

Water-Data Report 2013

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 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	26	56	39	e43	288	345	79	196	325	169	161	487
2	27	47	48	e43	e158	163	73	157	180	240	78	219
3	36	46	58	e42	e119	116	67	134	106	138	58	120
4	36	40	58	e42	e100	104	64	120	82	109	49	69
5	31	38	81	e41	e86	107	65	107	72	99	43	52
6	46	39	60	e41	e76	107	62	101	65	92	45	41
7	40	37	47	e42	e69	109	61	92	59	138	51	36
8	30	37	55	e42	e64	106	67	87	55	244	55	36
9	28	39	76	e43	e60	128	83	81	53	356	45	34
10	31	36	68	e50	e83	149	299	115	449	546	40	35
11	40	38	56	340	187	281	843	121	408	269	37	42
12	30	91	46	343	e173	485	1,300	83	163	129	109	381
13	31	158	42	408	121	264	839	72	1,140	94	253	198
14	294	74	40	410	110	167	320	68	962	80	101	77
15	181	53	39	176	103	135	218	68	236	392	55	53
16	55	45	53	105	94	141	213	64	214	677	46	47
17	38	41	73	82	75	151	170	59	164	145	41	42
18	175	40	50	68	88	127	845	55	157	98	38	40
19	142	38	43	e59	124	147	1,360	52	110	86	36	36
20	92	39	89	e56	e123	117	955	52	88	182	35	370
21	71	38	392	e52	e104	96	343	53	79	121	35	271
22	49	38	177	e50	e91	91	233	52	77	70	33	93
23	153	51	88	e49	e88	89	193	77	71	92	31	53
24	130	61	e63	e49	e75	83	449	76	e75	90	31	44
25	78	46	56	49	77	80	492	59	e88	60	30	40
26	58	40	e51	52	119	81	289	51	240	52	30	37
27	52	39	e48	58	327	78	207	50	143	161	48	35
28	46	37	e48	108	380	78	194	328	738	200	164	33
29	43	36	e47	e540	---	75	293	306	724	90	73	34
30	44	38	e46	1,160	---	74	207	225	270	64	60	55
31	69	---	e44	1,030	---	75	---	266	---	57	943	---
Total	2,202	1,456	2,181	5,673	3,562	4,349	10,883	3,427	7,593	5,340	2,854	3,110
Mean	71.0	48.5	70.4	183	127	140	363	111	253	172	92.1	104
Max	294	158	392	1,160	380	485	1,360	328	1,140	677	943	487
Min	26	36	39	41	60	74	61	50	53	52	30	33
Cfsm	0.38	0.26	0.38	0.98	0.68	0.75	1.94	0.59	1.35	0.92	0.49	0.55
In.	0.44	0.29	0.43	1.13	0.71	0.87	2.16	0.68	1.51	1.06	0.57	0.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	74.6	96.3	123	129	173	238	230	180	121	77.2	67.0	69.4
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)

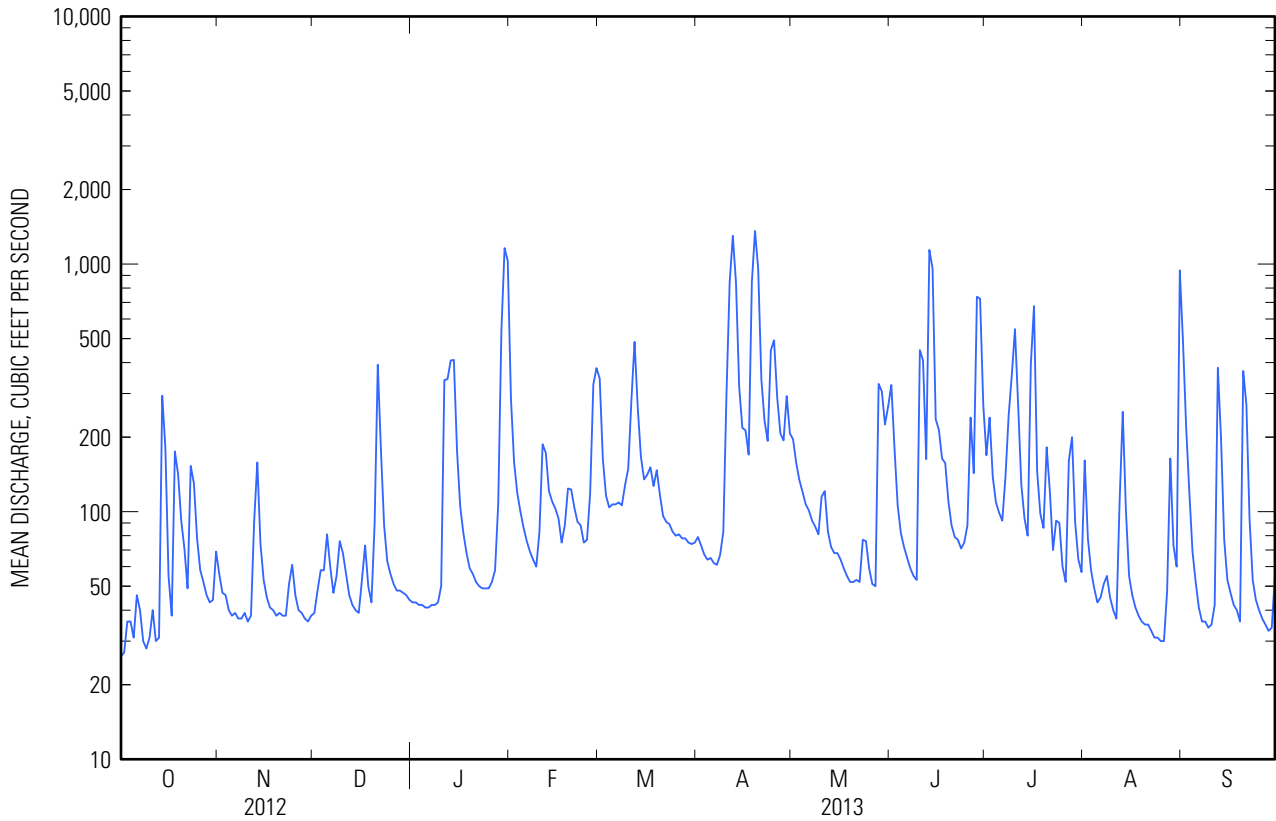
04166500 RIVER ROUGE AT DETROIT, MI—Continued

SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1931 - 2013	
Annual total	39,788		52,630			
Annual mean	109		144		131	
Highest annual mean					222 1968	
Lowest annual mean					25.7 1931	
Highest daily mean	776	Mar 13	1,360	Apr 19	7,380	Apr 6, 1947
Lowest daily mean	22	Jul 2	26	Oct 1	1.8	Aug 1, 1964
Annual seven-day minimum	25	Jul 12	32	Aug 20	2.7	Aug 2, 1963
Maximum peak flow			1,490	Jun 13	13,000	Apr 5, 1947
Maximum peak stage			13.61	Jun 13	21.40	Jun 26, 1968
Instantaneous low flow			25	Oct 1 ^a	1.8	Aug 1, 1964 ^b
Annual runoff (cfsm)	0.581		0.771		0.701	
Annual runoff (inches)	7.92		10.47		9.53	
10 percent exceeds	254		326		281	
50 percent exceeds	65		76		68	
90 percent exceeds	29		38		18	

^a Also occurred Oct. 2.

^b 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. 1-16, Oct. 28 to Nov. 19, Dec. 2-18, Feb. 20 to Mar. 1, June 13-17, July 1-16, July 26 to Aug. 18, Sept. 14-16, 30 rated good; Oct. 17, Aug. 19, 20 rated fair. pH, water temperature, and dissolved oxygen records rated excellent. Turbidity records rated excellent except for the following periods: Oct. 1, 2, 4-10, 15, 16, 18-25, Dec. 8-18, Jan. 12-15, 19-22, Feb. 1, 27, Mar. 8-11, 13, 14, 25-30, Apr. 2, 8, 12, 13, May 9-22, June 20, 21, 26, 28, Sept. 19, 22 rated good; Oct. 11-13, 17, Oct. 26 to Nov. 5, 7, 13, Jan. 23-26, Mar. 15-19, Mar. 31 to Apr. 1, 3-5, 14, June 22-25, 29, Sept. 23, 24 rated fair; Nov. 6, 8-12, 14-19, Jan. 27, 28, Feb. 2-26, Feb. 28 to Mar. 1, Apr. 6, 7, 9, 10, 15, 16, 20-22, June 27, June 30 to July 16, Sept. 25-30 rated poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 8670 microsiemens, Feb. 11, 2013; minimum recorded, 207 microsiemens, Aug. 9, 2011.

pH: Maximum recorded, 8.6 std. units on several days in water year 2013; minimum recorded, 7.1 std. units, July 16, 2013.

WATER TEMPERATURE: Maximum recorded during period of operation, 28.0°C, July 21, 2011; minimum recorded, -0.2°C, Dec. 30, 31, 2012, Feb. 25, 2013.

DISSOLVED OXYGEN: Maximum recorded during period of operation, 16.9 mg/L, Mar. 28, 2001, Apr. 4, 2013; minimum recorded, 0.1 mg/L, June 9, 2005.

TURBIDITY: Maximum recorded, 990 FNU, Apr. 8, 2013; minimum, 0.0 FNU, Mar. 1, 2013.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 8670 microsiemens, Feb. 11; minimum recorded, 212 microsiemens, Sept. 20.

pH: Maximum recorded, 8.6 std. units on several days; minimum recorded, 7.1 std. units, July 16.

WATER TEMPERATURE: Maximum recorded, 26.4°C, July 19; minimum recorded, -0.20°C, Dec. 30, 31, Feb. 25.

DISSOLVED OXYGEN: Maximum recorded, 16.9 mg/L, Apr. 4; minimum recorded, 2.3 mg/L, July 19.

TURBIDITY: Maximum recorded, 990 FNU, Apr. 8; minimum recorded, 0.0 FNU, Mar. 1.

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	1,660	1,360	1,390	1,380	1,270	1,330	1,720	1,370	1,390	3,910	3,410	3,530
2	2,130	1,370	1,490	1,270	1,260	1,260	1,970	1,370	1,440	3,830	3,350	3,520
3	1,920	1,400	1,510	1,890	1,260	1,360	1,620	1,310	1,500	3,570	2,800	3,080
4	1,520	1,400	1,450	1,300	1,280	1,290	1,840	1,400	1,550	2,880	2,410	2,560
5	1,510	1,350	1,400	1,340	1,300	1,320	1,710	1,230	1,360	2,440	2,270	2,350
6	1,800	1,240	1,370	2,040	1,340	1,430	1,560	1,220	1,320	2,840	2,150	2,250
7	1,570	1,270	1,330	1,420	1,360	1,390	1,220	1,200	1,210	2,390	2,110	2,180
8	1,280	1,260	1,270	1,400	1,380	1,390	1,710	1,210	1,270	6,840	2,360	2,680
9	1,280	1,270	1,270	2,070	1,400	1,490	1,320	1,200	1,260	3,230	2,350	2,480
10	1,760	1,260	1,350	1,450	1,410	1,420	1,520	1,190	1,260	2,710	2,320	2,460
11	1,670	1,260	1,350	1,610	1,420	1,440	1,220	1,180	1,200	4,420	1,540	2,070
12	1,500	1,300	1,320	2,000	1,010	1,420	1,250	1,220	1,240	1,620	1,490	1,540
13	1,370	974	1,330	1,300	912	1,060	1,820	1,240	1,310	1,610	1,150	1,350
14	1,440	602	830	1,030	945	991	1,310	1,260	1,290	1,200	1,040	1,150
15	789	610	693	1,460	1,030	1,120	1,340	1,310	1,330	1,360	1,200	1,280
16	1,010	782	867	1,220	1,130	1,180	1,820	1,300	1,380	1,720	1,360	1,450
17	1,070	941	1,020	1,410	1,220	1,270	1,500	1,300	1,370	1,580	1,490	1,530
18	1,500	669	922	1,870	1,310	1,380	1,400	1,240	1,300	2,300	1,560	1,620
19	897	715	814	1,360	1,320	1,340	1,260	1,240	1,240	1,690	1,600	1,630
20	1,180	876	920	2,030	1,360	1,420	1,730	727	1,230	1,650	1,590	1,630
21	1,030	925	1,000	1,400	1,370	1,380	894	644	732	2,370	1,460	1,660
22	1,430	1,020	1,080	1,410	1,380	1,390	1,060	702	920	1,840	1,700	1,770
23	1,430	785	979	2,050	1,370	1,470	1,260	1,060	1,190	2,110	1,820	1,870
24	987	778	865	1,540	1,360	1,460	1,860	895	1,300	2,540	1,860	1,910
25	978	902	935	1,720	1,340	1,400	1,400	1,320	1,350	2,560	1,900	1,950
26	1,090	978	1,030	1,340	1,310	1,330	2,910	1,400	1,700	2,150	1,900	1,980
27	1,630	1,090	1,170	1,330	1,310	1,310	2,000	1,750	1,850	2,910	2,150	2,480
28	1,230	1,170	1,190	2,000	1,330	1,400	4,620	1,660	2,120	7,620	2,720	3,890
29	1,960	1,230	1,320	1,370	1,350	1,360	6,180	2,910	3,310	7,140	1,720	4,490
30	1,350	1,260	1,290	2,060	1,370	1,420	4,020	2,800	3,220	1,720	963	1,100
31	1,750	1,250	1,360	---	---	---	6,080	3,760	4,290	1,220	1,030	1,130
Month	2,130	602	1,160	2,070	912	1,340	6,180	644	1,560	7,620	963	2,150

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	1,870	1,220	1,390	3,300	2,640	2,860	4,630	1,810	1,940	1,840	1,410	1,450
2	1,830	1,580	1,690	2,810	2,540	2,600	2,620	1,840	1,920	1,430	1,400	1,410
3	2,070	1,770	1,880	2,600	2,430	2,530	1,910	1,870	1,890	1,940	1,430	1,480
4	3,330	2,070	2,320	4,060	2,430	2,630	1,890	1,840	1,870	1,910	1,470	1,500
5	2,740	2,440	2,610	2,570	2,390	2,470	2,520	1,820	1,880	1,500	1,490	1,500
6	4,600	2,520	2,750	3,030	2,280	2,390	1,830	1,760	1,800	2,320	1,500	1,560
7	2,860	2,570	2,740	2,320	2,200	2,250	1,810	1,760	1,790	1,780	1,520	1,540
8	3,000	2,580	2,640	2,770	2,100	2,180	2,450	1,760	1,850	1,860	1,530	1,560
9	7,520	2,700	3,460	2,160	2,020	2,100	4,080	1,830	2,040	1,840	1,540	1,560
10	4,020	3,450	3,730	3,310	1,880	1,990	2,570	1,100	1,770	2,500	1,490	1,620
11	8,670	3,740	4,270	2,650	1,600	1,820	1,150	743	916	1,590	1,330	1,470
12	4,090	2,750	3,170	1,770	1,390	1,530	903	805	867	1,640	1,320	1,410
13	2,750	2,480	2,540	1,900	1,430	1,550	1,250	877	1,040	1,660	1,430	1,470
14	3,090	2,460	2,510	1,720	1,630	1,690	1,410	1,190	1,280	1,720	1,480	1,530
15	2,520	2,460	2,490	2,990	1,720	1,840	1,810	1,340	1,390	2,500	1,520	1,600
16	3,040	2,390	2,490	2,920	1,800	2,050	1,740	1,390	1,470	1,740	1,530	1,570
17	2,480	1,940	2,380	5,160	2,920	3,720	1,680	1,290	1,510	1,780	1,530	1,580
18	6,770	1,910	2,580	7,130	2,760	3,520	1,430	765	913	1,840	1,560	1,640
19	3,170	2,280	2,510	3,990	2,550	2,720	831	772	805	1,840	1,600	1,640
20	3,110	2,460	2,790	2,710	2,370	2,500	1,110	821	955	1,880	1,650	1,680
21	2,760	2,330	2,480	3,020	2,310	2,380	1,440	1,110	1,210	1,940	1,650	1,700
22	2,990	2,220	2,390	2,350	2,200	2,250	1,770	1,280	1,340	1,920	1,680	1,730
23	6,310	2,330	2,690	5,220	2,140	2,320	1,890	1,370	1,430	1,900	1,690	1,750
24	5,400	3,140	3,640	2,140	2,100	2,120	1,590	1,070	1,280	1,970	1,640	1,780
25	4,240	3,490	3,800	2,110	2,030	2,070	1,210	1,040	1,120	3,040	1,570	1,690
26	7,000	2,590	3,630	2,730	1,970	2,050	1,440	1,210	1,270	1,790	1,530	1,590
27	4,610	2,250	3,060	1,970	1,890	1,940	1,750	1,290	1,360	1,790	1,130	1,560
28	5,120	3,140	3,680	2,620	1,880	1,950	1,860	1,380	1,440	2,420	732	1,070
29	---	---	---	1,920	1,870	1,900	1,520	1,300	1,370	1,040	817	983
30	---	---	---	1,880	1,840	1,870	1,540	1,310	1,360	1,130	559	949
31	---	---	---	2,520	1,820	1,880	---	---	---	1,220	826	1,030
Month	8,670	1,220	2,800	7,130	1,390	2,250	4,630	743	1,440	3,040	559	1,500

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	968	768	905	1,200	880	1,040	1,340	931	1,100	---	---	---
2	1,090	926	1,010	1,150	880	1,000	1,170	990	1,030	---	---	---
3	1,300	1,060	1,120	1,270	1,010	1,080	1,240	1,070	1,120	1,060	---	---
4	1,370	1,160	1,200	1,380	1,150	1,200	1,340	1,140	1,210	1,280	846	962
5	1,430	1,220	1,270	1,430	1,110	1,250	1,460	1,240	1,310	1,370	1,060	1,120
6	1,470	1,290	1,330	1,430	989	1,280	1,500	1,330	1,370	1,490	1,130	1,200
7	1,510	1,350	1,390	1,450	1,100	1,220	1,560	1,370	1,430	1,530	1,200	1,270
8	1,550	1,400	1,440	1,260	474	958	1,580	1,420	1,470	1,530	1,260	1,320
9	1,600	1,440	1,480	861	499	706	1,600	1,400	1,460	1,560	1,310	1,340
10	1,550	670	961	794	259	609	1,550	1,360	1,390	1,570	1,340	1,390
11	993	718	852	996	784	835	1,570	1,360	1,420	1,560	1,230	1,390
12	1,250	935	1,030	1,210	875	966	1,860	848	1,330	1,340	542	717
13	1,220	323	523	1,330	1,040	1,120	1,080	773	908	905	711	789
14	935	518	702	1,370	1,140	1,200	1,030	793	878	1,170	845	898
15	1,180	884	997	1,390	237	989	1,260	953	1,060	1,280	931	994
16	1,260	963	1,140	892	267	680	1,380	1,100	1,180	1,440	1,030	1,110
17	1,210	1,080	1,120	1,280	847	1,030	1,430	1,220	1,270	1,540	1,160	1,220
18	1,290	1,070	1,150	1,360	1,040	1,170	1,510	1,310	1,360	1,540	1,220	1,250
19	1,480	1,180	1,220	1,320	887	1,100	1,560	1,370	1,410	1,550	1,250	1,310
20	1,550	1,240	1,290	1,310	840	1,110	1,680	1,420	1,460	1,540	212	702
21	1,600	1,300	1,370	1,200	907	991	1,680	1,430	1,460	762	434	605
22	1,750	1,370	1,430	1,350	1,030	1,120	1,670	1,430	1,470	1,220	740	890
23	1,590	1,410	1,450	1,360	1,020	1,170	1,650	1,410	1,470	1,360	1,000	1,080
24	---	---	---	1,210	1,000	1,100	1,640	1,400	1,450	1,500	1,120	1,200
25	---	---	---	1,380	1,130	1,170	1,620	1,390	1,420	1,530	1,230	1,280
26	1,560	718	997	1,440	1,160	1,230	1,600	1,400	1,450	1,580	1,260	1,330
27	1,240	793	1,040	1,420	482	1,030	1,550	1,210	1,430	1,610	1,300	1,360
28	821	533	597	1,090	731	911	1,950	832	1,100	1,620	1,340	1,380
29	719	556	627	984	773	858	1,020	802	905	1,640	1,370	1,430
30	1,050	719	877	1,260	984	1,080	1,220	977	1,030	1,560	1,380	1,450
31	---	---	---	1,440	1,150	1,240	---	---	---	---	---	---
Month	---	---	---	1,450	237	1,050	---	---	---	---	---	---

04166500 RIVER ROUGE AT DETROIT, MI—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	Median
	October			November			December			January		
1	8.1	8.0	8.1	8.0	8.0	8.0	8.3	8.2	8.3	8.3	8.2	8.2
2	8.1	8.0	8.1	8.0	8.0	8.0	8.3	8.0	8.2	8.2	8.2	8.2
3	8.1	7.9	8.0	8.1	7.9	8.0	8.1	7.9	8.0	8.2	8.1	8.2
4	7.9	7.9	7.9	8.1	8.0	8.1	8.0	7.9	8.0	8.2	8.1	8.2
5	7.9	7.8	7.9	8.1	8.1	8.1	8.1	7.9	8.0	8.2	8.1	8.2
6	7.9	7.8	7.9	8.1	8.1	8.1	8.2	8.0	8.1	8.2	8.2	8.2
7	7.9	7.8	7.9	8.2	8.1	8.1	8.2	8.1	8.2	8.3	8.2	8.2
8	8.0	7.8	7.9	8.2	8.1	8.2	8.2	8.1	8.1	8.3	8.0	8.2
9	7.9	7.9	7.9	8.2	8.1	8.2	8.2	8.0	8.1	8.3	8.2	8.2
10	7.9	7.8	7.9	8.2	8.1	8.1	8.2	7.9	8.1	8.3	8.2	8.2
11	7.9	7.8	7.9	8.1	8.1	8.1	8.3	8.1	8.2	8.3	7.9	8.1
12	7.9	7.8	7.9	8.1	7.8	8.0	8.3	8.2	8.3	8.1	8.0	8.0
13	7.9	7.8	7.9	7.9	7.8	7.9	8.3	8.2	8.3	8.1	7.9	8.0
14	7.9	7.5	7.6	8.0	7.9	8.0	8.3	8.2	8.3	8.0	7.9	8.0
15	7.5	7.4	7.5	8.2	8.0	8.1	8.3	8.2	8.2	8.3	8.0	8.1
16	7.7	7.5	7.5	8.2	8.1	8.1	8.2	7.9	8.2	8.3	8.3	8.3
17	7.8	7.6	7.6	8.2	8.1	8.2	8.2	8.0	8.1	8.4	8.3	8.3
18	7.9	7.6	7.7	8.2	8.1	8.2	8.2	8.0	8.1	8.4	8.4	8.4
19	7.8	7.6	7.7	8.2	8.1	8.2	8.2	8.1	8.2	8.4	8.4	8.4
20	7.9	7.7	7.7	8.2	8.1	8.1	8.2	8.0	8.2	8.5	8.4	8.4
21	7.8	7.7	7.8	8.2	8.1	8.1	8.0	7.9	8.0	8.5	8.4	8.4
22	7.9	7.8	7.8	8.2	8.1	8.2	8.1	8.0	8.1	8.4	8.3	8.4
23	7.9	7.6	7.7	8.2	7.9	8.1	8.2	8.1	8.1	8.3	8.2	8.3
24	7.7	7.6	7.6	8.2	8.0	8.1	8.2	8.1	8.2	8.3	8.2	8.2
25	7.7	7.6	7.6	8.2	8.1	8.2	8.2	8.2	8.2	8.3	8.2	8.2
26	7.7	7.6	7.7	8.3	8.1	8.2	8.2	8.2	8.2	8.2	8.1	8.1
27	7.9	7.7	7.8	8.3	8.2	8.3	8.3	8.2	8.2	8.1	8.1	8.1
28	7.9	7.8	7.9	8.3	8.2	8.3	8.2	8.2	8.2	8.2	8.1	8.1
29	8.0	7.9	7.9	8.3	8.2	8.3	8.2	8.0	8.2	8.2	8.1	8.1
30	8.0	7.9	8.0	8.3	8.2	8.3	8.2	8.2	8.2	8.2	8.0	8.1
31	8.0	7.9	8.0	---	---	---	8.2	8.1	8.2	8.1	8.0	8.1
Max	8.1	8.0	8.1	8.3	8.2	8.3	8.3	8.2	8.3	8.5	8.4	8.4
Min	7.5	7.4	7.5	7.9	7.8	7.9	8.0	7.9	8.0	8.0	7.9	8.0

04166500 RIVER ROUGE AT DETROIT, MI—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	Median
	February			March			April			May		
1	8.3	8.1	8.2	8.4	8.3	8.3	8.6	8.2	8.5	8.1	8.0	8.0
2	8.3	8.1	8.1	8.3	8.3	8.3	8.6	8.4	8.5	8.1	8.0	8.0
3	8.1	8.1	8.1	8.4	8.3	8.3	8.6	8.4	8.5	8.1	7.9	8.0
4	8.2	8.1	8.1	8.5	8.4	8.4	8.6	8.4	8.5	8.1	7.9	8.0
5	8.1	8.1	8.1	8.4	8.4	8.4	8.5	8.3	8.5	8.1	8.0	8.0
6	8.3	8.1	8.2	8.4	8.4	8.4	8.6	8.2	8.5	8.1	8.0	8.0
7	8.3	8.2	8.3	8.4	8.4	8.4	8.5	8.2	8.4	8.1	7.9	8.0
8	8.4	8.3	8.3	8.5	8.4	8.4	8.4	8.2	8.3	8.1	7.9	8.0
9	8.4	8.3	8.4	8.4	8.4	8.4	8.3	8.1	8.2	8.0	7.9	8.0
10	8.3	8.3	8.3	8.4	8.4	8.4	8.2	8.0	8.1	8.0	7.8	7.9
11	8.4	8.3	8.3	8.4	8.2	8.3	8.1	8.0	8.0	7.9	7.8	7.8
12	8.3	8.3	8.3	8.2	8.2	8.2	8.1	8.0	8.0	8.1	7.9	8.0
13	8.4	8.3	8.4	8.3	8.2	8.3	8.1	8.0	8.0	8.2	8.1	8.1
14	8.4	8.4	8.4	8.4	8.3	8.4	8.1	8.1	8.1	8.2	8.1	8.2
15	8.4	8.4	8.4	8.4	8.3	8.4	8.2	8.1	8.1	8.1	7.9	8.1
16	8.5	8.4	8.5	8.4	8.4	8.4	8.1	8.1	8.1	8.1	8.0	8.0
17	8.5	8.4	8.4	8.4	8.4	8.4	8.2	8.1	8.1	8.1	7.9	8.0
18	8.4	8.3	8.4	8.4	8.3	8.4	8.2	7.9	7.9	8.0	7.9	8.0
19	8.5	8.4	8.4	8.5	8.3	8.4	7.9	7.7	7.8	8.0	7.9	7.9
20	8.4	8.3	8.4	8.5	8.4	8.5	8.0	7.9	7.9	7.9	7.8	7.9
21	8.4	8.3	8.3	8.5	8.4	8.5	8.1	8.0	8.0	7.9	7.8	7.8
22	8.4	8.4	8.4	8.5	8.5	8.5	8.2	8.0	8.1	7.9	7.7	7.8
23	8.5	8.3	8.4	8.5	8.3	8.5	8.2	8.0	8.1	7.9	7.8	7.8
24	8.4	8.4	8.4	8.5	8.5	8.5	8.1	8.0	8.0	7.9	7.8	7.8
25	8.5	8.3	8.4	8.5	8.5	8.5	8.1	8.0	8.1	8.0	7.9	7.9
26	8.5	8.3	8.4	8.6	8.4	8.5	8.2	8.1	8.1	8.0	8.0	8.0
27	8.5	8.3	8.4	8.6	8.5	8.5	8.2	8.1	8.1	8.0	8.0	8.0
28	8.4	8.3	8.3	8.6	8.4	8.5	8.1	8.0	8.1	8.0	7.7	7.8
29	---	---	---	8.6	8.4	8.5	8.0	8.0	8.0	7.8	7.7	7.8
30	---	---	---	8.6	8.4	8.5	8.1	8.0	8.0	7.8	7.5	7.7
31	---	---	---	8.5	8.3	8.5	---	---	---	7.7	7.5	7.6
Max	8.5	8.4	8.5	8.6	8.5	8.5	8.6	8.4	8.5	8.2	8.1	8.2
Min	8.1	8.1	8.1	8.2	8.2	8.2	7.9	7.7	7.8	7.7	7.5	7.6

04166500 RIVER ROUGE AT DETROIT, MI—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	Median
	June			July			August			September		
1	7.7	7.5	7.6	7.8	7.7	7.7	7.8	7.6	7.7	---	---	---
2	7.7	7.7	7.7	7.8	7.7	7.7	7.8	7.6	7.8	---	---	---
3	7.8	7.7	7.8	7.8	7.7	7.8	7.8	7.8	7.8	7.8	---	---
4	7.9	7.8	7.8	7.8	7.8	7.8	7.9	7.8	7.8	7.9	7.8	7.8
5	7.9	7.8	7.9	7.8	7.7	7.8	7.9	7.8	7.8	7.9	7.8	7.9
6	7.9	7.8	7.9	7.8	7.8	7.8	7.9	7.8	7.9	8.0	7.9	7.9
7	7.9	7.9	7.9	7.8	7.6	7.7	7.9	7.9	7.9	8.0	7.9	7.9
8	7.9	7.9	7.9	7.8	7.5	7.7	7.9	7.8	7.8	8.0	7.9	8.0
9	7.9	7.9	7.9	7.6	7.5	7.5	7.9	7.8	7.8	8.0	8.0	8.0
10	7.9	7.5	7.6	7.7	7.4	7.5	7.9	7.8	7.9	8.0	7.9	8.0
11	7.8	7.6	7.7	7.7	7.6	7.7	7.9	7.8	7.9	8.0	7.8	8.0
12	7.8	7.8	7.8	7.8	7.7	7.7	7.9	7.7	7.8	7.9	7.6	7.7
13	7.8	7.5	7.6	7.8	7.8	7.8	7.7	7.6	7.7	7.8	7.7	7.8
14	7.7	7.5	7.6	7.9	7.8	7.8	7.9	7.7	7.8	7.9	7.8	7.9
15	7.8	7.7	7.8	7.8	7.3	7.8	8.0	7.8	7.9	8.0	7.9	7.9
16	7.8	7.7	7.8	7.4	7.1	7.3	7.9	7.9	7.9	8.0	7.9	8.0
17	7.8	7.7	7.7	7.6	7.4	7.5	8.0	7.9	7.9	8.0	8.0	8.0
18	7.8	7.7	7.7	7.6	7.5	7.6	8.0	7.9	7.9	8.0	7.8	8.0
19	7.8	7.7	7.8	7.7	7.4	7.6	7.9	7.9	7.9	8.0	8.0	8.0
20	7.8	7.8	7.8	7.6	7.4	7.6	7.9	7.8	7.9	8.2	7.6	7.7
21	7.8	7.8	7.8	7.7	7.6	7.6	7.9	7.8	7.8	7.7	7.5	7.6
22	7.8	7.7	7.8	7.8	7.6	7.7	7.8	7.8	7.8	7.9	7.7	7.8
23	7.8	7.8	7.8	7.8	7.7	7.7	7.8	7.7	7.8	8.0	7.8	7.9
24	7.8	7.8	7.8	7.8	7.7	7.7	7.8	7.7	7.8	8.0	7.9	7.9
25	7.8	7.6	7.7	7.8	7.7	7.8	7.8	7.7	7.8	8.0	7.9	8.0
26	7.6	7.5	7.5	7.8	7.8	7.8	7.8	7.7	7.8	8.0	8.0	8.0
27	7.7	7.5	7.6	7.8	7.4	7.8	7.8	7.6	7.7	8.0	7.9	8.0
28	7.6	7.4	7.5	7.8	7.4	7.7	7.7	7.4	7.5	8.0	7.9	8.0
29	7.6	7.5	7.5	7.8	7.6	7.7	7.6	7.5	7.6	8.0	7.9	7.9
30	7.7	7.6	7.7	7.8	7.8	7.8	7.7	7.6	7.6	7.9	7.8	7.9
31	---	---	---	7.8	7.8	7.8	---	---	---	---	---	---
Max	7.9	7.9	7.9	7.9	7.8	7.8	---	---	---	---	---	---
Min	7.6	7.4	7.5	7.4	7.1	7.3	---	---	---	---	---	---

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	13.6	12.5	13.0	7.3	6.9	7.1	5.0	2.8	3.3	0.2	-0.1	0.0
2	14.7	12.9	13.8	7.2	6.7	6.9	9.1	3.9	5.7	0.0	-0.1	-0.1
3	15.5	14.2	14.9	9.6	6.0	7.0	7.8	6.3	7.2	0.1	-0.1	-0.1
4	15.8	14.8	15.3	6.1	5.1	5.5	10.2	7.8	8.5	0.1	-0.1	0.0
5	15.8	14.5	15.4	5.4	4.7	5.1	9.0	5.8	7.2	0.1	-0.1	0.0
6	14.7	12.3	13.2	8.2	4.8	5.4	7.1	4.4	4.9	0.5	0.0	0.1
7	12.5	10.9	11.7	5.1	4.2	4.7	4.5	4.0	4.2	0.3	-0.1	0.1
8	10.9	9.4	10.2	4.7	3.9	4.3	7.5	4.5	4.9	2.6	-0.1	0.1
9	10.2	9.1	9.6	7.4	4.0	5.0	5.2	4.5	4.8	3.0	0.0	0.5
10	11.6	9.3	10.2	7.0	5.3	6.3	7.8	4.5	5.0	0.7	-0.1	0.2
11	11.1	8.3	9.1	9.3	7.0	7.8	4.5	2.9	3.6	6.0	0.4	2.0
12	10.1	8.5	9.3	11.0	9.1	9.8	2.9	1.8	2.2	4.7	2.1	3.1
13	11.0	8.0	8.3	9.5	7.0	8.4	5.6	1.0	1.8	5.8	3.9	5.1
14	13.7	10.4	12.0	7.0	5.1	5.5	1.7	1.0	1.3	5.1	2.7	4.0
15	13.9	12.5	13.3	8.0	4.3	4.9	2.4	1.3	1.6	2.7	0.9	1.5
16	13.1	11.5	11.9	4.4	3.4	3.9	8.0	2.4	4.1	3.0	0.1	0.6
17	12.8	11.4	12.1	4.2	3.3	3.8	7.5	4.8	5.5	1.2	0.6	0.9
18	14.2	12.8	13.7	7.4	3.9	4.8	5.4	4.9	5.1	3.1	-0.1	0.3
19	13.4	12.4	12.9	5.0	4.2	4.6	4.9	4.2	4.7	1.5	0.1	0.6
20	12.6	11.7	12.0	8.6	5.0	5.7	9.0	4.0	4.8	1.5	-0.1	0.5
21	11.9	10.7	11.1	6.6	5.8	6.2	5.9	4.2	5.1	0.8	-0.1	0.0
22	11.7	10.3	11.0	6.8	5.6	6.2	4.2	2.5	3.3	0.0	0.0	0.0
23	14.0	11.6	13.1	10.7	6.0	7.4	2.5	1.5	1.8	0.0	0.0	0.0
24	15.2	13.5	14.4	6.0	4.4	5.3	4.8	1.0	1.5	0.0	0.0	0.0
25	15.8	14.6	15.2	6.8	3.5	4.1	1.0	0.2	0.6	0.0	0.0	0.0
26	15.7	13.3	14.6	3.5	3.0	3.2	3.6	0.0	0.7	0.0	0.0	0.0
27	13.6	11.2	12.2	3.0	1.6	2.3	0.5	-0.1	0.1	0.0	-0.1	0.0
28	11.2	9.0	9.9	5.2	1.2	1.9	0.5	-0.1	0.0	0.4	-0.1	0.0
29	10.1	7.6	8.5	1.9	1.1	1.4	3.4	-0.1	0.2	---	-0.1	---
30	7.7	6.9	7.2	6.2	1.6	2.4	0.8	-0.2	-0.1	2.8	1.0	1.9
31	8.9	6.9	7.3	---	---	---	1.1	-0.2	0.1	3.0	1.1	2.2
Month	15.8	6.9	11.8	11.0	1.1	5.2	10.2	-0.2	3.3	---	-0.1	---

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	1.3	-0.1	0.2	2.4	1.4	1.9	8.6	6.7	7.4	16.6	13.3	14.8
2	0.2	-0.1	0.0	2.3	0.6	0.9	6.9	5.0	5.7	18.4	15.4	16.8
3	0.0	-0.1	0.0	1.6	0.1	0.9	6.0	3.8	5.0	18.8	15.3	17.6
4	0.0	-0.1	-0.1	3.1	0.0	1.1	7.2	4.1	5.6	18.1	14.7	17.2
5	0.0	-0.1	-0.1	2.3	0.4	1.4	8.8	6.0	7.3	17.9	15.8	16.9
6	0.6	-0.1	0.0	3.2	1.2	2.1	8.2	6.3	7.2	17.5	13.9	16.4
7	0.3	-0.1	0.0	3.2	2.2	2.8	9.3	7.3	8.3	18.2	15.5	16.8
8	0.0	-0.1	-0.1	5.5	2.0	3.1	9.0	7.6	8.1	19.1	15.9	17.7
9	1.8	-0.1	0.1	4.2	2.6	3.5	8.8	7.7	8.2	19.1	16.9	18.0
10	0.2	-0.1	0.0	6.6	3.6	4.7	8.4	7.3	7.9	18.6	14.6	17.6
11	3.1	0.2	0.6	6.7	5.7	6.2	7.3	5.2	6.1	16.8	14.4	15.5
12	0.6	0.2	0.4	6.2	3.9	5.0	5.3	5.0	5.2	14.4	11.4	12.7
13	1.3	0.2	0.7	4.6	2.8	3.5	5.7	5.3	5.4	11.4	9.7	10.7
14	3.2	0.5	1.1	3.5	2.0	2.8	6.1	5.3	5.6	13.0	10.2	11.4
15	1.7	1.1	1.5	4.9	2.6	3.1	8.6	5.5	7.0	16.6	12.0	14.2
16	3.6	0.3	1.0	3.3	2.5	2.8	11.3	8.6	9.8	18.0	15.1	16.7
17	0.3	-0.1	0.0	3.8	2.0	2.7	12.0	9.9	11.0	17.9	15.5	16.9
18	0.8	-0.1	0.2	4.4	2.0	2.3	12.9	9.5	10.7	18.3	16.3	17.3
19	3.2	0.2	0.8	3.9	1.6	2.1	13.5	10.4	12.4	19.6	17.1	18.3
20	0.3	-0.1	-0.1	1.8	0.9	1.4	10.4	8.0	8.9	21.2	18.4	19.8
21	0.1	-0.1	-0.1	2.6	0.0	0.8	8.8	7.1	8.0	21.5	19.7	21.0
22	0.0	-0.1	0.0	2.4	0.4	1.3	10.6	7.7	9.0	21.5	19.7	20.9
23	1.6	-0.1	0.2	5.1	1.3	2.5	11.9	9.3	10.6	20.6	16.2	18.7
24	2.2	-0.1	0.3	3.1	2.0	2.6	11.6	9.6	10.9	16.2	14.0	14.7
25	0.8	-0.2	0.3	2.8	2.0	2.4	9.6	8.2	8.6	14.5	12.6	13.6
26	4.6	0.4	1.0	4.6	2.4	3.3	10.3	7.8	9.0	14.9	13.0	14.1
27	2.0	0.4	1.0	5.3	3.1	4.1	12.7	9.3	10.9	14.8	13.3	13.8
28	2.9	1.3	1.8	7.4	4.2	5.3	12.0	11.5	11.7	15.8	12.6	13.6
29	---	---	---	7.7	4.9	6.3	12.8	11.1	11.9	17.3	14.6	15.8
30	---	---	---	8.5	5.7	7.1	14.4	12.4	13.4	21.0	17.3	18.6
31	---	---	---	8.8	6.8	7.9	---	---	---	20.5	19.3	20.0
Month	4.6	-0.2	0.4	8.8	0.0	3.2	14.4	3.8	8.6	21.5	9.7	16.4

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	20.8	20.0	20.4	20.5	18.5	19.5	20.6	18.5	19.8	---	---	---
2	20.3	19.3	20.0	19.1	18.1	18.7	20.2	18.9	19.6	---	---	---
3	19.4	17.6	18.4	20.4	18.5	19.4	20.4	19.1	19.8	---	---	---
4	18.1	16.2	17.4	21.5	19.7	20.7	20.3	19.1	19.6	20.0	18.4	19.3
5	18.0	16.0	17.1	22.1	20.1	21.5	19.7	18.6	18.9	19.8	18.8	19.3
6	17.8	16.5	17.1	22.9	20.8	22.1	19.5	18.4	19.0	18.8	17.2	17.9
7	17.0	15.8	16.2	22.5	20.4	22.0	20.2	19.1	19.6	18.2	17.3	17.8
8	16.8	15.3	16.1	23.0	21.5	22.3	20.6	19.6	20.2	19.3	18.2	18.7
9	17.6	16.1	16.9	23.7	22.2	22.8	21.2	19.6	20.4	18.6	17.7	18.0
10	17.6	16.4	17.2	23.5	22.6	23.0	21.1	20.3	20.7	20.7	18.2	19.5
11	19.0	17.1	18.0	23.2	22.2	22.9	20.4	19.4	19.9	22.3	19.4	21.1
12	19.2	18.4	18.9	22.2	20.9	21.6	20.1	17.8	19.6	22.5	20.8	22.0
13	19.4	18.0	18.9	22.6	20.6	21.7	19.6	18.9	19.4	21.2	17.6	19.5
14	19.8	18.8	19.3	23.7	21.1	22.5	18.9	17.6	18.1	17.6	15.8	16.3
15	19.5	18.6	19.1	25.4	22.5	23.7	18.0	16.8	17.5	15.9	14.8	15.1
16	19.9	18.0	19.1	25.1	24.1	24.6	18.3	16.9	17.7	15.3	14.7	14.9
17	21.0	18.8	19.9	26.0	24.0	25.0	18.9	17.4	18.2	14.8	13.5	14.2
18	20.5	19.0	19.7	26.2	24.4	25.3	19.7	18.3	18.9	16.9	13.6	14.5
19	19.5	17.8	18.8	26.4	23.5	25.5	20.3	18.6	19.5	16.9	14.9	15.8
20	19.8	17.6	18.7	26.2	23.4	25.0	21.0	19.1	20.1	20.1	16.9	19.1
21	20.5	17.8	19.4	24.7	23.6	24.1	21.8	20.2	21.0	20.0	18.6	19.5
22	21.1	18.1	20.2	24.0	22.5	23.2	22.4	21.0	21.9	18.6	16.3	17.2
23	23.0	20.4	21.6	22.9	21.5	22.2	22.4	21.1	21.6	16.3	14.4	15.0
24	23.0	21.7	22.4	21.7	20.1	20.8	21.2	19.9	20.8	14.4	13.5	13.9
25	---	---	---	20.8	19.2	19.8	21.4	19.8	20.6	14.6	13.3	13.9
26	22.8	19.8	22.1	20.5	19.3	19.9	22.4	20.5	21.5	14.6	13.6	14.1
27	23.5	21.5	22.6	20.5	19.2	20.0	22.6	21.7	22.2	15.4	14.0	14.6
28	22.3	21.1	21.4	20.1	18.2	19.0	22.8	19.5	22.3	15.9	14.7	15.3
29	21.1	20.4	20.6	18.2	17.4	17.8	23.1	21.9	22.5	15.9	15.7	15.8
30	21.0	19.9	20.5	19.1	17.1	18.1	23.1	22.1	22.6	16.6	15.6	16.1
31	---	---	---	19.5	18.6	18.9	---	---	---	---	---	---
Month	---	---	---	26.4	17.1	21.7	---	---	---	---	---	---

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	9.2	8.5	8.8	9.6	9.2	9.5	14.5	12.2	13.2	14.1	13.0	13.6
2	9.1	8.4	8.8	9.9	9.4	9.7	13.1	9.7	11.4	14.2	13.5	13.8
3	8.6	7.7	8.1	10.3	9.1	9.8	10.8	9.4	10.0	13.9	11.5	13.3
4	8.0	7.4	7.6	10.8	10.0	10.4	10.2	9.3	9.7	14.1	13.0	13.5
5	7.4	6.8	7.2	11.2	10.5	10.8	11.0	8.8	9.9	14.5	13.3	13.9
6	8.2	7.3	7.7	11.1	10.1	10.8	12.7	10.5	11.5	14.0	11.2	13.4
7	8.8	7.5	8.2	11.5	10.8	11.1	12.4	11.5	12.0	14.4	13.1	13.7
8	9.2	8.5	8.9	11.8	10.9	11.4	12.0	10.8	11.5	14.5	11.0	13.7
9	9.7	9.1	9.4	12.0	9.9	11.4	11.7	10.6	11.2	14.5	11.7	13.8
10	9.5	8.6	9.0	11.6	10.7	11.1	11.9	9.7	11.3	14.1	13.4	13.8
11	9.6	8.7	9.2	11.3	10.0	10.7	13.0	11.4	12.2	13.9	11.0	12.6
12	9.5	8.8	9.1	10.1	8.2	9.1	13.8	12.2	13.0	12.3	11.8	12.1
13	9.7	9.2	9.4	9.5	8.0	8.8	14.0	12.7	13.4	11.9	11.0	11.4
14	9.6	7.7	8.3	11.2	9.5	10.5	14.4	13.0	13.8	12.3	11.3	11.8
15	7.7	7.1	7.2	12.0	11.0	11.4	14.0	12.9	13.4	13.2	12.3	12.8
16	8.0	7.2	7.5	12.4	11.3	11.9	13.2	9.9	12.0	13.5	12.5	13.3
17	7.8	7.5	7.6	12.8	11.6	12.2	11.6	10.6	11.1	13.5	13.1	13.3
18	7.7	6.7	7.2	12.6	10.3	12.0	12.3	10.6	11.5	14.0	12.7	13.5
19	7.4	6.9	7.2	12.8	11.3	12.1	12.4	11.1	11.9	14.0	13.2	13.6
20	7.9	7.3	7.5	12.5	10.5	11.7	12.3	9.6	11.5	13.8	12.9	13.3
21	8.1	7.4	7.9	12.5	10.6	11.6	11.1	10.2	10.8	14.2	12.2	13.5
22	8.3	7.9	8.1	12.7	10.6	11.7	12.3	11.1	11.8	13.8	13.3	13.6
23	8.1	6.8	7.5	11.6	8.6	10.5	13.0	12.2	12.6	14.0	11.1	13.3
24	7.4	6.7	6.9	12.1	9.5	11.0	13.3	11.5	12.8	13.6	11.2	13.1
25	6.7	6.2	6.5	12.9	10.2	11.8	13.9	13.0	13.4	12.8	11.1	12.5
26	6.7	6.0	6.3	13.6	11.6	12.6	13.5	11.6	13.1	12.2	11.6	11.9
27	7.6	6.7	7.2	14.1	12.0	13.1	13.7	13.1	13.4	12.1	11.4	11.7
28	8.5	7.6	8.0	14.6	11.0	13.4	13.9	11.7	13.5	12.3	10.6	11.8
29	9.0	8.5	8.7	14.9	12.8	13.9	13.6	11.0	13.1	12.7	12.0	12.5
30	9.4	8.9	9.2	14.7	11.4	13.5	13.6	12.9	13.4	12.4	11.5	11.9
31	9.4	8.7	9.2	---	---	---	13.8	11.5	13.3	12.1	11.3	11.6
Month	9.7	6.0	8.0	14.9	8.0	11.3	14.5	8.8	12.2	14.5	10.6	13.0

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	13.1	12.1	12.6	12.7	12.2	12.4	15.4	10.2	12.8	10.7	9.0	9.7
2	13.1	12.0	13.0	13.2	12.5	12.9	15.6	11.4	13.4	10.6	8.4	9.3
3	12.9	12.7	12.8	13.6	13.1	13.3	16.7	12.1	14.2	10.4	7.9	9.0
4	12.7	11.9	12.6	13.8	12.5	13.3	16.9	12.1	14.3	10.6	7.8	9.0
5	12.5	12.5	12.5	13.8	13.1	13.4	16.6	11.4	13.8	10.7	7.9	9.1
6	12.8	11.8	12.6	13.4	12.2	13.0	16.1	11.0	13.4	10.5	7.9	9.1
7	13.0	12.8	12.9	13.1	12.6	12.8	15.8	10.8	13.2	10.4	8.0	9.0
8	13.0	12.8	12.9	13.6	12.5	13.0	13.3	10.5	11.9	9.8	7.7	8.6
9	13.2	11.2	13.0	13.5	12.6	13.0	11.9	10.0	10.9	9.7	7.3	8.3
10	13.2	12.9	13.0	12.9	11.8	12.5	10.8	9.6	10	8.3	6.1	7.2
11	12.9	11.3	12.5	12.2	10.8	11.2	11.0	10.1	10.7	8.4	6.3	7.3
12	13.0	12.6	12.9	11.6	10.8	11.2	11.1	10.9	10.9	10.2	7.8	9.0
13	13.3	12.9	13.1	12.6	11.6	12.1	11.0	10.7	10.8	11.5	9.4	10.4
14	13.1	12.1	12.9	13.5	12.4	12.9	11.5	11.0	11.2	11.8	9.7	10.6
15	13.1	12.6	12.8	13.0	11.4	12.7	11.8	10.8	11.3	11.2	8.9	9.9
16	13.4	12.6	13.1	12.9	12.1	12.5	10.8	9.9	10.3	10.4	7.7	8.9
17	13.9	13.2	13.5	13.8	12.1	13.0	11.7	9.6	10.5	10.3	7.3	8.7
18	13.9	11.4	13.4	13.3	11.6	12.8	10.7	8.9	9.8	10.0	7.3	8.5
19	13.3	12.1	12.9	13.6	12.0	12.9	8.9	8.1	8.4	9.5	7.0	8.1
20	13.3	12.8	13.1	14.3	12.8	13.6	10.7	8.9	9.7	8.8	6.4	7.4
21	13.8	13.2	13.4	14.6	12.6	13.9	11.7	10.7	11.2	7.0	5.9	6.5
22	13.7	12.1	13.4	14.9	13.4	14.1	11.4	10.7	11.1	6.5	5.4	5.9
23	13.6	11.2	13.2	14.8	11.4	13.7	11.1	10.1	10.6	6.3	5.3	5.6
24	13.8	12.0	13.3	14.5	12.8	13.6	10.1	9.1	9.5	7.8	5.6	6.6
25	14.0	13.3	13.6	14.5	12.6	13.5	11.1	9.9	10.6	9.0	7.3	8.0
26	13.4	11.2	13.0	15.0	11.8	13.7	11.8	10.8	11.2	8.9	7.7	8.3
27	12.8	12.2	12.6	15.5	12.4	13.8	11.6	10.3	10.9	8.5	7.7	8.1
28	12.5	12.2	12.4	16.1	12.2	13.8	10.4	9.5	9.8	8.5	6.6	7.5
29	---	---	---	16.1	11.9	13.7	10.1	9.3	9.6	7.7	7.1	7.4
30	---	---	---	16.3	11.4	13.6	10.4	9.3	9.7	7.6	5.5	6.6
31	---	---	---	15.1	10.6	12.7	---	---	---	6.2	3.9	5.4
Month	14.0	11.2	13.0	16.3	10.6	13.1	16.9	8.1	11.2	11.8	3.9	8.2

04166500 RIVER ROUGE AT DETROIT, MI—Continued

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

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	6.0	4.5	5.5	7.8	6.8	7.0	7.6	5.5	6.5	---	---	---
2	6.5	5.7	5.8	7.4	7.0	7.2	7.1	6.1	6.5	---	---	---
3	6.6	5.8	6.2	7.4	7.0	7.2	7.1	6.4	6.7	---	---	---
4	7.1	6.3	6.6	7.2	6.8	6.9	7.3	6.3	6.7	6.9	6.4	6.6
5	6.9	5.9	6.5	7.5	6.3	6.7	7.3	6.5	6.9	7.2	6.5	6.7
6	6.9	5.9	6.4	7.3	6.5	6.6	7.3	6.7	6.9	7.3	6.7	7.0
7	7.2	6.2	6.5	7.5	5.1	5.9	7.3	6.6	6.9	7.5	6.9	7.1
8	7.5	6.9	7.1	7.2	5.6	6.2	7.3	6.2	6.8	7.3	6.8	7.0
9	7.4	6.7	7.0	6.4	5.5	6.0	7.2	6.3	6.7	7.5	6.9	7.1
10	7.4	3.8	5.8	7.0	5.7	6.0	7.4	6.0	6.7	7.6	6.7	7.0
11	6.8	6.1	6.5	6.6	6.2	6.3	7.7	6.3	6.9	7.1	5.6	6.7
12	6.5	6.1	6.3	7.0	6.5	6.7	7.9	6.3	6.9	6.6	3.0	5.5
13	7.3	5.4	6.2	7.0	6.5	6.7	7.1	6.0	6.8	7.0	6.3	6.6
14	6.3	5.6	5.8	7.0	6.3	6.6	7.9	7.1	7.5	8.0	7.0	7.5
15	6.7	6.2	6.4	6.9	4.9	6.3	8.1	7.4	7.7	8.2	7.7	8.0
16	7.4	6.1	6.5	5.0	3.5	4.1	8.0	7.4	7.7	8.4	8.0	8.1
17	6.7	6.2	6.3	5.3	4.4	4.8	8.0	7.3	7.6	8.6	8.0	8.3
18	6.6	6.1	6.3	5.5	4.3	4.7	7.9	7.0	7.4	8.5	7.8	8.2
19	7.1	6.2	6.6	6.3	2.3	4.0	7.6	6.8	7.2	8.3	7.7	8.0
20	7.3	6.6	6.8	6.0	3.8	4.5	7.4	6.6	7.1	8.2	5.3	6.5
21	7.2	6.5	6.8	5.9	4.6	5.3	7.3	6.4	6.8	7.2	5.4	6.5
22	7.4	6.2	6.5	6.0	5.1	5.5	7.2	6.0	6.5	7.4	6.6	7.0
23	6.6	6.0	6.3	6.6	5.4	5.8	7.2	5.9	6.5	8.0	7.2	7.6
24	---	---	---	6.7	5.8	6.2	7.0	6.0	6.6	8.3	7.7	8.1
25	---	---	---	7.2	6.1	6.5	7.5	6.2	6.7	8.5	7.9	8.2
26	6.8	4.5	5.4	7.2	6.4	6.7	7.2	6.0	6.6	8.3	7.9	8.1
27	6.8	5.4	5.7	8.1	3.5	6.2	6.5	5.1	5.9	8.3	7.8	8.0
28	6.5	4.2	5.8	7.2	4.9	6.5	7.3	4.3	5.4	8.0	7.6	7.8
29	6.5	6.0	6.3	7.3	6.9	7.1	6.2	5.5	5.8	7.8	7.2	7.4
30	6.9	6.3	6.7	7.6	6.9	7.2	6.5	5.6	5.9	7.4	6.8	7.1
31	---	---	---	7.2	6.7	6.9	---	---	---	---	---	---
Month	---	---	---	8.1	2.3	6.1	---	---	---	---	---	---

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 2012 TO SEPTEMBER 2013

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	October			November			December			January		
1	20	14	18	9.6	6.5	7.5	6.7	4.8	5.6	86	55	75
2	24	12	18	8.2	6.1	7.0	12	5.7	7.6	81	55	72
3	24	18	21	9.5	6.2	6.8	12	8.2	10	77	70	73
4	26	17	20	7.6	5.7	6.7	22	9.0	10	77	71	74
5	22	14	18	7.7	5.1	6.1	22	11	14	80	75	77
6	32	16	20	12	4.5	6.3	19	7.3	10	85	75	78
7	27	16	20	7.3	5.1	6.1	8.7	6.5	7.5	80	76	78
8	19	14	16	7.7	5.1	6.2	11	7.0	8.1	84	76	78
9	16	12	14	8.7	4.4	6.1	14	7.8	9.2	88	74	79
10	20	12	14	12	5.2	6.9	17	7.5	8.6	880	16	81
11	17	12	15	13	5.5	7.4	8.2	5.6	7.1	140	33	81
12	17	11	13	47	5.8	12	8.3	5.3	5.9	72	25	38
13	66	9.0	11	28	14	19	9.5	5.2	6.2	71	23	48
14	160	45	90	14	6.7	8.1	9.2	5.6	6.3	62	32	45
15	68	29	49	7.8	4.7	5.8	8.6	5.9	6.4	39	14	29
16	30	16	22	7.1	4.0	5.0	18	6.4	8.1	15	9.3	10
17	18	10	14	7.7	3.8	4.6	15	8.2	9.6	12	7.2	8.6
18	46	15	32	9.9	4.8	7.0	12	4.6	8.0	14	6.1	8.1
19	31	16	21	6.2	4.0	5.1	6.5	4.7	5.3	9.5	5.1	6.8
20	17	13	14	6.1	4.5	5.2	87	3.9	5.3	12	5.2	6.2
21	14	10	12	6.1	4.7	5.4	510	76	140	7.1	3.3	5.0
22	12	8.7	9.9	6.6	4.4	5.3	510	73	92	5.6	3.9	4.4
23	37	9.3	28	11	5.3	6.6	75	61	68	9.2	3.6	4.1
24	31	15	20	11	5.5	7.0	96	64	76	4.1	2.1	3.7
25	16	11	12	8.4	4.8	6.1	85	73	80	3.7	1.8	3.0
26	11	8.9	9.9	5.6	4.5	5.1	86	74	79	3.1	2.4	2.8
27	11	8.5	9.3	6.9	4.5	5.2	96	54	86	3.1	2.3	2.6
28	10	8.0	9.3	12	4.1	5.2	74	44	64	90	1.6	3.9
29	9.9	6.7	8.4	7.6	4.6	5.2	83	69	74	130	42	60
30	9.2	6.7	7.7	6.1	4.5	5.1	85	59	70	160	85	140
31	12	8.1	10	---	---	---	100	70	75	86	46	58
Max	160	45	90	47	14	19	510	76	140	880	85	140
Min	9.2	6.7	7.7	5.6	3.8	4.6	6.5	3.9	5.3	3.1	1.6	2.6

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 2012 TO SEPTEMBER 2013

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	February			March			April			May		
1	46	20	32	45	0.0	35	59	5.8	32	18	9.4	13
2	35	11	14	23	12	16	78	15	36	17	9.2	12
3	12	8.2	9.8	30	10	12	150	5.3	57	18	9.8	12
4	10	6.4	7.3	27	8.1	9.7	180	5.7	60	21	10	13
5	8.1	5.4	6.3	10	7.4	8.5	180	5.6	72	17	11	13
6	8.9	5.5	6.7	10	7.0	8.3	160	5.2	42	19	11	14
7	7.9	5.5	6.4	9.6	7.5	8.7	260	6.5	44	17	10	13
8	8.0	6.2	7.0	10	7.0	8.8	990	24	190	17	10	13
9	17	6.0	7.0	11	7.9	8.9	410	5.4	41	18	9.8	13
10	22	6.2	8.5	18	8.7	9.9	190	6.3	53	31	13	16
11	44	10	21	53	11	21	160	77	110	29	12	16
12	34	14	20	100	38	74	94	44	62	17	7.3	10
13	15	9.4	11	38	14	22	44	30	34	12	6.0	8.3
14	12	7.8	8.6	16	9.2	11	32	16	18	12	6.8	8.7
15	9.6	6.7	7.9	23	6.7	8.2	19	10	13	14	8.0	9.8
16	9.1	4.5	7.4	20	7.2	8.6	23	11	15	14	8.4	10
17	10	4.8	7.1	19	9.2	12	58	9.0	13	15	8.8	10
18	15	5.6	6.8	40	7.4	11	130	49	85	15	9.6	12
19	19	6.5	8.1	16	7.4	10	85	45	62	16	10	13
20	21	10	17	9.8	6.4	7.4	47	30	39	19	12	14
21	11	6.3	7.6	13	6.2	7.2	32	14	19	21	13	16
22	10	4.4	5.6	16	5.5	7.0	20	10	13	25	16	19
23	19	4.4	5.5	18	4.7	6.2	15	8.6	12	38	24	28
24	8.2	4.7	5.7	7.0	5.0	5.7	44	13	38	38	20	27
25	11	4.5	6.3	7.1	4.5	5.1	40	19	24	30	14	21
26	91	7.1	10	5.8	3.7	4.8	21	9.8	13	25	15	19
27	110	52	63	5.8	4.6	5.0	15	8.8	12	89	15	19
28	61	26	40	6.3	4.0	5.3	18	8.6	11	100	58	84
29	---	---	---	8.3	4.7	5.7	26	14	18	92	59	66
30	---	---	---	18	5.5	7.0	19	8.7	12	240	37	58
31	---	---	---	34	7.8	14	---	---	---	91	38	59
Max	110	52	63	100	38	74	990	77	190	240	59	84
Min	7.9	4.4	5.5	5.8	0.0	4.8	15	5.2	11	12	6.0	8.3

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 2012 TO SEPTEMBER 2013

Day	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
	June			July			August			September		
1	91	52	58	51	26	33	76	32	52	---	---	---
2	64	34	42	84	40	56	38	16	25	---	---	---
3	43	31	36	46	24	33	26	14	19	---	---	---
4	42	28	32	30	16	22	25	14	18	34	19	24
5	38	27	32	88	17	22	23	14	19	27	17	22
6	39	28	33	60	14	21	25	13	20	23	16	19
7	45	28	34	75	27	37	28	12	19	22	14	18
8	38	26	30	190	43	99	25	11	18	21	15	18
9	36	26	31	190	62	110	25	12	17	28	14	18
10	190	31	130	200	70	91	23	10	15	21	13	16
11	110	55	75	85	34	56	26	10	16	100	11	17
12	56	32	41	39	20	29	110	16	21	230	72	140
13	180	47	95	32	13	24	120	72	100	76	38	58
14	59	35	42	18	5.4	12	81	26	38	39	19	25
15	51	37	42	200	5.7	12	34	16	22	26	15	19
16	56	39	44	130	44	55	27	17	21	21	15	18
17	53	33	42	45	17	26	27	16	21	20	14	17
18	55	36	43	56	16	22	25	16	21	20	13	17
19	50	30	36	40	12	19	24	15	20	20	13	16
20	37	26	32	68	18	49	25	15	19	300	16	110
21	36	23	30	52	14	24	25	14	18	94	39	62
22	39	22	30	26	13	20	22	13	17	40	18	24
23	35	21	28	44	20	25	23	13	18	20	12	15
24	---	---	---	44	20	30	24	14	18	15	11	13
25	---	---	---	29	15	22	26	14	19	15	9.5	12
26	120	51	96	24	14	19	24	13	18	15	11	12
27	140	27	46	230	19	24	67	18	21	16	10	12
28	260	78	140	100	43	57	99	45	75	15	10	12
29	110	58	74	49	20	32	54	22	30	16	9.0	12
30	60	32	48	26	13	18	33	18	23	23	16	19
31	---	---	---	32	13	17	---	---	---	---	---	---
Max	---	---	---	230	70	110	---	---	---	---	---	---
Min	---	---	---	18	5.4	12	---	---	---	---	---	---