,460	1,490	1,430	998	1,110
7	1,780	1,760	1,770	1,680	1,640	1,660	1,520	1,490	1,500	1,430	754	1,100
8	2,400	1,750	1,810	2,130	1,650	1,720	1,960	1,490	1,550	1,180	893	1,020
9	2,240	1,740	1,780	2,100	1,770	1,820	1,520	1,500	1,500	1,260	1,090	1,170
10	1,770	1,740	1,760	2,160	1,740	1,810	2,000	1,500	1,540	1,590	1,230	1,290
11	2,360	1,710	1,830	1,760	1,710	1,740	1,540	1,510	1,530	1,670	1,240	1,300
12	3,490	1,820	2,090	2,300	1,300	1,670	2,010	1,500	1,550	1,680	1,300	1,360
13	2,920	2,300	2,460	1,570	872	1,060	1,970	1,500	1,600	1,950	1,390	1,460
14	3,340	2,500	2,600	1,410	930	1,110	2,160	1,540	1,580	1,930	1,400	1,490
15	4,410	2,540	2,910	1,560	1,260	1,340	1,640	640	1,080	1,430	1,360	1,400
16	4,660	2,900	3,200	1,720	1,410	1,440	1,120	752	935	1,980	1,420	1,480
17	3,000	1,980	2,280	1,770	1,450	1,470	1,300	1,120	1,220	1,970	1,430	1,480
18	2,270	1,940	1,970	1,890	1,480	1,510	1,670	1,290	1,360	1,460	1,440	1,450
19	2,300	1,940	1,960	1,960	1,510	1,550	1,930	1,260	1,430	1,980	1,450	1,490
20	2,380	1,910	1,960	1,550	1,530	1,540	1,850	1,420	1,470	1,710	1,440	1,470
21	2,620	1,890	1,970	1,990	1,520	1,560	1,890	1,260	1,400	1,940	1,440	1,480
22	3,410	2,030	2,560	2,000	1,520	1,580	1,490	1,270	1,310	1,510	1,430	1,450
23	2,920	2,210	2,550	1,650	1,460	1,550	1,380	1,300	1,350	1,900	1,450	1,540
24	4,970	2,130	2,850	2,040	1,520	1,580	1,840	1,380	1,430	1,860	1,440	1,520
25	5,030	3,460	3,980	1,990	1,540	1,590	1,980	1,430	1,460	1,590	1,480	1,520
26	3,520	2,470	2,880	1,990	1,530	1,560	1,980	1,460	1,480	2,340	1,410	1,670
27	2,670	2,290	2,400	1,540	1,520	1,530	1,950	1,470	1,520	1,970	1,410	1,660
28	2,860	2,180	2,280	2,120	1,530	1,590	1,510	1,480	1,490	1,680	1,560	1,610
29	3,180	1,770	2,250	1,550	1,540	1,540	1,950	1,460	1,510	1,560	1,480	1,510
30	---	---	---	2,080	995	1,470	1,970	1,020	1,470	2,070	1,500	1,610
31	---	---	---	1,220	1,020	1,080	---	---	---	2,170	1,500	1,660
Month	5,030	1,710	2,300	2,310	872	1,540	2,160	640	1,420	2,340	692	1,370

04166500 RIVER ROUGE AT DETROIT, MI—Continued

**SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	2,150	1,240	1,520	1,970	1,450	1,570	1,240	1,130	1,200	1,860	1,340	1,420
2	1,380	1,220	1,290	2,130	1,510	1,600	2,000	1,220	1,330	1,430	1,380	1,400
3	1,240	1,120	1,210	1,970	519	1,480	1,300	1,280	1,290	1,960	1,410	1,510
4	1,800	1,240	1,340	1,140	598	807	1,960	1,290	1,390	1,830	1,330	1,440
5	1,640	1,340	1,460	892	394	692	1,760	762	1,020	1,700	1,060	1,250
6	2,180	1,480	1,570	822	668	772	946	758	833	1,120	1,040	1,080
7	1,870	1,520	1,560	1,410	822	955	1,250	937	1,040	1,620	1,090	1,200
8	2,130	1,490	1,580	1,160	1,020	1,080	1,170	1,070	1,120	1,600	944	1,160
9	---	---	---	1,600	827	1,210	1,730	466	926	1,130	912	985
10	2,010	1,500	1,580	1,260	1,100	1,180	876	437	615	1,060	918	1,000
11	1,560	1,520	1,540	1,180	1,120	1,140	876	726	761	1,490	1,060	1,160
12	1,970	1,550	1,640	1,770	1,180	1,320	1,200	735	915	1,250	1,170	1,200
13	2,000	1,540	1,620	1,390	1,310	1,370	1,100	987	1,050	1,750	1,250	1,320
14	1,580	1,530	1,550	2,040	1,380	1,500	1,470	505	834	1,560	1,080	1,310
15	1,770	1,530	1,580	1,640	1,400	1,440	895	693	820	1,250	1,010	1,110
16	1,570	1,550	1,560	2,050	1,440	1,550	1,220	895	1,010	1,050	1,000	1,010
17	2,060	1,300	1,580	1,490	1,460	1,470	1,830	1,100	1,180	1,490	1,050	1,140
18	1,460	957	1,210	2,000	1,450	1,530	1,910	1,240	1,290	1,230	1,150	1,190
19	1,210	959	1,120	2,000	1,170	1,550	1,990	1,280	1,350	2,050	1,210	1,310
20	1,300	1,170	1,190	1,170	937	997	1,510	1,280	1,330	1,400	1,310	1,350
21	1,280	1,200	1,250	1,490	958	1,050	2,020	1,340	1,400	1,640	1,030	1,280
22	1,920	1,280	1,390	1,090	1,030	1,060	1,790	1,260	1,410	1,890	1,170	1,300
23	1,470	1,360	1,380	1,940	1,090	1,240	1,380	1,220	1,310	1,360	1,260	1,290
24	2,010	1,360	1,500	1,280	1,220	1,250	1,970	1,360	1,430	1,290	1,250	1,270
25	1,450	1,390	1,420	1,800	1,280	1,300	1,390	1,380	1,390	1,880	1,280	1,400
26	2,010	1,420	1,510	2,010	1,160	1,450	1,990	1,390	1,480	1,280	1,270	1,280
27	1,470	1,410	1,440	1,640	223	918	1,900	1,140	1,420	1,970	1,280	1,360
28	1,950	1,440	1,490	637	318	455	1,390	1,210	1,260	1,320	1,300	1,310
29	1,930	1,440	1,500	938	637	826	1,300	1,260	1,280	1,980	1,310	1,370
30	1,520	1,450	1,480	1,050	938	995	1,700	1,300	1,350	2,000	1,360	1,410
31	---	---	---	1,760	1,050	1,150	1,340	1,300	1,320	---	---	---
Month	---	---	---	2,130	223	1,190	2,020	437	1,170	2,050	912	1,260

04166500 RIVER ROUGE AT DETROIT, MI—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	October			November			December			January		
1	8.1	8.0	8.0	8.1	8.1	8.1	8.0	7.9	7.9	8.2	8.1	8.2
2	8.1	8.0	8.1	8.1	8.1	8.1	8.1	8.0	8.0	8.3	8.2	8.2
3	8.1	8.0	8.1	8.1	8.1	8.1	8.1	8.0	8.0	8.3	8.2	8.3
4	8.1	8.0	8.0	8.1	8.1	8.1	8.1	8.0	8.0	8.3	8.2	8.2
5	8.1	8.0	8.0	8.1	8.1	8.1	8.1	8.0	8.0	8.3	8.2	8.3
6	8.1	8.0	8.0	8.1	8.1	8.1	8.1	8.0	8.1	8.3	8.2	8.3
7	8.0	8.0	8.0	8.1	8.1	8.1	8.1	8.0	8.1	8.3	8.2	8.3
8	8.0	8.0	8.0	8.1	8.1	8.1	8.1	8.1	8.1	8.3	8.3	8.3
9	8.0	8.0	8.0	8.1	7.9	8.0	8.1	8.1	8.1	8.3	8.3	8.3
10	8.0	8.0	8.0	7.9	7.8	7.9	8.2	8.1	8.1	8.3	8.3	8.3
11	8.0	8.0	8.0	8.0	7.9	7.9	8.2	8.1	8.1	8.3	8.3	8.3
12	8.0	7.9	7.9	8.1	8.0	8.1	8.2	8.1	8.1	8.3	8.2	8.2
13	8.0	7.9	7.9	8.1	8.1	8.1	8.2	8.1	8.1	8.2	8.2	8.2
14	7.9	7.8	7.9	8.1	7.9	8.1	8.2	8.1	8.1	8.3	8.2	8.2
15	7.9	7.8	7.8	7.9	7.8	7.9	8.1	8.0	8.1	8.4	8.3	8.3
16	7.9	7.8	7.8	8.0	7.9	7.9	8.1	8.0	8.1	8.4	8.2	8.3
17	7.9	7.8	7.9	8.1	8.0	8.0	8.2	8.1	8.1	8.3	8.1	8.1
18	8.0	7.8	7.9	8.1	8.1	8.1	8.2	8.1	8.1	8.1	8.1	8.1
19	8.0	7.9	7.9	8.2	8.1	8.1	8.2	8.1	8.2	8.2	8.1	8.2
20	7.9	7.6	7.8	8.2	8.1	8.1	8.2	8.2	8.2	8.2	8.1	8.2
21	7.9	7.8	7.9	8.2	8.1	8.1	8.2	8.2	8.2	8.2	8.1	8.1
22	8.0	7.9	7.9	8.2	8.1	8.1	8.2	8.2	8.2	8.2	8.1	8.1
23	8.0	7.9	8.0	8.1	7.9	7.9	8.2	8.2	8.2	8.1	8.0	8.1
24	8.0	7.9	8.0	8.1	7.9	8.0	8.2	8.2	8.2	8.1	8.0	8.1
25	8.0	7.9	7.9	8.1	8.0	8.0	8.2	8.2	8.2	8.2	8.1	8.1
26	8.0	7.9	8.0	8.1	8.0	8.1	8.3	8.2	8.2	8.2	8.1	8.1
27	8.0	8.0	8.0	8.1	8.0	8.0	8.3	8.2	8.2	8.2	8.1	8.1
28	8.0	8.0	8.0	8.0	7.9	8.0	8.2	8.2	8.2	8.2	8.1	8.1
29	8.1	8.0	8.0	8.1	7.8	7.9	8.3	8.2	8.2	8.2	8.1	8.2
30	8.1	8.0	8.0	7.9	7.8	7.8	8.2	8.2	8.2	8.2	8.1	8.2
31	8.1	8.0	8.1	---	---	---	8.2	8.1	8.1	8.2	8.2	8.2
Max	8.1	8.0	8.1	8.2	8.1	8.1	8.3	8.2	8.2	8.4	8.3	8.3
Min	7.9	7.6	7.8	7.9	7.8	7.8	8.0	7.9	7.9	8.1	8.0	8.1

04166500 RIVER ROUGE AT DETROIT, MI—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	February			March			April			May		
1	8.2	8.1	8.2	8.1	8.0	8.1	8.2	8.0	8.1	8.0	7.8	7.9
2	8.3	8.2	8.2	8.2	8.1	8.2	8.3	8.1	8.2	8.0	7.9	7.9
3	8.3	8.2	8.2	8.1	8.1	8.1	8.2	8.1	8.2	8.1	7.9	8.0
4	8.3	8.2	8.2	8.2	8.1	8.2	8.3	8.1	8.2	7.9	7.5	7.6
5	8.3	8.2	8.3	8.3	8.2	8.3	8.3	8.1	8.2	7.8	7.6	7.7
6	8.3	8.2	8.3	8.3	8.2	8.3	8.3	8.1	8.2	7.9	7.8	7.8
7	8.3	8.2	8.3	8.4	8.2	8.3	8.3	8.0	8.2	7.9	7.7	7.8
8	8.4	8.3	8.3	8.3	8.2	8.2	8.3	8.0	8.2	7.9	7.7	7.8
9	8.4	8.3	8.3	8.3	8.2	8.2	8.3	8.1	8.2	8.0	7.9	7.9
10	8.3	8.3	8.3	8.4	8.2	8.3	8.2	8.1	8.2	8.0	7.9	7.9
11	8.3	8.3	8.3	8.4	8.2	8.3	8.3	8.1	8.2	8.0	7.9	7.9
12	8.3	8.3	8.3	8.3	8.1	8.2	8.3	8.1	8.2	7.9	7.9	7.9
13	8.3	8.3	8.3	8.1	7.9	7.9	8.2	8.1	8.2	8.0	7.9	7.9
14	8.3	8.2	8.3	8.1	7.9	8.0	8.2	8.0	8.1	8.0	7.9	7.9
15	8.3	8.2	8.3	8.1	8.0	8.1	8.1	7.6	7.8	7.9	7.9	7.9
16	8.3	8.1	8.2	8.1	8.0	8.1	7.8	7.7	7.7	8.0	7.9	7.9
17	8.2	8.1	8.1	8.2	8.0	8.1	8.0	7.8	7.9	8.0	7.9	7.9
18	8.3	8.2	8.2	8.2	8.1	8.1	8.1	7.9	8.0	8.0	7.9	7.9
19	8.4	8.2	8.3	8.2	8.1	8.1	8.2	7.9	8.1	8.0	7.9	7.9
20	8.4	8.2	8.3	8.2	8.0	8.1	8.2	8.0	8.1	7.9	7.8	7.9
21	8.3	8.2	8.3	8.1	8.0	8.1	8.1	7.9	8.0	8.0	7.8	7.9
22	8.3	8.2	8.2	8.1	8.0	8.1	8.1	7.9	8.0	7.9	7.8	7.9
23	8.4	8.2	8.3	8.1	8.0	8.0	8.2	8.1	8.1	8.0	7.8	7.9
24	8.4	8.2	8.3	8.0	8.0	8.0	8.2	8.1	8.2	8.0	7.8	7.9
25	8.3	8.1	8.2	8.1	8.0	8.0	8.2	8.1	8.2	7.9	7.8	7.8
26	8.4	8.2	8.3	8.2	8.1	8.1	8.1	8.0	8.1	7.9	7.8	7.8
27	8.4	8.2	8.3	8.3	8.1	8.2	8.2	8.0	8.1	7.8	7.6	7.7
28	8.4	8.2	8.3	8.2	8.1	8.2	8.2	8.1	8.1	7.8	7.7	7.7
29	8.4	8.1	8.2	8.3	8.1	8.2	8.2	8.1	8.2	7.8	7.7	7.7
30	---	---	---	8.2	7.9	8.2	8.2	8.0	8.1	7.9	7.7	7.7
31	---	---	---	8.0	8.0	8.0	---	---	---	7.8	7.7	7.7
Max	8.4	8.3	8.3	8.4	8.2	8.3	8.3	8.1	8.2	8.1	7.9	8.0
Min	8.2	8.1	8.1	8.0	7.9	7.9	7.8	7.6	7.7	7.8	7.5	7.6

04166500 RIVER ROUGE AT DETROIT, MI—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	June			July			August			September		
1	7.9	7.8	7.8	7.9	7.8	7.8	7.8	7.8	7.8	8.0	7.8	7.9
2	7.8	7.7	7.8	7.9	7.7	7.8	7.9	7.8	7.8	7.9	7.8	7.9
3	7.8	7.8	7.8	7.9	7.4	7.8	7.8	7.8	7.8	7.9	7.8	7.8
4	7.9	7.8	7.8	7.5	7.4	7.4	7.9	7.7	7.8	7.9	7.7	7.8
5	7.8	7.8	7.8	7.7	7.4	7.5	7.9	7.4	7.5	7.9	7.5	7.7
6	7.9	7.8	7.9	7.5	7.5	7.5	7.6	7.4	7.5	7.8	7.6	7.7
7	7.9	7.8	7.9	7.7	7.5	7.5	7.7	7.6	7.6	7.9	7.8	7.8
8	7.9	7.8	7.9	7.7	7.6	7.6	7.8	7.7	7.7	7.9	7.7	7.8
9	---	---	---	7.7	7.6	7.7	7.8	7.6	7.7	7.8	7.7	7.8
10	7.9	7.8	7.8	7.6	7.5	7.6	7.8	7.6	7.6	7.9	7.8	7.9
11	7.8	7.8	7.8	7.6	7.5	7.6	7.8	7.7	7.7	8.0	7.9	7.9
12	7.9	7.8	7.8	7.7	7.6	7.7	7.9	7.7	7.8	7.9	7.9	7.9
13	7.9	7.8	7.8	7.8	7.7	7.7	7.9	7.8	7.9	8.0	7.9	7.9
14	7.9	7.8	7.8	7.8	7.7	7.8	7.9	7.7	7.8	8.0	7.8	7.9
15	7.9	7.8	7.8	7.8	7.7	7.7	7.8	7.7	7.8	7.9	7.8	7.8
16	7.8	7.8	7.8	7.9	7.7	7.8	7.9	7.8	7.8	8.0	7.9	7.9
17	7.9	7.6	7.8	7.9	7.7	7.8	8.0	7.9	7.9	8.0	7.9	7.9
18	7.7	7.4	7.5	7.8	7.7	7.7	8.0	7.9	7.9	8.0	7.9	7.9
19	7.6	7.4	7.6	7.8	7.6	7.8	8.0	7.9	7.9	8.2	8.0	8.1
20	7.7	7.5	7.6	7.7	7.6	7.7	8.0	7.9	8.0	8.2	8.1	8.1
21	7.7	7.6	7.7	7.8	7.7	7.8	8.0	7.9	8.0	8.2	7.9	8.0
22	7.9	7.7	7.7	7.8	7.7	7.8	8.0	7.8	8.0	8.2	8.0	8.0
23	7.7	7.6	7.7	7.9	7.7	7.8	7.9	7.8	7.9	8.2	8.0	8.1
24	7.8	7.7	7.7	7.9	7.7	7.8	7.9	7.9	7.9	8.2	8.1	8.1
25	7.8	7.7	7.8	7.9	7.8	7.8	7.9	7.9	7.9	8.2	8.0	8.0
26	7.9	7.8	7.8	7.9	7.7	7.8	8.0	7.9	7.9	8.0	8.0	8.0
27	7.9	7.8	7.8	7.9	7.4	7.7	8.0	7.8	7.9	8.1	8.0	8.0
28	7.9	7.8	7.8	7.9	7.5	7.7	7.8	7.7	7.7	8.1	8.0	8.0
29	7.9	7.8	7.8	7.7	7.5	7.6	7.8	7.8	7.8	8.1	8.0	8.0
30	7.9	7.8	7.8	7.8	7.6	7.7	7.9	7.8	7.9	8.0	8.0	8.0
31	---	---	---	7.8	7.7	7.8	7.9	7.8	7.9	---	---	---
Max	---	---	---	7.9	7.8	7.8	8.0	7.9	8.0	8.2	8.1	8.1
Min	---	---	---	7.5	7.4	7.4	7.6	7.4	7.5	7.8	7.5	7.7

04166500 RIVER ROUGE AT DETROIT, MI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	14.2	12.4	13.1	8.3	7.5	8.0	5.0	4.1	4.4	5.2	4.0	4.1
2	12.6	11.3	11.9	10.0	7.9	8.6	5.8	4.3	4.6	4.3	2.5	3.4
3	13.5	11.6	12.2	9.4	8.7	8.9	5.6	4.3	4.6	2.5	0.4	1.2
4	14.2	12.5	13.1	10.2	8.0	8.4	7.2	4.7	5.7	2.5	-0.1	0.3
5	14.1	13.0	13.5	9.0	7.1	7.5	7.6	6.5	7.0	3.3	0.1	0.7
6	14.4	13.4	13.9	7.5	6.2	6.8	6.7	5.3	5.8	2.5	1.0	1.6
7	15.3	13.9	14.4	10.2	7.5	8.4	5.8	4.6	5.1	4.5	2.5	2.9
8	15.3	14.3	14.8	11.4	9.1	9.9	5.3	3.7	4.2	4.5	2.7	3.1
9	15.5	14.7	15.2	12.5	11.1	11.5	4.8	3.0	3.5	4.4	1.8	2.3
10	16.0	15.0	15.4	11.9	9.5	10.8	4.1	1.4	2.3	2.3	1.6	2.0
11	15.6	14.8	15.3	9.5	7.4	8.2	3.0	0.5	0.9	4.6	1.7	2.3
12	15.6	15.3	15.4	8.4	6.3	6.9	3.4	0.5	1.0	5.1	2.8	3.7
13	16.0	15.2	15.5	10.1	7.1	7.7	4.4	1.0	1.6	4.0	2.6	3.2
14	15.8	14.7	15.4	10.8	8.6	9.2	5.4	2.4	3.6	3.9	0.8	1.7
15	14.7	12.9	13.7	10.2	9.3	9.7	7.5	5.2	6.4	2.5	0.0	0.4
16	12.9	12.0	12.4	9.6	8.2	8.8	7.1	4.9	6.1	3.0	-0.1	0.3
17	12.3	11.2	11.6	8.2	5.6	6.7	5.1	3.7	4.2	4.4	1.0	3.1
18	12.1	10.5	10.9	7.3	4.3	4.8	4.7	3.4	3.6	3.9	1.6	2.8
19	12.5	10.7	11.1	7.6	4.2	4.7	4.9	3.3	3.8	2.3	-0.1	0.9
20	11.8	11.0	11.4	7.2	5.6	6.3	5.6	4.0	4.2	0.0	-0.1	0.0
21	11.0	10.4	10.7	8.2	6.0	6.4	6.1	4.3	4.7	0.0	-0.1	-0.1
22	11.1	9.7	10.1	7.0	5.1	5.5	6.4	5.2	5.6	0.2	-0.1	0.0
23	10.7	9.3	9.9	6.4	5.1	5.5	6.4	4.1	4.9	1.7	0.0	0.7
24	11.7	10.2	11.0	6.4	5.0	5.3	4.9	2.9	3.4	2.2	0.6	0.9
25	11.4	10.4	10.9	6.5	5.2	5.7	4.8	2.4	2.9	2.2	1.3	1.5
26	11.9	10.8	11.1	8.0	6.4	7.1	5.2	2.9	3.2	3.0	1.6	1.9
27	11.7	10.2	10.7	10.4	8.0	9.3	4.9	3.0	3.3	3.5	2.3	2.7
28	10.2	9.1	9.4	10.2	7.9	9.1	3.7	1.9	2.8	2.9	2.2	2.5
29	10.2	8.0	8.4	8.5	6.0	6.9	3.5	1.5	1.7	2.9	1.1	1.7
30	9.0	7.1	7.7	6.0	4.7	5.3	4.8	1.7	2.6	2.2	0.4	0.7
31	9.8	7.8	8.1	---	---	---	4.6	4.0	4.2	2.8	0.6	1.4
Month	16.0	7.1	12.2	12.5	4.2	7.6	7.6	0.5	3.9	5.2	-0.1	1.7

04166500 RIVER ROUGE AT DETROIT, MI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	4.6	2.8	3.8	4.5	3.1	3.6	8.2	6.6	7.3	11.6	10.6	11.2
2	5.3	4.0	4.4	5.4	4.0	4.5	9.9	7.3	8.5	14.4	11.5	12.6
3	4.0	3.3	3.5	5.3	3.8	4.7	10.2	8.4	9.2	18.5	14.1	15.9
4	4.6	3.1	3.5	4.1	3.1	3.4	11.6	9.3	10.5	18.3	17.5	18.0
5	4.3	2.7	3.2	3.8	2.6	3.0	11.2	9.4	10.4	17.9	17.3	17.6
6	4.7	2.3	2.9	5.2	2.5	3.3	11.0	8.5	9.9	17.5	15.7	16.9
7	3.4	2.9	3.1	7.3	4.0	5.4	11.7	8.8	10.3	16.8	14.2	15.2
8	3.8	2.2	2.6	8.5	7.3	8.0	12.6	10.4	11.5	16.4	14.3	15.3
9	3.7	1.1	1.8	7.7	5.4	6.6	12.3	10.8	11.6	16.5	15.5	16.0
10	1.7	0.8	1.1	6.0	3.8	4.6	11.9	9.5	10.3	15.8	14.5	15.2
11	1.8	-0.1	0.2	6.6	4.0	5.2	9.5	8.4	9.0	16.3	13.8	15.1
12	1.3	-0.1	0.0	8.1	6.1	7.0	10.4	7.9	9.2	16.3	15.0	15.7
13	0.3	-0.1	0.0	10.5	7.9	9.4	11.6	8.8	10.2	16.3	14.9	15.8
14	2.0	0.0	0.4	10.6	9.4	10.0	12.5	10.4	11.3	17.5	14.8	16.2
15	3.4	0.6	1.3	12.2	10.0	11.0	14.3	12.4	13.3	18.4	15.7	17.1
16	4.1	2.0	2.8	13.5	11.5	12.4	15.8	14.3	14.9	18.3	16.5	17.5
17	3.5	2.6	3.0	14.7	12.2	13.5	14.8	13.3	14.1	17.5	15.6	16.4
18	4.5	2.9	3.3	15.6	13.2	14.4	13.9	11.8	12.9	17.1	15.3	16.3
19	3.2	2.2	2.6	16.3	14.4	15.2	14.5	11.9	13.3	18.5	15.1	17.1
20	3.3	1.0	1.7	17.2	15.1	16.1	14.5	12.9	13.8	19.6	16.6	18.4
21	3.7	1.2	1.7	17.9	14.7	16.8	13.2	11.7	12.4	20.2	17.0	19.4
22	3.4	2.1	2.5	18.1	15.8	17.0	11.8	10.4	11.2	19.9	18.5	19.0
23	4.3	2.7	3.3	17.5	16.2	16.8	11.6	9.8	10.8	19.2	16.7	18.3
24	4.8	3.0	3.5	16.6	14.8	15.7	12.0	9.8	11.0	20.3	18.0	19.0
25	3.5	2.4	2.7	15.9	13.5	15.1	12.8	10.5	11.6	22.1	20.1	21.0
26	3.0	1.9	2.3	15.3	12.1	13.3	12.7	11.8	12.3	21.7	17.9	20.3
27	4.4	2.2	2.8	12.1	9.6	10.5	12.3	10.2	11.3	20.4	18.6	19.5
28	3.6	2.1	2.8	12.0	9.6	10.8	11.9	9.5	10.4	22.0	19.7	20.8
29	4.6	3.0	3.3	11.6	9.7	10.3	10.8	8.3	9.6	22.6	21.8	22.1
30	---	---	---	9.7	6.7	8.1	10.9	9.8	10.3	22.0	18.2	20.4
31	---	---	---	7.1	6.1	6.5	---	---	---	19.9	16.7	18.5
Month	5.3	-0.1	2.4	18.1	2.5	9.7	15.8	6.6	11.1	22.6	10.6	17.3

04166500 RIVER ROUGE AT DETROIT, MI—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	17.2	14.7	15.8	25.7	22.0	24.1	24.3	22.9	23.6	23.0	21.6	22.1
2	15.8	14.1	14.9	25.8	21.8	24.2	23.7	21.2	23.1	22.4	20.7	21.9
3	17.6	15.4	16.4	25.3	22.2	23.8	25.1	23.1	24.0	23.0	21.3	22.0
4	17.6	16.2	17.1	25.2	23.1	24.2	25.7	22.1	24.5	22.7	20.7	22.3
5	17.2	16.7	17.0	24.8	23.5	24.1	25.3	22.9	24.8	22.3	21.4	22.0
6	17.6	15.1	16.7	26.3	23.7	24.8	24.7	22.8	23.4	22.7	21.7	22.2
7	19.3	16.5	18.1	27.4	24.4	26.3	23.7	21.1	22.7	22.1	20.1	21.7
8	20.0	16.9	19.0	26.8	25.3	25.9	24.6	22.8	23.6	20.9	19.2	20.0
9	---	---	---	25.3	21.1	24.0	23.4	20.2	21.8	19.2	18.0	18.3
10	22.8	18.6	21.4	24.1	22.6	23.4	20.9	20.3	20.6	18.0	16.7	17.3
11	22.0	21.4	21.8	23.7	22.5	23.1	20.6	19.6	20.1	18.0	16.6	17.3
12	23.0	19.0	21.5	23.9	20.6	22.7	20.4	19.0	19.6	18.9	17.3	18.0
13	21.6	19.3	20.4	25.0	22.8	23.8	20.2	19.6	20.0	19.7	18.1	18.8
14	20.6	18.6	19.5	25.3	21.9	24.1	20.1	18.8	19.7	19.1	17.9	18.7
15	21.4	19.1	20.1	26.0	23.8	25.0	20.8	19.2	19.9	18.1	16.7	17.2
16	22.1	20.4	21.3	26.8	24.1	25.3	21.0	19.5	20.4	17.2	16.1	16.7
17	22.0	19.4	21.4	27.7	25.4	26.5	21.1	19.6	20.7	17.6	16.5	17.0
18	21.4	20.2	20.8	26.8	23.8	26.0	20.2	19.1	19.7	17.7	16.1	17.3
19	23.5	20.6	21.9	25.3	21.6	23.9	19.8	18.7	19.3	16.1	14.5	15.1
20	24.7	21.6	23.6	22.8	21.6	22.2	19.6	18.9	19.3	15.4	14.5	14.9
21	25.6	24.2	24.8	22.9	19.8	21.9	19.7	18.2	19.0	15.6	14.3	15.0
22	24.5	21.3	23.6	24.4	22.4	23.6	19.8	18.0	18.9	15.2	14.1	14.8
23	23.3	21.9	22.6	26.3	23.8	24.7	20.7	19.1	19.8	14.1	12.7	13.5
24	22.6	20.8	22.1	26.8	24.7	25.8	21.6	18.9	20.6	12.7	11.9	12.3
25	23.0	20.7	22.1	24.7	22.9	24.0	22.5	20.8	21.5	13.8	12.0	12.8
26	21.6	20.0	20.6	24.1	22.1	23.3	23.0	20.1	22.0	14.7	13.1	14.1
27	22.6	20.0	21.3	23.2	21.4	22.7	22.6	20.9	22.3	15.0	13.3	13.9
28	24.2	21.2	22.6	22.7	21.5	22.0	22.5	20.5	21.7	14.2	13.1	13.6
29	25.8	22.0	24.4	23.0	21.3	22.2	21.6	20.5	21.1	14.4	13.1	13.7
30	25.7	23.5	24.5	23.6	21.8	22.5	21.4	20.1	20.6	14.3	13.0	13.6
31	---	---	---	24.0	21.6	23.2	22.4	20.4	21.4	---	---	---
Month	---	---	---	27.7	19.8	24.0	25.7	18.0	21.3	23.0	11.9	17.3

04166500 RIVER ROUGE AT DETROIT, MI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	9.0	8.3	8.7	10.1	9.7	9.9	11.2	10.7	10.9	11.8	11.5	11.7
2	9.4	9.0	9.2	10.1	9.7	9.9	11.3	11.2	11.2	12.3	11.7	12.0
3	9.2	8.9	9.1	9.7	9.4	9.5	11.4	11.3	11.4	13.4	12.3	12.9
4	9.0	8.7	8.9	10.0	9.3	9.7	11.4	10.7	11.0	13.5	12.4	13.4
5	8.8	8.6	8.7	10.5	9.8	10.1	10.7	10.5	10.6	13.5	12.6	13.3
6	8.8	8.5	8.6	10.8	10.2	10.5	11.2	10.7	11.0	13.2	12.6	12.9
7	8.6	8.2	8.4	10.6	9.9	10.2	11.3	11.1	11.2	12.6	11.9	12.4
8	8.4	8.0	8.2	10.1	9.3	9.6	11.7	11.2	11.5	12.7	11.9	12.4
9	8.2	7.8	8.0	9.3	7.1	8.5	11.8	11.5	11.7	13.1	12.1	12.8
10	8.4	7.6	7.8	8.6	6.7	8.0	12.5	11.6	12.1	13.2	12.7	13.0
11	7.9	7.4	7.6	10.0	8.4	9.3	13.0	12.3	12.8	13.2	11.7	12.8
12	7.7	7.1	7.3	10.8	9.8	10.4	13.0	12.3	12.9	12.6	11.3	11.9
13	7.7	6.8	7.1	10.5	9.5	10.2	12.8	11.9	12.7	12.2	11.3	11.7
14	7.2	6.3	6.6	9.7	7.9	9.4	12.4	11.1	11.9	13.3	11.9	12.7
15	7.4	6.5	6.8	9.2	7.6	8.8	11.2	10.4	10.8	14.2	12.9	13.7
16	7.7	6.9	7.3	9.8	9.1	9.4	11.3	10.4	10.8	14.2	12.8	13.9
17	8.2	7.6	8.0	10.7	9.7	10.2	11.8	11.3	11.6	13.6	11.6	12.3
18	8.6	8.0	8.3	11.7	10.4	11.2	12.0	11.6	11.9	12.7	11.7	12.1
19	9.0	8.1	8.4	11.6	10.6	11.4	11.9	11.6	11.8	13.2	12.6	13.0
20	8.6	7.9	8.3	11.1	10.7	11.0	11.8	11.3	11.7	13.6	12.7	13.3
21	8.9	8.3	8.6	11.2	10.4	10.8	11.7	11.2	11.5	13.4	13.2	13.3
22	9.3	8.9	9.1	11.3	10.7	10.9	11.3	11.1	11.3	13.4	12.4	13.3
23	9.4	9.1	9.3	11.3	10.4	10.9	11.8	11.0	11.4	13.2	11.9	12.6
24	9.2	8.4	8.9	11.1	10.8	10.9	12.4	11.7	12.2	12.9	12.6	12.8
25	9.0	8.5	8.7	11.1	10.7	11.0	12.5	12.0	12.4	13.0	12.7	12.9
26	8.9	8.6	8.7	10.8	10.3	10.6	12.4	11.7	12.3	12.9	12.4	12.8
27	8.9	8.5	8.7	10.3	9.1	9.7	12.2	11.4	12.0	12.6	12.1	12.2
28	9.4	8.8	9.2	10.2	9.1	9.6	12.4	11.7	12.0	12.6	12.3	12.5
29	9.8	9.3	9.7	10.8	10.1	10.4	12.9	12.2	12.6	13.0	12.4	12.8
30	10.0	9.6	9.8	10.7	10.2	10.4	12.7	11.6	12.4	13.6	12.6	13.3
31	10.0	9.6	9.9	---	---	---	11.9	10.9	11.6	13.6	12.7	13.3
Month	10.0	6.3	8.4	11.7	6.7	10.1	13.0	10.4	11.7	14.2	11.3	12.8

04166500 RIVER ROUGE AT DETROIT, MI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	12.9	12.0	12.3	12.1	11.9	12.0	11.9	10.6	11.1	9.3	7.8	8.6
2	12.5	11.8	12.1	12.5	11.4	12.0	13.0	10.6	11.6	9.6	8.4	8.9
3	13.2	12.2	12.6	11.7	11.2	11.4	11.6	10.4	11.0	9.9	7.3	8.5
4	13.3	12.2	12.8	13.0	11.7	12.4	13.1	10.0	11.4	7.4	4.0	5.9
5	13.4	12.3	12.8	14.1	12.4	13.2	13.5	9.8	11.5	7.0	6.2	6.5
6	13.6	12.6	13.0	14.7	12.8	13.6	14.1	10.2	11.9	7.4	6.4	6.8
7	13.4	12.4	12.9	14.5	12.3	13.3	14.3	10.2	12.1	8.2	6.4	7.1
8	14.2	12.2	13.3	12.6	10.7	11.4	13.8	9.7	11.6	7.8	7.2	7.5
9	14.4	13.0	13.7	13.5	10.6	11.9	13.0	9.3	11.1	7.4	7.0	7.1
10	13.8	13.2	13.5	15.0	12.1	13.3	12.7	9.3	10.9	7.7	7.0	7.3
11	14.9	13.1	14.0	15.3	12.4	13.7	13.2	10.1	11.5	8.2	7.2	7.4
12	15.1	13.3	14.5	13.3	10.3	11.4	14.2	10.3	12.1	7.3	7.0	7.1
13	14.9	14.0	14.4	10.5	9.6	9.8	14.2	10.1	12.0	7.8	6.8	7.2
14	14.3	12.6	13.9	10.4	9.6	9.9	12.3	9.4	10.8	7.9	6.8	7.2
15	14.5	13.1	13.8	10.9	9.8	10.2	10.4	6.8	8.2	7.0	6.4	6.7
16	13.8	12.0	12.4	10.7	9.3	9.9	8.1	7.4	7.6	7.4	6.2	6.5
17	13.0	12.0	12.5	11.1	9.2	10	9.6	7.7	8.6	7.9	6.2	6.6
18	13.8	12.3	12.9	10.8	8.8	9.6	10.6	8.5	9.4	7.2	6.5	6.8
19	14.8	12.5	13.6	10.4	8.5	9.4	10.3	8.5	9.4	7.7	6.1	6.8
20	15.2	12.7	14.0	10.2	8.2	9.1	10.2	8.2	9.1	6.5	5.5	6.1
21	14.1	13.0	13.5	10.0	7.9	8.9	9.0	7.8	8.4	6.8	5.2	5.6
22	13.7	12.0	12.9	10.0	7.8	8.7	10.6	8.4	9.4	6.0	5.1	5.5
23	14.6	12.2	13.4	9.0	7.5	8.1	11.5	9.3	10.3	7.0	5.3	5.8
24	13.2	11.7	12.4	8.5	7.5	7.9	11.7	9.3	10.3	7.0	5.2	5.8
25	13.2	11.8	12.4	9.9	7.8	8.8	11.4	9.0	10.1	5.4	4.7	5.0
26	15.1	12.5	13.7	10.8	8.3	9.5	10.0	8.5	9.2	6.7	4.2	4.8
27	14.9	13.0	13.9	12.0	9.6	10.7	11.7	8.7	10.1	5.4	3.4	4.5
28	15.7	12.7	14.1	11.8	10.0	10.9	10.5	9.1	9.8	5.9	3.9	4.4
29	14.3	11.7	12.5	11.7	9.5	10.6	12.9	9.6	11.1	4.8	3.4	4.0
30	---	---	---	11.1	9.3	10.6	11.1	9.0	9.8	5.8	3.9	4.3
31	---	---	---	10.8	10.2	10.6	---	---	---	6.0	3.9	4.8
Month	15.7	11.7	13.2	15.3	7.5	10.7	14.3	6.8	10.4	9.9	3.4	6.4

04166500 RIVER ROUGE AT DETROIT, MI—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	7.2	5.5	6.2	6.4	5.1	5.8	6.2	5.4	5.8	7.6	6.0	6.6
2	7.5	6.2	6.8	6.7	5.1	5.9	6.4	5.3	5.8	6.9	6.0	6.4
3	7.2	6.3	6.7	6.3	3.2	5.3	6.4	5.4	5.8	7.4	5.9	6.5
4	7.4	6.0	6.4	4.4	2.8	3.7	6.4	5.3	5.9	6.9	5.5	5.9
5	6.6	6.0	6.3	5.3	3.8	4.6	6.6	3.9	4.8	6.4	4.5	5.5
6	7.4	6.1	6.6	5.5	4.9	5.1	5.3	4.1	4.7	6.5	5.0	5.8
7	6.8	6.1	6.5	6.0	4.6	5.0	6.0	5.0	5.4	7.0	5.8	6.2
8	7.0	5.9	6.3	5.7	4.4	5.0	6.1	5.1	5.5	7.3	6.2	6.6
9	---	---	---	6.1	4.5	5.2	7.3	5.2	5.9	7.1	6.5	6.8
10	6.4	5.1	5.6	5.0	4.1	4.6	7.2	6.3	6.6	7.8	7.0	7.4
11	5.2	4.8	5.1	5.4	4.3	4.8	7.2	6.8	6.9	8.0	7.3	7.6
12	6.3	5.0	5.5	6.0	4.8	5.4	7.9	7.0	7.2	7.8	7.1	7.4
13	7.3	5.1	5.8	6.2	5.0	5.5	7.1	6.8	6.9	7.8	6.9	7.4
14	6.4	5.7	6.0	6.4	4.9	5.7	7.7	6.4	7.1	7.8	6.8	7.2
15	7.1	5.7	6.1	6.4	4.9	5.6	7.2	6.8	7.1	7.7	6.9	7.3
16	6.1	5.5	5.8	7.1	4.9	5.8	7.4	6.7	6.9	8.1	7.3	7.7
17	6.7	4.2	5.5	7.0	4.6	5.6	7.3	6.5	6.8	8.4	7.2	7.7
18	5.4	3.4	4.4	6.0	4.4	5.1	7.4	6.6	7.0	7.7	7.1	7.4
19	5.3	4.0	4.9	6.2	4.2	5.0	7.7	6.8	7.2	8.5	7.5	8.0
20	5.9	4.3	4.7	5.6	4.4	5.4	7.5	6.8	7.2	8.6	7.8	8.2
21	4.9	4.2	4.6	6.6	5.5	5.9	7.8	6.9	7.2	8.2	7.4	7.7
22	6.3	4.4	4.9	6.0	5.2	5.6	7.6	6.0	6.9	8.4	7.5	7.9
23	5.2	3.9	4.6	6.6	4.9	5.6	7.2	6.2	6.7	8.8	7.8	8.3
24	6.6	4.7	5.2	6.1	4.6	5.3	7.5	6.4	7.0	9.2	8.5	8.9
25	5.9	4.9	5.4	6.4	4.9	5.6	7.4	6.4	6.9	9.2	8.5	8.9
26	7.1	5.5	6.1	6.3	4.4	5.4	7.4	6.2	6.8	8.8	8.2	8.5
27	6.5	5.7	6.1	7.3	4.1	5.4	7.2	6.0	6.4	9.1	8.2	8.6
28	6.4	5.5	6.0	6.3	5.0	5.8	6.6	5.6	6.0	9.0	8.4	8.8
29	6.3	5.0	5.6	6.5	5.8	6.1	6.9	5.8	6.3	8.9	8.4	8.7
30	6.5	4.9	5.6	6.9	5.7	6.0	7.6	6.2	6.7	8.8	8.3	8.6
31	---	---	---	6.6	5.5	5.9	7.2	6.2	6.7	---	---	---
Month	---	---	---	7.3	2.8	5.4	7.9	3.9	6.5	9.2	4.5	7.5

04166500 RIVER ROUGE AT DETROIT, MI—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	October			November			December			January		
1	30	20	22	13	8.4	9.7	38	22	28	22	8.5	12
2	20	15	16	---	---	---	---	---	---	9.0	5.6	6.6
3	17	12	15	---	---	---	---	---	---	6.6	4.7	5.5
4	22	14	16	---	---	---	29	13	16	8.6	4.3	5.9
5	18	13	15	---	---	---	39	19	24	6.9	4.8	5.8
6	17	12	14	---	---	---	28	16	20	7.1	4.8	5.6
7	16	13	15	---	---	---	19	11	13	7.3	4.9	5.7
8	17	12	14	---	---	---	13	9.3	10	8.2	5.0	5.9
9	16	12	14	---	---	---	13	9.2	10	11	5.0	5.8
10	15	9.9	13	34	16	24	12	8.3	9.2	8.2	5.1	6.1
11	21	10	12	17	8.9	12	16	8.4	10	11	4.3	5.8
12	14	9.4	11	9.3	5.6	6.6	11	8.3	9.3	20	6.3	10
13	13	8.8	11	10	6.1	7.1	10	5.6	8.7	15	8.5	10
14	21	10	12	40	6.7	8.2	43	5.7	9.8	14	5.5	6.6
15	23	10	13	60	21	35	46	30	39	8.3	3.8	4.9
16	23	12	15	22	12	15	30	15	20	8.5	4.3	5.0
17	14	8.7	11	12	7.1	8.5	15	7.9	10	100	5.7	69
18	11	7.6	8.9	8.6	6.0	7.1	10	6.5	7.5	95	23	42
19	71	7.6	12	8.1	6.2	7.1	8.1	6.1	6.9	24	10	13
20	100	40	58	8.8	6.9	7.6	7.5	5.1	6.5	18	7.0	11
21	40	24	28	8.5	6.8	7.9	9.2	5.0	5.9	7.4	5.6	6.5
22	25	16	20	48	6.3	7.8	11	6.7	9.3	8.6	4.8	5.3
23	18	12	14	---	---	---	12	6.3	7.2	86	5.2	42
24	36	12	17	---	---	---	7.0	5.3	6.4	65	24	42
25	18	12	16	---	---	---	7.8	4.5	5.9	24	11	14
26	14	9.3	12	---	---	---	8.9	4.7	5.6	12	6.9	8.6
27	13	9.7	11	---	---	---	13	5.2	5.8	37	8.4	21
28	12	10	11	---	---	---	18	7.3	10	20	10	13
29	16	9.7	11	66	22	55	12	5.4	5.9	11	6.5	8.1
30	15	10	11	75	29	42	56	5.2	5.7	7.7	5.4	6.4
31	11	9.2	10	---	---	---	57	22	41	7.5	4.8	5.7
Max	100	40	58	---	---	---	---	---	---	100	24	69
Min	11	7.6	8.9	---	---	---	---	---	---	6.6	3.8	4.9

04166500 RIVER ROUGE AT DETROIT, MI—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	February			March			April			May		
1	9.8	6.8	7.8	65	16	29	22	9.2	12	56	21	29
2	9.0	5.0	6.5	56	7.5	14	13	7.2	10	25	10	14
3	6.6	4.2	5.3	85	25	49	14	8.6	10	110	8.8	12
4	5.8	4.0	4.9	28	8.7	12	12	8.3	10	100	39	75
5	6.2	4.4	5.1	9.3	5.3	6.8	16	7.7	9.7	---	---	---
6	6.1	3.9	4.8	8.1	5.0	6.2	15	7.8	9.2	---	---	---
7	5.1	3.4	4.2	7.8	5.4	6.4	14	8.1	9.9	---	---	---
8	9.2	3.7	4.5	13	6.4	7.9	16	8.2	11	50	30	33
9	5.0	3.6	4.2	14	7.7	10	30	8.2	14	32	17	24
10	7.0	3.8	4.4	22	7.8	12	30	7.2	14	34	22	28
11	16	3.6	4.4	21	8.9	12	26	6.9	12	30	19	24
12	16	3.3	4.0	34	10	18	38	6.9	15	30	20	24
13	9.1	3.5	4.0	180	28	92	34	6.6	16	40	22	27
14	8.7	4.0	4.7	70	20	31	69	9.3	14	41	25	31
15	11	3.8	4.5	21	10	13	140	10	87	37	23	29
16	25	4.5	17	16	9.1	12	70	19	30	34	24	29
17	28	7.7	12	16	8.4	11	23	9.1	13	35	24	30
18	8.0	3.6	5.0	15	8.7	11	15	7.5	10	36	26	29
19	7.9	3.1	4.2	15	9.7	12	15	6.7	9.2	38	23	29
20	5.0	3.3	3.9	14	11	13	16	8.0	10	40	25	28
21	7.9	3.7	4.3	15	11	13	27	15	18	43	25	29
22	14	4.9	6.7	17	11	14	18	8.4	11	51	26	32
23	6.6	3.4	4.5	30	15	17	12	6.8	9.0	51	25	31
24	37	4.1	7.0	23	14	18	13	7.4	9.4	38	25	30
25	30	7.1	12	22	13	17	20	7.8	10	36	24	30
26	14	3.8	4.6	21	13	15	17	8.7	11	66	27	34
27	4.9	3.3	4.3	18	10	13	20	7.3	11	46	23	30
28	8.9	3.7	4.3	15	9.9	12	22	7.8	11	34	20	26
29	78	4.2	33	16	9.3	12	21	6.2	9.9	52	21	30
30	---	---	---	72	7.7	12	57	10	14	44	27	32
31	---	---	---	76	22	39	---	---	---	40	29	34
Max	78	7.7	33	180	28	92	140	19	87	---	---	---
Min	4.9	3.1	3.9	7.8	5.0	6.2	12	6.2	9.0	---	---	---

04166500 RIVER ROUGE AT DETROIT, MI—Continued

TURBIDITY, WATER, UNFILT, NEAR IR LED LIGHT, 780-900 NM, DETECT ANG. 90 DEG, FORMAZIN NEPHELOMETRIC UNITS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	June			July			August			September		
1	93	36	55	44	21	28	32	22	26	25	12	14
2	90	45	58	45	19	30	34	22	26	19	9.7	13
3	51	30	36	190	24	38	32	19	24	18	10	14
4	49	24	34	250	81	130	34	18	24	43	11	15
5	37	29	33	260	87	150	210	31	65	110	15	24
6	52	26	32	170	48	87	47	29	37	29	13	19
7	51	29	34	59	29	42	38	23	30	20	13	16
8	48	29	33	45	28	35	33	20	25	69	17	54
9	---	---	---	130	32	39	220	29	98	59	29	40
10	51	31	36	59	26	34	160	80	89	35	20	25
11	58	36	40	48	22	29	97	65	80	30	17	22
12	57	38	43	42	19	27	67	34	50	26	17	22
13	54	36	47	36	18	24	41	27	32	33	15	20
14	54	39	46	52	17	24	140	30	100	68	22	35
15	60	39	48	37	16	24	81	36	50	69	32	38
16	97	43	52	49	15	22	39	23	30	38	21	27
17	110	53	65	33	14	22	29	21	25	30	16	24
18	120	58	80	40	17	23	29	21	24	28	17	21
19	---	---	---	130	40	58	46	22	26	24	13	19
20	---	---	---	130	45	61	36	21	28	27	18	21
21	40	28	34	60	40	49	32	20	25	46	27	31
22	49	34	39	45	28	36	40	23	29	34	18	27
23	49	35	41	42	24	34	32	19	24	34	18	22
24	48	31	40	38	21	26	27	16	21	22	16	19
25	44	30	36	42	25	32	30	15	20	20	14	18
26	44	29	38	120	36	43	24	14	18	23	16	19
27	48	28	38	240	79	100	49	19	27	25	13	19
28	49	24	32	300	82	98	50	22	28	21	15	18
29	40	20	26	88	35	55	30	15	20	22	15	18
30	40	22	29	39	25	32	28	14	18	22	15	18
31	---	---	---	35	24	28	21	13	16	---	---	---
Max	---	---	---	300	87	150	220	80	100	110	32	54
Min	---	---	---	33	14	22	21	13	16	18	9.7	13