

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

**RESEARCH AND DEVELOPMENT
DEPARTMENT**

REPORT NO. 08-59

CONTINUOUS DISSOLVED OXYGEN MONITORING

IN CHICAGO AREA WADEABLE STREAMS

DURING 2007

October 2008

Metropolitan Water Reclamation District of Greater Chicago

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**CONTINUOUS DISSOLVED OXYGEN MONITORING
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DURING 2007**

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DISCLAIMER

Mention of proprietary equipment and chemicals in this report does not constitute endorsement by the Metropolitan Water Reclamation District of Greater Chicago.

INTRODUCTION

The Metropolitan Water Reclamation District of Greater Chicago (District) began monitoring the Chicago Waterway System (CWS) (Lanyon, 2002) with continuous dissolved oxygen monitors in 1998. The initial project involved monitoring the Chicago River System and later expanded into the Calumet River System. The Continuous Dissolved Oxygen Monitoring (CDOM) program was developed to identify reaches of the waterways where the dissolved oxygen (DO) concentrations were below the DO standards established by the Illinois Pollution Control Board (IPCB). In 2005 the CDOM program expanded again and started monitoring the Chicago area wadeable streams.

Low DO levels can be caused by a multitude of sources including low gradient streams, dams, combined sewer overflow (CSO), storm water runoff, wastewater effluents, thermal discharges, respiration, decomposition, and chemical reactions. Illinois streams that are found to not meet the state DO standards are placed on the 303(d) list of impaired waters by the Illinois Environmental Protection Agency (IEPA, 2008).

The goal of this program is to better understand the DO concentrations in the wadeable streams within the Chicago area. Monitoring locations were chosen to measure DO levels above and below discharges, impoundments, and major confluences. Thirteen wadeable sites were chosen within the Chicago River system, Upper Des Plaines River system, and Calumet River system.

One monitoring location was chosen on the North Branch of the Chicago River. This location is upstream of the North Branch Dam. The North Branch watershed encompasses 113 square miles and is located both in Lake and Cook counties (Ogata, 1975).

Eight monitoring locations were chosen in the Upper Des Plaines River system. Four sites are on the Upper Des Plaines River and four sites are in Salt Creek. The entire Des Plaines River watershed covers approximately 700 square miles and originates in Wisconsin. The area within the District's jurisdiction flows southward through a highly urbanized watershed from the Lake-Cook County line to Highway 171, at which point it flows southwestward, parallel and adjacent to the Chicago Sanitary and Ship Canal, to Lockport (Schmeelk, et al., 1979). Salt Creek is an approximately 150 square mile watershed originating with the confluence of several small streams west of Palatine, Illinois (Polls, Lanyon, and Lue-Hing, 1979). Salt Creek is a tributary to the Des Plaines River and their confluence is located in the town of Lyons.

Four monitoring locations were chosen in the Calumet River system including two locations on both the Grand Calumet River and the Little Calumet River. The Grand Calumet River originates in Gary, Indiana and flows 13 miles through the heavily industrialized cities of Gary, East Chicago, and Hammond. The Little Calumet River basin is located in northeastern Illinois and northwestern Indiana. The watershed drains an area of 242 square miles, 151.2 square miles of which are in Illinois (Northeastern Illinois Planning Commission, 1981).

This report includes the monitoring results for 2007 on wadeable streams in the Chicago River System, Upper Des Plaines River System, and Calumet River System.

MONITORING STATIONS

Locations and Descriptions

The CDOM Program and the Ambient Water Quality Monitoring (AWQM) Program supply the District with water quality data throughout the year for both the wadeable streams and deep-draft waterways within its jurisdiction. All stations for both programs are shown in Figure 1. Descriptions of the wadeable CDOM stations are listed in Table 1.

Designated Uses

The IPCB has assigned water uses for specific water bodies within the state of Illinois. All waters in Illinois are designated for General Use, except those selected as Secondary Contact and Indigenous Aquatic Life Waters (Secondary Contact).

In the Chicago, Calumet, and Upper Des Plaines River Systems, General Use Waters include the North Shore Channel upstream of the North Side Water Reclamation Plant (WRP), the Chicago and Calumet Rivers, and the wadeable streams and tributaries of the Chicago, Upper Des Plaines, and Calumet River Systems.

Secondary Contact Waters include the North Shore Channel from the North Side WRP to the North Branch Chicago River, the North Branch Chicago River from the North Shore Channel to the Chicago River, the South Branch Chicago River, Bubbly Creek, the Chicago Sanitary and Ship Canal, the Grand Calumet River, the deep-draft portion of the Little Calumet River, the Calumet-Sag Channel, and the Lower Des Plaines River from its confluence with the Chicago Sanitary and Ship Canal to the Interstate Highway 55 bridge southwest of Joliet.

Water Quality Standards

The IPCB has established water quality standards for DO in both General Use and Secondary Contact Waters. In General Use Waters, the DO shall not be less than 6.0 mg/L during 16 hours of any 24-hour period, nor less than 5.0 mg/L at any time. In Secondary Contact Waters, the DO shall not be less than 4.0 mg/L at any time, except in the Calumet-Sag Channel where the DO shall not be less than 3.0 mg/L at any time. For this report, we have selected the 5.0 mg/L DO standard when calculating percent compliance for General Use Waters.

MATERIALS AND METHODS

Water Quality Monitor

The continuous water quality monitors (monitor) used to collect these data were manufactured by YSI Incorporated (YSI) of Yellow Springs, Ohio. DO was measured hourly using the YSI Model 6920 or Model 6600 monitor. In order to protect and safeguard the monitors from marine navigation and vandalism, the monitors were deployed in the field in stainless steel pipes. Installation designs resulted in a fixed length of pipe at each location with multiple 2-inch circular openings on the submerged end to allow sufficient flow of water through the pipe. Each monitor housing was vertically mounted on the side of a bridge abutment with an access hatch on the top end to allow for the exchange of monitors.

Servicing the monitors followed a weekly schedule. Industrial Waste Division personnel retrieved each monitor from the field following seven days of continuous monitoring. Prior to retrieval, a water sample for Winkler DO analysis was collected next to the protective housing. An additional monitor, that had been previously calibrated and serviced in the laboratory, was then deployed to replace the retrieved monitor. The retrieved monitors were returned to the laboratory for data downloading, exterior cleaning, servicing, and calibration of the DO sensors. The monitors were temporarily stored in holding tanks containing tap water for subsequent deployment during the following week.

Data Management and Review

Hourly DO data were directly exported electronically from individual monitors to a specially designed Access® database for data processing and storage. Following data downloading, the weekly DO data were carefully reviewed for accuracy.

The review process included the following:

1. Comparing a grab sample DO concentration measured in the field with a DO concentration recorded by a retrieved monitor (DO rejection criteria = difference greater than 2.0 mg/L).
2. Comparing the last hourly DO concentration measured by a retrieved monitor with the first hourly DO concentration recorded by a deployed monitor (DO rejection criteria = difference greater than 2.0 mg/L).
3. Comparing a DO concentration measured in a laboratory holding tank and a DO concentration recorded by a retrieved monitor (DO rejection criteria = difference greater than 1.0 mg/L).

Criterion 3 would entail rejection of all hourly readings; criteria 1 and 2 may or may not reject all readings.

After careful review of the DO data, weekly summary statistics (mean, minimum, maximum, and percent observations above DO standard), and individual line drawings for each monitoring station showing hourly DO concentrations were prepared.

Verification of Representative Data

During the spring, summer, and fall of 2007, cross-sectional DO surveys were conducted in the CWS and Des Plaines River System to determine if each fixed continuous monitoring location represented the DO concentration across the waterway. Verification was achieved by comparing the DO concentrations measured in grab samples at multiple fixed locations and depths across the waterway with the fixed monitor measurements. The results from the cross-sectional surveys clearly showed that the differences across the waterway were minimal and equivalent to the DO concentration measured by the monitor at the fixed locations.

RESULTS

The annual minimum, maximum, and mean DO concentrations measured at all 13 stations during 2007 are shown in Table 2.

The number and percent of measured DO concentrations rejected and removed from the Access[®] database following review during 2007 are summarized in Table 3.

The number and percent of DO concentrations above the applicable IPCB DO standard for each waterway during 2007 are presented in Table 4. The DO data shown in Table 4 do not include the DO concentrations rejected during the data review.

Table 5 shows the percent distribution of DO concentrations from <1.0 mg/L to >5.0 mg/L at the 13 monitoring stations during 2007. The current national one-day minimum dissolved oxygen criterion for adult life stages of fish is 3.0 mg/L (Chapman, 1986).

Individual graphs showing hourly DO concentrations at each monitoring station are indicated in Figure 2 through Figure 14.

Weekly DO summary statistics during 2007 are presented for each monitoring station in Appendix A, Tables A-1 through A-13.

DO Fluctuations

DO concentrations fluctuate seasonally and daily in the aquatic environment. Cold water holds more DO than warm water, a trend that can typically be seen in annual DO graphs where the colder months have higher mean DO concentrations than the warmer months. Daily fluctuations in DO can be caused by photosynthesis during daylight hours causing a surplus of DO, and conversely, respiration by aquatic plants and algae during the night, resulting in a deficiency of DO. Other deficiencies of DO can occur when oxygen demanding materials are introduced into a waterway or by thermal discharges. Oxygen demanding materials enter a waterway most often through wastewater treatment effluents, CSOs, and stormwater run-off. Wastewater treatment effluents and CSOs contain organic materials that are decomposed by microorganisms which consume DO in the process. Stormwater run-off also can flush organic materials into the waterway. This is most evident during heavy rain storms that result in CSO events containing untreated waste and stormwater. The District Web site (www.mwrd.org) has information regarding CSO events which can be found in the Public Interest Section under the titles “CSO Event Synopsis Report” and “Combined Sewer Overflow.”

TABLE 1: WADEABLE STREAM CONTINUOUS
DISSOLVED OXYGEN MONITORING STATIONS

| Monitoring Station | Waterway | Description of Monitoring Station |
|---------------------------------|----------------------------|---|
| <u>Chicago River System</u> | | |
| Central Park Avenue | North Branch Chicago River | 0.8 mile above junction with North Shore Channel, water quality monitor on northeast side of Central Park Avenue bridge, 2 feet below water surface. |
| <u>Des Plaines River System</u> | | |
| Devon Avenue | Des Plaines River | 0.7 mile above junction with Willow Creek, water quality monitor on northwest side of Devon Avenue bridge, 2 feet below water surface. |
| Irving Park Road | Des Plaines River | 3.1 miles below junction with Willow Creek, water quality monitor on northeast side of Irving Park Road bridge, 2 feet below water surface. |
| Ogden Avenue | Des Plaines River | 1.7 miles below junction with Salt Creek, 25.8 miles above junction with Chicago Sanitary and Ship Canal, water quality monitor on center of south side of Ogden Avenue bridge, 2 feet below water surface. |
| Material Service Road | Des Plaines River | 3.2 miles above junction with Chicago Sanitary & Ship Canal, water quality monitor on center of northwest side of Material Service Road bridge, 2 feet below water surface. |

TABLE 1 (Continued): WADEABLE STREAM CONTINUOUS
DISSOLVED OXYGEN MONITORING STATIONS

| Monitoring Station | Waterway | Description of Monitoring Station |
|---|---------------------|--|
| <u>Des Plaines River System (Continued)</u> | | |
| Busse Lake Dam | Salt Creek | 0.1 mile above Egan WRP outfall, water quality monitor on bike path bridge support, downstream of Busse Woods South Dam, in center of creek, 2 feet below water surface. |
| JFK Boulevard | Salt Creek | 0.8 mile below Egan WRP outfall, water quality monitor on southeast side of J. F. Kennedy Boulevard bridge, 2 feet below water surface. |
| Thorndale Avenue | Salt Creek | 2.6 miles below Egan WRP outfall, water quality monitor on southeast side of Thorndale Avenue bridge, 2 feet below water surface. |
| Wolf Road | Salt Creek | 8.0 miles above junction with Des Plaines River, water quality monitor on northwest side of Wolf Road bridge, 1 foot below water surface. |
| <u>Calumet River System</u> | | |
| Hohman Avenue | Grand Calumet River | 3.1 miles above junction with Calumet River, water quality monitor on southeast side of Hohman Avenue bridge, 1 foot below water surface. |

TABLE 1 (Continued): WADEABLE STREAM CONTINUOUS
DISSOLVED OXYGEN MONITORING STATIONS

| Monitoring Station | Waterway | Description of Monitoring Station |
|---|----------------------|--|
| <u>Calumet River System (Continued)</u> | | |
| Torrence Avenue | Grand Calumet River | 150 feet above junction with Calumet River, 100 feet below Torrence Avenue bridge, water quality monitor attached to bridge abutment on southeast side of river, 2 feet below water surface. |
| Wentworth Avenue | Little Calumet River | 12.4 miles above junction with Calumet-Sag Channel, water quality monitor on center of east side of Wentworth Avenue bridge, 2 feet below water surface. |
| Ashland Avenue | Little Calumet River | 0.5 mile above junction with Calumet-Sag Channel, water quality monitor attached to east side Ashland Avenue bridge, 2 feet below water surface. |

TABLE 2: MINIMUM, MAXIMUM, AND MEAN HOURLY
DISSOLVED OXYGEN CONCENTRATIONS¹

| Monitoring Station | Waterway | DO Values (mg/L) | | |
|---------------------------------|----------------------------|------------------|---------|------|
| | | Minimum | Maximum | Mean |
| <u>Chicago River System</u> | | | | |
| Central Park Avenue | North Branch Chicago River | 2.0 | 16.1 | 8.8 |
| <u>Des Plaines River System</u> | | | | |
| Devon Avenue | Des Plaines River | 2.3 | 17.2 | 8.8 |
| Irving Park Road | Des Plaines River | 0.3 | 15.6 | 8.7 |
| Ogden Avenue | Des Plaines River | 0.7 | 15.4 | 9.9 |
| Material Service Road | Des Plaines River | 4.1 | 20.2 | 10.2 |
| Busse Lake Dam | Salt Creek | 1.2 | 18.3 | 10.4 |
| JFK Boulevard | Salt Creek | 3.1 | 13.9 | 9.0 |
| Thorndale Avenue | Salt Creek | 1.4 | 15.7 | 9.2 |
| Wolf Road | Salt Creek | 2.5 | 17.7 | 9.4 |
| <u>Calumet River System</u> | | | | |
| Hohman Avenue | Grand Calumet River | 0.0 | 20.1 | 3.9 |
| Torrence Avenue | Grand Calumet River | 0.0 | 23.7 | 7.3 |
| Wentworth Avenue | Little Calumet River | 7.1 | 13.8 | 11.1 |
| Ashland Avenue | Little Calumet River | 0.6 | 16.6 | 7.9 |

¹Dissolved oxygen was measured hourly using a YSI Model 6920 or Model 6600 continuous water quality monitor.

TABLE 3: NUMBER AND PERCENT OF DISSOLVED OXYGEN VALUES
NOT MEETING ACCEPTANCE CRITERIA¹

| Monitoring Station | Waterway | Number of DO Values Rejected | Percent of DO Values Rejected |
|---------------------------------|----------------------------|------------------------------|-------------------------------|
| <u>Chicago River System</u> | | | |
| Central Park Avenue | North Branch Chicago River | 339 | 4 |
| <u>Des Plaines River System</u> | | | |
| Devon Avenue | Des Plaines River | 177 | 2 |
| Irving Park Road | Des Plaines River | 6 | <1 |
| Ogden Avenue | Des Plaines River | 506 | 6 |
| Material Service Road | Des Plaines River | 5 | <1 |
| Busse Lake Dam | Salt Creek | 170 | 2 |
| JFK Boulevard | Salt Creek | 2 | <1 |
| Thorndale Avenue | Salt Creek | 841 | 10 |
| Wolf Road | Salt Creek | 536 | 6 |
| <u>Calumet River System</u> | | | |
| Hohman Avenue | Grand Calumet River | 7,026 | 80 |
| Torrence Avenue | Grand Calumet River | 672 | 8 |
| Wentworth Avenue | Little Calumet River | 6,547 | 75 |
| Ashland Avenue | Little Calumet River | 676 | 8 |

¹Dissolved oxygen was measured hourly using a YSI Model 6920 or Model 6600 continuous water quality monitor. DO values were rejected based on quality control check and/or operational problems with monitor.

TABLE 4: NUMBER AND PERCENT OF DISSOLVED OXYGEN VALUES
MEASURED ABOVE THE ILLINOIS POLLUTION CONTROL BOARD'S
WATER QUALITY STANDARD¹

| Monitoring Station | Waterway | IPCB DO Standard | Number of DO Values | Number Above Standard | Percent Above Standard |
|---------------------------------|----------------------------|------------------|---------------------|-----------------------|------------------------|
| <u>Chicago River System</u> | | | | | |
| Central Park Avenue | North Branch Chicago River | 5.0 | 8,421 | 8,028 | 95 |
| <u>Des Plaines River System</u> | | | | | |
| Devon Avenue | Des Plaines River | 5.0 | 8,583 | 7,020 | 82 |
| Irving Park Road | Des Plaines River | 5.0 | 8,754 | 7,254 | 83 |
| Ogden Avenue | Des Plaines River | 5.0 | 8,254 | 8,250 | >99 |
| Material Service Road | Des Plaines River | 5.0 | 8,755 | 8,379 | 96 |
| Busse Lake Dam | Salt Creek | 5.0 | 8,590 | 8,409 | 98 |
| J. F. Kennedy Boulevard | Salt Creek | 5.0 | 8,758 | 8,641 | 99 |
| Thorndale Avenue | Salt Creek | 5.0 | 7,919 | 7,793 | 98 |
| Wolf Road | Salt Creek | 5.0 | 8,224 | 7,752 | 94 |
| <u>Calumet River System</u> | | | | | |
| Hohman Avenue | Grand Calumet River | 4.0 | 1,734 | 806 | 46 |
| Torrence Avenue | Grand Calumet River | 4.0 | 8,088 | 5,914 | 73 |
| Wentworth Avenue | Little Calumet River | 5.0 | 2,213 | 2,213 | 100 |
| Ashland Avenue | Little Calumet River | 5.0 | 8,084 | 5,714 | 71 |

¹Dissolved oxygen was measured hourly using a YSI Model 6920 or Model 6600 continuous water quality monitor.

TABLE 5: PERCENT OF DISSOLVED OXYGEN VALUES IN SELECTED RANGES

| Monitoring Station | Waterway | Percent of DO Values in Range (mg/L) | | | | | |
|---------------------------------|----------------------------|--------------------------------------|------|------|------|------|-----|
| | | 0-<1 | 1-<2 | 2-<3 | 3-<4 | 4-<5 | ≥5 |
| <u>Chicago River System</u> | | | | | | | |
| Central Park Avenue | North Branch Chicago River | 0 | <1 | <1 | 1 | 4 | 95 |
| <u>Des Plaines River System</u> | | | | | | | |
| Devon Avenue | Des Plaines River | 0 | 0 | 1 | 5 | 13 | 82 |
| Irving Park Road | Des Plaines River | <1 | <1 | <1 | 3 | 14 | 83 |
| Ogden Avenue | Des Plaines River | <1 | 0 | <1 | 0 | <1 | >99 |
| Material Service Road | Des Plaines River | 0 | 0 | 0 | 0 | 4 | 96 |
| Busse Lake Dam | Salt Creek | 0 | <1 | <1 | 1 | 1 | 98 |
| JFK Boulevard | Salt Creek | 0 | 0 | 0 | <1 | 1 | 99 |
| Thorndale Avenue | Salt Creek | 0 | <1 | <1 | <1 | 1 | 98 |
| Wolf Road | Salt Creek | 0 | 0 | <1 | 1 | 5 | 94 |
| <u>Calumet River System</u> | | | | | | | |
| Hohman Avenue | Grand Calumet River | 28 | 10 | 8 | 7 | 7 | 39 |
| Torrence Avenue | Grand Calumet River | 8 | 5 | 7 | 7 | 7 | 66 |
| Wentworth Avenue | Little Calumet River | 0 | 0 | 0 | 0 | 0 | 100 |
| Ashland Avenue | Little Calumet River | <1 | <1 | 2 | 12 | 15 | 71 |

FIGURE 1: CONTINUOUS DISSOLVED OXYGEN MONITORING AND AMBIENT WATER QUALITY MONITORING SAMPLE STATIONS

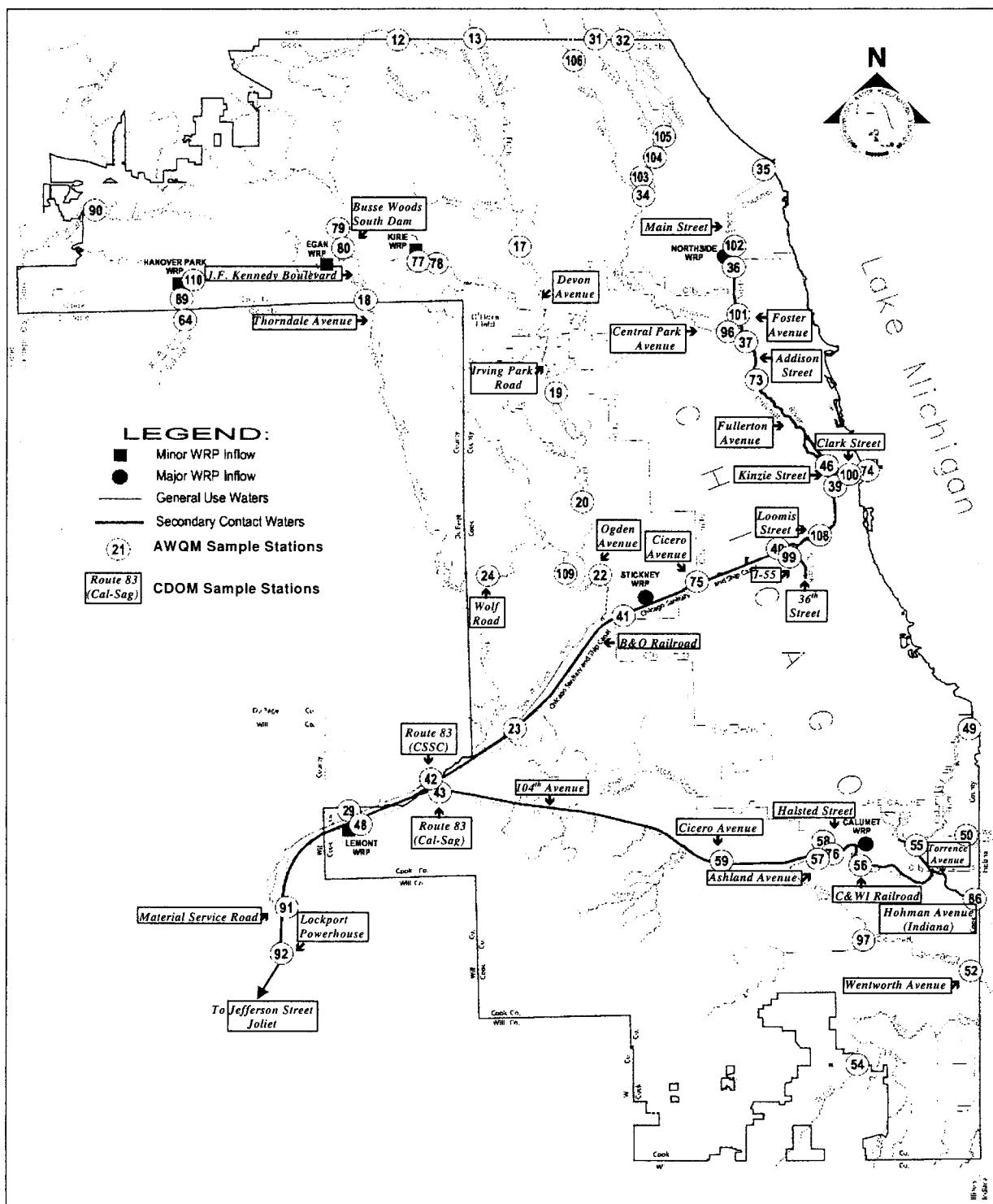


FIGURE 2: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT CENTRAL PARK AVENUE
ON THE NORTH BRANCH CHICAGO RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

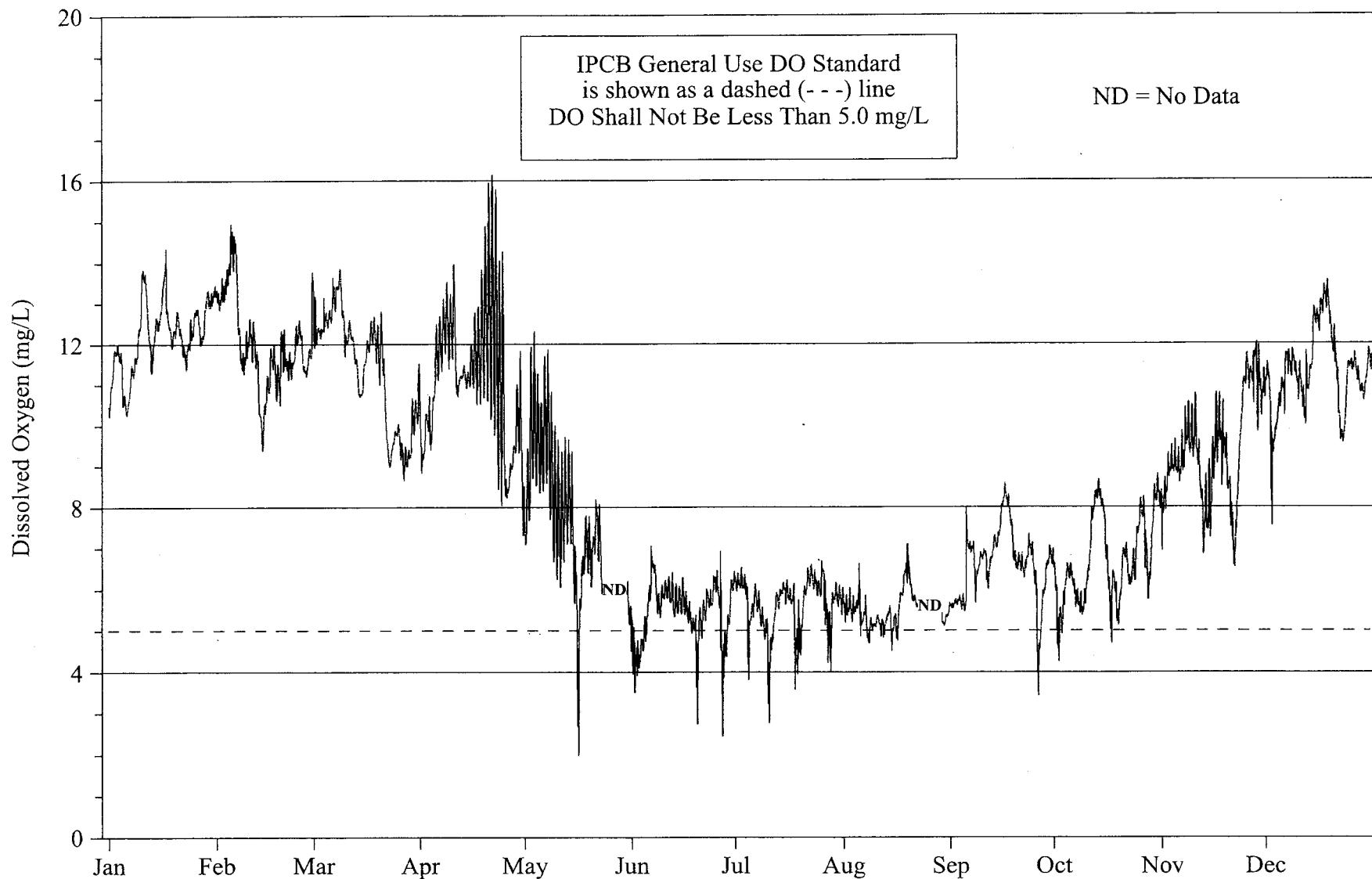


FIGURE 3: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT DEVON AVENUE
ON THE DES PLAINES RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

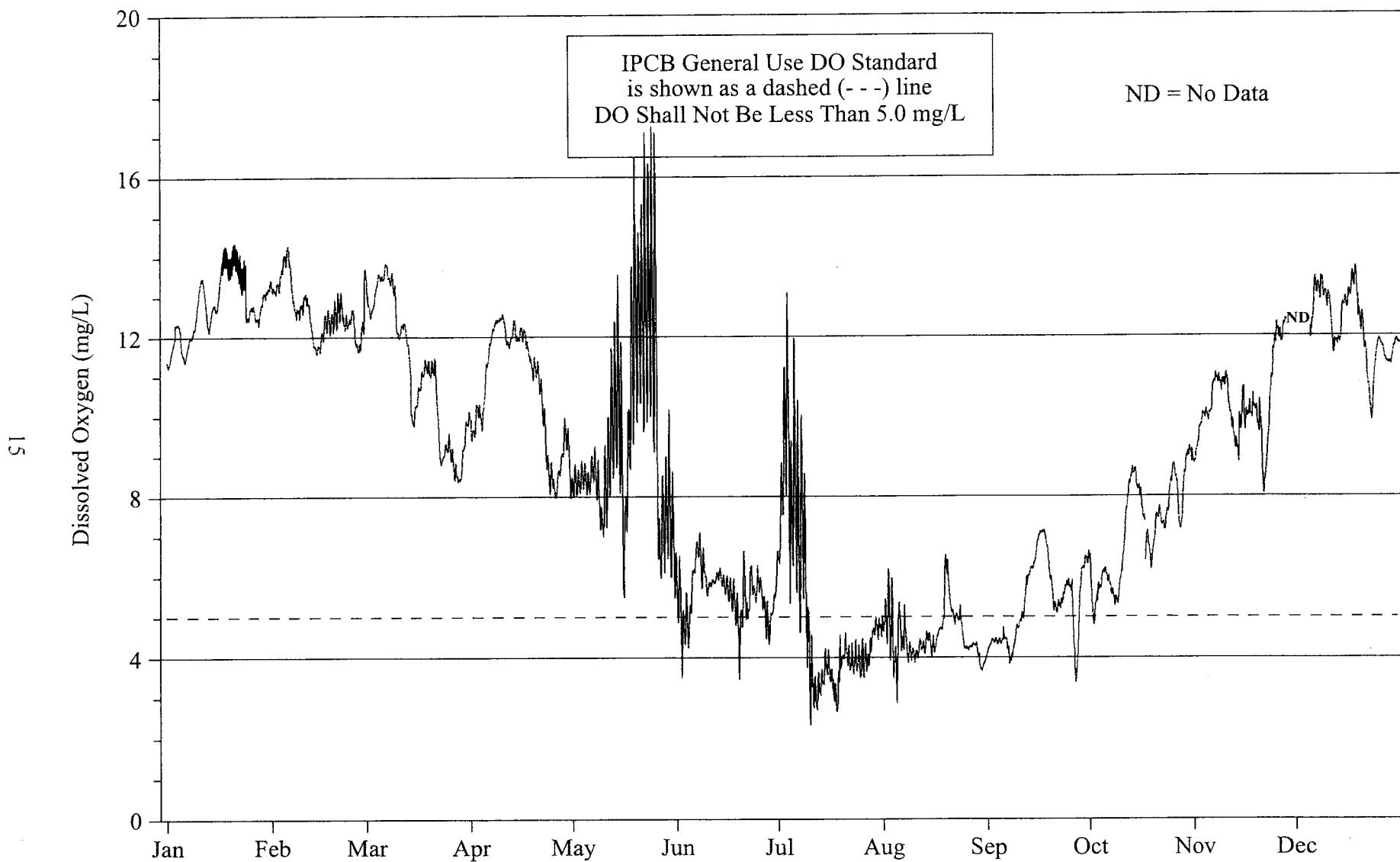


FIGURE 4: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT IRVING PARK ROAD
ON THE DES PLAINES RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

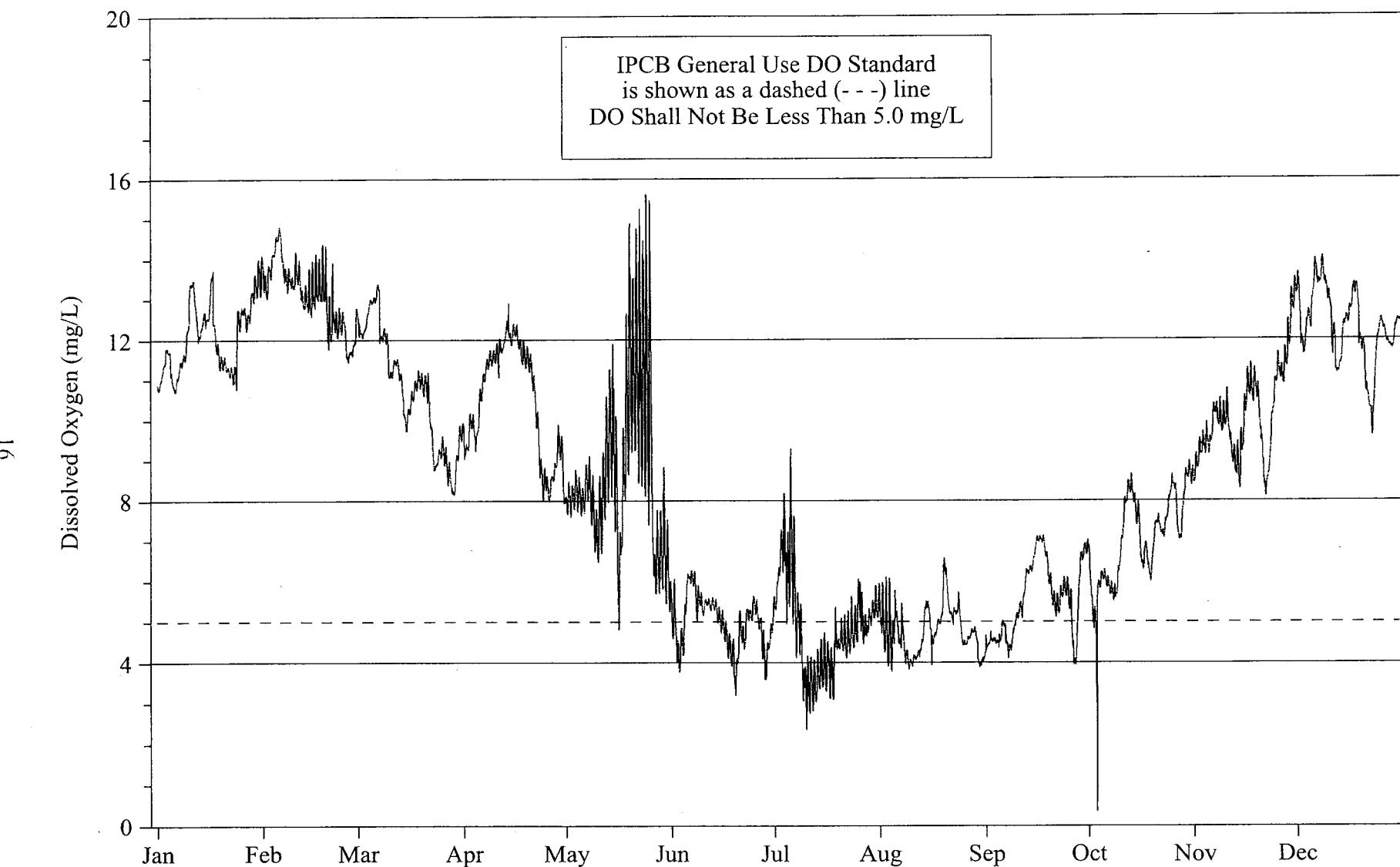


FIGURE 5: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT OGDEN AVENUE
ON THE DES PLAINES RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

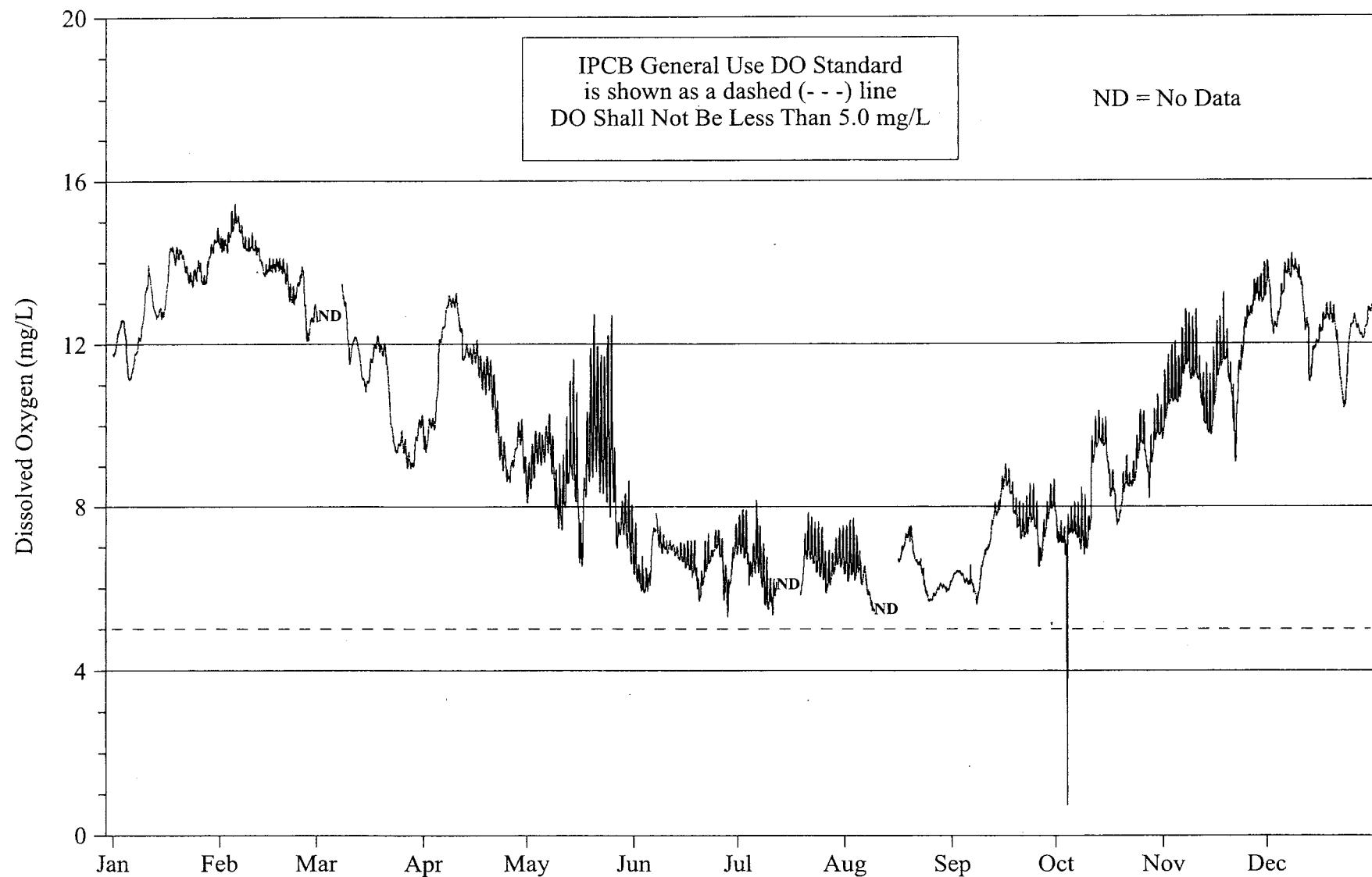


FIGURE 6: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT MATERIAL SERVICE ROAD
ON THE DES PLAINES RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

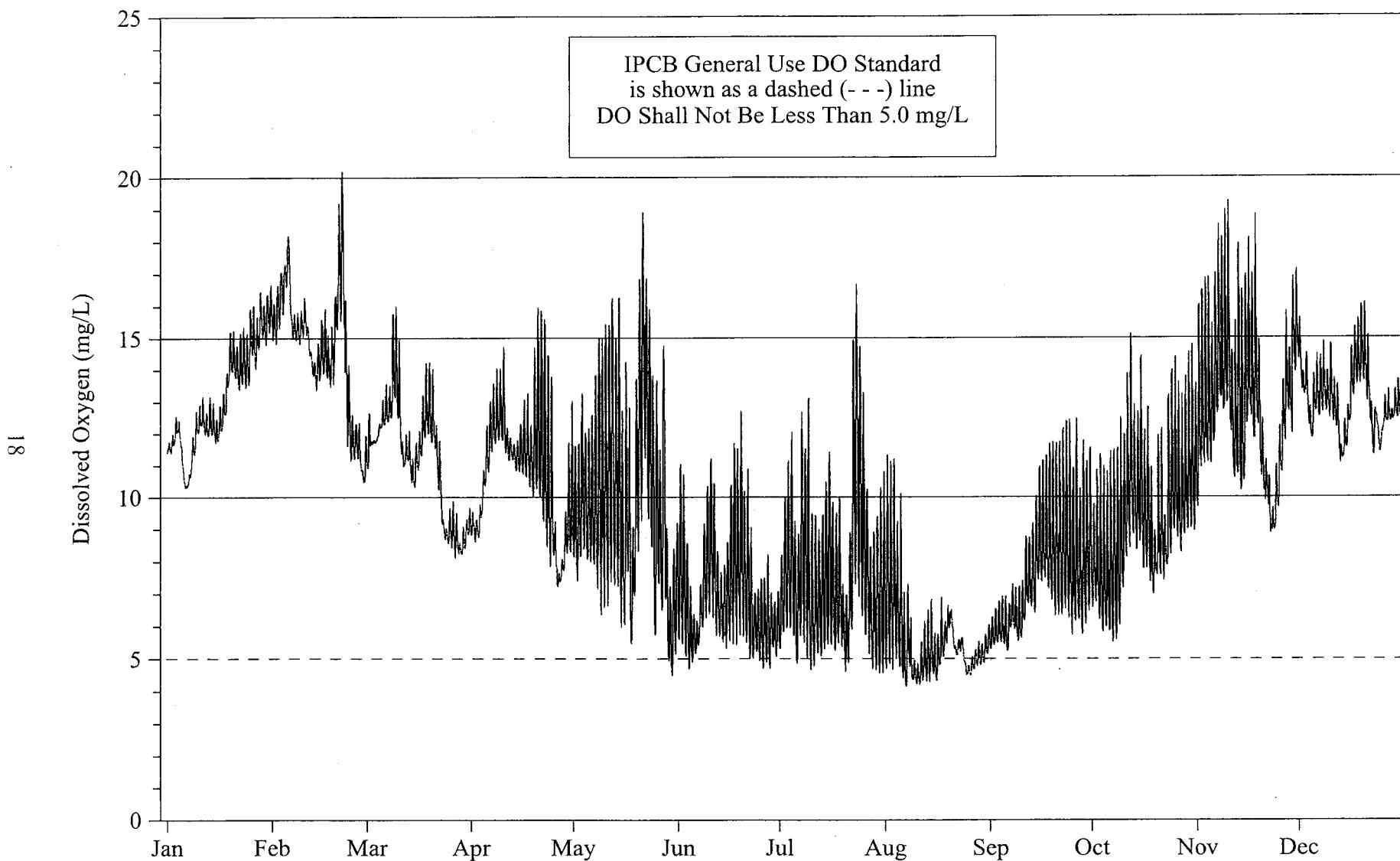


FIGURE 7: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT BUSSE LAKE DAM
ON SALT CREEK FROM JANUARY 2007 THROUGH DECEMBER 2007

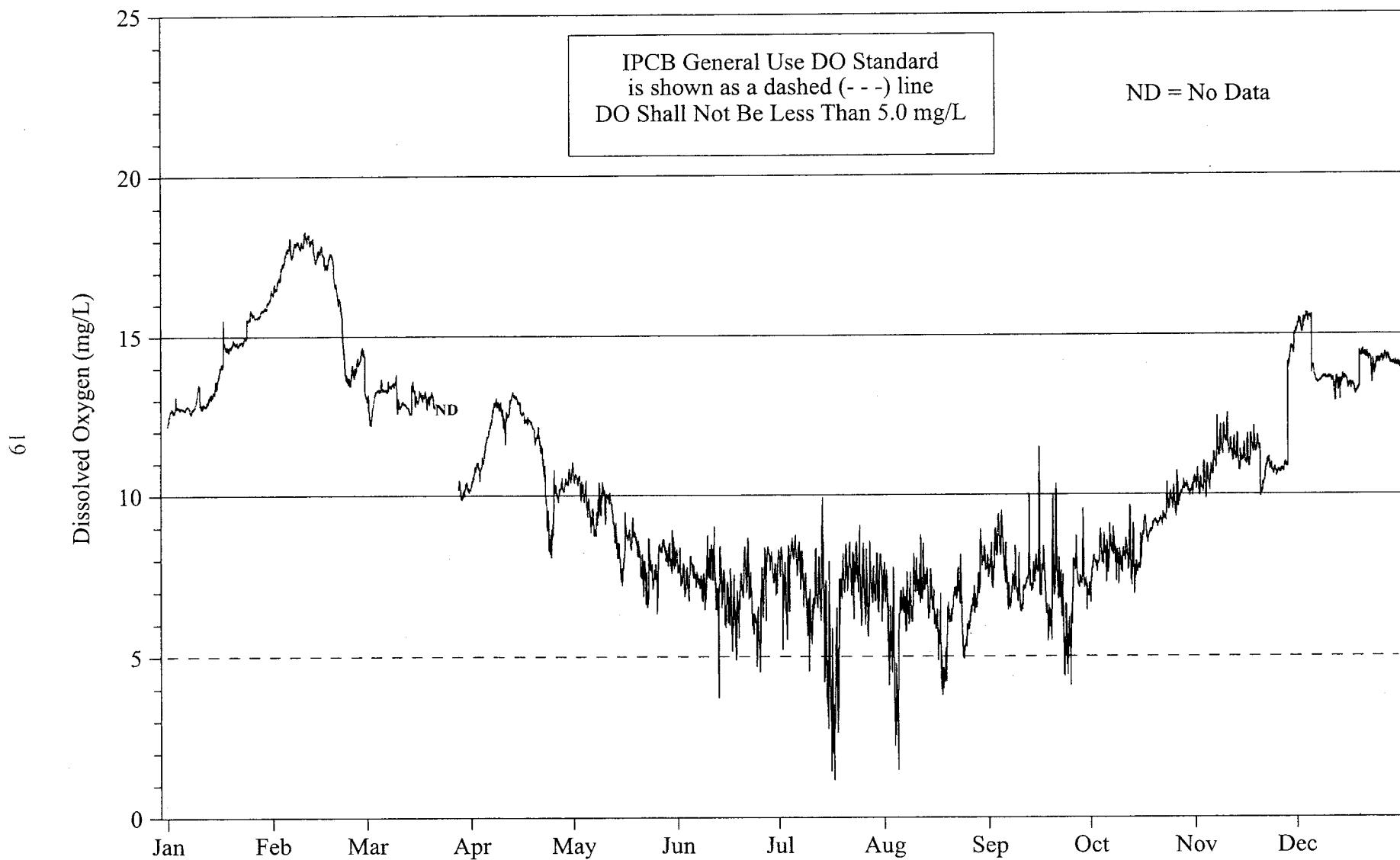


FIGURE 8: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT JFK BOULEVARD
ON SALT CREEK FROM JANUARY 2007 THROUGH DECEMBER 2007

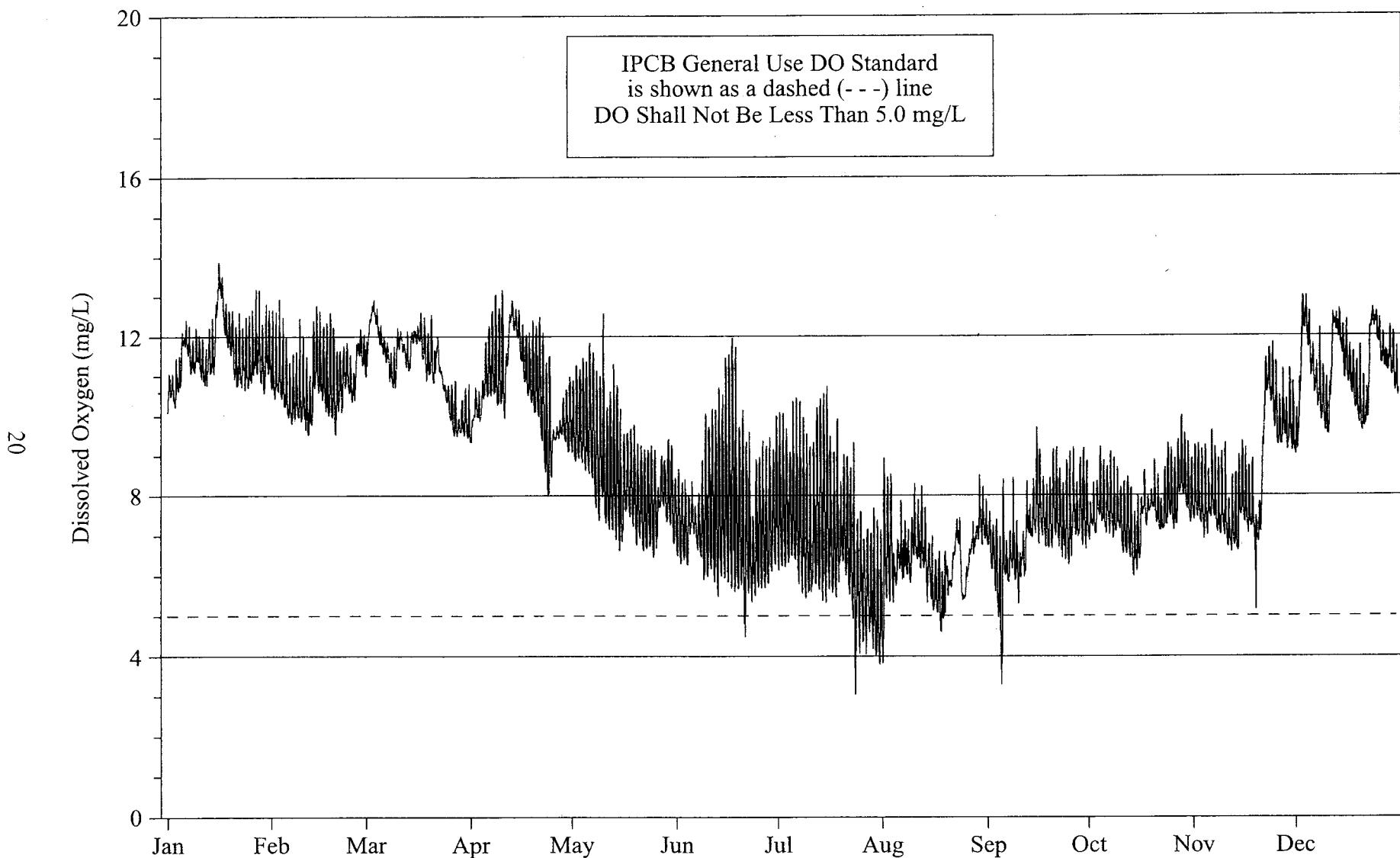


FIGURE 9: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT THORNDALE AVENUE
ON SALT CREEK FROM JANUARY 2007 THROUGH DECEMBER 2007

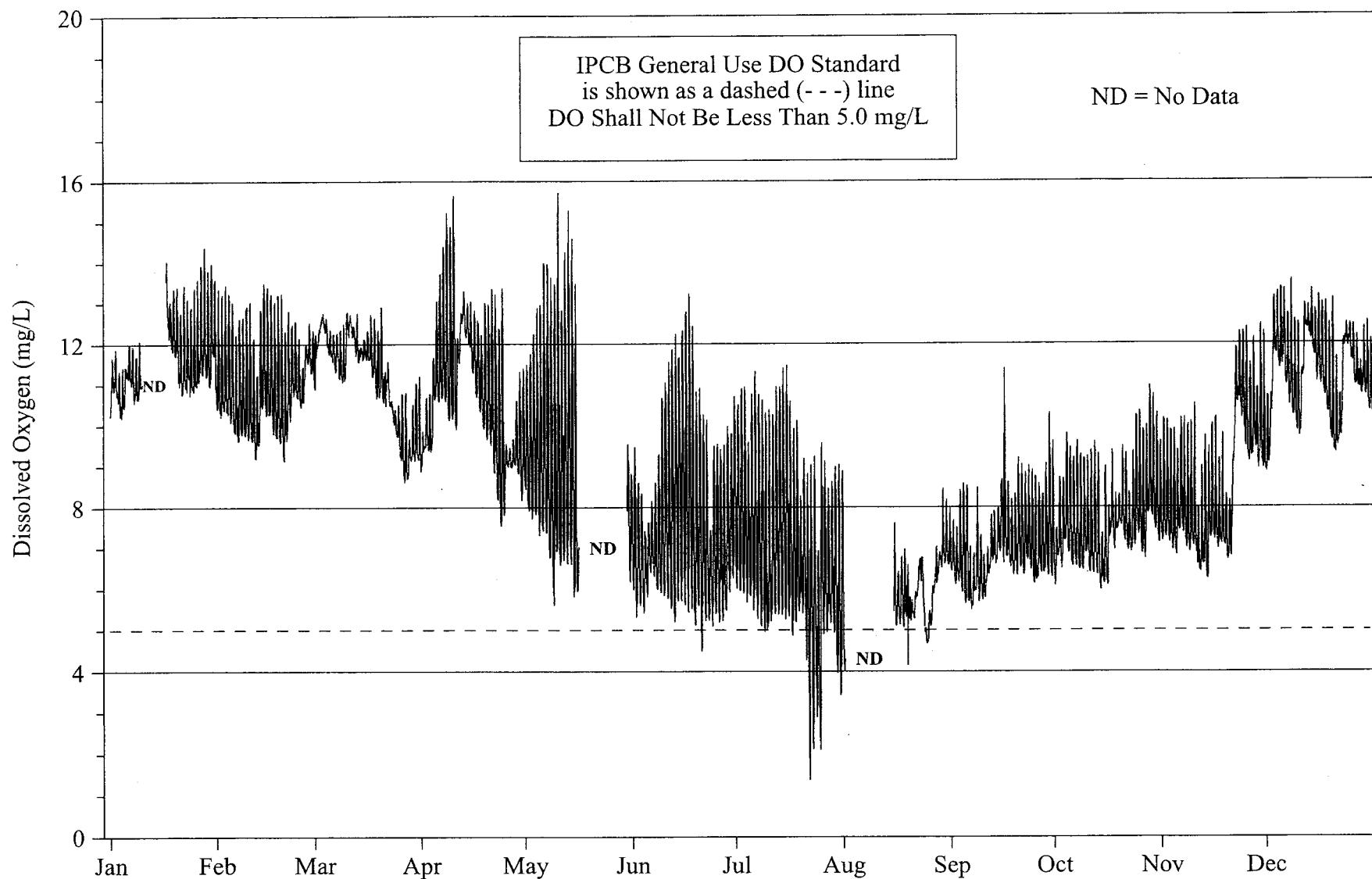


FIGURE 10: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT WOLF ROAD
ON SALT CREEK FROM JANUARY 2007 THROUGH DECEMBER 2007

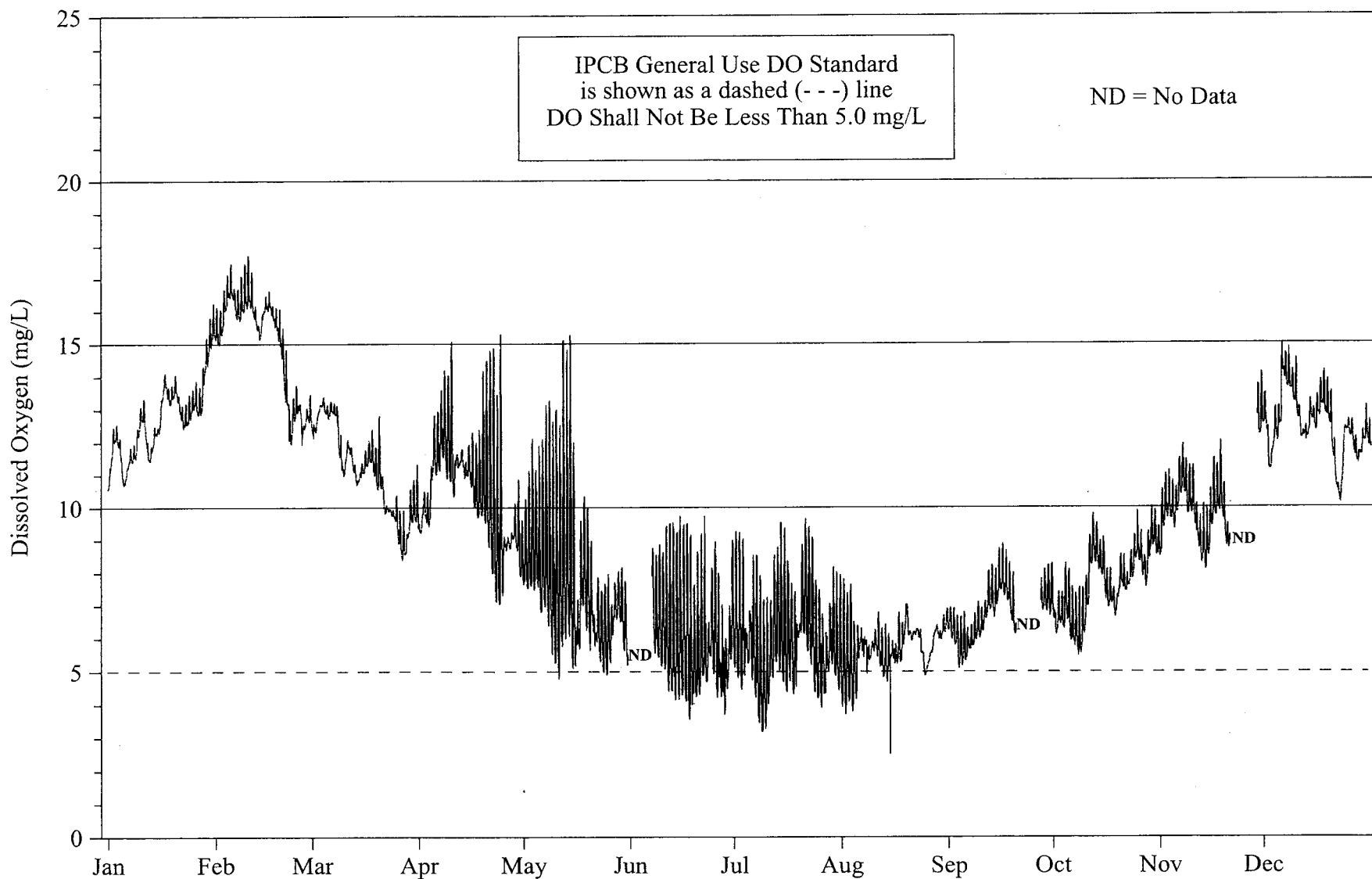


FIGURE 11: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT HOHMAN AVENUE
ON THE GRAND CALUMET RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

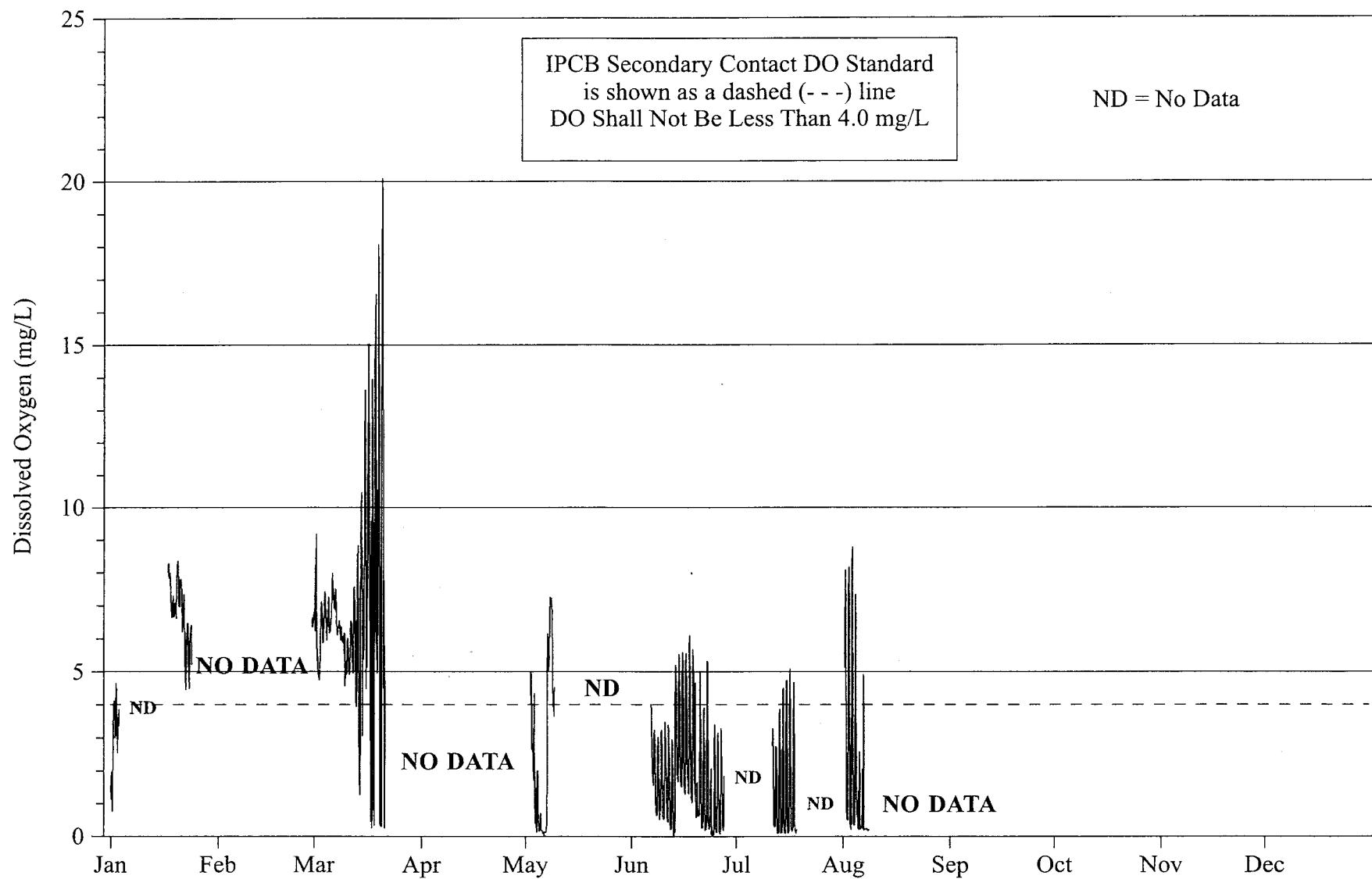


FIGURE 12: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT TORRENCE AVENUE
ON THE GRAND CALUMET RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

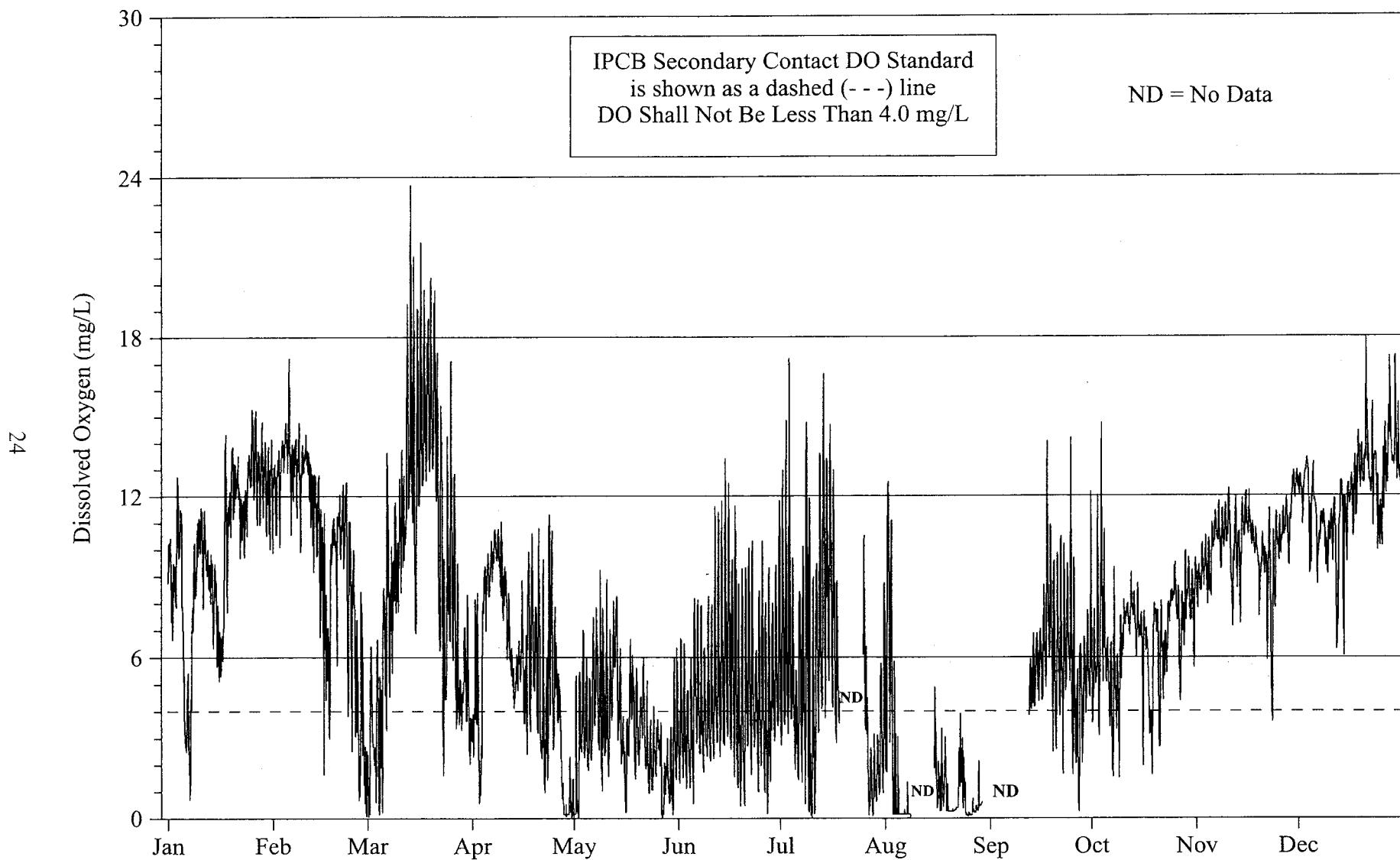


FIGURE 13: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT WENTWORTH AVENUE
ON THE LITTLE CALUMET RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

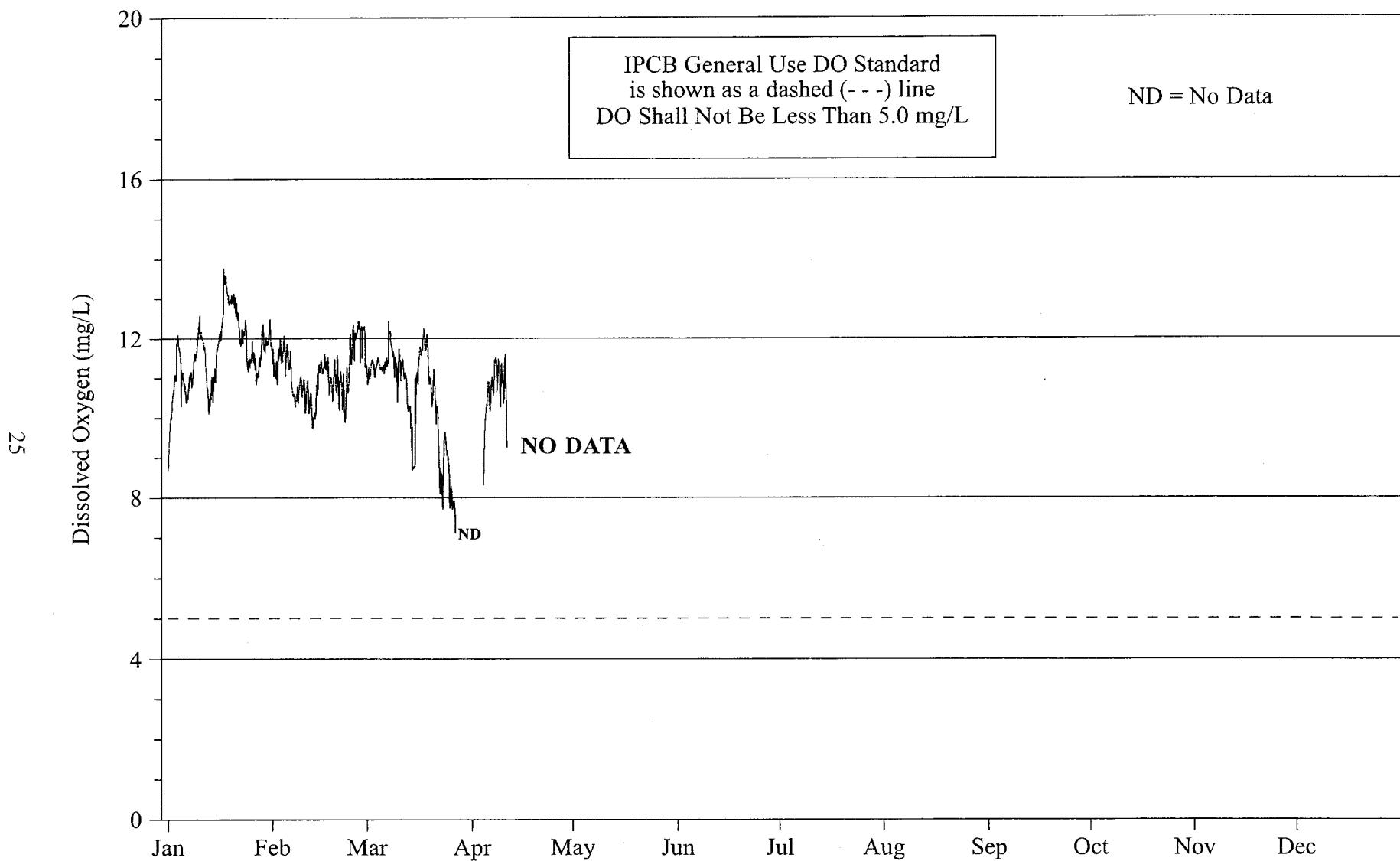
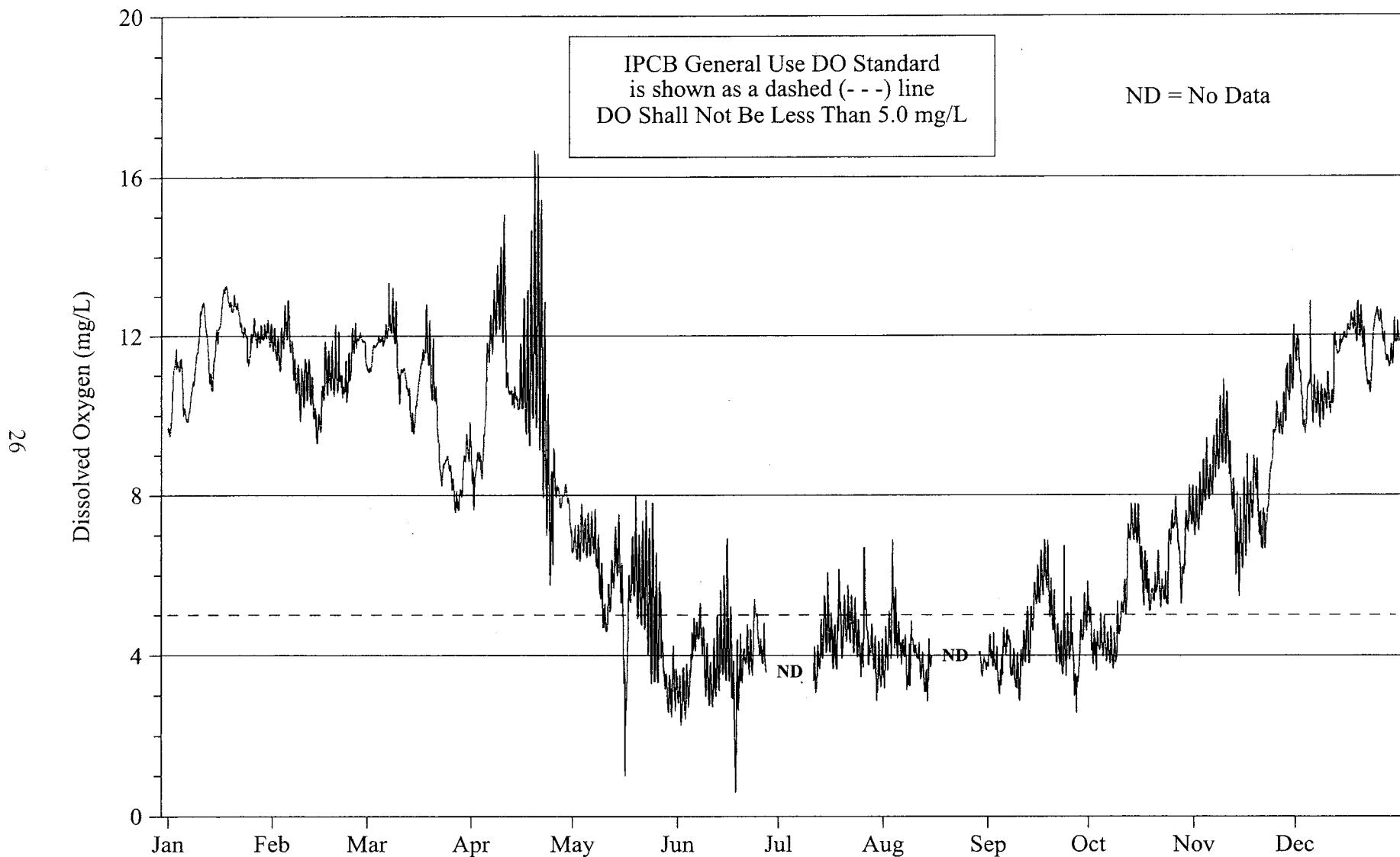


FIGURE 14: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT ASHLAND AVENUE
ON THE LITTLE CALUMET RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007



REFERENCES

Chapman, G., "Water Quality Criteria for Dissolved Oxygen," EPA 440/5-86-003, United States Environmental Protection Agency, Office of Water Regulations and Standards, Washington, D.C., 1986.

Illinois Environmental Protection Agency Bureau of Water: "Illinois Integrated Water Quality Report and Section 303(d) list – 2008," August 2008.

Lanyon, R., "Description of the Chicago Waterway System," Use Attainability Analysis Study Conducted by Illinois Environmental Protection Agency in Cooperation with the Metropolitan Water Reclamation District of Greater Chicago, Illinois, May 2002.

Northeastern Illinois Planning Commission Staff Paper, Stream Use Inventory: Little Calumet River, February 1981.

Ogata, K. M., Drainage Areas for Illinois Streams, United States Geological Survey, Water-Resources Investigations 13-75, United States Geological Survey, Water Resources Division, Champaign, Illinois, pp. 120, 1975.

Polls, I., R. Lanyon, and C. Lue-Hing, "Water Quality Investigations of Upper Salt Creek Northeastern Illinois," Transactions of the Illinois State Academy of Science, Vol. 72, No. 2, pp. 64-73, 1979.

Schmeelk, W. G., S. G. Dennison, and P. O'Brien, "1979 Annual Report, Water Quality Within the Waterway System of the Metropolitan Sanitary District of Greater Chicago, Volume II, Biological," Research and Development Department, Metropolitan Sanitary District of Greater Chicago, Chicago, Illinois, April 1983.

APPENDIX A

**WEEKLY DO SUMMARY STATISTICS AT ALL WADEABLE STREAM
MONITORING STATIONS DURING 2007**

TABLE A-1: WEEKLY DO SUMMARY STATISTICS AT CENTRAL PARK AVENUE
ON THE NORTH BRANCH CHICAGO RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 10.2 | 12.0 | 11.1 | 100 | |
| 01/08/07 - 01/14/07 | 168 | 11.2 | 13.8 | 12.4 | 100 | |
| 01/15/07 - 01/21/07 | 168 | 11.9 | 14.3 | 12.7 | 100 | |
| 01/22/07 - 01/28/07 | 168 | 11.4 | 13.0 | 12.2 | 100 | |
| 01/29/07 - 02/04/07 | 168 | 12.8 | 14.0 | 13.3 | 100 | |
| 02/05/07 - 02/11/07 | 168 | 11.3 | 14.9 | 12.7 | 100 | |
| 02/12/07 - 02/18/07 | 168 | 9.4 | 12.3 | 11.0 | 100 | |
| 02/19/07 - 02/25/07 | 168 | 10.5 | 12.6 | 11.8 | 100 | |
| 02/26/07 - 03/04/07 | 168 | 11.2 | 13.8 | 12.1 | 100 | |
| 03/05/07 - 03/11/07 | 168 | 11.7 | 13.9 | 12.8 | 100 | |
| 03/12/07 - 03/18/07 | 167 | 10.7 | 12.7 | 11.7 | 100 | |
| 03/19/07 - 03/25/07 | 168 | 9.0 | 12.8 | 10.5 | 100 | |
| 03/26/07 - 04/01/07 | 168 | 8.7 | 11.5 | 9.7 | 100 | |
| 04/02/07 - 04/08/07 | 168 | 9.2 | 13.5 | 11.2 | 100 | |
| 04/09/07 - 04/15/07 | 168 | 10.7 | 14.0 | 11.6 | 100 | |
| 04/16/07 - 04/22/07 | 168 | 9.8 | 16.1 | 12.5 | 100 | |
| 04/23/07 - 04/29/07 | 168 | 8.1 | 14.3 | 9.9 | 100 | |
| 04/30/07 - 05/06/07 | 168 | 7.1 | 12.3 | 9.3 | 100 | |
| 05/07/07 - 05/13/07 | 168 | 6.1 | 11.8 | 8.5 | 100 | |
| 05/14/07 - 05/20/07 | 168 | 2.0 | 9.4 | 6.5 | 90 | |
| 05/21/07 - 05/27/07 | 59 | 5.9 | 8.2 | 7.3 | 100 | |
| 05/28/07 - 06/03/07 | 108 | 3.5 | 6.2 | 4.8 | 38 | |
| 06/04/07 - 06/10/07 | 168 | 4.5 | 7.1 | 5.8 | 88 | |
| 06/11/07 - 06/17/07 | 168 | 5.2 | 6.4 | 5.7 | 100 | |
| 06/18/07 - 06/24/07 | 168 | 2.7 | 6.3 | 5.3 | 79 | |
| 06/25/07 - 07/01/07 | 168 | 2.4 | 6.9 | 5.5 | 76 | |
| 07/02/07 - 07/08/07 | 168 | 3.8 | 6.5 | 5.7 | 95 | |
| 07/09/07 - 07/15/07 | 168 | 2.8 | 6.2 | 5.3 | 70 | |
| 07/16/07 - 07/22/07 | 168 | 3.6 | 6.6 | 5.6 | 79 | |
| 07/23/07 - 07/29/07 | 168 | 4.0 | 6.7 | 5.8 | 90 | |
| 07/30/07 - 08/05/07 | 168 | 4.9 | 6.6 | 5.6 | 99 | |
| 08/06/07 - 08/12/07 | 168 | 4.7 | 5.8 | 5.2 | 80 | |
| 08/13/07 - 08/19/07 | 168 | 4.5 | 7.1 | 5.6 | 85 | |
| 08/20/07 - 08/26/07 | 60 | 5.6 | 6.5 | 5.9 | 100 | |

TABLE A-1 (Continued): WEEKLY DO SUMMARY STATISTICS AT CENTRAL PARK AVENUE ON THE NORTH BRANCH CHICAGO RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 108 | 5.1 | 5.8 | 5.5 | 100 | |
| 09/03/07 - 09/09/07 | 168 | 5.5 | 8.0 | 6.4 | 100 | |
| 09/10/07 - 09/16/07 | 168 | 6.0 | 8.6 | 7.2 | 100 | |
| 09/17/07 - 09/23/07 | 168 | 6.3 | 8.3 | 7.0 | 100 | |
| 09/24/07 - 09/30/07 | 168 | 3.4 | 7.1 | 6.1 | 85 | |
| 10/01/07 - 10/07/07 | 167 | 4.3 | 6.6 | 5.9 | 92 | |
| 10/08/07 - 10/14/07 | 168 | 5.4 | 8.7 | 7.1 | 100 | |
| 10/15/07 - 10/21/07 | 168 | 4.7 | 8.0 | 6.3 | 98 | |
| 10/22/07 - 10/28/07 | 168 | 5.8 | 8.3 | 6.9 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 6.9 | 9.6 | 8.5 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 8.5 | 10.8 | 9.5 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 6.9 | 10.8 | 8.8 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 6.5 | 11.8 | 9.2 | 100 | |
| 11/26/07 - 12/02/07 | 168 | 7.5 | 12.0 | 11.0 | 100 | |
| 12/03/07 - 12/09/07 | 168 | 9.3 | 11.9 | 10.9 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 10.0 | 13.1 | 11.6 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 9.6 | 13.6 | 11.7 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 10.6 | 11.9 | 11.3 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 11.3 | 11.8 | 11.6 | 100 | |

TABLE A-2: WEEKLY DO SUMMARY STATISTICS AT DEVON AVENUE
ON THE DES PLAINES RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|-----------------------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 11.2 | 12.3 | 11.8 | 100 |
| 01/08/07 - 01/14/07 | 168 | 12.0 | 13.5 | 12.7 | 100 |
| 01/15/07 - 01/21/07 | 168 | 12.6 | 14.4 | 13.7 | 100 |
| 01/22/07 - 01/28/07 | 168 | 12.3 | 14.1 | 12.9 | 100 |
| 01/29/07 - 02/04/07 | 168 | 12.8 | 14.0 | 13.3 | 100 |
| 02/05/07 - 02/11/07 | 168 | 12.5 | 14.3 | 13.1 | 100 |
| 02/12/07 - 02/18/07 | 168 | 11.6 | 12.8 | 12.1 | 100 |
| 02/19/07 - 02/25/07 | 168 | 11.8 | 13.1 | 12.5 | 100 |
| 02/26/07 - 03/04/07 | 168 | 11.6 | 13.7 | 12.7 | 100 |
| 03/05/07 - 03/11/07 | 168 | 12.0 | 13.8 | 13.1 | 100 |
| 03/12/07 - 03/18/07 | 167 | 9.8 | 12.4 | 11.0 | 100 |
| 03/19/07 - 03/25/07 | 168 | 8.8 | 11.5 | 10.1 | 100 |
| 03/26/07 - 04/01/07 | 168 | 8.4 | 10.1 | 9.1 | 100 |
| 04/02/07 - 04/08/07 | 168 | 9.5 | 12.4 | 11.0 | 100 |
| 04/09/07 - 04/15/07 | 168 | 11.7 | 12.6 | 12.2 | 100 |
| 04/16/07 - 04/22/07 | 168 | 9.8 | 12.2 | 11.2 | 100 |
| 04/23/07 - 04/29/07 | 168 | 8.0 | 10.0 | 8.8 | 100 |
| 04/30/07 - 05/06/07 | 168 | 8.0 | 9.1 | 8.4 | 100 |
| 05/07/07 - 05/13/07 | 168 | 7.0 | 12.4 | 8.7 | 100 |
| 05/14/07 - 05/20/07 | 168 | 5.5 | 16.5 | 10.3 | 100 |
| 05/21/07 - 05/27/07 | 167 | 6.0 | 17.2 | 11.5 | 100 |
| 05/28/07 - 06/03/07 | 168 | 3.5 | 10.2 | 6.3 | 81 |
| 06/04/07 - 06/10/07 | 168 | 4.2 | 7.1 | 6.0 | 90 |
| 06/11/07 - 06/17/07 | 168 | 5.1 | 6.2 | 5.8 | 100 |
| 06/18/07 - 06/24/07 | 168 | 3.5 | 6.6 | 5.4 | 80 |
| 06/25/07 - 07/01/07 | 168 | 4.3 | 8.8 | 5.6 | 83 |
| 07/02/07 - 07/08/07 | 168 | 4.6 | 13.1 | 8.3 | 98 |
| 07/09/07 - 07/15/07 | 168 | 2.3 | 6.6 | 3.6 | 4 |
| 07/16/07 - 07/22/07 | 168 | 2.7 | 4.6 | 3.7 | 0 |
| 07/23/07 - 07/29/07 | 167 | 3.5 | 5.0 | 4.1 | 1 |
| 07/30/07 - 08/05/07 | 168 | 2.9 | 6.2 | 4.6 | 24 |
| 08/06/07 - 08/12/07 | 168 | 3.9 | 5.3 | 4.3 | 4 |
| 08/13/07 - 08/19/07 | 168 | 4.0 | 6.5 | 4.7 | 11 |
| 08/20/07 - 08/26/07 | 168 | 4.2 | 6.4 | 4.9 | 42 |

TABLE A-2 (Continued): WEEKLY DO SUMMARY STATISTICS AT
DEVON AVENUE ON THE DES PLAINES RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 168 | 3.6 | 4.5 | 4.1 | 0 | |
| 09/03/07 - 09/09/07 | 168 | 3.8 | 4.8 | 4.4 | 0 | |
| 09/10/07 - 09/16/07 | 168 | 4.7 | 7.1 | 6.0 | 83 | |
| 09/17/07 - 09/23/07 | 168 | 5.1 | 7.1 | 5.9 | 100 | |
| 09/24/07 - 09/30/07 | 168 | 3.4 | 6.6 | 5.5 | 75 | |
| 10/01/07 - 10/07/07 | 167 | 4.8 | 6.5 | 5.7 | 93 | |
| 10/08/07 - 10/14/07 | 168 | 5.3 | 8.7 | 7.1 | 100 | |
| 10/15/07 - 10/21/07 | 164 | 6.2 | 8.3 | 7.3 | 100 | |
| 10/22/07 - 10/28/07 | 168 | 7.2 | 8.8 | 7.9 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 8.5 | 10.2 | 9.3 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 9.9 | 11.1 | 10.6 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 8.9 | 10.7 | 9.9 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 8.1 | 12.3 | 10.1 | 100 | |
| 11/26/07 - 12/02/07 | 59 | 11.8 | 12.4 | 12.1 | 100 | |
| 12/03/07 - 12/09/07 | 108 | 11.9 | 13.5 | 13.0 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 11.6 | 13.2 | 12.5 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 9.9 | 13.8 | 12.1 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 10.7 | 11.9 | 11.5 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 11.8 | 11.9 | 11.8 | 100 | |

TABLE A-3: WEEKLY DO SUMMARY STATISTICS AT IRVING PARK ROAD
ON THE DES PLAINES RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|-----------------------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 10.7 | 11.8 | 11.2 | 100 |
| 01/08/07 - 01/14/07 | 168 | 11.3 | 13.5 | 12.4 | 100 |
| 01/15/07 - 01/21/07 | 168 | 11.2 | 13.7 | 12.1 | 100 |
| 01/22/07 - 01/28/07 | 168 | 10.8 | 13.2 | 12.1 | 100 |
| 01/29/07 - 02/04/07 | 168 | 12.9 | 14.6 | 13.6 | 100 |
| 02/05/07 - 02/11/07 | 168 | 13.2 | 14.8 | 13.8 | 100 |
| 02/12/07 - 02/18/07 | 168 | 12.6 | 14.4 | 13.2 | 100 |
| 02/19/07 - 02/25/07 | 168 | 11.5 | 14.3 | 12.5 | 100 |
| 02/26/07 - 03/04/07 | 168 | 11.4 | 13.0 | 12.2 | 100 |
| 03/05/07 - 03/11/07 | 168 | 11.1 | 13.4 | 12.2 | 100 |
| 03/12/07 - 03/18/07 | 167 | 9.7 | 11.5 | 10.7 | 100 |
| 03/19/07 - 03/25/07 | 168 | 8.8 | 11.2 | 10.0 | 100 |
| 03/26/07 - 04/01/07 | 168 | 8.2 | 9.9 | 9.0 | 100 |
| 04/02/07 - 04/08/07 | 168 | 9.2 | 11.7 | 10.4 | 100 |
| 04/09/07 - 04/15/07 | 168 | 11.1 | 12.9 | 11.9 | 100 |
| 04/16/07 - 04/22/07 | 168 | 9.8 | 12.4 | 11.4 | 100 |
| 04/23/07 - 04/29/07 | 168 | 8.0 | 9.9 | 8.8 | 100 |
| 04/30/07 - 05/06/07 | 168 | 7.6 | 9.0 | 8.1 | 100 |
| 05/07/07 - 05/13/07 | 168 | 6.5 | 11.3 | 8.2 | 100 |
| 05/14/07 - 05/20/07 | 168 | 4.8 | 14.9 | 9.3 | 98 |
| 05/21/07 - 05/27/07 | 168 | 5.7 | 15.6 | 10.2 | 100 |
| 05/28/07 - 06/03/07 | 168 | 3.8 | 8.8 | 5.7 | 67 |
| 06/04/07 - 06/10/07 | 168 | 4.2 | 6.3 | 5.6 | 90 |
| 06/11/07 - 06/17/07 | 168 | 4.1 | 5.6 | 5.1 | 66 |
| 06/18/07 - 06/24/07 | 167 | 3.2 | 5.6 | 4.6 | 39 |
| 06/25/07 - 07/01/07 | 168 | 3.6 | 6.0 | 4.9 | 45 |
| 07/02/07 - 07/08/07 | 168 | 4.1 | 9.3 | 6.2 | 83 |
| 07/09/07 - 07/15/07 | 168 | 2.3 | 4.7 | 3.6 | 0 |
| 07/16/07 - 07/22/07 | 168 | 3.1 | 5.4 | 4.3 | 11 |
| 07/23/07 - 07/29/07 | 168 | 4.2 | 6.1 | 5.0 | 50 |
| 07/30/07 - 08/05/07 | 168 | 3.8 | 6.1 | 5.1 | 63 |
| 08/06/07 - 08/12/07 | 167 | 3.8 | 5.5 | 4.3 | 5 |
| 08/13/07 - 08/19/07 | 168 | 3.9 | 6.6 | 5.1 | 50 |
| 08/20/07 - 08/26/07 | 168 | 4.4 | 6.3 | 5.1 | 63 |

TABLE A-3 (Continued): WEEKLY DO SUMMARY STATISTICS AT
IRVING PARK ROAD ON THE DES PLAINES RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 167 | 3.9 | 4.9 | 4.4 | 0 | |
| 09/03/07 - 09/09/07 | 167 | 4.1 | 5.2 | 4.6 | 8 | |
| 09/10/07 - 09/16/07 | 168 | 5.1 | 7.1 | 6.2 | 100 | |
| 09/17/07 - 09/23/07 | 168 | 5.1 | 7.1 | 6.0 | 100 | |
| 09/24/07 - 09/30/07 | 167 | 3.9 | 7.0 | 5.7 | 76 | |
| 10/01/07 - 10/07/07 | 168 | 0.3 | 6.9 | 5.7 | 90 | |
| 10/08/07 - 10/14/07 | 168 | 5.5 | 8.7 | 7.2 | 100 | |
| 10/15/07 - 10/21/07 | 168 | 6.0 | 8.0 | 6.9 | 100 | |
| 10/22/07 - 10/28/07 | 168 | 7.0 | 8.7 | 7.7 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 8.0 | 10.0 | 8.9 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 9.1 | 10.8 | 9.9 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 8.3 | 11.4 | 9.9 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 8.1 | 11.7 | 9.9 | 100 | |
| 11/26/07 - 12/02/07 | 168 | 10.9 | 13.7 | 12.2 | 100 | |
| 12/03/07 - 12/09/07 | 168 | 11.6 | 14.1 | 13.1 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 11.2 | 13.3 | 12.2 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 9.6 | 13.4 | 11.8 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 11.0 | 12.5 | 12.1 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 12.4 | 12.5 | 12.5 | 100 | |

TABLE A-4: WEEKLY DO SUMMARY STATISTICS AT OGDEN AVENUE
ON THE DES PLAINES RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|-----------------------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 11.1 | 12.6 | 11.9 | 100 |
| 01/08/07 - 01/14/07 | 168 | 11.8 | 13.9 | 12.8 | 100 |
| 01/15/07 - 01/21/07 | 168 | 12.6 | 14.4 | 13.8 | 100 |
| 01/22/07 - 01/28/07 | 168 | 13.4 | 14.1 | 13.7 | 100 |
| 01/29/07 - 02/04/07 | 168 | 14.1 | 15.3 | 14.5 | 100 |
| 02/05/07 - 02/11/07 | 168 | 14.2 | 15.4 | 14.6 | 100 |
| 02/12/07 - 02/18/07 | 168 | 13.7 | 14.4 | 14.0 | 100 |
| 02/19/07 - 02/25/07 | 168 | 12.9 | 14.1 | 13.5 | 100 |
| 02/26/07 - 03/04/07 | 81 | 12.1 | 13.0 | 12.5 | 100 |
| 03/05/07 - 03/11/07 | 86 | 11.5 | 13.5 | 12.4 | 100 |
| 03/12/07 - 03/18/07 | 167 | 10.8 | 12.2 | 11.6 | 100 |
| 03/19/07 - 03/25/07 | 168 | 9.3 | 12.1 | 10.6 | 100 |
| 03/26/07 - 04/01/07 | 168 | 9.0 | 10.3 | 9.5 | 100 |
| 04/02/07 - 04/08/07 | 168 | 9.5 | 13.2 | 11.4 | 100 |
| 04/09/07 - 04/15/07 | 168 | 11.5 | 13.2 | 12.3 | 100 |
| 04/16/07 - 04/22/07 | 168 | 9.8 | 12.1 | 11.2 | 100 |
| 04/23/07 - 04/29/07 | 168 | 8.6 | 10.2 | 9.3 | 100 |
| 04/30/07 - 05/06/07 | 168 | 8.1 | 10.0 | 9.2 | 100 |
| 05/07/07 - 05/13/07 | 168 | 7.4 | 11.1 | 8.8 | 100 |
| 05/14/07 - 05/20/07 | 168 | 6.5 | 12.7 | 9.0 | 100 |
| 05/21/07 - 05/27/07 | 168 | 7.0 | 12.7 | 9.3 | 100 |
| 05/28/07 - 06/03/07 | 168 | 5.9 | 8.6 | 7.1 | 100 |
| 06/04/07 - 06/10/07 | 166 | 5.9 | 7.8 | 6.9 | 100 |
| 06/11/07 - 06/17/07 | 168 | 6.3 | 7.2 | 6.8 | 100 |
| 06/18/07 - 06/24/07 | 168 | 5.7 | 7.4 | 6.6 | 100 |
| 06/25/07 - 07/01/07 | 168 | 5.3 | 7.8 | 6.7 | 100 |
| 07/02/07 - 07/08/07 | 168 | 5.6 | 8.2 | 6.8 | 100 |
| 07/09/07 - 07/15/07 | 81 | 5.3 | 6.7 | 5.9 | 100 |
| 07/16/07 - 07/22/07 | 87 | 5.8 | 7.9 | 6.8 | 100 |
| 07/23/07 - 07/29/07 | 168 | 5.9 | 7.6 | 6.6 | 100 |
| 07/30/07 - 08/05/07 | 168 | 6.1 | 7.7 | 6.7 | 100 |
| 08/06/07 - 08/12/07 | 86 | 5.4 | 6.5 | 5.9 | 100 |
| 08/13/07 - 08/19/07 | 87 | 6.6 | 7.5 | 7.1 | 100 |
| 08/20/07 - 08/26/07 | 168 | 5.7 | 7.5 | 6.3 | 100 |

TABLE A-4 (Continued): WEEKLY DO SUMMARY STATISTICS AT
OGDEN AVENUE ON THE DES PLAINES RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|--|
| | | Minimum | Maximum | Mean | $\geq 5.0 \text{ mg/L}$ IPCB Standard |
| 08/27/07 - 09/02/07 | 167 | 5.8 | 6.4 | 6.1 | 100 |
| 09/03/07 - 09/09/07 | 168 | 5.6 | 6.7 | 6.2 | 100 |
| 09/10/07 - 09/16/07 | 168 | 6.7 | 9.0 | 7.8 | 100 |
| 09/17/07 - 09/23/07 | 168 | 7.2 | 8.9 | 7.9 | 100 |
| 09/24/07 - 09/30/07 | 168 | 6.5 | 8.7 | 7.6 | 100 |
| 10/01/07 - 10/07/07 | 167 | 0.7 | 8.1 | 7.3 | 98 |
| 10/08/07 - 10/14/07 | 168 | 6.8 | 10.4 | 8.6 | 100 |
| 10/15/07 - 10/21/07 | 168 | 7.5 | 10.2 | 8.5 | 100 |
| 10/22/07 - 10/28/07 | 167 | 8.2 | 10.4 | 9.1 | 100 |
| 10/29/07 - 11/04/07 | 168 | 9.2 | 12.0 | 10.4 | 100 |
| 11/05/07 - 11/11/07 | 168 | 10.6 | 12.8 | 11.5 | 100 |
| 11/12/07 - 11/18/07 | 168 | 9.8 | 13.2 | 11.0 | 100 |
| 11/19/07 - 11/25/07 | 168 | 9.1 | 12.9 | 11.4 | 100 |
| 11/26/07 - 12/02/07 | 168 | 12.4 | 14.0 | 13.2 | 100 |
| 12/03/07 - 12/09/07 | 168 | 12.2 | 14.2 | 13.3 | 100 |
| 12/10/07 - 12/16/07 | 168 | 11.1 | 13.9 | 12.4 | 100 |
| 12/17/07 - 12/23/07 | 168 | 10.4 | 13.0 | 12.1 | 100 |
| 12/24/07 - 12/30/07 | 168 | 10.8 | 12.9 | 12.3 | 100 |
| 12/31/07 - 12/31/07 | 24 | 12.8 | 12.9 | 12.8 | 100 |

TABLE A-5: WEEKLY DO SUMMARY STATISTICS AT MATERIAL SERVICE ROAD
ON THE DES PLAINES RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|--|
| | | Minimum | Maximum | Mean | $\geq 5.0 \text{ mg/L}$ IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 10.3 | 12.5 | 11.3 | 100 |
| 01/08/07 - 01/14/07 | 168 | 10.7 | 13.2 | 12.2 | 100 |
| 01/15/07 - 01/21/07 | 167 | 11.7 | 15.2 | 13.3 | 100 |
| 01/22/07 - 01/28/07 | 168 | 13.4 | 16.4 | 14.6 | 100 |
| 01/29/07 - 02/04/07 | 168 | 14.8 | 17.3 | 15.8 | 100 |
| 02/05/07 - 02/11/07 | 168 | 14.8 | 18.2 | 15.8 | 100 |
| 02/12/07 - 02/18/07 | 168 | 13.4 | 15.9 | 14.4 | 100 |
| 02/19/07 - 02/25/07 | 168 | 11.1 | 20.2 | 14.5 | 100 |
| 02/26/07 - 03/04/07 | 168 | 10.5 | 12.6 | 11.5 | 100 |
| 03/05/07 - 03/11/07 | 168 | 11.0 | 16.0 | 13.0 | 100 |
| 03/12/07 - 03/18/07 | 167 | 10.3 | 14.2 | 11.5 | 100 |
| 03/19/07 - 03/25/07 | 168 | 8.6 | 14.2 | 10.8 | 100 |
| 03/26/07 - 04/01/07 | 168 | 8.1 | 9.9 | 8.8 | 100 |
| 04/02/07 - 04/08/07 | 168 | 8.6 | 14.0 | 10.9 | 100 |
| 04/09/07 - 04/15/07 | 168 | 10.8 | 14.7 | 11.9 | 100 |
| 04/16/07 - 04/22/07 | 168 | 9.3 | 15.9 | 11.9 | 100 |
| 04/23/07 - 04/29/07 | 168 | 7.2 | 14.5 | 9.0 | 100 |
| 04/30/07 - 05/06/07 | 168 | 7.4 | 13.3 | 9.9 | 100 |
| 05/07/07 - 05/13/07 | 168 | 6.4 | 16.2 | 10.7 | 100 |
| 05/14/07 - 05/20/07 | 167 | 5.5 | 16.8 | 9.8 | 100 |
| 05/21/07 - 05/27/07 | 167 | 5.7 | 18.9 | 11.4 | 100 |
| 05/28/07 - 06/03/07 | 168 | 4.5 | 12.7 | 7.2 | 93 |
| 06/04/07 - 06/10/07 | 168 | 4.7 | 11.2 | 6.8 | 96 |
| 06/11/07 - 06/17/07 | 168 | 5.3 | 11.7 | 7.3 | 100 |
| 06/18/07 - 06/24/07 | 168 | 5.0 | 12.7 | 7.3 | 99 |
| 06/25/07 - 07/01/07 | 168 | 4.7 | 8.2 | 6.1 | 89 |
| 07/02/07 - 07/08/07 | 168 | 4.8 | 12.7 | 8.0 | 98 |
| 07/09/07 - 07/15/07 | 168 | 4.7 | 13.1 | 7.3 | 94 |
| 07/16/07 - 07/22/07 | 168 | 4.6 | 14.9 | 7.2 | 95 |
| 07/23/07 - 07/29/07 | 168 | 4.6 | 16.7 | 8.6 | 93 |
| 07/30/07 - 08/05/07 | 168 | 4.6 | 11.3 | 7.3 | 85 |
| 08/06/07 - 08/12/07 | 168 | 4.1 | 7.3 | 5.0 | 33 |
| 08/13/07 - 08/19/07 | 168 | 4.3 | 6.9 | 5.4 | 63 |
| 08/20/07 - 08/26/07 | 168 | 4.5 | 6.5 | 5.2 | 64 |

TABLE A-5 (Continued): WEEKLY DO SUMMARY STATISTICS AT
MATERIAL SERVICE ROAD ON THE DES PLAINES RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 168 | 4.7 | 6.5 | 5.3 | 74 | |
| 09/03/07 - 09/09/07 | 168 | 5.2 | 7.3 | 6.1 | 100 | |
| 09/10/07 - 09/16/07 | 168 | 5.7 | 11.1 | 7.7 | 100 | |
| 09/17/07 - 09/23/07 | 167 | 6.3 | 12.4 | 8.7 | 100 | |
| 09/24/07 - 09/30/07 | 168 | 5.7 | 12.5 | 8.2 | 100 | |
| 10/01/07 - 10/07/07 | 168 | 5.5 | 11.5 | 8.0 | 100 | |
| 10/08/07 - 10/14/07 | 168 | 5.6 | 15.1 | 9.7 | 100 | |
| 10/15/07 - 10/21/07 | 168 | 7.0 | 14.4 | 9.3 | 100 | |
| 10/22/07 - 10/28/07 | 168 | 7.4 | 14.4 | 10.1 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 9.0 | 16.9 | 12.1 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 11.1 | 19.2 | 14.2 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 10.2 | 18.8 | 13.5 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 8.9 | 14.9 | 10.6 | 100 | |
| 11/26/07 - 12/02/07 | 168 | 10.8 | 17.1 | 13.9 | 100 | |
| 12/03/07 - 12/09/07 | 168 | 11.9 | 14.9 | 13.2 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 11.1 | 14.8 | 12.5 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 11.3 | 16.1 | 13.7 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 11.4 | 13.7 | 12.5 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 12.5 | 13.3 | 12.8 | 100 | |

TABLE A-6: WEEKLY DO SUMMARY STATISTICS AT BUSSE LAKE DAM
ON SALT CREEK DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 12.2 | 13.1 | 12.7 | 100 | |
| 01/08/07 - 01/14/07 | 168 | 12.6 | 13.5 | 13.0 | 100 | |
| 01/15/07 - 01/21/07 | 168 | 13.3 | 15.5 | 14.4 | 100 | |
| 01/22/07 - 01/28/07 | 168 | 14.7 | 15.8 | 15.4 | 100 | |
| 01/29/07 - 02/04/07 | 168 | 15.8 | 17.6 | 16.5 | 100 | |
| 02/05/07 - 02/11/07 | 168 | 17.4 | 18.3 | 17.9 | 100 | |
| 02/12/07 - 02/18/07 | 168 | 17.1 | 18.2 | 17.6 | 100 | |
| 02/19/07 - 02/25/07 | 168 | 13.4 | 17.5 | 14.9 | 100 | |
| 02/26/07 - 03/04/07 | 168 | 12.2 | 14.7 | 13.4 | 100 | |
| 03/05/07 - 03/11/07 | 168 | 12.6 | 13.8 | 13.2 | 100 | |
| 03/12/07 - 03/18/07 | 167 | 12.6 | 13.6 | 13.0 | 100 | |
| 03/19/07 - 03/25/07 | 59 | 12.7 | 13.3 | 13.0 | 100 | |
| 03/26/07 - 04/01/07 | 110 | 9.9 | 10.6 | 10.2 | 100 | |
| 04/02/07 - 04/08/07 | 168 | 10.5 | 13.0 | 11.7 | 100 | |
| 04/09/07 - 04/15/07 | 168 | 11.6 | 13.2 | 12.7 | 100 | |
| 04/16/07 - 04/22/07 | 168 | 9.8 | 12.6 | 11.8 | 100 | |
| 04/23/07 - 04/29/07 | 168 | 8.1 | 10.8 | 9.8 | 100 | |
| 04/30/07 - 05/06/07 | 168 | 8.8 | 11.0 | 10.1 | 100 | |
| 05/07/07 - 05/13/07 | 168 | 8.3 | 10.4 | 9.5 | 100 | |
| 05/14/07 - 05/20/07 | 168 | 7.2 | 9.5 | 8.4 | 100 | |
| 05/21/07 - 05/27/07 | 168 | 6.3 | 8.6 | 7.7 | 100 | |
| 05/28/07 - 06/03/07 | 168 | 6.9 | 8.9 | 7.9 | 100 | |
| 06/04/07 - 06/10/07 | 168 | 6.5 | 8.7 | 7.5 | 100 | |
| 06/11/07 - 06/17/07 | 168 | 3.7 | 9.0 | 7.0 | 98 | |
| 06/18/07 - 06/24/07 | 168 | 4.7 | 8.7 | 6.7 | 98 | |
| 06/25/07 - 07/01/07 | 168 | 4.5 | 8.4 | 7.5 | 99 | |
| 07/02/07 - 07/08/07 | 168 | 5.2 | 8.7 | 7.7 | 100 | |
| 07/09/07 - 07/15/07 | 168 | 2.8 | 9.9 | 6.4 | 85 | |
| 07/16/07 - 07/22/07 | 168 | 1.2 | 8.5 | 6.1 | 69 | |
| 07/23/07 - 07/29/07 | 167 | 5.6 | 9.0 | 7.3 | 100 | |
| 07/30/07 - 08/05/07 | 168 | 1.5 | 8.1 | 6.0 | 74 | |
| 08/06/07 - 08/12/07 | 168 | 5.8 | 8.7 | 7.0 | 100 | |
| 08/13/07 - 08/19/07 | 168 | 3.8 | 7.7 | 6.0 | 77 | |
| 08/20/07 - 08/26/07 | 168 | 4.9 | 8.1 | 6.3 | 98 | |

TABLE A-6 (Continued): WEEKLY DO SUMMARY STATISTICS AT
BUSSE LAKE DAM ON SALT CREEK DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 168 | 6.3 | 9.0 | 7.6 | 100 | |
| 09/03/07 - 09/09/07 | 168 | 6.4 | 9.5 | 7.7 | 100 | |
| 09/10/07 - 09/16/07 | 167 | 6.4 | 11.5 | 7.5 | 100 | |
| 09/17/07 - 09/23/07 | 168 | 4.4 | 10.3 | 6.9 | 96 | |
| 09/24/07 - 09/30/07 | 168 | 4.1 | 9.6 | 7.1 | 98 | |
| 10/01/07 - 10/07/07 | 168 | 6.7 | 9.1 | 8.1 | 100 | |
| 10/08/07 - 10/14/07 | 168 | 6.9 | 9.7 | 8.0 | 100 | |
| 10/15/07 - 10/21/07 | 168 | 7.7 | 9.4 | 8.8 | 100 | |
| 10/22/07 - 10/28/07 | 168 | 9.0 | 10.7 | 9.8 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 9.9 | 11.0 | 10.3 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 10.1 | 12.5 | 11.4 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 10.7 | 12.1 | 11.3 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 9.9 | 11.8 | 10.8 | 100 | |
| 11/26/07 - 12/02/07 | 168 | 10.7 | 15.5 | 13.4 | 100 | |
| 12/03/07 - 12/09/07 | 168 | 13.5 | 15.7 | 14.3 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 12.9 | 13.8 | 13.5 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 13.1 | 14.5 | 13.9 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 13.8 | 14.4 | 14.2 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 13.9 | 14.2 | 14.0 | 100 | |

TABLE A-7: WEEKLY DO SUMMARY STATISTICS AT JFK BOULEVARD
ON SALT CREEK DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|--|
| | | Minimum | Maximum | Mean | $\geq 5.0 \text{ mg/L}$ IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 10.1 | 12.4 | 11.2 | 100 |
| 01/08/07 - 01/14/07 | 168 | 10.8 | 12.5 | 11.4 | 100 |
| 01/15/07 - 01/21/07 | 168 | 10.8 | 13.9 | 12.3 | 100 |
| 01/22/07 - 01/28/07 | 168 | 10.6 | 13.2 | 11.4 | 100 |
| 01/29/07 - 02/04/07 | 168 | 10.2 | 12.9 | 11.3 | 100 |
| 02/05/07 - 02/11/07 | 168 | 9.5 | 12.5 | 10.5 | 100 |
| 02/12/07 - 02/18/07 | 168 | 9.5 | 12.8 | 10.9 | 100 |
| 02/19/07 - 02/25/07 | 168 | 9.5 | 12.2 | 10.8 | 100 |
| 02/26/07 - 03/04/07 | 168 | 11.0 | 12.9 | 12.0 | 100 |
| 03/05/07 - 03/11/07 | 168 | 10.7 | 12.3 | 11.6 | 100 |
| 03/12/07 - 03/18/07 | 167 | 11.1 | 12.6 | 11.8 | 100 |
| 03/19/07 - 03/25/07 | 168 | 10.0 | 12.5 | 11.1 | 100 |
| 03/26/07 - 04/01/07 | 168 | 9.3 | 10.9 | 9.9 | 100 |
| 04/02/07 - 04/08/07 | 168 | 9.9 | 13.1 | 10.8 | 100 |
| 04/09/07 - 04/15/07 | 168 | 9.9 | 13.2 | 11.8 | 100 |
| 04/16/07 - 04/22/07 | 168 | 9.1 | 12.5 | 11.1 | 100 |
| 04/23/07 - 04/29/07 | 168 | 8.0 | 11.5 | 9.6 | 100 |
| 04/30/07 - 05/06/07 | 168 | 8.6 | 11.8 | 9.8 | 100 |
| 05/07/07 - 05/13/07 | 168 | 7.1 | 12.6 | 9.0 | 100 |
| 05/14/07 - 05/20/07 | 168 | 6.6 | 10.8 | 8.2 | 100 |
| 05/21/07 - 05/27/07 | 168 | 6.5 | 9.3 | 7.8 | 100 |
| 05/28/07 - 06/03/07 | 168 | 6.3 | 9.4 | 7.7 | 100 |
| 06/04/07 - 06/10/07 | 168 | 5.9 | 10.0 | 7.4 | 100 |
| 06/11/07 - 06/17/07 | 168 | 5.5 | 11.9 | 8.1 | 100 |
| 06/18/07 - 06/24/07 | 168 | 4.5 | 11.7 | 7.1 | 99 |
| 06/25/07 - 07/01/07 | 168 | 5.7 | 10.1 | 7.4 | 100 |
| 07/02/07 - 07/08/07 | 168 | 5.6 | 10.4 | 7.7 | 100 |
| 07/09/07 - 07/15/07 | 168 | 5.3 | 10.7 | 7.4 | 100 |
| 07/16/07 - 07/22/07 | 168 | 5.5 | 9.9 | 7.1 | 100 |
| 07/23/07 - 07/29/07 | 168 | 3.1 | 9.3 | 5.8 | 68 |
| 07/30/07 - 08/05/07 | 168 | 3.8 | 8.9 | 6.1 | 79 |
| 08/06/07 - 08/12/07 | 168 | 5.8 | 8.3 | 6.7 | 100 |
| 08/13/07 - 08/19/07 | 168 | 4.6 | 7.7 | 5.9 | 94 |
| 08/20/07 - 08/26/07 | 168 | 5.4 | 7.4 | 6.2 | 100 |

TABLE A-7 (Continued): WEEKLY DO SUMMARY STATISTICS AT
JFK BOULEVARD ON SALT CREEK DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 168 | 6.2 | 8.5 | 7.1 | 100 | |
| 09/03/07 - 09/09/07 | 168 | 3.3 | 8.4 | 6.2 | 90 | |
| 09/10/07 - 09/16/07 | 168 | 5.3 | 9.7 | 7.2 | 100 | |
| 09/17/07 - 09/23/07 | 168 | 6.5 | 9.2 | 7.5 | 100 | |
| 09/24/07 - 09/30/07 | 168 | 6.3 | 9.2 | 7.5 | 100 | |
| 10/01/07 - 10/07/07 | 168 | 6.9 | 9.2 | 7.7 | 100 | |
| 10/08/07 - 10/14/07 | 168 | 6.0 | 8.9 | 7.3 | 100 | |
| 10/15/07 - 10/21/07 | 168 | 6.1 | 8.9 | 7.6 | 100 | |
| 10/22/07 - 10/28/07 | 168 | 7.1 | 10.0 | 8.0 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 6.9 | 9.6 | 8.1 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 6.7 | 9.6 | 7.7 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 6.6 | 9.3 | 7.6 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 5.2 | 11.8 | 9.4 | 100 | |
| 11/26/07 - 12/02/07 | 167 | 9.0 | 11.3 | 9.8 | 100 | |
| 12/03/07 - 12/09/07 | 168 | 9.7 | 13.0 | 11.4 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 9.5 | 12.7 | 11.4 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 9.6 | 12.3 | 10.7 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 10.6 | 12.7 | 11.8 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 10.5 | 11.7 | 10.9 | 100 | |

TABLE A-8: WEEKLY DO SUMMARY STATISTICS AT THORNDALE AVENUE
ON SALT CREEK DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|--|
| | | Minimum | Maximum | Mean | $\geq 5.0 \text{ mg/L}$ IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 10.2 | 12.0 | 11.0 | 100 |
| 01/08/07 - 01/14/07 | 58 | 10.6 | 12.1 | 11.1 | 100 |
| 01/15/07 - 01/21/07 | 110 | 10.8 | 14.0 | 12.3 | 100 |
| 01/22/07 - 01/28/07 | 168 | 10.7 | 14.4 | 11.8 | 100 |
| 01/29/07 - 02/04/07 | 168 | 10.2 | 14.0 | 11.6 | 100 |
| 02/05/07 - 02/11/07 | 168 | 9.5 | 13.0 | 10.7 | 100 |
| 02/12/07 - 02/18/07 | 168 | 9.2 | 13.5 | 11.0 | 100 |
| 02/19/07 - 02/25/07 | 168 | 9.1 | 13.2 | 10.9 | 100 |
| 02/26/07 - 03/04/07 | 168 | 10.8 | 12.7 | 12.0 | 100 |
| 03/05/07 - 03/11/07 | 167 | 11.1 | 12.8 | 11.9 | 100 |
| 03/12/07 - 03/18/07 | 167 | 11.0 | 12.8 | 11.9 | 100 |
| 03/19/07 - 03/25/07 | 168 | 9.3 | 12.9 | 10.8 | 100 |
| 03/26/07 - 04/01/07 | 168 | 8.6 | 11.2 | 9.5 | 100 |
| 04/02/07 - 04/08/07 | 168 | 9.4 | 15.2 | 11.1 | 100 |
| 04/09/07 - 04/15/07 | 168 | 9.9 | 15.6 | 12.1 | 100 |
| 04/16/07 - 04/22/07 | 168 | 8.8 | 13.4 | 11.1 | 100 |
| 04/23/07 - 04/29/07 | 168 | 7.5 | 13.4 | 9.5 | 100 |
| 04/30/07 - 05/06/07 | 168 | 7.3 | 14.0 | 9.6 | 100 |
| 05/07/07 - 05/13/07 | 168 | 5.6 | 15.7 | 9.5 | 100 |
| 05/14/07 - 05/20/07 | 58 | 5.8 | 14.6 | 8.5 | 100 |
| 05/21/07 - 05/27/07 | | NO DATA | | | |
| 05/28/07 - 06/03/07 | 110 | 5.3 | 9.5 | 7.3 | 100 |
| 06/04/07 - 06/10/07 | 168 | 5.4 | 11.0 | 7.2 | 100 |
| 06/11/07 - 06/17/07 | 168 | 5.2 | 13.2 | 8.4 | 100 |
| 06/18/07 - 06/24/07 | 168 | 4.5 | 12.4 | 7.2 | 96 |
| 06/25/07 - 07/01/07 | 168 | 5.2 | 10.7 | 7.4 | 100 |
| 07/02/07 - 07/08/07 | 168 | 5.1 | 11.3 | 7.7 | 100 |
| 07/09/07 - 07/15/07 | 168 | 5.0 | 11.5 | 7.5 | 99 |
| 07/16/07 - 07/22/07 | 168 | 1.4 | 10.6 | 6.7 | 89 |
| 07/23/07 - 07/29/07 | 168 | 2.1 | 9.6 | 6.0 | 74 |
| 07/30/07 - 08/05/07 | 58 | 3.4 | 9.0 | 5.6 | 45 |
| 08/06/07 - 08/12/07 | | NO DATA | | | |
| 08/13/07 - 08/19/07 | 111 | 4.2 | 7.6 | 5.8 | 99 |
| 08/20/07 - 08/26/07 | 168 | 4.7 | 6.8 | 5.6 | 86 |

TABLE A-8 (Continued): WEEKLY DO SUMMARY STATISTICS AT
THORNDALE AVENUE ON SALT CREEK DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 168 | 6.0 | 8.5 | 6.8 | 100 | |
| 09/03/07 - 09/09/07 | 168 | 5.5 | 8.6 | 6.6 | 100 | |
| 09/10/07 - 09/16/07 | 168 | 5.7 | 11.4 | 7.1 | 100 | |
| 09/17/07 - 09/23/07 | 168 | 6.3 | 9.2 | 7.3 | 100 | |
| 09/24/07 - 09/30/07 | 168 | 6.1 | 10.3 | 7.3 | 100 | |
| 10/01/07 - 10/07/07 | 168 | 6.1 | 9.8 | 7.5 | 100 | |
| 10/08/07 - 10/14/07 | 168 | 6.0 | 9.6 | 7.3 | 100 | |
| 10/15/07 - 10/21/07 | 168 | 6.1 | 9.5 | 7.6 | 100 | |
| 10/22/07 - 10/28/07 | 168 | 6.8 | 11.0 | 8.1 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 7.0 | 10.8 | 8.2 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 6.5 | 10.5 | 7.9 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 6.3 | 10.2 | 7.7 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 6.7 | 12.4 | 9.5 | 100 | |
| 11/26/07 - 12/02/07 | 168 | 8.9 | 12.5 | 10.0 | 100 | |
| 12/03/07 - 12/09/07 | 168 | 10.2 | 13.6 | 11.7 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 9.7 | 13.3 | 11.8 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 9.3 | 13.1 | 10.8 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 10.4 | 12.5 | 11.6 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 10.3 | 12.1 | 10.8 | 100 | |

TABLE A-9: WEEKLY DO SUMMARY STATISTICS AT WOLF ROAD
ON SALT CREEK DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|-----------------------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 10.6 | 12.5 | 11.5 | 100 |
| 01/08/07 - 01/14/07 | 168 | 11.4 | 13.3 | 12.1 | 100 |
| 01/15/07 - 01/21/07 | 168 | 12.2 | 14.1 | 13.3 | 100 |
| 01/22/07 - 01/28/07 | 168 | 12.4 | 14.3 | 13.1 | 100 |
| 01/29/07 - 02/04/07 | 168 | 14.1 | 17.1 | 15.5 | 100 |
| 02/05/07 - 02/11/07 | 168 | 15.7 | 17.7 | 16.4 | 100 |
| 02/12/07 - 02/18/07 | 168 | 15.1 | 16.6 | 15.9 | 100 |
| 02/19/07 - 02/25/07 | 168 | 12.0 | 16.1 | 13.6 | 100 |
| 02/26/07 - 03/04/07 | 168 | 11.9 | 13.5 | 12.7 | 100 |
| 03/05/07 - 03/11/07 | 168 | 11.0 | 13.2 | 12.3 | 100 |
| 03/12/07 - 03/18/07 | 167 | 10.7 | 12.4 | 11.3 | 100 |
| 03/19/07 - 03/25/07 | 168 | 9.2 | 12.8 | 10.4 | 100 |
| 03/26/07 - 04/01/07 | 168 | 8.4 | 11.3 | 9.5 | 100 |
| 04/02/07 - 04/08/07 | 168 | 9.4 | 14.2 | 11.2 | 100 |
| 04/09/07 - 04/15/07 | 168 | 10.3 | 15.1 | 11.6 | 100 |
| 04/16/07 - 04/22/07 | 168 | 7.9 | 14.9 | 10.9 | 100 |
| 04/23/07 - 04/29/07 | 168 | 7.1 | 15.3 | 9.2 | 100 |
| 04/30/07 - 05/06/07 | 168 | 6.8 | 12.1 | 8.8 | 100 |
| 05/07/07 - 05/13/07 | 168 | 4.8 | 15.1 | 8.6 | 98 |
| 05/14/07 - 05/20/07 | 168 | 5.1 | 15.3 | 7.5 | 100 |
| 05/21/07 - 05/27/07 | 168 | 4.9 | 8.0 | 6.4 | 98 |
| 05/28/07 - 06/03/07 | 81 | 5.2 | 8.2 | 6.8 | 100 |
| 06/04/07 - 06/10/07 | 85 | 5.2 | 8.9 | 6.7 | 100 |
| 06/11/07 - 06/17/07 | 168 | 4.1 | 9.7 | 6.2 | 63 |
| 06/18/07 - 06/24/07 | 168 | 3.6 | 9.7 | 5.9 | 63 |
| 06/25/07 - 07/01/07 | 168 | 3.7 | 9.3 | 5.9 | 70 |
| 07/02/07 - 07/08/07 | 168 | 3.5 | 9.2 | 5.9 | 71 |
| 07/09/07 - 07/15/07 | 168 | 3.2 | 9.5 | 5.9 | 66 |
| 07/16/07 - 07/22/07 | 168 | 4.3 | 9.7 | 6.5 | 86 |
| 07/23/07 - 07/29/07 | 168 | 3.9 | 9.1 | 5.8 | 74 |
| 07/30/07 - 08/05/07 | 168 | 3.7 | 8.0 | 5.4 | 52 |
| 08/06/07 - 08/12/07 | 166 | 4.8 | 6.8 | 5.7 | 98 |
| 08/13/07 - 08/19/07 | 167 | 2.5 | 7.0 | 5.7 | 88 |
| 08/20/07 - 08/26/07 | 168 | 4.9 | 6.9 | 5.8 | 92 |

TABLE A-9 (Continued): WEEKLY DO SUMMARY STATISTICS AT
WOLF ROAD ON SALT CREEK DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|--|
| | | Minimum | Maximum | Mean | $\geq 5.0 \text{ mg/L}$ IPCB Standard |
| 08/27/07 - 09/02/07 | 168 | 5.6 | 6.9 | 6.2 | 100 |
| 09/03/07 - 09/09/07 | 168 | 5.1 | 7.1 | 6.0 | 100 |
| 09/10/07 - 09/16/07 | 168 | 6.0 | 8.9 | 7.2 | 100 |
| 09/17/07 - 09/23/07 | 82 | 6.1 | 8.7 | 7.2 | 100 |
| 09/24/07 - 09/30/07 | 86 | 6.7 | 8.3 | 7.3 | 100 |
| 10/01/07 - 10/07/07 | 168 | 5.8 | 8.3 | 6.7 | 100 |
| 10/08/07 - 10/14/07 | 167 | 5.5 | 9.8 | 7.6 | 100 |
| 10/15/07 - 10/21/07 | 168 | 6.7 | 9.1 | 7.6 | 100 |
| 10/22/07 - 10/28/07 | 168 | 7.4 | 9.9 | 8.3 | 100 |
| 10/29/07 - 11/04/07 | 168 | 8.5 | 11.1 | 9.6 | 100 |
| 11/05/07 - 11/11/07 | 168 | 9.1 | 11.9 | 10.3 | 100 |
| 11/12/07 - 11/18/07 | 168 | 8.1 | 12.0 | 9.6 | 100 |
| 11/19/07 - 11/25/07 | 57 | 8.8 | 10.7 | 9.4 | 100 |
| 11/26/07 - 12/02/07 | 86 | 11.2 | 14.1 | 12.6 | 100 |
| 12/03/07 - 12/09/07 | 168 | 11.2 | 15.0 | 13.1 | 100 |
| 12/10/07 - 12/16/07 | 168 | 12.1 | 14.5 | 12.7 | 100 |
| 12/17/07 - 12/23/07 | 168 | 10.1 | 14.1 | 12.1 | 100 |
| 12/24/07 - 12/30/07 | 168 | 11.4 | 13.1 | 12.1 | 100 |
| 12/31/07 - 12/31/07 | 24 | 11.8 | 12.7 | 12.1 | 100 |

TABLE A-10: WEEKLY DO SUMMARY STATISTICS AT HOHMAN AVENUE
ON THE GRAND CALUMET RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 4.0 mg/L | IPCB Standard |
| 01/01/07 - 01/07/07 | 59 | 0.8 | 4.6 | 3.1 | 17 | |
| 01/08/07 - 01/14/07 | | | NO DATA | | | |
| 01/15/07 - 01/21/07 | 109 | 6.2 | 8.4 | 7.3 | 100 | |
| 01/22/07 - 01/28/07 | 58 | 4.5 | 7.3 | 5.8 | 100 | |
| 01/29/07 - 02/25/07 | | | NO DATA | | | |
| 02/26/07 - 03/04/07 | 109 | 4.8 | 9.2 | 6.4 | 100 | |
| 03/05/07 - 03/11/07 | 168 | 4.6 | 8.0 | 6.3 | 100 | |
| 03/12/07 - 03/18/07 | 167 | 0.3 | 16.5 | 7.3 | 86 | |
| 03/19/07 - 03/25/07 | 59 | 0.3 | 20.1 | 8.5 | 73 | |
| 03/26/07 - 04/29/07 | | | NO DATA | | | |
| 04/30/07 - 05/06/07 | 109 | 0.0 | 5.0 | 1.1 | 6 | |
| 05/07/07 - 05/13/07 | 59 | 0.0 | 7.3 | 5.1 | 81 | |
| 05/14/07 - 06/03/07 | | | NO DATA | | | |
| 06/04/07 - 06/10/07 | 108 | 0.5 | 4.0 | 1.9 | 1 | |
| 06/11/07 - 06/17/07 | 168 | 0.0 | 6.1 | 2.5 | 26 | |
| 06/18/07 - 06/24/07 | 168 | 0.0 | 5.7 | 1.6 | 11 | |
| 06/25/07 - 07/01/07 | 59 | 0.0 | 3.3 | 1.1 | 0 | |
| 07/02/07 - 07/08/07 | | | NO DATA | | | |
| 07/09/07 - 07/15/07 | 107 | 0.1 | 4.7 | 1.5 | 7 | |
| 07/16/07 - 07/22/07 | 59 | 0.1 | 5.1 | 1.3 | 10 | |
| 07/23/07 - 07/29/07 | | | NO DATA | | | |
| 07/30/07 - 08/05/07 | 109 | 0.2 | 8.8 | 2.6 | 29 | |
| 08/06/07 - 08/12/07 | 59 | 0.2 | 4.9 | 0.5 | 2 | |
| 08/13/07 - 12/31/07 | | | NO DATA | | | |

TABLE A-11: WEEKLY DO SUMMARY STATISTICS AT TORRENCE AVENUE
ON THE GRAND CALUMET RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values ≥ 4.0 mg/L IPCB Standard |
|---------------------|---------------------|-------------------------|---------|------|--|
| | | Minimum | Maximum | Mean | |
| 01/01/07 - 01/07/07 | 168 | 0.7 | 12.7 | 7.3 | 79 |
| 01/08/07 - 01/14/07 | 168 | 6.4 | 11.6 | 9.3 | 100 |
| 01/15/07 - 01/21/07 | 168 | 5.1 | 14.3 | 10.1 | 100 |
| 01/22/07 - 01/28/07 | 168 | 9.7 | 15.3 | 12.6 | 100 |
| 01/29/07 - 02/04/07 | 168 | 9.9 | 14.8 | 12.8 | 100 |
| 02/05/07 - 02/11/07 | 168 | 9.9 | 17.2 | 13.3 | 100 |
| 02/12/07 - 02/18/07 | 168 | 1.6 | 13.2 | 9.6 | 96 |
| 02/19/07 - 02/25/07 | 168 | 2.5 | 12.5 | 9.1 | 95 |
| 02/26/07 - 03/04/07 | 168 | 0.0 | 8.4 | 3.1 | 32 |
| 03/05/07 - 03/11/07 | 168 | 0.2 | 13.8 | 8.7 | 94 |
| 03/12/07 - 03/18/07 | 167 | 6.9 | 23.7 | 14.4 | 100 |
| 03/19/07 - 03/25/07 | 168 | 1.6 | 20.2 | 11.6 | 97 |
| 03/26/07 - 04/01/07 | 168 | 2.0 | 12.8 | 5.3 | 62 |
| 04/02/07 - 04/08/07 | 168 | 0.6 | 10.8 | 7.7 | 80 |
| 04/09/07 - 04/15/07 | 168 | 4.1 | 11.0 | 6.8 | 100 |
| 04/16/07 - 04/22/07 | 168 | 1.0 | 10.8 | 5.4 | 62 |
| 04/23/07 - 04/29/07 | 168 | 0.0 | 11.3 | 3.5 | 42 |
| 04/30/07 - 05/06/07 | 168 | 0.0 | 7.5 | 2.8 | 31 |
| 05/07/07 - 05/13/07 | 168 | 1.0 | 9.2 | 5.0 | 63 |
| 05/14/07 - 05/20/07 | 168 | 0.2 | 6.7 | 3.5 | 33 |
| 05/21/07 - 05/27/07 | 168 | 0.0 | 6.0 | 2.5 | 12 |
| 05/28/07 - 06/03/07 | 168 | 0.1 | 6.7 | 2.7 | 23 |
| 06/04/07 - 06/10/07 | 168 | 0.6 | 8.3 | 4.1 | 46 |
| 06/11/07 - 06/17/07 | 168 | 1.5 | 13.4 | 6.3 | 66 |
| 06/18/07 - 06/24/07 | 168 | 0.5 | 10.3 | 4.4 | 47 |
| 06/25/07 - 07/01/07 | 168 | 0.2 | 13.0 | 5.1 | 55 |
| 07/02/07 - 07/08/07 | 168 | 0.5 | 17.2 | 6.0 | 67 |
| 07/09/07 - 07/15/07 | 168 | 0.0 | 16.6 | 6.8 | 74 |
| 07/16/07 - 07/22/07 | 59 | 2.8 | 13.0 | 6.6 | 81 |
| 07/23/07 - 07/29/07 | 108 | 0.0 | 10.5 | 2.7 | 20 |
| 07/30/07 - 08/05/07 | 168 | 0.0 | 12.5 | 3.2 | 34 |
| 08/06/07 - 08/12/07 | 58 | 0.0 | 1.3 | 0.0 | 0 |
| 08/13/07 - 08/19/07 | 110 | 0.2 | 4.9 | 1.3 | 3 |
| 08/20/07 - 08/26/07 | 168 | 0.1 | 3.9 | 0.7 | 0 |

TABLE A-11 (Continued): WEEKLY DO SUMMARY STATISTICS AT
TORRENCE AVENUE ON THE GRAND CALUMET RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 4.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 60 | 0.2 | 2.1 | 0.5 | 0 | |
| 09/03/07 - 09/09/07 | | NO DATA | | | | |
| 09/10/07 - 09/16/07 | 110 | 3.9 | 8.7 | 5.7 | 99 | |
| 09/17/07 - 09/23/07 | 168 | 1.6 | 14.1 | 6.7 | 89 | |
| 09/24/07 - 09/30/07 | 168 | 0.2 | 14.2 | 5.2 | 71 | |
| 10/01/07 - 10/07/07 | 168 | 1.5 | 14.7 | 6.2 | 86 | |
| 10/08/07 - 10/14/07 | 168 | 1.5 | 9.1 | 6.8 | 92 | |
| 10/15/07 - 10/21/07 | 168 | 1.6 | 8.1 | 5.8 | 73 | |
| 10/22/07 - 10/28/07 | 168 | 4.4 | 10.0 | 7.3 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 5.6 | 10.5 | 8.8 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 7.1 | 12.3 | 10.3 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 7.3 | 12.2 | 10.5 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 3.6 | 11.5 | 9.1 | 98 | |
| 11/26/07 - 12/02/07 | 168 | 9.4 | 13.0 | 11.7 | 100 | |
| 12/03/07 - 12/09/07 | 168 | 8.7 | 13.4 | 11.2 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 6.1 | 12.8 | 10.9 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 10.5 | 17.9 | 13.1 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 10.0 | 17.3 | 13.2 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 12.5 | 13.7 | 13.0 | 100 | |

TABLE A-12: WEEKLY DO SUMMARY STATISTICS AT WENTWORTH AVENUE
ON THE LITTLE CALUMET RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values |
|---------------------|---------------------|-------------------------|---------|------|--------------------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 8.7 | 12.1 | 10.8 | 100 |
| 01/08/07 - 01/14/07 | 168 | 10.1 | 12.6 | 11.3 | 100 |
| 01/15/07 - 01/21/07 | 168 | 10.9 | 13.8 | 12.7 | 100 |
| 01/22/07 - 01/28/07 | 168 | 10.8 | 12.5 | 11.6 | 100 |
| 01/29/07 - 02/04/07 | 168 | 10.8 | 12.5 | 11.7 | 100 |
| 02/05/07 - 02/11/07 | 168 | 10.1 | 11.9 | 10.8 | 100 |
| 02/12/07 - 02/18/07 | 168 | 9.7 | 11.6 | 10.8 | 100 |
| 02/19/07 - 02/25/07 | 168 | 9.9 | 12.4 | 11.1 | 100 |
| 02/26/07 - 03/04/07 | 168 | 10.8 | 12.4 | 11.6 | 100 |
| 03/05/07 - 03/11/07 | 168 | 10.4 | 12.4 | 11.4 | 100 |
| 03/12/07 - 03/18/07 | 167 | 8.7 | 12.3 | 10.8 | 100 |
| 03/19/07 - 03/25/07 | 168 | 7.7 | 11.8 | 9.6 | 100 |
| 03/26/07 - 04/01/07 | 30 | 7.1 | 8.2 | 7.7 | 100 |
| 04/02/07 - 04/08/07 | 110 | 8.3 | 11.5 | 10.6 | 100 |
| 04/09/07 - 04/15/07 | 58 | 9.3 | 11.6 | 10.8 | 100 |
| 04/16/07 - 12/31/07 | | NO DATA | | | |

TABLE A-13: WEEKLY DO SUMMARY STATISTICS AT ASHLAND AVENUE
ON THE LITTLE CALUMET RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 01/01/07 - 01/07/07 | 168 | 9.5 | 11.7 | 10.5 | 100 | |
| 01/08/07 - 01/14/07 | 168 | 10.6 | 12.9 | 11.6 | 100 | |
| 01/15/07 - 01/21/07 | 168 | 11.6 | 13.3 | 12.7 | 100 | |
| 01/22/07 - 01/28/07 | 168 | 11.3 | 12.5 | 12.0 | 100 | |
| 01/29/07 - 02/04/07 | 168 | 11.1 | 12.8 | 11.9 | 100 | |
| 02/05/07 - 02/11/07 | 168 | 9.9 | 12.9 | 11.2 | 100 | |
| 02/12/07 - 02/18/07 | 168 | 9.3 | 11.9 | 10.5 | 100 | |
| 02/19/07 - 02/25/07 | 168 | 10.3 | 12.3 | 11.2 | 100 | |
| 02/26/07 - 03/04/07 | 168 | 11.1 | 12.1 | 11.7 | 100 | |
| 03/05/07 - 03/11/07 | 168 | 10.3 | 13.3 | 11.8 | 100 | |
| 03/12/07 - 03/18/07 | 167 | 9.5 | 12.8 | 10.8 | 100 | |
| 03/19/07 - 03/25/07 | 168 | 8.2 | 12.4 | 9.7 | 100 | |
| 03/26/07 - 04/01/07 | 168 | 7.6 | 9.8 | 8.4 | 100 | |
| 04/02/07 - 04/08/07 | 168 | 8.3 | 13.8 | 10.6 | 100 | |
| 04/09/07 - 04/15/07 | 168 | 10.1 | 15.1 | 11.4 | 100 | |
| 04/16/07 - 04/22/07 | 168 | 7.9 | 16.6 | 11.6 | 100 | |
| 04/23/07 - 04/29/07 | 168 | 5.8 | 10.5 | 8.0 | 100 | |
| 04/30/07 - 05/06/07 | 168 | 6.4 | 7.8 | 7.0 | 100 | |
| 05/07/07 - 05/13/07 | 168 | 4.6 | 7.6 | 5.9 | 82 | |
| 05/14/07 - 05/20/07 | 168 | 1.0 | 8.0 | 5.5 | 76 | |
| 05/21/07 - 05/27/07 | 168 | 3.3 | 7.9 | 5.2 | 50 | |
| 05/28/07 - 06/03/07 | 168 | 2.3 | 4.2 | 3.1 | 0 | |
| 06/04/07 - 06/10/07 | 168 | 2.7 | 5.3 | 4.0 | 5 | |
| 06/11/07 - 06/17/07 | 168 | 1.9 | 6.9 | 3.9 | 14 | |
| 06/18/07 - 06/24/07 | 168 | 0.6 | 5.4 | 3.9 | 12 | |
| 06/25/07 - 07/01/07 | 58 | 3.6 | 4.8 | 4.1 | 0 | |
| 07/02/07 - 07/08/07 | | NO DATA | | | | |
| 07/09/07 - 07/15/07 | 108 | 3.1 | 6.1 | 4.2 | 17 | |
| 07/16/07 - 07/22/07 | 168 | 3.6 | 6.2 | 4.7 | 28 | |
| 07/23/07 - 07/29/07 | 168 | 3.0 | 6.7 | 4.4 | 15 | |
| 07/30/07 - 08/05/07 | 167 | 2.9 | 6.9 | 4.3 | 16 | |
| 08/06/07 - 08/12/07 | 168 | 3.1 | 4.9 | 4.0 | 0 | |
| 08/13/07 - 08/19/07 | 58 | 2.9 | 4.4 | 3.5 | 0 | |
| 08/20/07 - 08/26/07 | | NO DATA | | | | |

TABLE A-13 (Continued): WEEKLY DO SUMMARY STATISTICS AT ASHLAND AVENUE ON THE LITTLE CALUMET RIVER DURING 2007

| Monitoring Dates | Number of DO Values | DO Concentration (mg/L) | | | Percent DO Values | |
|---------------------|---------------------|-------------------------|---------|------|-------------------|---------------|
| | | Minimum | Maximum | Mean | ≥ 5.0 mg/L | IPCB Standard |
| 08/27/07 - 09/02/07 | 110 | 3.5 | 4.6 | 3.9 | 0 | |
| 09/03/07 - 09/09/07 | 168 | 3.0 | 4.7 | 3.8 | 0 | |
| 09/10/07 - 09/16/07 | 168 | 2.9 | 6.6 | 4.7 | 42 | |
| 09/17/07 - 09/23/07 | 168 | 3.5 | 6.9 | 5.1 | 51 | |
| 09/24/07 - 09/30/07 | 168 | 2.6 | 5.8 | 4.3 | 14 | |
| 10/01/07 - 10/07/07 | 168 | 3.6 | 5.3 | 4.4 | 9 | |
| 10/08/07 - 10/14/07 | 168 | 3.7 | 7.8 | 5.6 | 64 | |
| 10/15/07 - 10/21/07 | 168 | 5.1 | 7.8 | 6.1 | 100 | |
| 10/22/07 - 10/28/07 | 168 | 5.2 | 7.9 | 6.4 | 100 | |
| 10/29/07 - 11/04/07 | 168 | 6.0 | 9.4 | 7.6 | 100 | |
| 11/05/07 - 11/11/07 | 168 | 7.9 | 10.9 | 9.1 | 100 | |
| 11/12/07 - 11/18/07 | 168 | 5.5 | 9.0 | 7.4 | 100 | |
| 11/19/07 - 11/25/07 | 168 | 6.7 | 10.3 | 8.2 | 100 | |
| 11/26/07 - 12/02/07 | 168 | 9.5 | 12.3 | 10.8 | 100 | |
| 12/03/07 - 12/09/07 | 168 | 9.5 | 12.9 | 10.4 | 100 | |
| 12/10/07 - 12/16/07 | 168 | 10.0 | 12.3 | 11.3 | 100 | |
| 12/17/07 - 12/23/07 | 168 | 10.6 | 12.9 | 11.8 | 100 | |
| 12/24/07 - 12/30/07 | 168 | 11.2 | 12.7 | 12.0 | 100 | |
| 12/31/07 - 12/31/07 | 24 | 11.8 | 12.4 | 12.0 | 100 | |