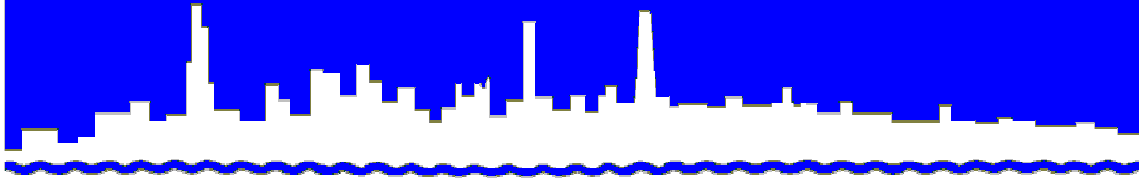


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***RESEARCH AND DEVELOPMENT
DEPARTMENT***

REPORT NO. 08-39

CONTINUOUS DISSOLVED OXYGEN MONITORING
IN THE DEEP-DRAFT CHICAGO WATERWAY SYSTEM
DURING 2007

August 2008

Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street Chicago, Illinois 60611-2803 (312) 751-5600

**CONTINUOUS DISSOLVED OXYGEN MONITORING
IN THE DEEP-DRAFT CHICAGO WATERWAY SYSTEM
DURING 2007**

By

Thomas A. Minarik, Jr.
Biologist I

Jennifer L. Wasik
Biologist II

Michael Sopcak
Biologist III

Samuel G. Dennison
Biologist IV

Research and Development Department
Louis Kollias, Director

August 2008

TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES	ii
LIST OF FIGURES	iv
ACKNOWLEDGEMENT	vi
DISCLAIMER	vi
INTRODUCTION	1
MONITORING STATIONS	2
Locations and Descriptions	2
Designated Uses	2
Water Quality Standards	2
MATERIALS AND METHODS	3
Water Quality Monitor	3
Data Management and Review	3
Verification of Representative Data	4
RESULTS	5
DO Fluctuations	5
REFERENCES	34
APPENDIX:	
A Weekly DO Summary Statistics at all Deep-Draft Monitoring Stations During 2007	A-1

LIST OF TABLES

Table No.		Page
1	Deep-Draft Continuous Dissolved Oxygen Monitoring Stations	6
2	Minimum, Maximum, and Mean Hourly Dissolved Oxygen Concentrations	10
3	Number and Percent of Dissolved Oxygen Values Not Meeting Acceptance Criteria	11
4	Number and Percent of Dissolved Oxygen Values Measured Above the Illinois Pollution Control Board's Water Quality Standard	12
5	Percent of Dissolved Oxygen Values in Selected Ranges	13
A-1	Weekly DO Summary Statistics at Main Street on the North Shore Channel During 2007	A-1
A-2	Weekly DO Summary Statistics at Foster Avenue on the North Shore Channel During 2007	A-3
A-3	Weekly DO Summary Statistics at Addison Street on the North Branch of the Chicago River During 2007	A-5
A-4	Weekly DO Summary Statistics at Fullerton Avenue on the North Branch of the Chicago River During 2007	A-7
A-5	Weekly DO Summary Statistics at Kinzie Street on the North Branch of the Chicago River During 2007	A-9
A-6	Weekly DO Summary Statistics at Clark Street on the Chicago River During 2007	A-11
A-7	Weekly DO Summary Statistics at Loomis Street on the South Branch of the Chicago River During 2007	A-13
A-8	Weekly DO Summary Statistics at 36th Street on Bubbly Creek During 2007	A-15
A-9	Weekly DO Summary Statistics at Interstate Highway 55 on Bubbly Creek During 2007	A-17

LIST OF TABLES (Continued)

<u>Table No.</u>		<u>Page</u>
A-10	Weekly DO Summary Statistics at Cicero Avenue on the Chicago Sanitary and Ship Canal During 2007	A-19
A-11	Weekly DO Summary Statistics at B&O Central Railroad on the Chicago Sanitary and Ship Canal During 2007	A-21
A-12	Weekly DO Summary Statistics at Route 83 on the Chicago Sanitary and Ship Canal During 2007	A-23
A-13	Weekly DO Summary Statistics at the Lockport Powerhouse on the Chicago Sanitary and Ship Canal During 2007	A-25
A-14	Weekly DO Summary Statistics at Jefferson Street on the Des Plaines River During 2007	A-27
A-15	Weekly DO Summary Statistics at C&W Indiana Railroad on the Little Calumet River During 2007	A-29
A-16	Weekly DO Summary Statistics at Halsted Street on the Little Calumet River During 2007	A-31
A-17	Weekly DO Summary Statistics at Cicero Avenue on the Calumet-Sag Channel During 2007	A-33
A-18	Weekly DO Summary Statistics at 104th Avenue on the Calumet-Sag Channel During 2007	A-35
A-19	Weekly DO Summary Statistics at Route 83 on the Calumet-Sag Channel During 2007	A-37

LIST OF FIGURES

<u>Figure No.</u>		<u>Page</u>
1	Continuous Dissolved Oxygen Monitoring and Ambient Water Quality Monitoring Sample Stations	14
2	Dissolved Oxygen Concentration Measured Hourly at Main Street on the North Shore Channel From January 2007 Through December 2007	15
3	Dissolved Oxygen Concentration Measured Hourly at Foster Avenue on the North Shore Channel From January 2007 Through December 2007	16
4	Dissolved Oxygen Concentration Measured Hourly at Addison Street on the North Branch Chicago River From January 2007 Through December 2007	17
5	Dissolved Oxygen Concentration Measured Hourly at Fullerton Avenue on the North Branch Chicago River From January 2007 Through December 2007	18
6	Dissolved Oxygen Concentration Measured Hourly at Kinzie Street on the North Branch Chicago River From January 2007 Through December 2007	19
7	Dissolved Oxygen Concentration Measured Hourly at Clark Street on the Chicago River From January 2007 Through December 2007	20
8	Dissolved Oxygen Concentration Measured Hourly at Loomis Street on the South Branch Chicago River From January 2007 Through December 2007	21
9	Dissolved Oxygen Concentration Measured Hourly at 36th Street on Bubbly Creek From January 2007 Through December 2007	22
10	Dissolved Oxygen Concentration Measured Hourly at Interstate Highway 55 on Bubbly Creek From January 2007 Through December 2007	23
11	Dissolved Oxygen Concentration Measured Hourly at Cicero Avenue on the Chicago Sanitary and Ship Canal From January 2007 Through December 2007	24

LIST OF FIGURES (Continued)

<u>Figure No.</u>		<u>Page</u>
12	Dissolved Oxygen Concentration Measured Hourly at B&O Central Railroad on the Chicago Sanitary and Ship Canal From January 2007 Through December 2007	25
13	Dissolved Oxygen Concentration Measured Hourly at Route 83 on the Chicago Sanitary and Ship Canal From January 2007 Through December 2007	26
14	Dissolved Oxygen Concentration Measured Hourly at Lockport Powerhouse on the Chicago Sanitary and Ship Canal From January 2007 Through December 2007	27
15	Dissolved Oxygen Concentration Measured Hourly at Jefferson Street on the Des Plaines River From January 2007 Through December 2007	28
16	Dissolved Oxygen Concentration Measured Hourly at C&W Indiana Railroad on the Little Calumet River From January 2007 Through December 2007	29
17	Dissolved Oxygen Concentration Measured Hourly at Halsted Street on the Little Calumet River From January 2007 Through December 2007	30
18	Dissolved Oxygen Concentration Measured Hourly at Cicero Avenue on the Calumet-Sag Channel From January 2007 Through December 2007	31
19	Dissolved Oxygen Concentration Measured Hourly at 104th Avenue on the Calumet-Sag Channel From January 2007 Through December 2007	32
20	Dissolved Oxygen Concentration Measured Hourly at Route 83 on the Calumet-Sag Channel From January 2007 Through December 2007	33

ACKNOWLEDGEMENT

Thanks are extended to staff from the Industrial Waste Division who deployed and retrieved the water quality monitors weekly during the study. Special thanks to Richard Schackart, Justin Vick, Dustin Gallagher, Colleen Joyce, Angel Whittington, and Panu Lansiri for downloading and servicing the monitors.

Thanks are also extended to Dr. Thomas Granato, Assistant Director of Research and Development, Environmental Monitoring and Research Division, for his helpful review of the draft report.

We thank Robert Larson, Illinois State Water Survey, for designing the Access[®] database program, and Roger Smith, Senior Program Analyst, Information Technology Department, for modifying the database program. Their help with the Access[®] program is greatly appreciated.

We thank Dr. Zainul Abedin, Biostatistician, for modifying the database program and for performing the calculations for the data summaries used in this report.

Particular thanks are due to Joan Scrima and Rhonda Griffith for reviewing, formatting, and typing the report.

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 Chicago Waterway System (CWS) consists of 78 miles of canals, which serve the Chicago area for two principal purposes, the drainage of urban storm water runoff and treated municipal wastewater effluent and the support of commercial navigation. Approximately 75 percent of the length is composed of man-made canals where no waterway existed previously, and the remainder is composed of natural streams that have been deepened, straightened and/or widened to such an extent that reversion to the natural state is not possible. The flow of water in the CWS is artificially controlled by hydraulic structures. The CWS has two river systems, the Calumet River System and the Chicago River System (Lanyon, 2002).

Over the years, increased pollutant loading from urbanization throughout the Chicago metropolitan area and low stream velocities in Chicago area deep-draft waterways have caused dissolved oxygen (DO) concentrations to fall below DO standards established by the Illinois Pollution Control Board (IPCB). More than 30 years ago, the Metropolitan Water Reclamation District of Greater Chicago (District) determined that applicable IPCB DO standards for Chicago area waterways could not be met exclusively by advanced wastewater treatment at its three major regional water reclamation plants (WRPs), Calumet, North Side, and Stickney, and by the capture and treatment of combined sewer overflows (CSOs). In order to increase the DO concentration in the Chicago and Calumet River Systems, the District designed and constructed artificial aeration systems (instream diffuser and sidestream elevated pool aeration [SEPA] stations) during the late 1970s and early 1990s, respectively.

From October 1994 through May 1996, the Research and Development Department (R&D) conducted weekly DO surveys in the Chicago River System. Water samples were collected manually, chemically fixed in the field, and returned to the laboratory for titration. The results from these surveys showed that DO concentrations in selected waterway reaches were less than IPCB DO standards applicable to these reaches.

In August 1996, R&D began developing a comprehensive field-monitoring program in order to locate and identify reaches in the Chicago River System where the DO concentration is less than the applicable IPCB DO standard. Initially, the program was to focus on the Chicago River System for a two-year period and has since been extended. Subsequently, the scope of the monitoring program was first expanded to include the Calumet River System, and then later the Chicago area wadeable streams. The resulting data have been used for the calibration and verification of a water quality model for the CWS.

Data in this report are from the 19 deep-draft continuous DO monitoring stations of the District's Continuous Dissolved Oxygen Monitoring (CDOM) Program. This report covers the monitoring results for the period January 2007 through December 2007 for the deep-draft waterways of the Chicago River System, 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 and deep-draft waterways within its jurisdiction. All stations for both programs are shown in Figure 1. Descriptions of the locations for the deep-draft monitoring 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 and Calumet River Systems, General Use Waters include the North Shore Channel upstream of the North Side WRP, and the Chicago and Calumet Rivers.

Secondary Contact Waters include the North Shore Channel from the North Side WRP to the North Branch of the Chicago River, the North Branch of the Chicago River from the North Shore Channel to the Chicago River, the South Branch of the 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 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. Two different installation designs were employed: (1) a 3-foot length of 8-inch diameter stainless steel pipe secured to shore by means of a chain, was positioned on the bottom of the waterway and oriented downstream such that the water passed through the pipe, and (2) a fixed length of 8-inch diameter stainless steel pipe, with multiple 2-inch circular openings, was vertically mounted on the side of a bridge abutment.

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 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 20 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 20 monitoring stations during 2007. The current national one-day minimum DO 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 Figures 2 through 20.

Weekly DO summary statistics during 2007 are presented for each monitoring station in Appendix A, Tables A-1 through A-19.

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.mwrdd.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: DEEP-DRAFT CONTINUOUS DISSOLVED OXYGEN
MONITORING STATIONS

Monitoring Station	Waterway	Description of Monitoring Station
<u>Chicago River System</u>		
Main Street	North Shore Channel	3.5 miles below Wilmette Pumping Station, 0.8 mile above North Side WRP outfall, water quality monitor under Main Street bridge, center of channel, 6 inches above bottom.
Foster Avenue	North Shore Channel	3.2 miles below North Side WRP outfall, 1.5 miles below Devon Aeration Station, 0.1 mile above junction with North Branch Chicago River, water quality monitor on northwest side Foster Avenue bridge, 3 feet below water surface.
Addison Street	North Branch Chicago River	5.2 miles below North Side WRP outfall, water quality monitor on northwest side Addison Street bridge, 3 feet below water surface.
Fullerton Avenue	North Branch Chicago River	7.2 miles below North Side WRP outfall, 0.4 mile above Webster Aeration Station, water quality monitor on northwest side Fullerton Avenue bridge, 3 feet below water surface.
Kinzie Street	North Branch Chicago River	9.9 miles below North Side WRP outfall, 3.1 miles below Webster Aeration Station, 0.2 mile above junction with Chicago River, water quality monitor on northeast side Kinzie Street bridge, 3 feet below water surface.
Clark Street	Chicago River	1.2 miles below Chicago River Controlling Works, 0.4 mile above junction with South Branch Chicago River, water quality monitor on northeast side Clark Street bridge, 3 feet below water surface.

TABLE 1 (Continued): DEEP-DRAFT CONTINUOUS DISSOLVED OXYGEN MONITORING STATIONS

Monitoring Station	Waterway	Description of Monitoring Station
<u>Chicago River System (Continued)</u>		
Loomis Street	South Branch Chicago River	3.6 miles below junction with Chicago River, water quality monitor on north-east side Loomis Street bridge, 3 feet below water surface.
36 th Street	Bubbly Creek	0.2 mile below Racine Avenue Pumping Station, 1.2 miles above junction with South Branch of the Chicago River, water quality monitor attached to concrete wall on west side of river, 3 feet below water surface.
Interstate Highway 55	Bubbly Creek	1.0 mile below Racine Avenue Pumping Station, 0.4 mile above junction with South Branch of the Chicago River, water quality monitor on north-east side I-55 bridge, 3 feet below water surface.
Cicero Avenue	Chicago Sanitary and Ship Canal	1.5 miles above Stickney WRP outfall, 1.1 miles below Crawford Generating Station cooling water discharge, water quality monitor on northeast side Cicero Avenue bridge, 3 feet below water surface.
B&O Central Railroad	Chicago Sanitary and Ship Canal	3.6 miles below Stickney WRP outfall, water quality monitor in center of canal, east side B&O Central RR bridge, 3 feet below water surface.
Route 83	Chicago Sanitary and Ship Canal	1.2 miles above junction with Calumet-Sag Channel, 1.1 miles above Canal Junction SEPA Station, water quality monitor 0.6 mile above Route 83 bridge, center of canal, 6 inches above bottom.

TABLE 1 (Continued): DEEP-DRAFT CONTINUOUS DISSOLVED OXYGEN MONITORING STATIONS

Monitoring Station	Waterway	Description of Monitoring Station
<u>Chicago River System (Continued)</u>		
Lockport Powerhouse	Chicago Sanitary and Ship Canal	0.1 mile above Lockport Powerhouse, 1.1 miles above junction with Des Plaines River, water quality monitor on north side of canal, in forebay area on fender wall, 3 feet below water surface.
<u>Des Plaines River System</u>		
Jefferson Street	Des Plaines River	3.0 miles below Lockport Lock, 2.1 miles below junction with Chicago Sanitary and Ship Canal, water quality monitor on southeast side Jefferson Street bridge, 3 feet below water surface.
<u>Calumet River System</u>		
C&W Indiana Railroad	Little Calumet River	5.2 miles below SEPA 1, 1.5 miles above SEPA 2, 3.6 miles below Thomas J. O'Brien Lock and Dam, 1.3 miles above Calumet WRP outfall, water quality monitor attached to northeast side C&W Indiana RR bridge, 3 feet below water surface.
Halsted Street	Little Calumet River	7.7 miles below SEPA 1, 1.0 mile below SEPA 2, 1.2 miles below Calumet WRP, 0.5 mile above junction with Calumet-Sag Channel, water quality monitor attached to southeast side Halsted Street bridge, 3 feet below water surface.
Cicero Avenue	Calumet-Sag Channel	3.1 miles below SEPA 3, 3.3 miles above SEPA 4, water quality monitor attached to northwest side Cicero Avenue bridge, 3 feet below water surface.

TABLE 1 (Continued): DEEP-DRAFT CONTINUOUS DISSOLVED OXYGEN
MONITORING STATIONS

Monitoring Station	Waterway	Description of Monitoring Station
<u>Calumet River System (Continued)</u>		
104 th Avenue	Calumet-Sag Channel	4.6 miles below SEPA 4, 3.2 miles above Canal Junction SEPA Station, water quality monitor in center of channel, 6 inches above bottom.
Route 83	Calumet-Sag Channel	0.4 mile above junction with Chicago Sanitary and Ship Canal, 0.3 mile above Canal Junction SEPA Station, water quality monitor on southwest side Illinois Central-Gulf RR bridge, 3 feet below water surface.

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

Monitoring Station	Waterway	DO Concentration (mg/L)		
		Minimum	Maximum	Mean
<u>Chicago River System</u>				
Main Street	North Shore Channel	0.2	24.4	9.0
Foster Avenue	North Shore Channel	3.9	11.8	7.6
Addison Street	North Branch Chicago River	3.5	11.8	7.5
Fullerton Avenue	North Branch Chicago River	1.7	12.4	6.9
Kinzie Street	North Branch Chicago River	1.5	13.3	6.7
Clark Street	Chicago River	2.5	14.2	8.8
Loomis Street	South Branch Chicago River	2.0	12.5	7.5
36 th Street	Bubbly Creek	0.0	15.3	4.1
Interstate Highway 55	Bubbly Creek	0.0	13.3	5.6
Cicero Avenue	Chicago Sanitary and Ship Canal	0.3	11.3	5.9
B&O Central Railroad	Chicago Sanitary and Ship Canal	1.4	10.8	7.0
Route 83	Chicago Sanitary and Ship Canal	0.0	9.7	6.1
Lockport Powerhouse	Chicago Sanitary and Ship Canal	0.9	10.1	6.0
<u>Des Plaines River System</u>				
Jefferson Street	Des Plaines River	2.0	12.7	7.3
<u>Calumet River System</u>				
C&W Indiana Railroad	Little Calumet River	0.2	19.8	9.0
Halsted Street	Little Calumet River	0.0	13.1	6.6
Cicero Avenue	Calumet-Sag Channel	1.7	15.0	7.0
104 th Avenue	Calumet-Sag Channel	2.9	11.4	7.7
Route 83	Calumet-Sag Channel	2.2	11.2	6.9

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>			
Main Street	North Shore Channel	2,062	24
Foster Avenue	North Shore Channel	175	2
Addison Street	North Branch Chicago River	170	2
Fullerton Avenue	North Branch Chicago River	1	<1
Kinzie Street	North Branch Chicago River	339	4
Clark Street	Chicago River	511	6
Loomis Street	South Branch Chicago River	1,016	12
36 th Street	Bubbly Creek	543	6
Interstate Highway 55	Bubbly Creek	3	<1
Cicero Avenue	Chicago Sanitary and Ship Canal	167	2
B&O Central Railroad	Chicago Sanitary and Ship Canal	506	6
Route 83	Chicago Sanitary and Ship Canal	3,316	38
Lockport Powerhouse	Chicago Sanitary and Ship Canal	844	10
<u>Des Plaines River System</u>			
Jefferson Street	Des Plaines River	514	6
<u>Calumet River System</u>			
C&W Indiana Railroad	Little Calumet River	508	6
Halsted Street	Little Calumet River	789	9
Cicero Avenue	Calumet-Sag Channel	1,176	13
104 th Avenue	Calumet-Sag Channel	3,621	41
Route 83	Calumet-Sag Channel	340	4

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>					
Main Street	North Shore Channel	5.0	6,698	5,935	89
Foster Avenue	North Shore Channel	4.0	8,585	8,584	>99
Addison Street	North Branch Chicago River	4.0	8,590	8,572	>99
Fullerton Avenue	North Branch Chicago River	4.0	8,759	8,616	98
Kinzie Street	North Branch Chicago River	4.0	8,421	8,158	97
Clark Street	Chicago River	5.0	8,249	8,162	99
Loomis Street	South Branch Chicago River	4.0	7,744	7,694	99
36 th Street	Bubbly Creek	4.0	8,217	3,611	44
Interstate Highway 55	Bubbly Creek	4.0	8,757	6,869	78
Cicero Avenue	Chicago Sanitary and Ship Canal	4.0	8,593	7,143	83
B&O Central Railroad	Chicago Sanitary and Ship Canal	4.0	8,254	8,082	98
Route 83	Chicago Sanitary and Ship Canal	4.0	5,444	4,833	89
Lockport Powerhouse	Chicago Sanitary and Ship Canal	4.0	7,916	6,520	82
<u>Des Plaines River System</u>					
Jefferson Street	Des Plaines River	4.0	8,246	7,826	95
<u>Calumet River System</u>					
C&W Indiana Railroad	Little Calumet River	4.0	8,252	8,093	98
Halsted Street	Little Calumet River	4.0	7,971	7,782	98
Cicero Avenue	Calumet-Sag Channel	3.0	7,584	7,496	99
104 th Avenue	Calumet-Sag Channel	3.0	5,139	5,134	>99
Route 83	Calumet-Sag Channel	3.0	8,420	8,282	98

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>							
Main Street	North Shore Channel	<1	1	2	3	5	89
Foster Avenue	North Shore Channel	0	0	0	<1	<1	>99
Addison Street	North Branch Chicago River	0	0	0	<1	2	98
Fullerton Avenue	North Branch Chicago River	0	<1	<1	1	10	89
Kinzie Street	North Branch Chicago River	0	<1	<1	3	15	82
Clark Street	Chicago River	0	0	<1	<1	<1	99
Loomis Street	South Branch Chicago River	0	<1	<1	1	3	96
36 th Street	Bubbly Creek	17	10	14	16	15	29
Interstate Highway 55	Bubbly Creek	7	3	4	8	15	63
Cicero Avenue	Chicago Sanitary and Ship Canal	<1	1	4	11	15	68
B&O Central Railroad	Chicago Sanitary and Ship Canal	0	<1	<1	2	7	91
Route 83	Chicago Sanitary and Ship Canal	1	<1	2	8	17	72
Lockport Powerhouse	Chicago Sanitary and Ship Canal	<1	1	4	13	17	65
<u>Des Plaines River System</u>							
Jefferson Street	Des Plaines River	0	<1	1	4	15	80
<u>Calumet River System</u>							
C&W Indiana Railroad	Little Calumet River	<1	<1	<1	1	4	94
Halsted Street	Little Calumet River	<1	<1	<1	2	8	89
Cicero Avenue	Calumet-Sag Channel	0	<1	1	4	10	85
104 th Avenue	Calumet-Sag Channel	0	0	<1	3	11	86
Route 83	Calumet-Sag Channel	0	0	2	7	14	78

FIGURE 3: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT FOSTER AVENUE ON THE NORTH SHORE CHANNEL FROM JANUARY 2007 THROUGH DECEMBER 2007

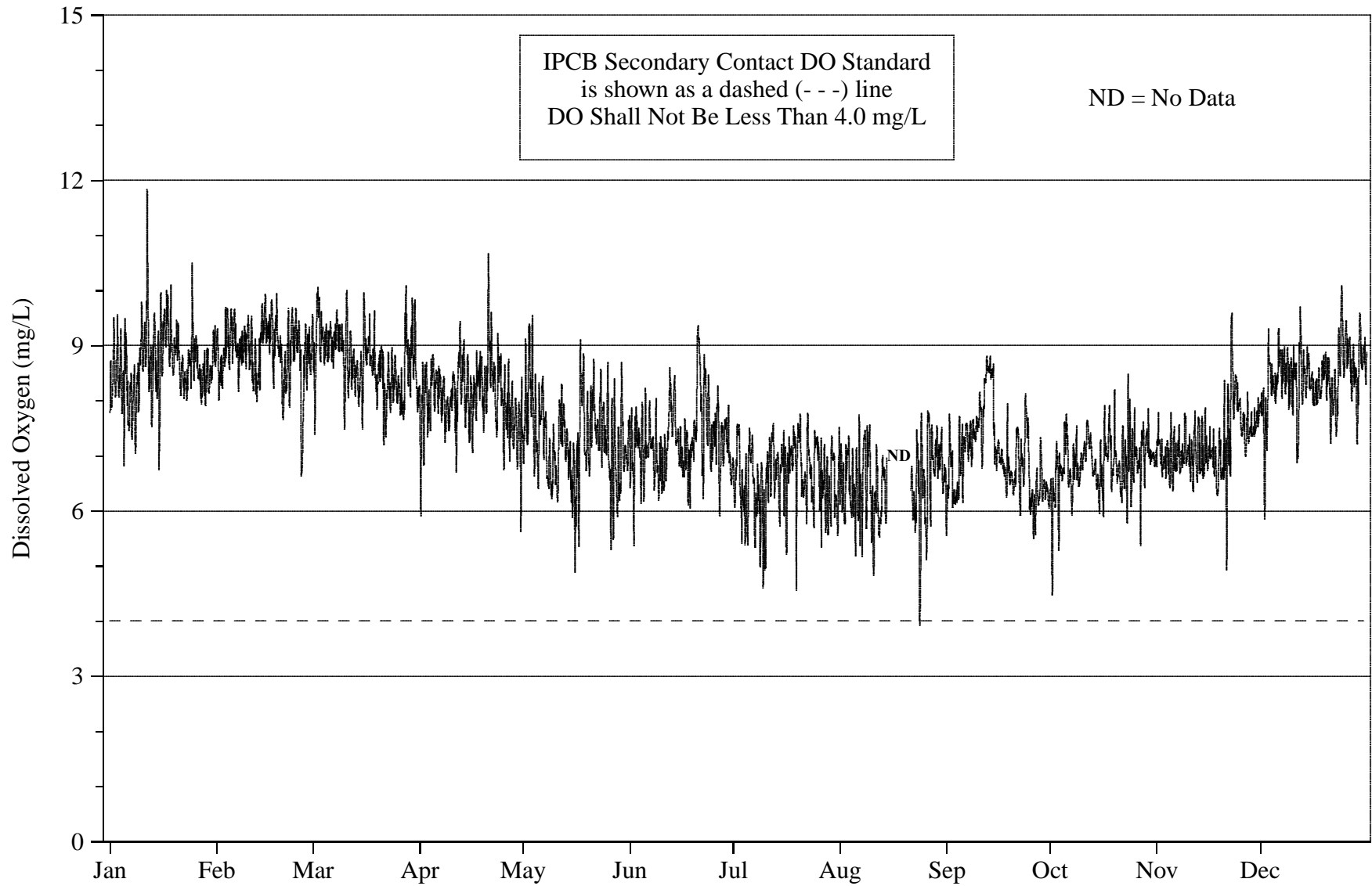


FIGURE 4: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT ADDISON STREET ON THE NORTH BRANCH CHICAGO RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

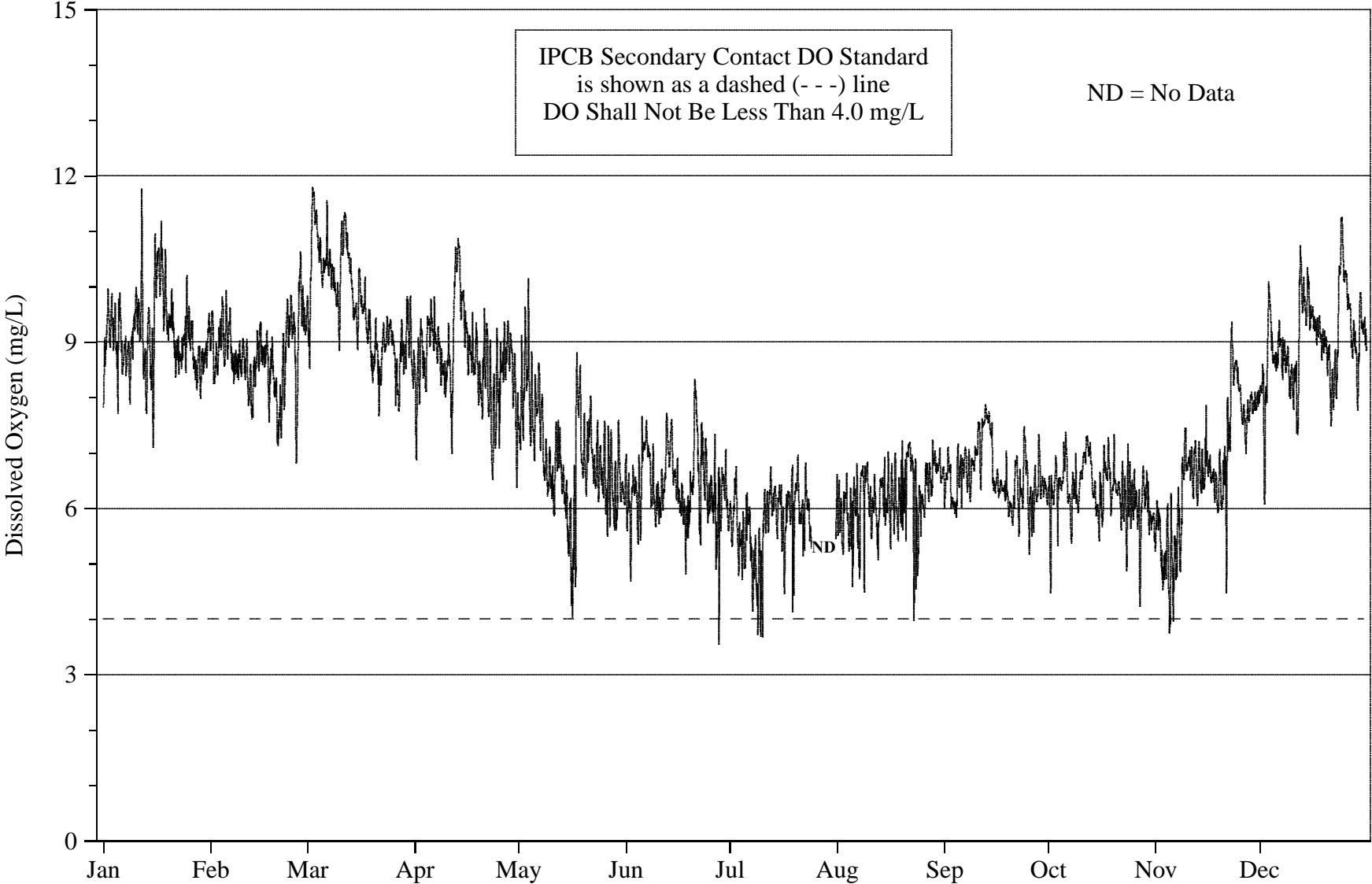


FIGURE 5: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT FULLERTON AVENUE ON THE NORTH BRANCH CHICAGO RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

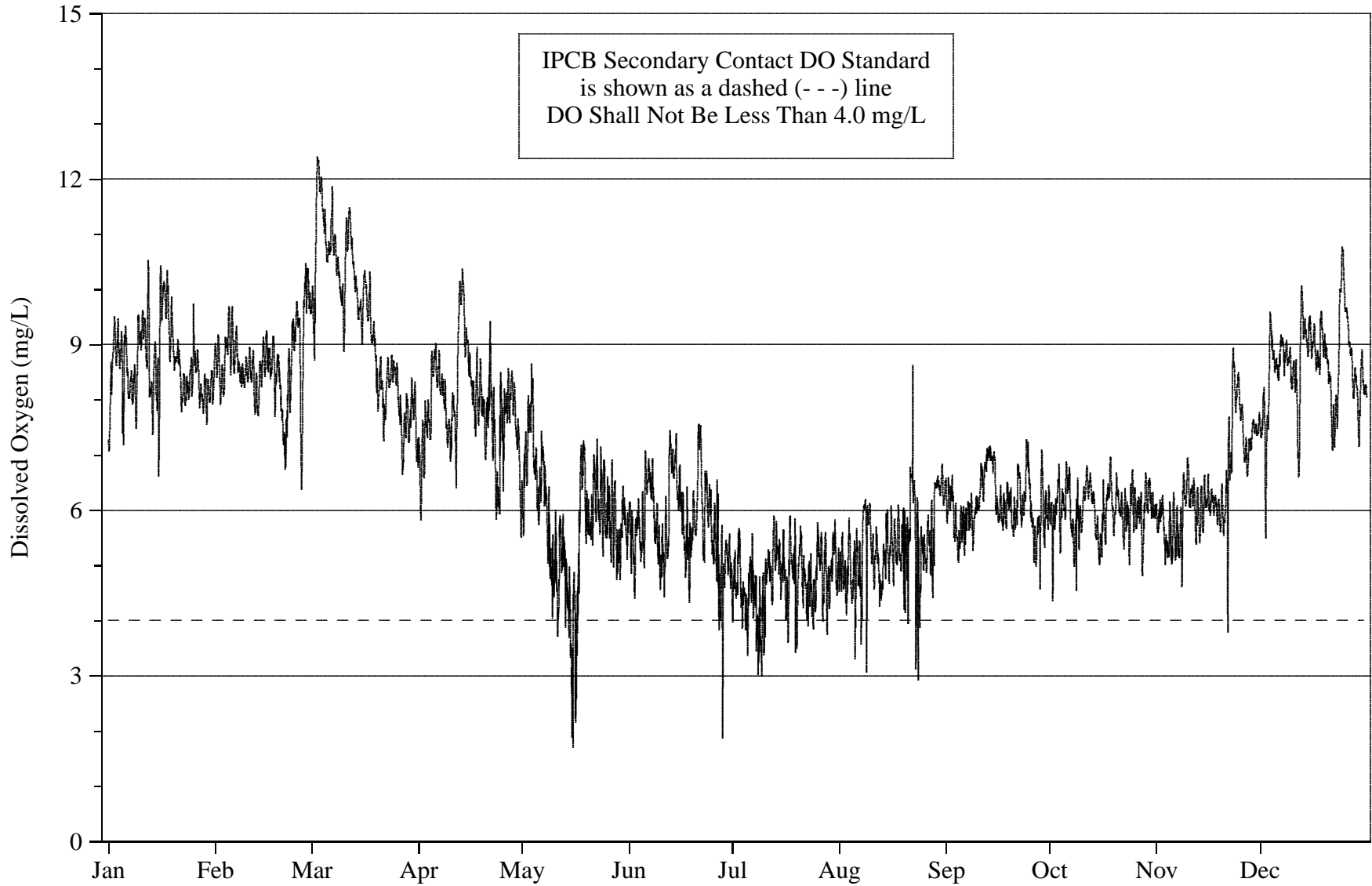


FIGURE 6: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT KINZIE STREET ON THE NORTH BRANCH CHICAGO RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

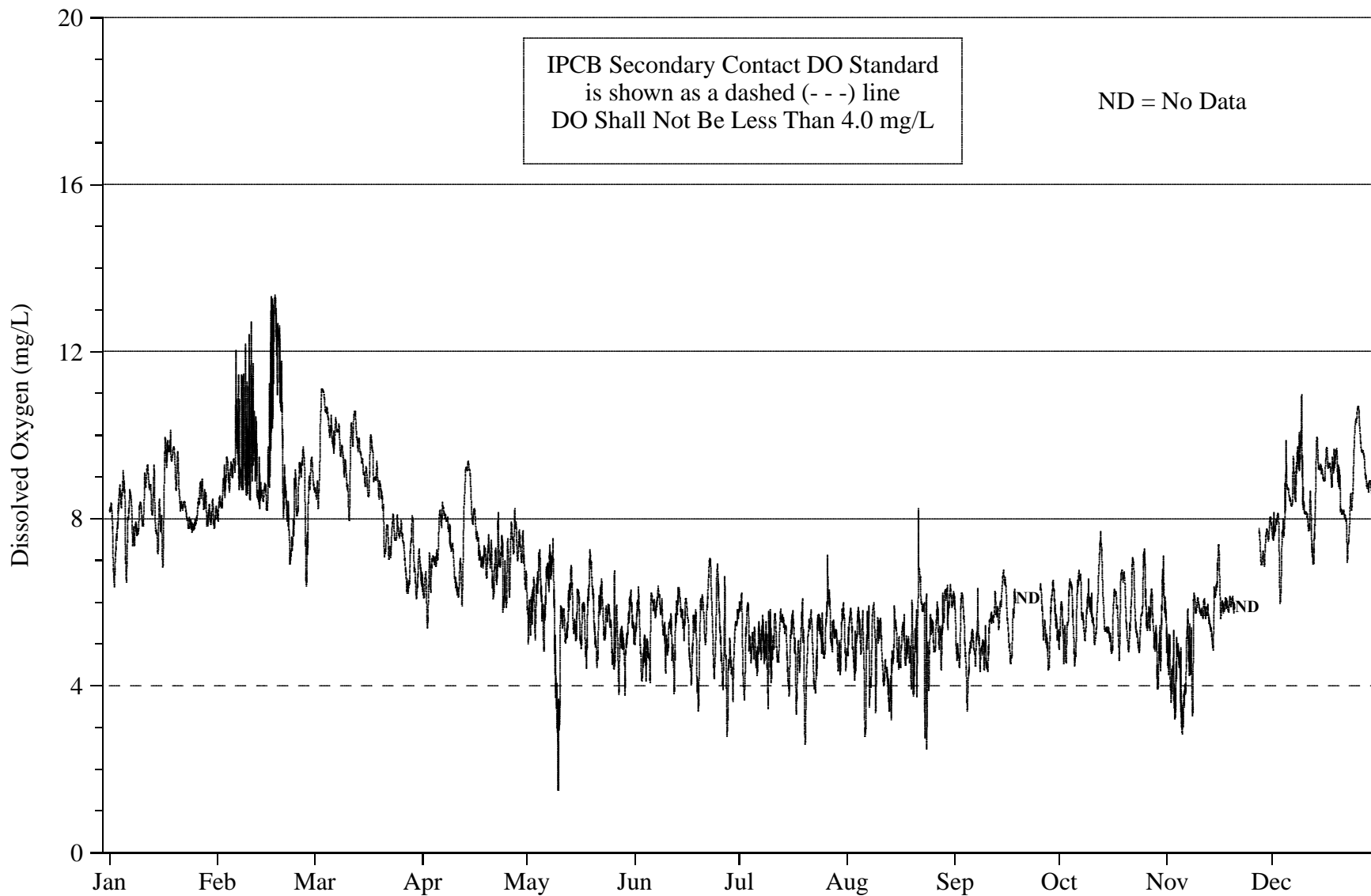


FIGURE 7: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT CLARK STREET ON THE CHICAGO RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

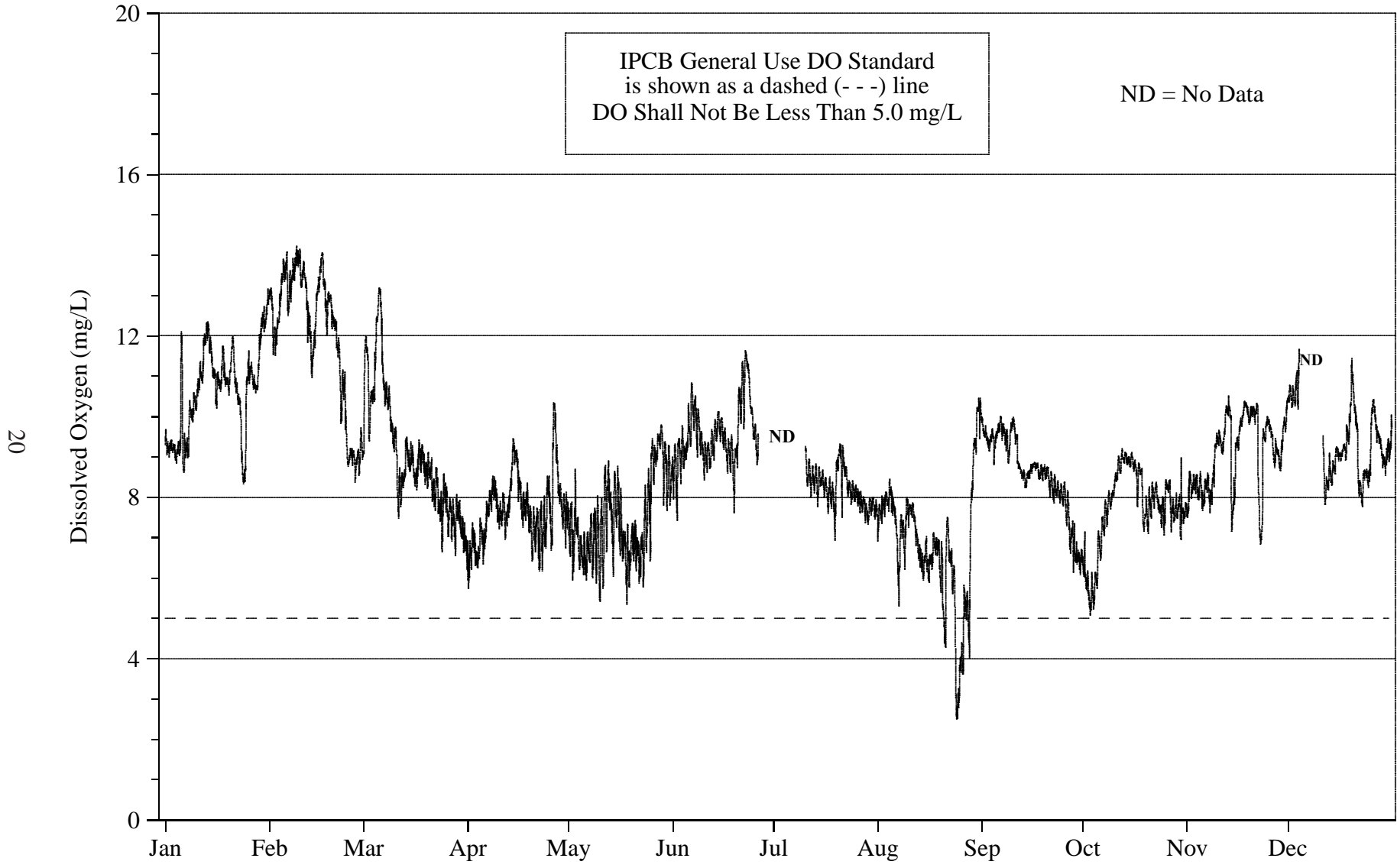


FIGURE 8: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT LOOMIS STREET ON THE SOUTH BRANCH CHICAGO RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

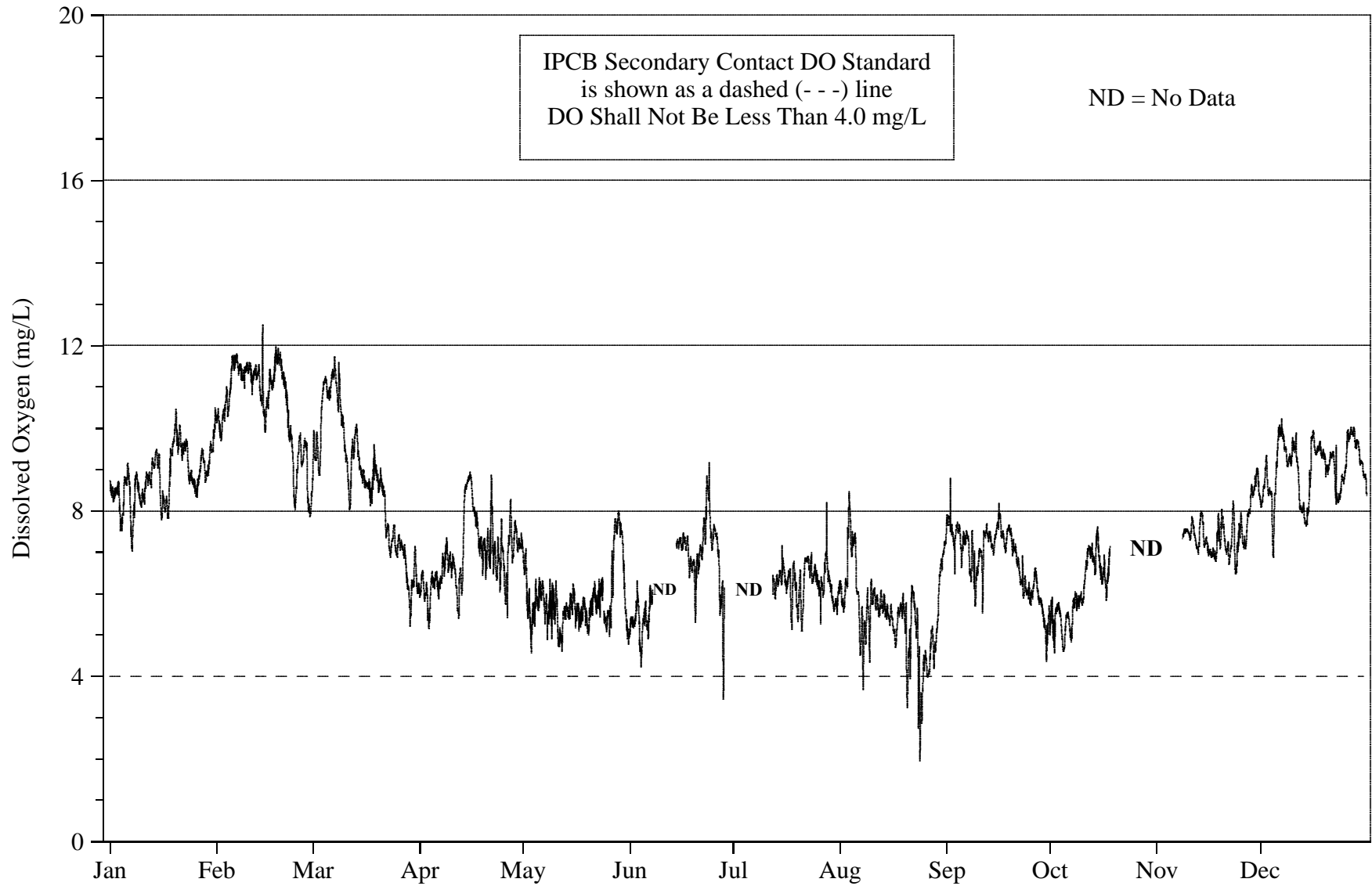


FIGURE 9: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT 36TH STREET ON BUBBLY CREEK FROM JANUARY 2007 THROUGH DECEMBER 2007

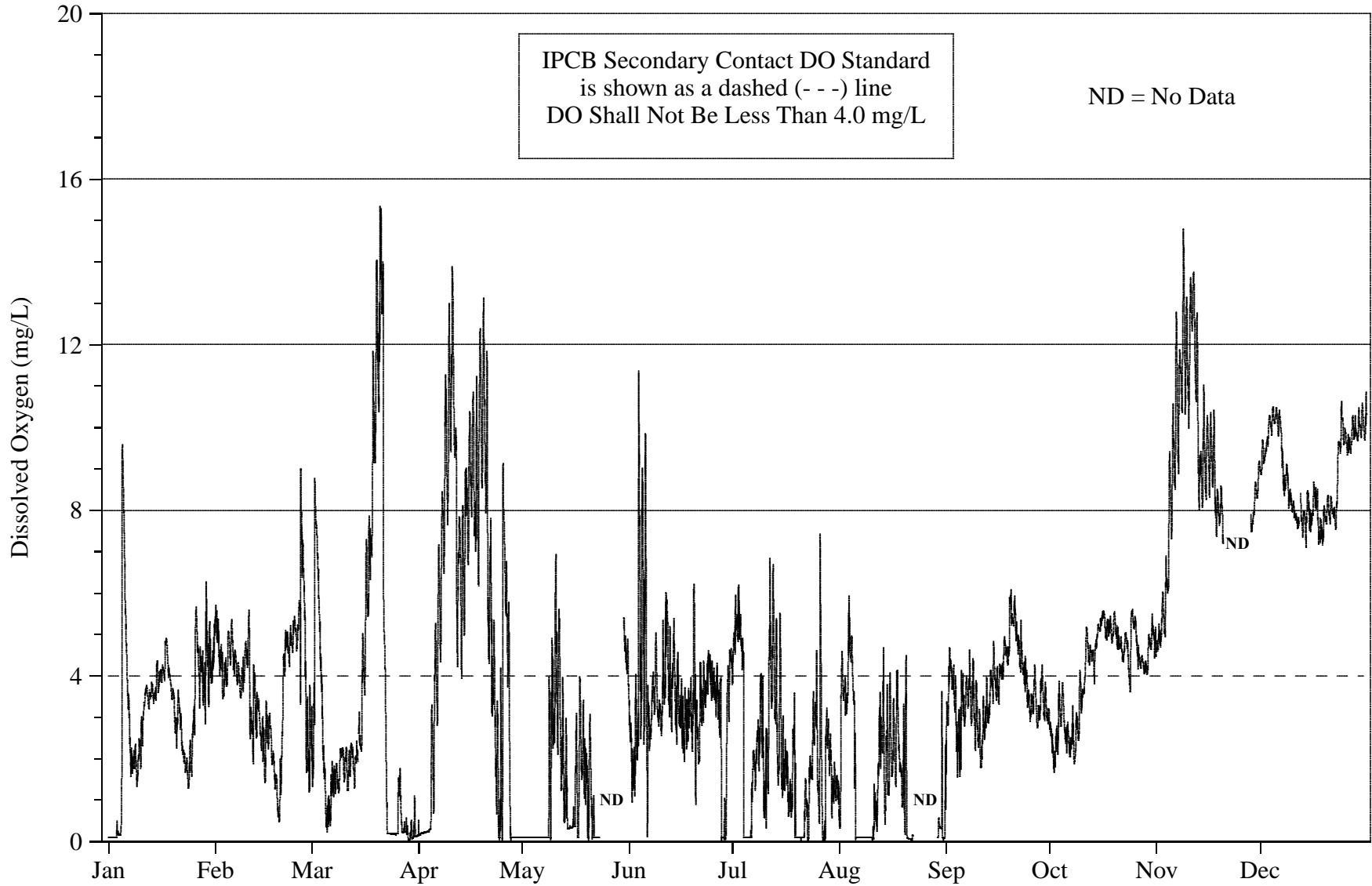


FIGURE 10: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT INTERSTATE HIGHWAY 55 ON BUBBLY CREEK FROM JANUARY 2007 THROUGH DECEMBER 2007

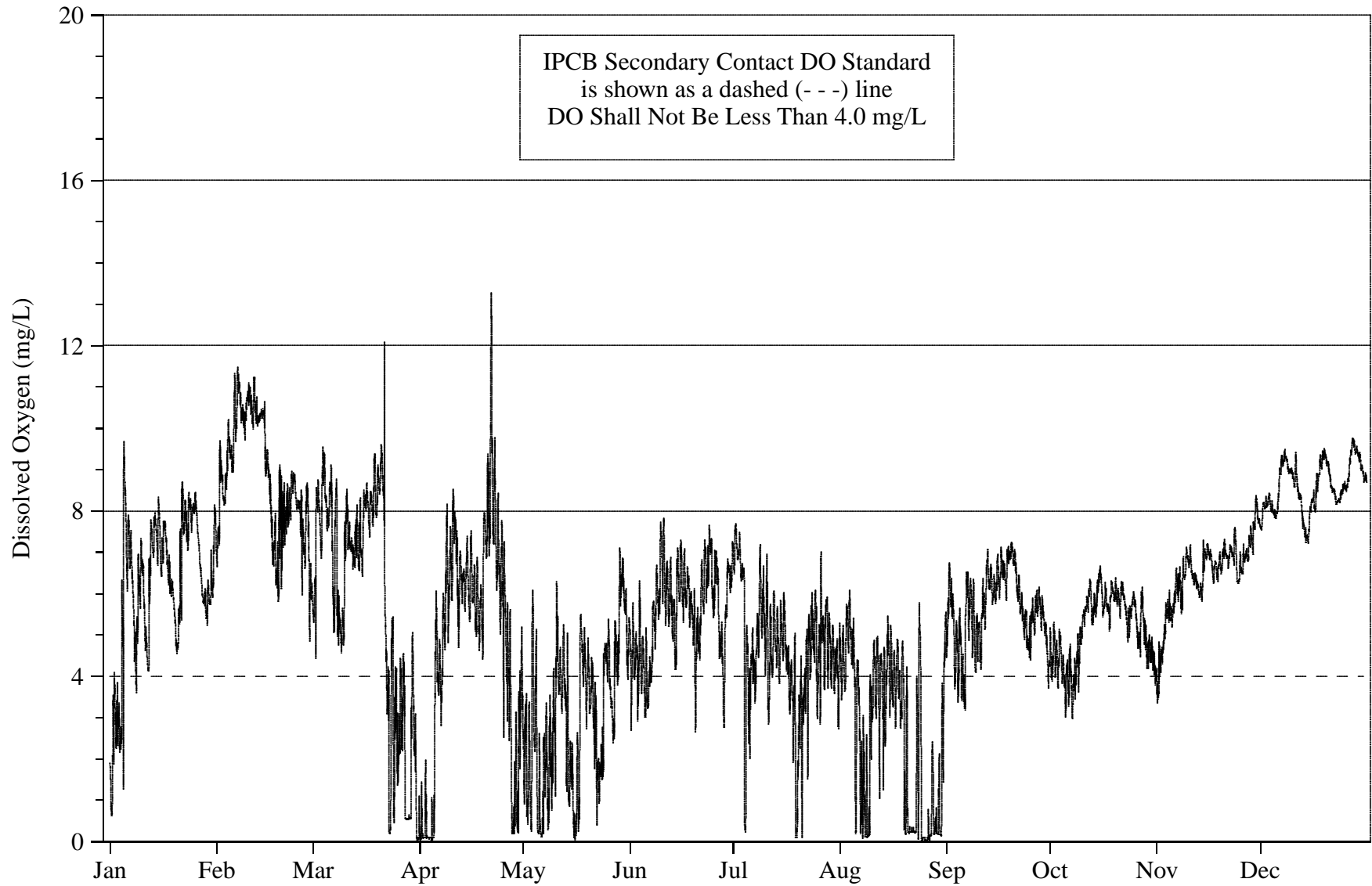


FIGURE 11: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT CICERO AVENUE ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 2007 THROUGH DECEMBER 2007

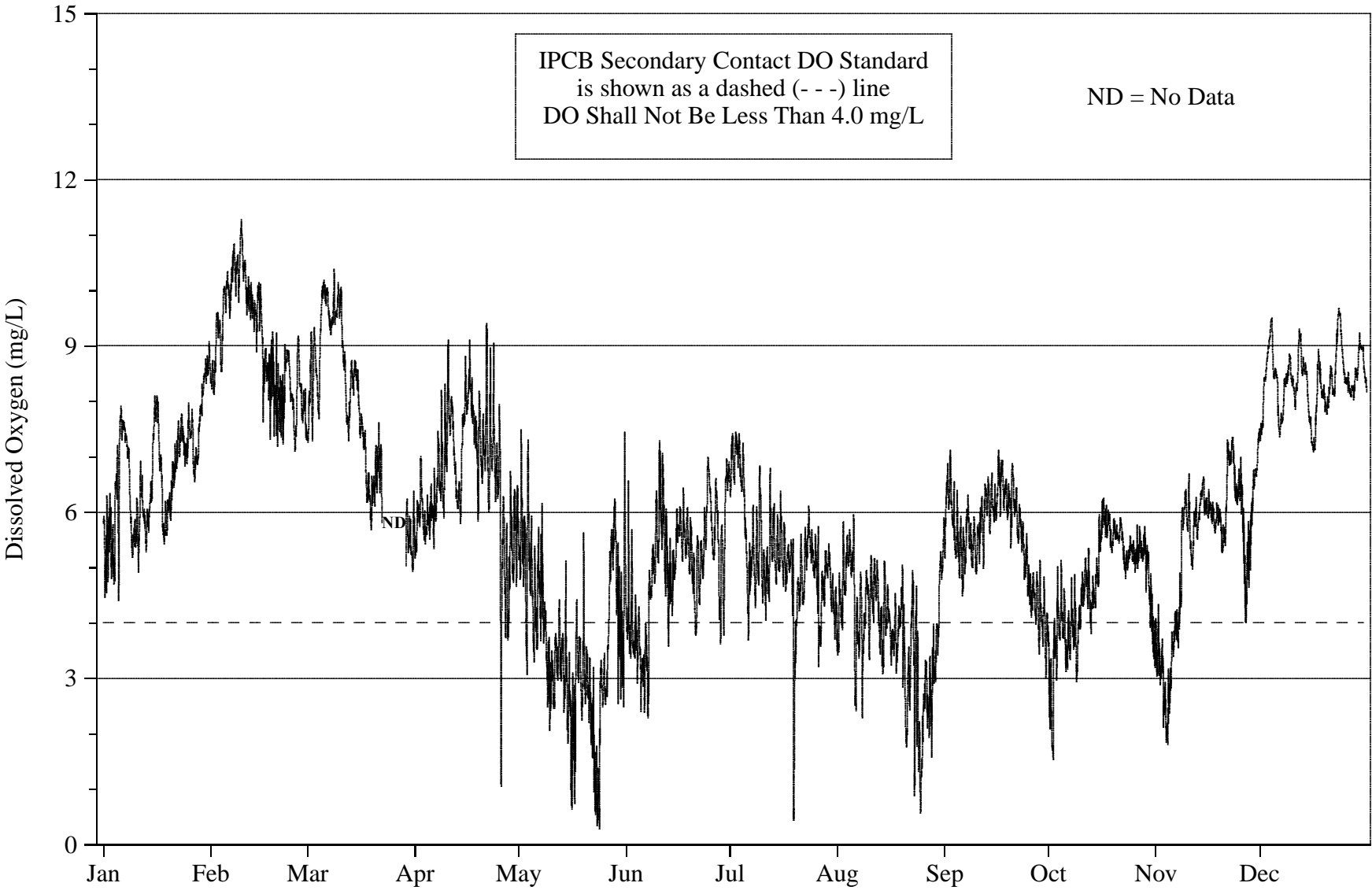


FIGURE 12: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT B&O CENTRAL RAILROAD ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 2007 THROUGH DECEMBER 2007

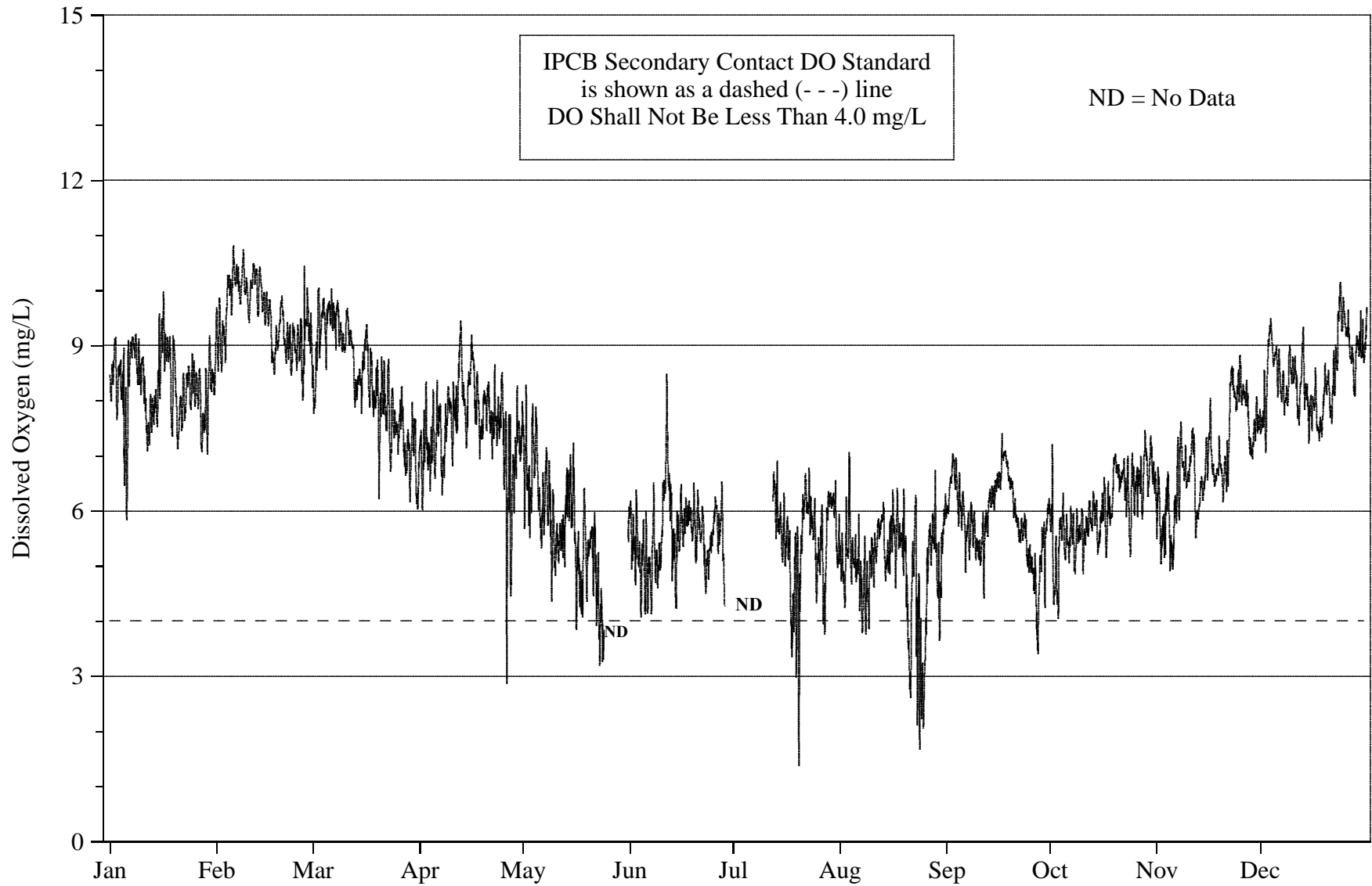


FIGURE 13: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT ROUTE 83 ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 2007 THROUGH DECEMBER 2007

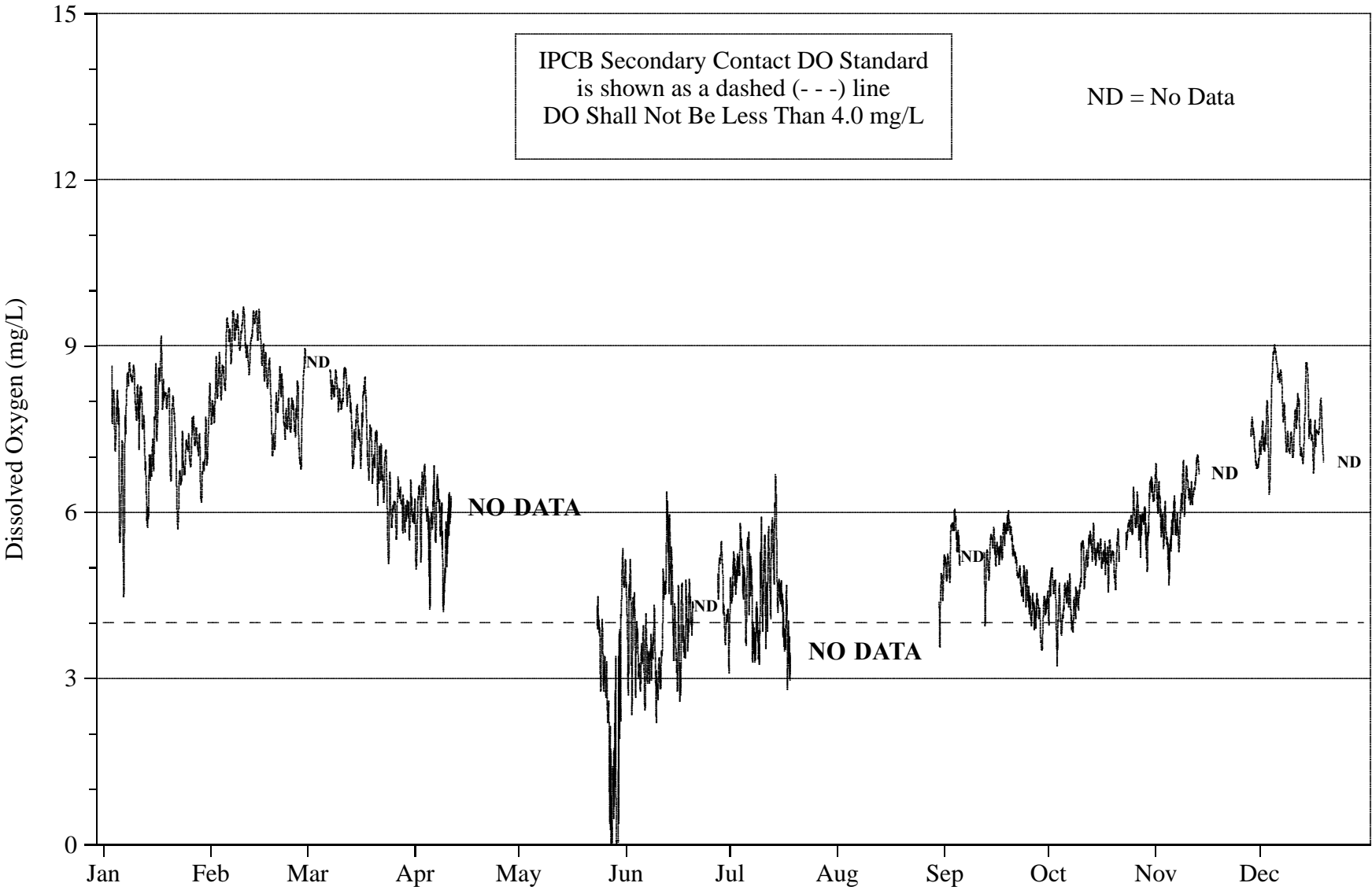


FIGURE 14: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT LOCKPORT POWERHOUSE ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 2007 THROUGH DECEMBER 2007

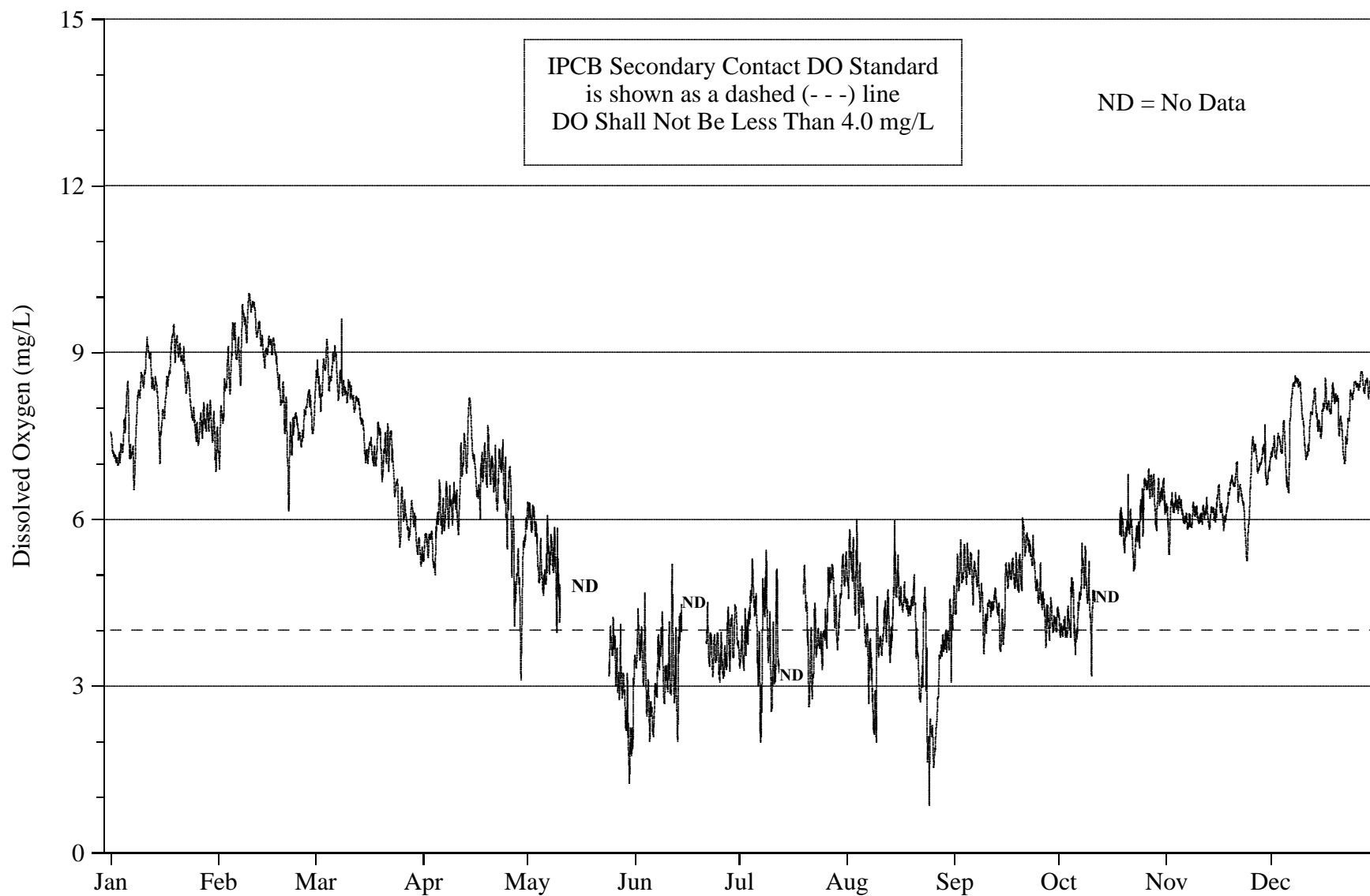


FIGURE 15: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT JEFFERSON STREET ON THE DES PLAINES RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

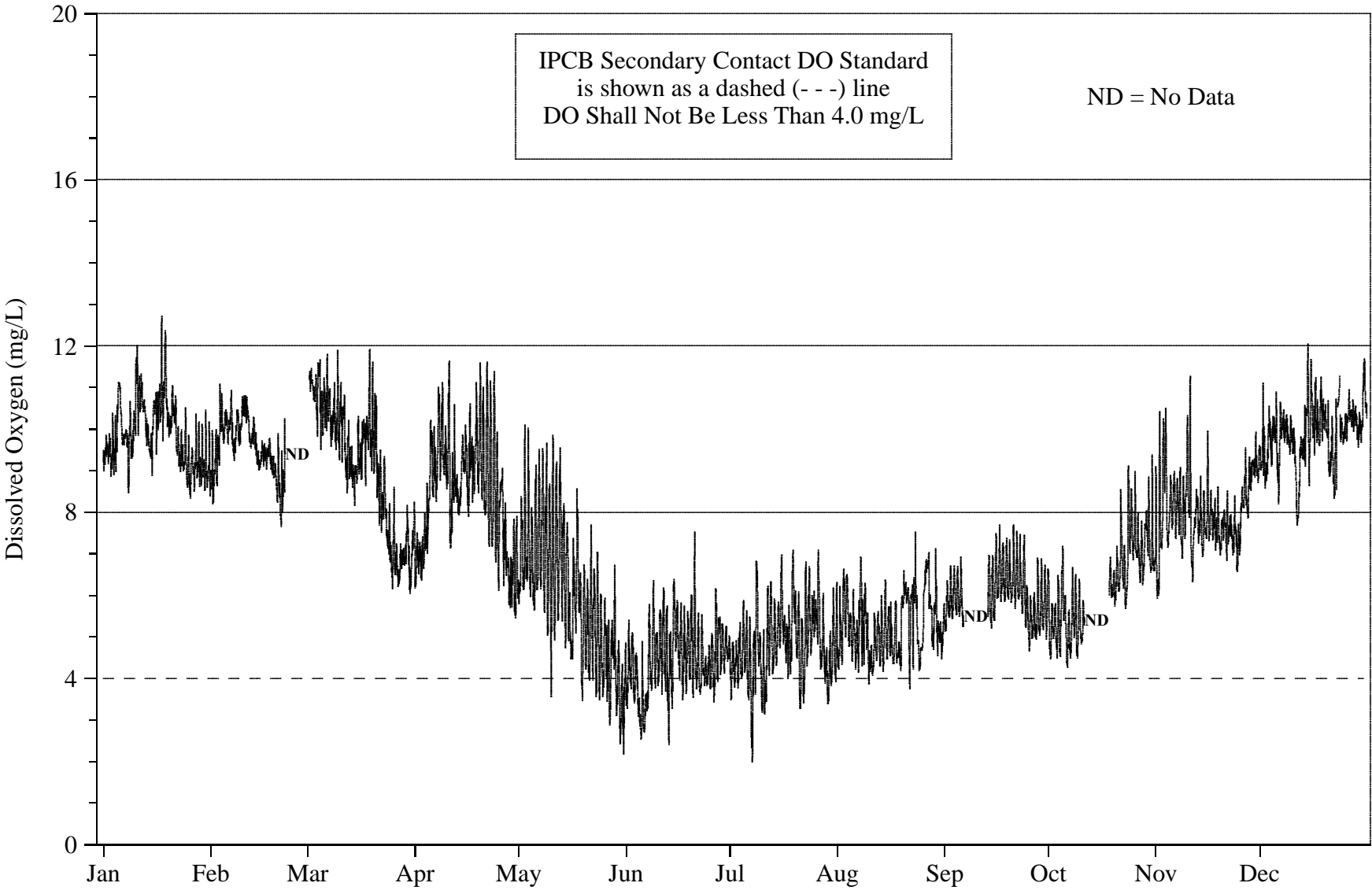


FIGURE 16: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT C&W INDIANA RAILROAD ON THE LITTLE CALUMET RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

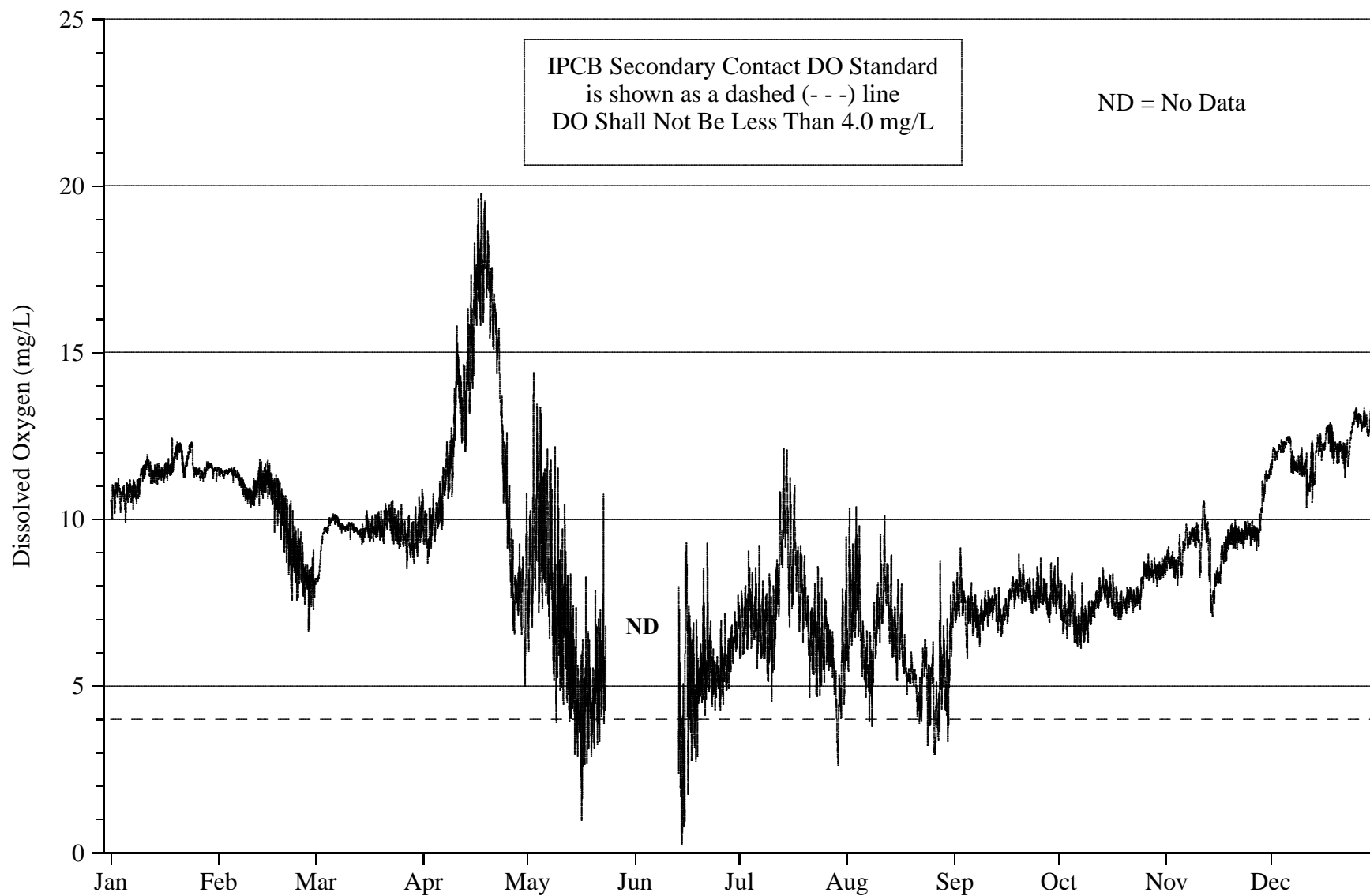


FIGURE 17: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT HALSTED STREET ON THE LITTLE CALUMET RIVER FROM JANUARY 2007 THROUGH DECEMBER 2007

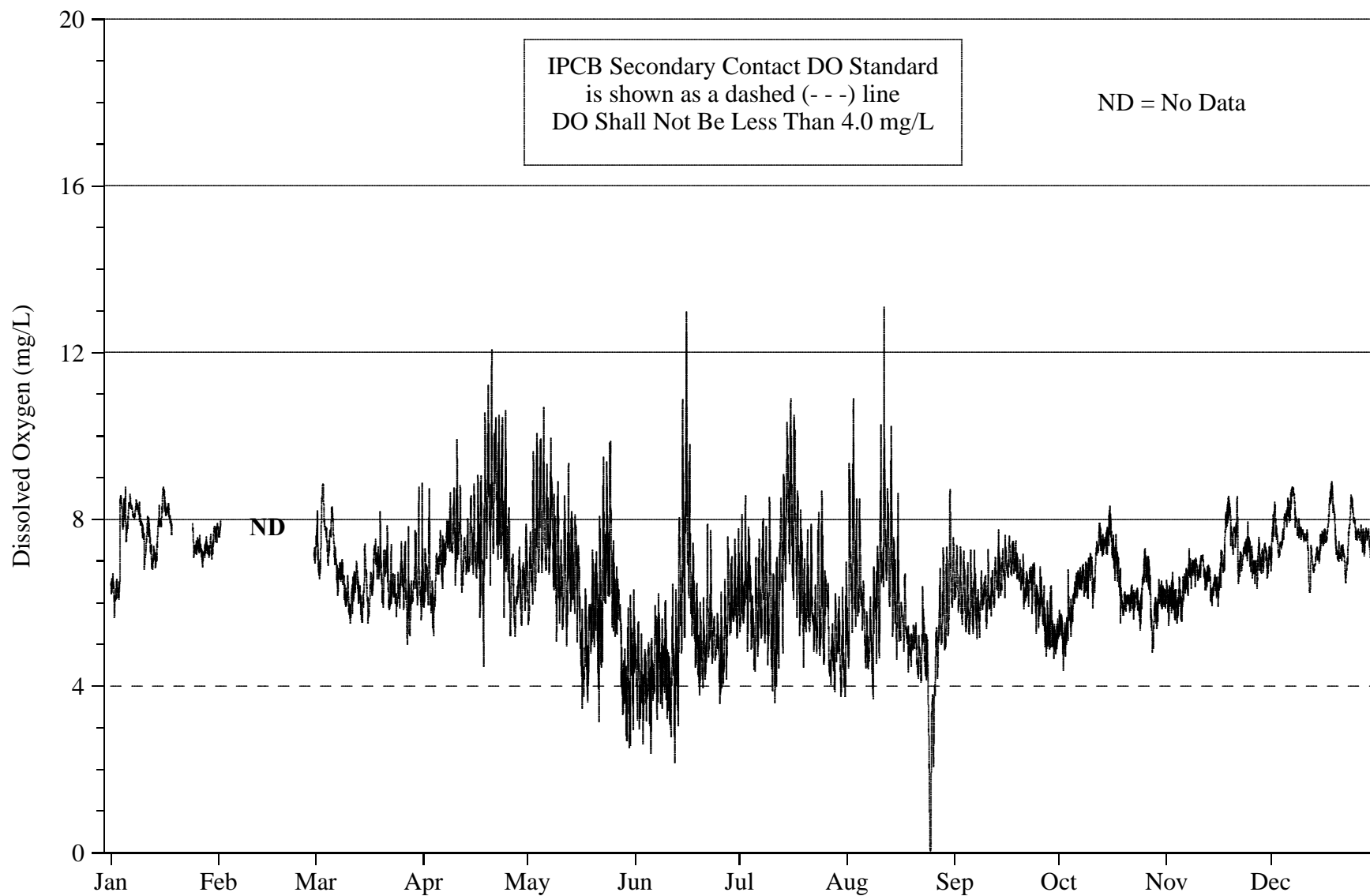


FIGURE 18: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT CICERO AVENUE ON THE CALUMET-SAG CHANNEL FROM JANUARY 2007 THROUGH DECEMBER 2007

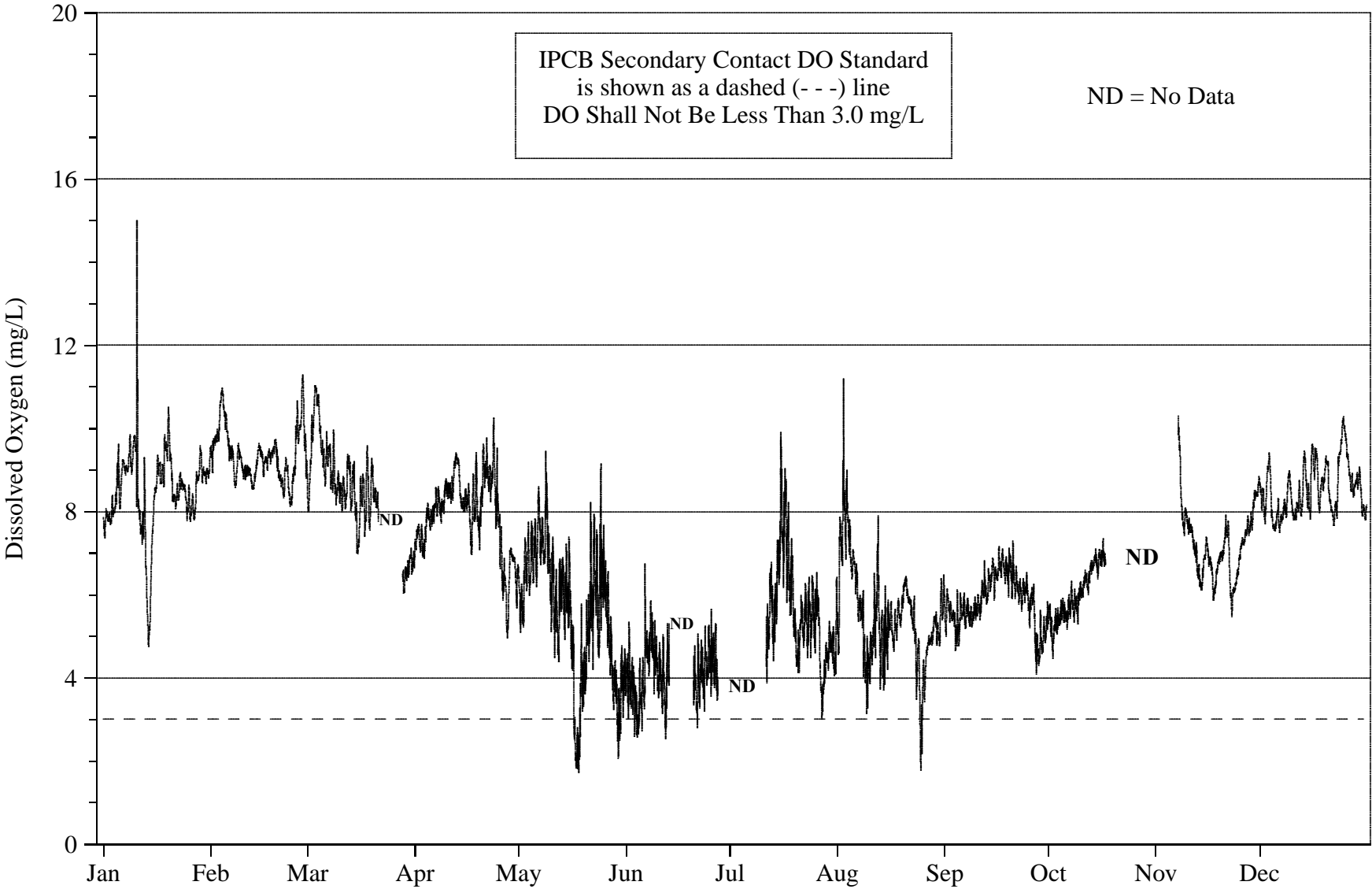


FIGURE 19: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT 104TH AVENUE ON THE CALUMET-SAG CHANNEL FROM JANUARY 2007 THROUGH DECEMBER 2007

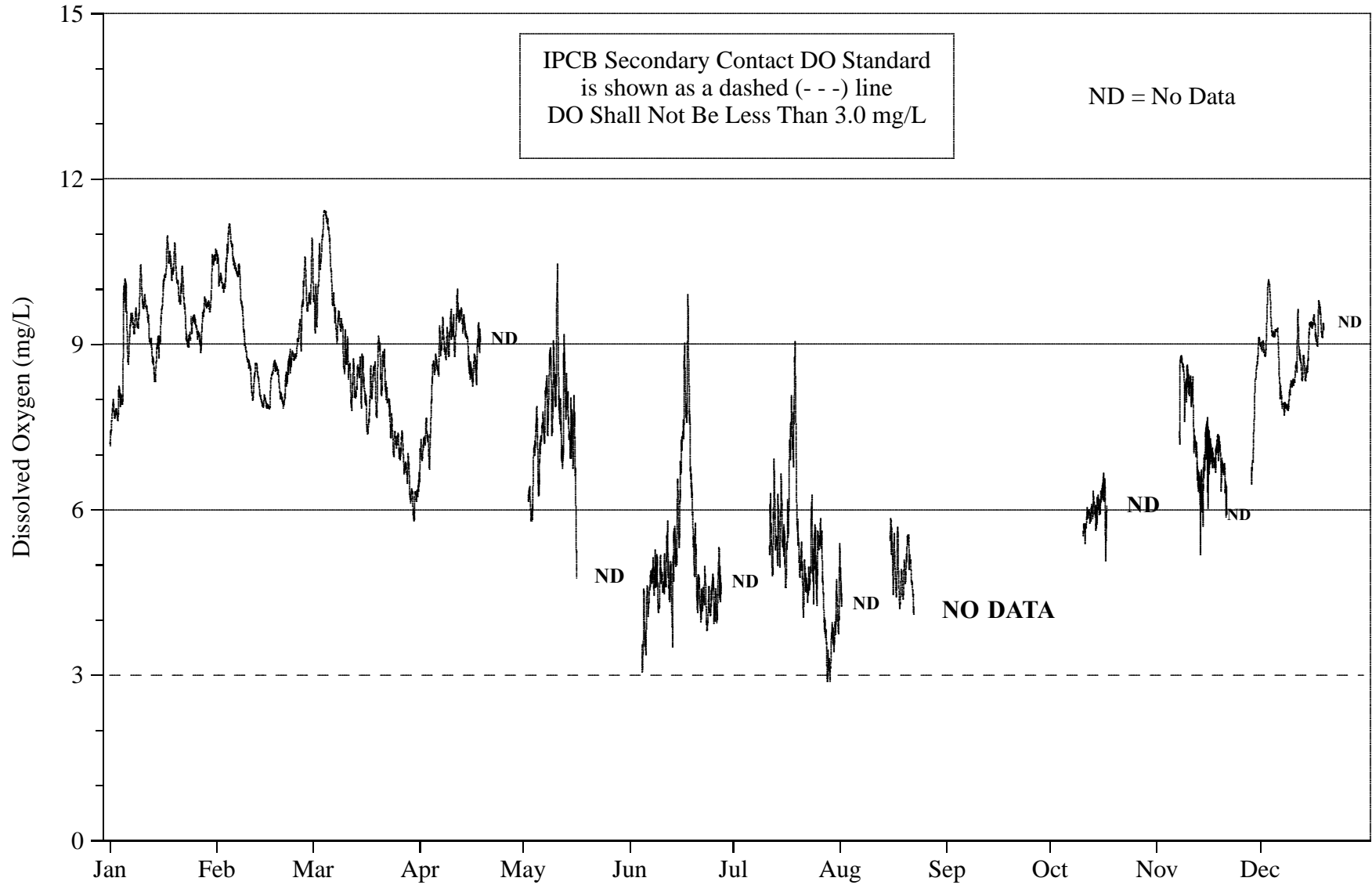
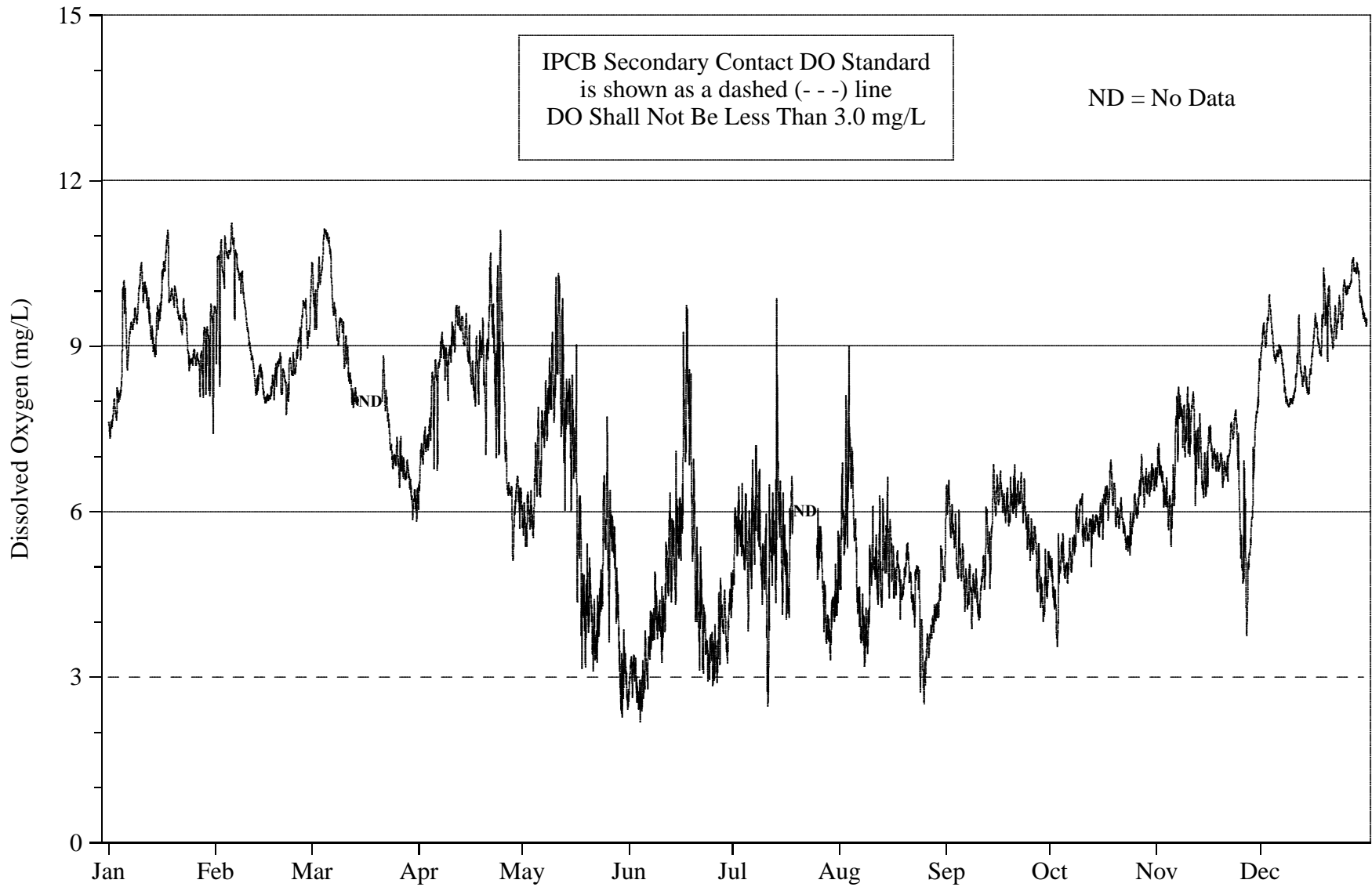


FIGURE 20: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT ROUTE 83 ON THE CALUMET-SAG CHANNEL FROM JANUARY 2007 THROUGH DECEMBER 2007



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.

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

APPENDIX A

WEEKLY DO SUMMARY STATISTICS AT ALL DEEP-DRAFT
MONITORING STATIONS DURING 2007

TABLE A-1: WEEKLY DO SUMMARY STATISTICS AT MAIN STREET
ON THE NORTH SHORE CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 5.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/07 - 01/07/07	168	6.0	16.0	10.1	100
01/08/07 - 01/14/07	168	9.5	20.2	14.5	100
01/15/07 - 01/21/07	168	7.1	20.3	12.4	100
01/22/07 - 01/28/07	168	11.0	19.8	14.7	100
01/29/07 - 02/04/07	168	14.1	23.1	17.9	100
02/05/07 - 02/11/07	168	17.0	24.4	22.8	100
02/12/07 - 02/18/07	168	8.9	23.8	15.6	100
02/19/07 - 02/25/07	168	5.4	11.1	8.6	100
02/26/07 - 03/04/07	168	3.2	9.7	5.8	75
03/05/07 - 03/11/07	168	4.5	9.3	7.0	88
03/12/07 - 03/18/07	37	5.8	9.6	7.8	100
03/19/07 - 03/25/07			NO DATA		
03/26/07 - 04/01/07	130	4.3	15.9	9.0	90
04/02/07 - 04/08/07	168	2.2	8.5	5.0	50
04/09/07 - 04/15/07	168	5.2	11.5	7.8	100
04/16/07 - 04/22/07	168	10.6	21.8	15.7	100
04/23/07 - 04/29/07	168	3.6	18.2	9.9	98
04/30/07 - 05/06/07	38	7.1	11.1	8.7	100
05/07/07 - 05/13/07			NO DATA		
05/14/07 - 05/20/07	83	6.4	9.7	8.2	100
05/21/07 - 05/27/07	168	4.2	10.9	8.5	92
05/28/07 - 06/03/07	167	3.9	12.8	9.2	92
06/04/07 - 06/10/07	168	5.7	12.8	9.1	100
06/11/07 - 06/17/07	168	7.7	11.9	9.4	100
06/18/07 - 06/24/07	168	4.5	12.6	9.3	99
06/25/07 - 07/01/07	168	4.8	11.1	7.9	99
07/02/07 - 07/08/07	168	1.6	7.7	5.0	44
07/09/07 - 07/15/07	168	1.6	8.6	5.1	48
07/16/07 - 07/22/07	168	3.6	9.3	6.2	88
07/23/07 - 07/29/07	168	4.6	8.0	6.4	97
07/30/07 - 08/05/07	168	3.7	7.7	6.1	87
08/06/07 - 08/12/07	39	1.1	6.3	2.8	5
08/13/07 - 09/02/07			NO DATA		
09/03/07 - 09/09/07	130	0.2	7.0	2.9	6

TABLE A-1 (Continued): WEEKLY DO SUMMARY STATISTICS AT
MAIN STREET ON THE NORTH SHORE CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 5.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
09/10/07 - 09/16/07	168	4.5	7.5	5.7	82
09/17/07 - 09/23/07	168	5.4	9.9	7.2	100
09/24/07 - 09/30/07	168	4.7	9.4	7.0	98
10/01/07 - 10/07/07	168	6.2	8.8	7.6	100
10/08/07 - 10/14/07	168	6.9	10.1	8.7	100
10/15/07 - 10/21/07	39	5.2	6.9	6.0	100
10/22/07 - 11/04/07		NO DATA			
11/05/07 - 11/11/07	82	7.0	8.7	7.8	100
11/12/07 - 11/18/07	87	7.1	11.8	8.9	100
11/19/07 - 11/25/07	130	5.8	17.0	10.5	100
11/26/07 - 12/02/07	168	5.6	13.3	10.8	100
12/03/07 - 12/09/07	168	4.6	9.7	7.2	96
12/10/07 - 12/16/07	168	1.9	8.5	5.4	64
12/17/07 - 12/23/07	168	4.2	8.5	6.5	90
12/24/07 - 12/30/07	168	0.7	8.9	5.5	72
12/31/07 - 12/31/07	24	2.1	5.3	4.3	21

TABLE A-2: WEEKLY DO SUMMARY STATISTICS AT FOSTER AVENUE
ON THE NORTH SHORE CHANNEL 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	6.8	9.6	8.3	100
01/08/07 - 01/14/07	168	7.0	11.8	8.7	100
01/15/07 - 01/21/07	168	6.8	10.1	8.9	100
01/22/07 - 01/28/07	168	7.9	10.5	8.6	100
01/29/07 - 02/04/07	168	8.0	9.7	8.8	100
02/05/07 - 02/11/07	168	8.2	9.7	9.0	100
02/12/07 - 02/18/07	168	8.0	9.9	9.1	100
02/19/07 - 02/25/07	168	6.6	9.7	8.7	100
02/26/07 - 03/04/07	168	7.3	10.1	9.0	100
03/05/07 - 03/11/07	168	7.5	10.0	9.0	100
03/12/07 - 03/18/07	167	7.5	10.0	8.7	100
03/19/07 - 03/25/07	168	7.2	9.0	8.3	100
03/26/07 - 04/01/07	167	5.9	10.1	8.4	100
04/02/07 - 04/08/07	168	6.8	8.8	8.1	100
04/09/07 - 04/15/07	168	6.7	9.4	8.1	100
04/16/07 - 04/22/07	168	7.1	10.7	8.4	100
04/23/07 - 04/29/07	168	6.8	9.2	7.8	100
04/30/07 - 05/06/07	168	5.6	9.5	7.7	100
05/07/07 - 05/13/07	168	6.2	8.3	7.1	100
05/14/07 - 05/20/07	168	4.9	9.1	7.1	100
05/21/07 - 05/27/07	168	5.3	8.8	7.4	100
05/28/07 - 06/03/07	168	5.4	8.7	7.1	100
06/04/07 - 06/10/07	168	6.1	8.2	7.0	100
06/11/07 - 06/17/07	168	6.1	8.6	7.3	100
06/18/07 - 06/24/07	167	6.1	9.4	7.7	100
06/25/07 - 07/01/07	168	5.9	8.3	7.1	100
07/02/07 - 07/08/07	168	5.0	7.6	6.5	100
07/09/07 - 07/15/07	168	4.6	7.6	6.5	100
07/16/07 - 07/22/07	167	4.6	7.8	6.8	100
07/23/07 - 07/29/07	167	5.3	7.5	6.6	100
07/30/07 - 08/05/07	167	5.2	7.5	6.5	100
08/06/07 - 08/12/07	168	4.8	7.7	6.3	100
08/13/07 - 08/19/07	37	5.8	7.0	6.5	100
08/20/07 - 08/26/07	130	3.9	7.8	6.4	99

TABLE A-2 (Continued): WEEKLY DO SUMMARY STATISTICS AT
FOSTER AVENUE ON THE NORTH SHORE CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	168	5.6	7.8	6.8	100
09/03/07 - 09/09/07	168	6.1	7.7	7.1	100
09/10/07 - 09/16/07	168	6.7	8.8	7.8	100
09/17/07 - 09/23/07	168	5.9	8.1	6.8	100
09/24/07 - 09/30/07	168	5.5	7.8	6.5	100
10/01/07 - 10/07/07	168	4.5	7.8	6.6	100
10/08/07 - 10/14/07	168	6.4	7.6	6.9	100
10/15/07 - 10/21/07	168	5.9	8.2	6.9	100
10/22/07 - 10/28/07	168	5.4	8.5	7.0	100
10/29/07 - 11/04/07	168	6.4	7.9	7.0	100
11/05/07 - 11/11/07	168	6.3	7.8	7.0	100
11/12/07 - 11/18/07	168	6.3	7.9	7.0	100
11/19/07 - 11/25/07	168	4.9	9.6	7.5	100
11/26/07 - 12/02/07	168	5.9	8.2	7.5	100
12/03/07 - 12/09/07	168	7.3	9.3	8.5	100
12/10/07 - 12/16/07	168	6.9	9.7	8.3	100
12/17/07 - 12/23/07	168	7.2	9.3	8.3	100
12/24/07 - 12/30/07	168	7.2	10.1	8.8	100
12/31/07 - 12/31/07	24	8.3	9.1	8.7	100

TABLE A-3: WEEKLY DO SUMMARY STATISTICS AT ADDISON STREET
ON THE NORTH BRANCH CHICAGO 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	7.7	10.0	9.0	100
01/08/07 - 01/14/07	168	7.7	11.8	9.1	100
01/15/07 - 01/21/07	168	7.1	11.2	9.6	100
01/22/07 - 01/28/07	168	8.0	10.2	8.9	100
01/29/07 - 02/04/07	168	8.0	9.8	8.9	100
02/05/07 - 02/11/07	168	7.9	9.9	8.8	100
02/12/07 - 02/18/07	168	7.6	9.4	8.6	100
02/19/07 - 02/25/07	168	6.8	9.8	8.5	100
02/26/07 - 03/04/07	168	7.9	11.8	10.2	100
03/05/07 - 03/11/07	168	8.9	11.5	10.3	100
03/12/07 - 03/18/07	167	8.9	11.1	9.8	100
03/19/07 - 03/25/07	168	7.7	9.5	8.9	100
03/26/07 - 04/01/07	168	6.9	9.8	8.6	100
04/02/07 - 04/08/07	168	7.9	9.8	8.9	100
04/09/07 - 04/15/07	168	7.0	10.9	9.2	100
04/16/07 - 04/22/07	168	7.6	9.6	8.6	100
04/23/07 - 04/29/07	168	6.5	9.4	8.3	100
04/30/07 - 05/06/07	168	6.4	10.1	8.0	100
05/07/07 - 05/13/07	168	5.9	8.1	6.8	100
05/14/07 - 05/20/07	168	4.0	8.8	6.5	100
05/21/07 - 05/27/07	168	5.5	8.0	6.8	100
05/28/07 - 06/03/07	168	4.7	7.6	6.3	100
06/04/07 - 06/10/07	168	5.4	7.7	6.5	100
06/11/07 - 06/17/07	167	5.7	7.7	6.6	100
06/18/07 - 06/24/07	168	4.8	8.3	6.6	100
06/25/07 - 07/01/07	168	3.5	7.3	6.1	99
07/02/07 - 07/08/07	168	4.2	6.8	5.4	100
07/09/07 - 07/15/07	168	3.7	6.7	5.7	95
07/16/07 - 07/22/07	168	4.1	7.0	5.9	100
07/23/07 - 07/29/07	36	5.3	6.3	5.9	100
07/30/07 - 08/05/07	132	4.6	6.6	5.9	100
08/06/07 - 08/12/07	168	4.5	6.8	6.1	100
08/13/07 - 08/19/07	168	5.3	7.2	6.2	100
08/20/07 - 08/26/07	168	4.0	7.2	6.3	99

TABLE A-3 (Continued): WEEKLY DO SUMMARY STATISTICS AT
ADDISON STREET ON THE NORTH BRANCH CHICAGO 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	
08/27/07 - 09/02/07	168	6.0	7.2	6.6	100
09/03/07 - 09/09/07	168	5.8	7.2	6.6	100
09/10/07 - 09/16/07	168	6.2	7.9	7.1	100
09/17/07 - 09/23/07	168	5.5	7.5	6.3	100
09/24/07 - 09/30/07	168	5.2	7.4	6.4	100
10/01/07 - 10/07/07	168	4.5	7.4	6.3	100
10/08/07 - 10/14/07	168	5.9	7.3	6.6	100
10/15/07 - 10/21/07	168	5.4	7.3	6.4	100
10/22/07 - 10/28/07	168	4.2	7.2	6.0	100
10/29/07 - 11/04/07	168	3.7	6.7	5.6	98
11/05/07 - 11/11/07	168	3.9	7.4	6.0	98
11/12/07 - 11/18/07	168	5.9	7.9	6.6	100
11/19/07 - 11/25/07	168	4.5	9.4	7.5	100
11/26/07 - 12/02/07	168	6.1	8.6	7.8	100
12/03/07 - 12/09/07	168	7.9	10.1	8.8	100
12/10/07 - 12/16/07	168	7.3	10.7	9.2	100
12/17/07 - 12/23/07	168	7.5	10.3	8.8	100
12/24/07 - 12/30/07	168	7.8	11.3	9.6	100
12/31/07 - 12/31/07	24	8.8	9.4	9.2	100

TABLE A-4: WEEKLY DO SUMMARY STATISTICS AT FULLERTON AVENUE
ON THE NORTH BRANCH CHICAGO 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	7.1	9.5	8.6	100
01/08/07 - 01/14/07	168	7.4	10.5	8.7	100
01/15/07 - 01/21/07	168	6.6	10.4	9.1	100
01/22/07 - 01/28/07	168	7.8	9.7	8.3	100
01/29/07 - 02/04/07	168	7.6	9.7	8.5	100
02/05/07 - 02/11/07	168	8.2	9.7	8.7	100
02/12/07 - 02/18/07	168	7.7	9.3	8.5	100
02/19/07 - 02/25/07	168	6.4	9.8	8.4	100
02/26/07 - 03/04/07	168	6.4	12.4	10.5	100
03/05/07 - 03/11/07	168	8.9	11.9	10.6	100
03/12/07 - 03/18/07	167	9.0	11.4	9.9	100
03/19/07 - 03/25/07	168	7.3	9.2	8.4	100
03/26/07 - 04/01/07	168	5.8	8.4	7.5	100
04/02/07 - 04/08/07	168	6.6	9.0	8.0	100
04/09/07 - 04/15/07	168	6.4	10.4	8.5	100
04/16/07 - 04/22/07	168	6.9	9.4	7.9	100
04/23/07 - 04/29/07	168	5.8	8.6	7.5	100
04/30/07 - 05/06/07	168	5.5	8.7	6.9	100
05/07/07 - 05/13/07	168	3.7	7.1	5.3	98
05/14/07 - 05/20/07	168	1.7	7.3	5.0	77
05/21/07 - 05/27/07	168	5.0	7.3	6.1	100
05/28/07 - 06/03/07	168	4.4	6.4	5.6	100
06/04/07 - 06/10/07	168	4.6	7.1	5.9	100
06/11/07 - 06/17/07	168	4.4	7.4	6.1	100
06/18/07 - 06/24/07	168	4.3	7.6	6.0	100
06/25/07 - 07/01/07	168	1.9	6.5	5.0	96
07/02/07 - 07/08/07	168	3.0	5.7	4.5	82
07/09/07 - 07/15/07	168	3.0	5.9	4.8	88
07/16/07 - 07/22/07	168	3.4	5.9	4.8	92
07/23/07 - 07/29/07	168	3.7	5.8	4.8	94
07/30/07 - 08/05/07	168	3.3	5.8	4.9	98
08/06/07 - 08/12/07	168	3.1	6.2	5.3	97
08/13/07 - 08/19/07	168	4.2	6.1	5.3	100
08/20/07 - 08/26/07	168	2.9	8.6	5.4	94

TABLE A-4 (Continued): WEEKLY DO SUMMARY STATISTICS AT
FULLERTON AVENUE ON THE NORTH BRANCH CHICAGO 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	
08/27/07 - 09/02/07	168	4.4	6.8	6.1	100
09/03/07 - 09/09/07	168	5.1	6.3	5.8	100
09/10/07 - 09/16/07	168	5.8	7.2	6.5	100
09/17/07 - 09/23/07	168	5.5	6.8	6.1	100
09/24/07 - 09/30/07	168	4.6	7.3	6.0	100
10/01/07 - 10/07/07	168	4.4	6.9	6.0	100
10/08/07 - 10/14/07	168	4.5	6.8	6.0	100
10/15/07 - 10/21/07	168	5.0	7.0	6.0	100
10/22/07 - 10/28/07	168	4.8	6.7	5.9	100
10/29/07 - 11/04/07	168	5.0	6.6	5.9	100
11/05/07 - 11/11/07	168	4.6	6.9	6.0	100
11/12/07 - 11/18/07	168	5.4	6.7	6.1	100
11/19/07 - 11/25/07	168	3.8	8.9	7.1	99
11/26/07 - 12/02/07	168	5.5	8.2	7.3	100
12/03/07 - 12/09/07	168	7.4	9.6	8.7	100
12/10/07 - 12/16/07	168	6.6	10.1	8.8	100
12/17/07 - 12/23/07	168	7.1	9.6	8.5	100
12/24/07 - 12/30/07	168	7.2	10.8	9.0	100
12/31/07 - 12/31/07	24	8.1	8.3	8.2	100

TABLE A-5: WEEKLY DO SUMMARY STATISTICS AT KINZIE STREET
ON THE NORTH BRANCH CHICAGO 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	6.4	9.1	7.9	100
01/08/07 - 01/14/07	168	7.2	9.3	8.3	100
01/15/07 - 01/21/07	168	6.8	10.1	8.9	100
01/22/07 - 01/28/07	168	7.7	9.0	8.2	100
01/29/07 - 02/04/07	168	7.8	9.5	8.5	100
02/05/07 - 02/11/07	168	8.4	12.7	9.6	100
02/12/07 - 02/18/07	168	8.2	13.3	10.1	100
02/19/07 - 02/25/07	168	6.9	11.8	8.7	100
02/26/07 - 03/04/07	168	6.4	11.1	9.3	100
03/05/07 - 03/11/07	168	7.9	10.5	9.6	100
03/12/07 - 03/18/07	167	8.5	10.6	9.5	100
03/19/07 - 03/25/07	168	7.0	9.0	7.8	100
03/26/07 - 04/01/07	168	6.1	8.1	6.8	100
04/02/07 - 04/08/07	168	5.4	8.4	7.3	100
04/09/07 - 04/15/07	168	5.9	9.4	7.6	100
04/16/07 - 04/22/07	167	6.1	8.2	7.1	100
04/23/07 - 04/29/07	168	5.8	8.2	7.1	100
04/30/07 - 05/06/07	168	4.8	7.3	6.1	100
05/07/07 - 05/13/07	168	1.5	7.5	5.6	84
05/14/07 - 05/20/07	168	4.4	7.3	5.7	100
05/21/07 - 05/27/07	168	3.8	6.8	5.3	98
05/28/07 - 06/03/07	168	3.8	6.4	5.2	99
06/04/07 - 06/10/07	168	4.1	6.4	5.4	100
06/11/07 - 06/17/07	168	3.8	6.3	5.4	97
06/18/07 - 06/24/07	168	3.4	7.1	5.6	94
06/25/07 - 07/01/07	168	2.8	6.6	5.0	87
07/02/07 - 07/08/07	168	3.6	6.0	5.0	93
07/09/07 - 07/15/07	168	3.5	5.8	5.0	95
07/16/07 - 07/22/07	168	2.6	6.1	4.8	80
07/23/07 - 07/29/07	168	3.8	7.1	5.3	99
07/30/07 - 08/05/07	168	3.7	6.0	5.1	99
08/06/07 - 08/12/07	168	2.8	6.0	4.7	85
08/13/07 - 08/19/07	168	3.2	6.0	4.8	89
08/20/07 - 08/26/07	168	2.5	8.2	5.3	89

TABLE A-5 (Continued): WEEKLY DO SUMMARY STATISTICS AT
KINZIE STREET ON THE NORTH BRANCH CHICAGO 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	
08/27/07 - 09/02/07	168	4.4	6.4	5.6	100
09/03/07 - 09/09/07	168	3.4	6.3	4.9	93
09/10/07 - 09/16/07	168	4.3	6.8	5.7	100
09/17/07 - 09/23/07	35	4.5	6.3	5.4	100
09/24/07 - 09/30/07	132	4.4	6.5	5.5	100
10/01/07 - 10/07/07	168	4.5	6.7	5.7	100
10/08/07 - 10/14/07	168	5.0	7.7	5.9	100
10/15/07 - 10/21/07	168	4.6	6.9	5.7	100
10/22/07 - 10/28/07	168	4.8	7.3	5.8	100
10/29/07 - 11/04/07	168	3.2	7.1	4.8	85
11/05/07 - 11/11/07	168	2.8	6.2	5.0	77
11/12/07 - 11/18/07	168	4.9	7.4	5.9	100
11/19/07 - 11/25/07	35	5.7	6.1	6.0	100
11/26/07 - 12/02/07	133	6.9	8.1	7.6	100
12/03/07 - 12/09/07	168	6.0	11.0	8.5	100
12/10/07 - 12/16/07	168	6.9	9.9	8.5	100
12/17/07 - 12/23/07	168	7.0	9.7	8.6	100
12/24/07 - 12/30/07	168	7.6	10.7	9.2	100
12/31/07 - 12/31/07	24	8.1	9.0	8.5	100

TABLE A-6: WEEKLY DO SUMMARY STATISTICS AT CLARK STREET
ON THE CHICAGO RIVER DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 5.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/07 - 01/07/07	168	8.6	12.1	9.3	100
01/08/07 - 01/14/07	168	9.7	12.4	11.0	100
01/15/07 - 01/21/07	168	10.2	12.0	11.1	100
01/22/07 - 01/28/07	168	8.3	12.0	10.4	100
01/29/07 - 02/04/07	168	11.5	13.6	12.5	100
02/05/07 - 02/11/07	168	12.5	14.2	13.5	100
02/12/07 - 02/18/07	168	11.0	14.1	12.7	100
02/19/07 - 02/25/07	168	8.8	13.0	10.8	100
02/26/07 - 03/04/07	168	8.4	12.5	10.1	100
03/05/07 - 03/11/07	168	7.5	13.2	10.4	100
03/12/07 - 03/18/07	167	7.8	9.5	8.8	100
03/19/07 - 03/25/07	168	6.6	9.1	8.2	100
03/26/07 - 04/01/07	168	5.7	8.1	7.2	100
04/02/07 - 04/08/07	168	6.2	8.5	7.3	100
04/09/07 - 04/15/07	168	7.0	9.5	8.1	100
04/16/07 - 04/22/07	168	6.2	8.7	7.5	100
04/23/07 - 04/29/07	168	6.2	10.3	8.1	100
04/30/07 - 05/06/07	168	5.9	8.7	7.0	100
05/07/07 - 05/13/07	168	5.4	8.9	7.3	100
05/14/07 - 05/20/07	168	5.3	8.8	7.1	100
05/21/07 - 05/27/07	168	5.8	9.6	7.8	100
05/28/07 - 06/03/07	168	7.4	9.8	8.8	100
06/04/07 - 06/10/07	168	8.4	10.8	9.6	100
06/11/07 - 06/17/07	168	8.6	10.1	9.4	100
06/18/07 - 06/24/07	168	7.6	11.6	10.1	100
06/25/07 - 07/01/07	35	8.8	9.8	9.4	100
07/02/07 - 07/08/07			NO DATA		
07/09/07 - 07/15/07	133	7.8	9.3	8.5	100
07/16/07 - 07/22/07	168	6.9	9.3	8.4	100
07/23/07 - 07/29/07	168	7.3	8.4	7.9	100
07/30/07 - 08/05/07	168	6.9	8.5	7.8	100
08/06/07 - 08/12/07	168	5.3	8.0	7.3	100
08/13/07 - 08/19/07	168	5.6	7.1	6.5	100
08/20/07 - 08/26/07	168	2.5	7.5	5.1	55

TABLE A-6 (Continued): WEEKLY DO SUMMARY STATISTICS AT
CLARK STREET ON THE CHICAGO RIVER DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 5.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	168	4.0	10.4	8.5	93
09/03/07 - 09/09/07	168	8.8	10.0	9.5	100
09/10/07 - 09/16/07	168	8.2	10.0	8.9	100
09/17/07 - 09/23/07	168	7.8	8.8	8.5	100
09/24/07 - 09/30/07	168	6.1	8.4	7.2	100
10/01/07 - 10/07/07	168	5.1	7.9	6.3	100
10/08/07 - 10/14/07	167	7.3	9.2	8.5	100
10/15/07 - 10/21/07	163	7.1	9.1	8.2	100
10/22/07 - 10/28/07	168	7.1	8.4	7.9	100
10/29/07 - 11/04/07	168	7.0	9.0	8.0	100
11/05/07 - 11/11/07	168	7.6	9.7	8.7	100
11/12/07 - 11/18/07	168	7.1	10.5	9.5	100
11/19/07 - 11/25/07	168	6.8	10.3	9.4	100
11/26/07 - 12/02/07	168	8.7	10.8	9.7	100
12/03/07 - 12/09/07	35	10.2	11.7	10.8	100
12/10/07 - 12/16/07	133	7.8	9.5	8.7	100
12/17/07 - 12/23/07	168	7.8	11.4	9.3	100
12/24/07 - 12/30/07	168	8.2	10.4	9.3	100
12/31/07 - 12/31/07	24	8.9	10.0	9.3	100

TABLE A-7: WEEKLY DO SUMMARY STATISTICS AT LOOMIS STREET
ON THE SOUTH BRANCH CHICAGO 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	7.0	9.1	8.3	100
01/08/07 - 01/14/07	168	7.8	9.5	8.7	100
01/15/07 - 01/21/07	168	7.8	10.4	9.0	100
01/22/07 - 01/28/07	168	8.3	9.7	9.0	100
01/29/07 - 02/04/07	168	8.8	11.0	10.0	100
02/05/07 - 02/11/07	168	10.8	11.8	11.4	100
02/12/07 - 02/18/07	168	9.9	12.5	11.1	100
02/19/07 - 02/25/07	168	8.0	11.8	10.0	100
02/26/07 - 03/04/07	168	7.9	11.3	9.5	100
03/05/07 - 03/11/07	168	8.0	11.7	10.3	100
03/12/07 - 03/18/07	167	8.1	10.1	9.1	100
03/19/07 - 03/25/07	168	6.9	9.1	7.9	100
03/26/07 - 04/01/07	168	5.2	7.4	6.5	100
04/02/07 - 04/08/07	168	5.1	7.4	6.3	100
04/09/07 - 04/15/07	168	5.4	8.9	7.2	100
04/16/07 - 04/22/07	168	6.4	8.9	7.4	100
04/23/07 - 04/29/07	168	5.4	8.3	7.0	100
04/30/07 - 05/06/07	167	4.6	7.5	6.1	100
05/07/07 - 05/13/07	168	4.6	6.3	5.5	100
05/14/07 - 05/20/07	168	5.0	6.2	5.6	100
05/21/07 - 05/27/07	162	5.0	7.8	6.0	100
05/28/07 - 06/03/07	168	4.6	8.0	6.1	100
06/04/07 - 06/10/07	86	4.2	6.2	5.4	100
06/11/07 - 06/17/07	85	6.9	7.5	7.2	100
06/18/07 - 06/24/07	168	5.3	9.2	7.1	100
06/25/07 - 07/01/07	82	3.4	7.7	6.5	95
07/02/07 - 07/08/07			NO DATA		
07/09/07 - 07/15/07	85	5.9	7.2	6.4	100
07/16/07 - 07/22/07	168	5.1	6.9	6.2	100
07/23/07 - 07/29/07	168	5.3	8.2	6.4	100
07/30/07 - 08/05/07	168	5.5	8.5	6.5	100
08/06/07 - 08/12/07	168	3.7	6.3	5.5	99
08/13/07 - 08/19/07	168	4.7	6.0	5.5	100
08/20/07 - 08/26/07	168	2.0	6.2	4.5	74

TABLE A-7 (Continued): WEEKLY DO SUMMARY STATISTICS AT
LOOMIS STREET ON THE SOUTH BRANCH CHICAGO 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	
08/27/07 - 09/02/07	168	4.1	8.8	6.3	100
09/03/07 - 09/09/07	168	5.7	7.7	7.0	100
09/10/07 - 09/16/07	168	5.5	8.2	7.3	100
09/17/07 - 09/23/07	168	5.9	7.7	6.9	100
09/24/07 - 09/30/07	168	4.4	6.6	5.8	100
10/01/07 - 10/07/07	168	4.6	5.9	5.3	100
10/08/07 - 10/14/07	168	5.6	7.6	6.5	100
10/15/07 - 10/21/07	82	5.8	7.2	6.5	100
10/22/07 - 11/04/07			NO DATA		
11/05/07 - 11/11/07	85	7.3	7.9	7.5	100
11/12/07 - 11/18/07	168	6.8	8.0	7.2	100
11/19/07 - 11/25/07	168	6.5	8.2	7.3	100
11/26/07 - 12/02/07	168	7.1	9.3	8.3	100
12/03/07 - 12/09/07	168	6.9	10.2	9.0	100
12/10/07 - 12/16/07	168	7.6	9.9	8.8	100
12/17/07 - 12/23/07	167	8.2	9.7	9.1	100
12/24/07 - 12/30/07	168	8.3	10.0	9.4	100
12/31/07 - 12/31/07	24	8.4	8.9	8.7	100

TABLE A-8: WEEKLY DO SUMMARY STATISTICS AT 36TH STREET
ON BUBBLY CREEK 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	0.0	9.6	2.2	22
01/08/07 - 01/14/07	168	1.3	4.3	2.9	1
01/15/07 - 01/21/07	168	2.3	4.9	3.8	41
01/22/07 - 01/28/07	168	1.3	5.7	3.1	30
01/29/07 - 02/04/07	168	2.8	6.3	4.5	79
02/05/07 - 02/11/07	168	1.9	5.6	4.1	65
02/12/07 - 02/18/07	168	1.0	4.3	2.6	4
02/19/07 - 02/25/07	168	0.5	9.0	4.2	75
02/26/07 - 03/04/07	168	0.9	8.8	4.2	44
03/05/07 - 03/11/07	168	0.2	2.3	1.5	0
03/12/07 - 03/18/07	166	1.3	11.8	4.3	46
03/19/07 - 03/25/07	168	0.2	15.3	5.4	46
03/26/07 - 04/01/07	168	0.0	1.8	0.4	0
04/02/07 - 04/08/07	168	0.2	11.3	3.6	43
04/09/07 - 04/15/07	168	3.9	13.9	8.6	99
04/16/07 - 04/22/07	168	3.0	13.1	8.2	95
04/23/07 - 04/29/07	168	0.0	9.1	2.3	26
04/30/07 - 05/06/07	168	0.0	0.0	0.0	0
05/07/07 - 05/13/07	168	0.0	6.9	2.2	18
05/14/07 - 05/20/07	168	0.0	4.0	1.3	0
05/21/07 - 05/27/07	57	0.0	1.1	0.1	0
05/28/07 - 06/03/07	111	0.9	11.4	3.6	39
06/04/07 - 06/10/07	168	0.1	9.8	4.0	32
06/11/07 - 06/17/07	168	1.9	6.0	3.6	28
06/18/07 - 06/24/07	168	0.9	6.2	3.4	23
06/25/07 - 07/01/07	168	0.0	5.9	3.1	32
07/02/07 - 07/08/07	168	0.0	6.2	2.3	32
07/09/07 - 07/15/07	168	0.3	6.8	3.0	27
07/16/07 - 07/22/07	168	0.0	3.6	0.9	0
07/23/07 - 07/29/07	168	0.0	7.4	2.1	7
07/30/07 - 08/05/07	168	0.0	5.9	2.8	23
08/06/07 - 08/12/07	168	0.0	3.6	0.4	0
08/13/07 - 08/19/07	168	0.2	4.7	2.2	3
08/20/07 - 08/26/07	57	0.0	4.5	0.6	2

TABLE A-8 (Continued): WEEKLY DO SUMMARY STATISTICS AT
36TH STREET ON BUBBLY CREEK DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	110	0.0	4.7	1.9	17
09/03/07 - 09/09/07	168	1.6	4.6	3.2	9
09/10/07 - 09/16/07	168	1.8	4.8	3.3	20
09/17/07 - 09/23/07	168	3.6	6.1	4.7	95
09/24/07 - 09/30/07	168	2.7	4.3	3.4	8
10/01/07 - 10/07/07	168	1.7	3.9	2.6	0
10/08/07 - 10/14/07	168	1.9	5.2	3.9	53
10/15/07 - 10/21/07	168	4.6	5.6	5.1	100
10/22/07 - 10/28/07	168	3.6	5.6	4.6	93
10/29/07 - 11/04/07	168	4.0	9.4	5.3	100
11/05/07 - 11/11/07	168	7.3	14.8	11.3	100
11/12/07 - 11/18/07	168	7.4	12.8	9.4	100
11/19/07 - 11/25/07	33	7.2	8.6	8.0	100
11/26/07 - 12/02/07	111	7.5	9.7	8.7	100
12/03/07 - 12/09/07	166	8.1	10.5	9.5	100
12/10/07 - 12/16/07	158	7.1	8.7	7.9	100
12/17/07 - 12/23/07	168	7.2	9.7	8.0	100
12/24/07 - 12/30/07	168	9.3	10.6	9.9	100
12/31/07 - 12/31/07	24	9.7	10.9	10.1	100

TABLE A-9: WEEKLY DO SUMMARY STATISTICS AT INTERSTATE HIGHWAY 55
ON BUBBLY CREEK 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	0.6	9.7	4.8	51
01/08/07 - 01/14/07	168	3.6	7.9	6.1	98
01/15/07 - 01/21/07	168	4.5	8.7	6.4	100
01/22/07 - 01/28/07	168	5.4	8.7	7.3	100
01/29/07 - 02/04/07	168	5.2	10.2	7.7	100
02/05/07 - 02/11/07	168	8.9	11.5	10.4	100
02/12/07 - 02/18/07	168	5.8	10.8	8.9	100
02/19/07 - 02/25/07	168	6.0	9.1	8.1	100
02/26/07 - 03/04/07	168	4.4	9.5	7.5	100
03/05/07 - 03/11/07	168	4.6	9.1	6.8	100
03/12/07 - 03/18/07	167	6.4	9.4	7.7	100
03/19/07 - 03/25/07	168	0.2	12.1	5.3	58
03/26/07 - 04/01/07	167	0.0	5.0	1.6	13
04/02/07 - 04/08/07	168	0.0	8.2	2.7	36
04/09/07 - 04/15/07	168	4.7	8.5	6.6	100
04/16/07 - 04/22/07	168	4.4	13.3	7.1	100
04/23/07 - 04/29/07	168	0.2	8.4	4.1	55
04/30/07 - 05/06/07	168	0.1	6.1	2.2	13
05/07/07 - 05/13/07	168	0.3	6.3	3.1	26
05/14/07 - 05/20/07	168	0.0	5.5	2.7	32
05/21/07 - 05/27/07	168	0.4	5.4	3.2	32
05/28/07 - 06/03/07	168	2.7	7.1	5.1	88
06/04/07 - 06/10/07	168	3.0	7.8	5.1	74
06/11/07 - 06/17/07	168	4.2	7.3	6.0	100
06/18/07 - 06/24/07	168	2.7	7.6	5.8	95
06/25/07 - 07/01/07	168	2.8	7.7	5.9	93
07/02/07 - 07/08/07	168	0.2	7.5	5.0	79
07/09/07 - 07/15/07	168	2.8	6.9	5.0	92
07/16/07 - 07/22/07	168	0.0	5.6	3.3	38
07/23/07 - 07/29/07	168	2.8	7.0	4.9	88
07/30/07 - 08/05/07	168	0.2	6.1	4.3	73
08/06/07 - 08/12/07	168	0.1	5.0	2.6	26
08/13/07 - 08/19/07	168	0.2	5.5	3.7	46
08/20/07 - 08/26/07	168	0.0	5.8	1.0	8

TABLE A-9 (Continued): WEEKLY DO SUMMARY STATISTICS AT
INTERSTATE HIGHWAY 55 ON BUBBLY CREEK DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	168	0.0	6.7	2.8	40
09/03/07 - 09/09/07	168	3.2	6.5	4.9	80
09/10/07 - 09/16/07	168	4.2	7.1	6.0	100
09/17/07 - 09/23/07	168	4.9	7.2	6.3	100
09/24/07 - 09/30/07	168	3.7	6.2	5.2	98
10/01/07 - 10/07/07	167	3.0	5.3	4.2	63
10/08/07 - 10/14/07	168	3.5	6.3	5.3	93
10/15/07 - 10/21/07	168	5.1	6.7	5.9	100
10/22/07 - 10/28/07	168	4.5	6.3	5.4	100
10/29/07 - 11/04/07	168	3.3	6.1	4.7	88
11/05/07 - 11/11/07	168	5.2	7.2	6.3	100
11/12/07 - 11/18/07	168	5.8	7.3	6.6	100
11/19/07 - 11/25/07	168	6.2	7.6	6.8	100
11/26/07 - 12/02/07	168	6.8	8.4	7.6	100
12/03/07 - 12/09/07	168	7.8	9.5	8.6	100
12/10/07 - 12/16/07	168	7.2	9.4	8.2	100
12/17/07 - 12/23/07	168	8.0	9.5	8.8	100
12/24/07 - 12/30/07	168	8.2	9.8	9.0	100
12/31/07 - 12/31/07	24	8.7	8.9	8.8	100

TABLE A-10: WEEKLY DO SUMMARY STATISTICS AT CICERO AVENUE
ON THE CHICAGO SANITARY AND SHIP CANAL 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	4.4	7.9	6.2	100
01/08/07 - 01/14/07	168	4.9	7.2	6.0	100
01/15/07 - 01/21/07	168	5.4	8.1	6.7	100
01/22/07 - 01/28/07	168	6.5	8.0	7.3	100
01/29/07 - 02/04/07	168	7.7	10.1	8.8	100
02/05/07 - 02/11/07	168	9.5	11.3	10.3	100
02/12/07 - 02/18/07	168	7.3	10.1	9.2	100
02/19/07 - 02/25/07	168	7.1	9.2	8.1	100
02/26/07 - 03/04/07	168	7.3	9.6	8.3	100
03/05/07 - 03/11/07	168	8.2	10.4	9.6	100
03/12/07 - 03/18/07	167	6.2	8.7	7.7	100
03/19/07 - 03/25/07	83	5.7	7.6	6.6	100
03/26/07 - 04/01/07	87	4.9	6.4	5.6	100
04/02/07 - 04/08/07	168	5.3	8.2	6.2	100
04/09/07 - 04/15/07	168	5.8	9.1	7.2	100
04/16/07 - 04/22/07	168	5.8	9.4	7.5	100
04/23/07 - 04/29/07	168	1.1	9.1	5.8	92
04/30/07 - 05/06/07	168	3.1	7.5	5.1	84
05/07/07 - 05/13/07	168	2.1	6.2	3.5	24
05/14/07 - 05/20/07	168	0.7	5.6	2.9	5
05/21/07 - 05/27/07	168	0.3	5.7	2.7	15
05/28/07 - 06/03/07	168	2.5	7.4	4.4	55
06/04/07 - 06/10/07	168	2.3	7.3	4.3	54
06/11/07 - 06/17/07	168	3.6	7.1	5.4	98
06/18/07 - 06/24/07	168	3.8	7.0	5.3	95
06/25/07 - 07/01/07	168	3.6	7.4	5.9	96
07/02/07 - 07/08/07	168	3.7	7.4	5.9	98
07/09/07 - 07/15/07	168	4.0	6.8	5.3	100
07/16/07 - 07/22/07	168	0.4	5.8	4.7	89
07/23/07 - 07/29/07	168	3.2	6.1	5.0	89
07/30/07 - 08/05/07	168	3.4	6.0	4.7	85
08/06/07 - 08/12/07	168	2.3	5.2	4.2	65
08/13/07 - 08/19/07	168	2.8	5.1	4.0	46
08/20/07 - 08/26/07	168	0.6	4.9	2.8	15

TABLE A-10 (Continued): WEEKLY DO SUMMARY STATISTICS AT
CICERO AVENUE ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	168	1.6	7.1	4.5	52
09/03/07 - 09/09/07	168	4.5	6.6	5.5	100
09/10/07 - 09/16/07	168	4.9	7.1	6.0	100
09/17/07 - 09/23/07	168	5.2	6.9	6.1	100
09/24/07 - 09/30/07	168	3.0	5.6	4.4	76
10/01/07 - 10/07/07	168	1.5	5.1	3.6	33
10/08/07 - 10/14/07	168	2.9	5.3	4.3	75
10/15/07 - 10/21/07	168	4.7	6.2	5.6	100
10/22/07 - 10/28/07	168	4.8	5.8	5.3	100
10/29/07 - 11/04/07	168	1.8	5.4	3.5	30
11/05/07 - 11/11/07	168	2.6	6.7	4.8	67
11/12/07 - 11/18/07	168	5.5	6.6	6.0	100
11/19/07 - 11/25/07	168	5.3	7.3	6.4	100
11/26/07 - 12/02/07	168	4.0	8.6	6.5	100
12/03/07 - 12/09/07	168	7.4	9.5	8.4	100
12/10/07 - 12/16/07	168	7.1	9.3	8.2	100
12/17/07 - 12/23/07	168	7.2	9.7	8.3	100
12/24/07 - 12/30/07	168	8.0	9.6	8.6	100
12/31/07 - 12/31/07	24	8.2	8.8	8.4	100

TABLE A-11: WEEKLY DO SUMMARY STATISTICS AT B&O CENTRAL RAILROAD
ON THE CHICAGO SANITARY AND SHIP CANAL 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	5.8	9.2	8.3	100
01/08/07 - 01/14/07	168	7.1	9.2	8.1	100
01/15/07 - 01/21/07	168	7.1	10.0	8.5	100
01/22/07 - 01/28/07	168	7.1	8.9	8.1	100
01/29/07 - 02/04/07	168	7.0	10.3	9.0	100
02/05/07 - 02/11/07	168	9.4	10.8	10.1	100
02/12/07 - 02/18/07	168	8.5	10.4	9.6	100
02/19/07 - 02/25/07	168	8.1	9.9	9.1	100
02/26/07 - 03/04/07	168	7.8	10.4	9.1	100
03/05/07 - 03/11/07	168	8.9	10.0	9.4	100
03/12/07 - 03/18/07	167	7.7	9.4	8.5	100
03/19/07 - 03/25/07	168	6.2	8.8	7.8	100
03/26/07 - 04/01/07	168	6.0	8.3	7.1	100
04/02/07 - 04/08/07	168	6.3	8.4	7.3	100
04/09/07 - 04/15/07	168	6.8	9.4	8.1	100
04/16/07 - 04/22/07	168	6.9	9.2	7.9	100
04/23/07 - 04/29/07	168	2.9	8.5	7.0	98
04/30/07 - 05/06/07	168	5.3	8.3	6.7	100
05/07/07 - 05/13/07	168	4.4	7.1	5.8	100
05/14/07 - 05/20/07	168	3.8	7.2	5.5	99
05/21/07 - 05/27/07	83	3.2	6.0	4.5	71
05/28/07 - 06/03/07	85	4.7	6.4	5.5	100
06/04/07 - 06/10/07	168	4.1	6.5	5.2	100
06/11/07 - 06/17/07	168	4.2	8.5	5.9	100
06/18/07 - 06/24/07	168	4.5	6.5	5.6	100
06/25/07 - 07/01/07	84	4.3	6.5	5.7	100
07/02/07 - 07/08/07			NO DATA		
07/09/07 - 07/15/07	84	5.1	6.9	5.9	100
07/16/07 - 07/22/07	168	1.4	6.7	5.1	83
07/23/07 - 07/29/07	168	3.8	6.8	5.6	98
07/30/07 - 08/05/07	168	4.2	7.1	5.3	100
08/06/07 - 08/12/07	168	3.8	5.9	5.0	93
08/13/07 - 08/19/07	168	4.6	6.4	5.5	100
08/20/07 - 08/26/07	168	1.7	6.3	4.0	51

TABLE A-11 (Continued): WEEKLY DO SUMMARY STATISTICS AT B&O CENTRAL RAILROAD ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values \geq 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	168	3.6	7.0	5.7	96
09/03/07 - 09/09/07	168	4.9	7.0	5.9	100
09/10/07 - 09/16/07	168	4.4	7.4	6.0	100
09/17/07 - 09/23/07	168	5.4	7.1	6.2	100
09/24/07 - 09/30/07	168	3.4	6.2	5.1	93
10/01/07 - 10/07/07	168	4.1	7.2	5.4	100
10/08/07 - 10/14/07	168	4.9	6.3	5.7	100
10/15/07 - 10/21/07	168	5.2	7.0	6.2	100
10/22/07 - 10/28/07	168	5.2	7.5	6.5	100
10/29/07 - 11/04/07	168	4.9	7.4	6.2	100
11/05/07 - 11/11/07	168	4.9	7.6	6.6	100
11/12/07 - 11/18/07	168	5.5	8.0	6.6	100
11/19/07 - 11/25/07	168	6.2	8.8	7.6	100
11/26/07 - 12/02/07	167	6.9	8.5	7.7	100
12/03/07 - 12/09/07	168	7.7	9.5	8.6	100
12/10/07 - 12/16/07	168	7.2	9.3	8.2	100
12/17/07 - 12/23/07	168	7.3	9.9	8.2	100
12/24/07 - 12/30/07	168	8.1	10.1	9.1	100
12/31/07 - 12/31/07	24	8.7	9.7	9.1	100

TABLE A-12: WEEKLY DO SUMMARY STATISTICS AT ROUTE 83
ON THE CHICAGO SANITARY AND SHIP CANAL 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	110	4.5	8.6	7.2	100
01/08/07 - 01/14/07	167	5.7	8.7	7.6	100
01/15/07 - 01/21/07	168	6.6	9.2	7.9	100
01/22/07 - 01/28/07	168	5.7	7.7	7.0	100
01/29/07 - 02/04/07	168	6.2	8.9	7.7	100
02/05/07 - 02/11/07	168	8.2	9.7	9.2	100
02/12/07 - 02/18/07	168	7.0	9.7	8.8	100
02/19/07 - 02/25/07	168	7.1	8.6	7.8	100
02/26/07 - 03/04/07	58	6.8	9.0	7.8	100
03/05/07 - 03/11/07	110	7.8	8.6	8.2	100
03/12/07 - 03/18/07	167	6.6	8.6	7.6	100
03/19/07 - 03/25/07	168	5.1	7.6	6.6	100
03/26/07 - 04/01/07	168	5.0	6.6	6.0	100
04/02/07 - 04/08/07	168	4.3	6.9	6.0	100
04/09/07 - 04/15/07	59	4.2	6.3	5.4	100
04/16/07 - 05/20/07			NO DATA		
05/21/07 - 05/27/07	106	0.0	4.5	2.8	8
05/28/07 - 06/03/07	168	0.0	5.3	3.2	45
06/04/07 - 06/10/07	168	2.2	4.3	3.3	7
06/11/07 - 06/17/07	168	2.6	6.4	4.3	55
06/18/07 - 06/24/07	58	3.4	4.8	4.1	69
06/25/07 - 07/01/07	108	3.1	5.5	4.5	82
07/02/07 - 07/08/07	168	3.3	5.8	4.7	80
07/09/07 - 07/15/07	167	3.3	6.7	4.9	88
07/16/07 - 07/22/07	58	2.8	4.7	3.8	36
07/23/07 - 08/26/07			NO DATA		
08/27/07 - 09/02/07	85	3.6	5.8	4.9	95
09/03/07 - 09/09/07	59	5.0	6.1	5.6	100
09/10/07 - 09/16/07	110	4.0	5.7	5.2	98
09/17/07 - 09/23/07	168	4.4	6.0	5.3	100
09/24/07 - 09/30/07	168	3.5	5.0	4.3	86
10/01/07 - 10/07/07	168	3.2	5.0	4.4	85
10/08/07 - 10/14/07	168	3.8	5.8	5.0	98
10/15/07 - 10/21/07	154	4.6	5.7	5.2	100

TABLE A-12 (Continued): WEEKLY DO SUMMARY STATISTICS AT
ROUTE 83 ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
10/22/07 - 10/28/07	135	5.2	6.4	5.8	100
10/29/07 - 11/04/07	168	4.7	6.9	6.0	100
11/05/07 - 11/11/07	168	5.3	6.9	6.1	100
11/12/07 - 11/18/07	36	6.4	7.0	6.7	100
11/19/07 - 11/25/07			NO DATA		
11/26/07 - 12/02/07	110	6.8	7.7	7.2	100
12/03/07 - 12/09/07	168	6.3	9.0	7.9	100
12/10/07 - 12/16/07	168	6.7	8.7	7.5	100
12/17/07 - 12/23/07	59	6.9	8.1	7.5	100
12/24/07 - 12/31/07			NO DATA		

TABLE A-13: WEEKLY DO SUMMARY STATISTICS AT LOCKPORT POWERHOUSE
ON THE CHICAGO SANITARY AND SHIP CANAL 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	6.5	8.5	7.3	100
01/08/07 - 01/14/07	168	7.0	9.3	8.4	100
01/15/07 - 01/21/07	168	7.0	9.5	8.6	100
01/22/07 - 01/28/07	168	7.3	9.1	8.0	100
01/29/07 - 02/04/07	168	6.9	9.4	8.0	100
02/05/07 - 02/11/07	168	8.4	10.1	9.5	100
02/12/07 - 02/18/07	168	8.1	9.6	9.0	100
02/19/07 - 02/25/07	168	6.2	8.5	7.6	100
02/26/07 - 03/04/07	168	7.5	9.2	8.3	100
03/05/07 - 03/11/07	168	8.0	9.6	8.5	100
03/12/07 - 03/18/07	167	7.0	8.2	7.5	100
03/19/07 - 03/25/07	168	5.5	7.7	6.9	100
03/26/07 - 04/01/07	168	5.2	6.3	5.8	100
04/02/07 - 04/08/07	168	5.0	6.7	5.9	100
04/09/07 - 04/15/07	168	5.7	8.2	6.9	100
04/16/07 - 04/22/07	168	6.0	7.7	6.8	100
04/23/07 - 04/29/07	168	3.1	7.4	5.7	94
04/30/07 - 05/06/07	168	4.6	6.3	5.6	100
05/07/07 - 05/13/07	82	4.0	5.9	5.1	99
05/14/07 - 05/20/07			NO DATA		
05/21/07 - 05/27/07	85	2.8	4.2	3.5	7
05/28/07 - 06/03/07	168	1.2	4.7	3.0	11
06/04/07 - 06/10/07	168	2.0	4.3	3.0	4
06/11/07 - 06/17/07	82	2.0	5.2	3.4	27
06/18/07 - 06/24/07	86	3.2	4.5	3.7	8
06/25/07 - 07/01/07	168	3.1	4.5	3.7	24
07/02/07 - 07/08/07	168	2.0	5.4	4.1	62
07/09/07 - 07/15/07	83	2.5	5.1	3.6	24
07/16/07 - 07/22/07	85	2.6	5.2	3.8	46
07/23/07 - 07/29/07	168	3.3	5.2	4.2	49
07/30/07 - 08/05/07	168	4.0	6.0	4.9	100
08/06/07 - 08/12/07	168	2.0	4.7	3.6	30
08/13/07 - 08/19/07	168	3.4	6.0	4.5	89
08/20/07 - 08/26/07	168	0.9	5.0	3.0	22

TABLE A-13 (Continued): WEEKLY DO SUMMARY STATISTICS AT LOCKPORT POWERHOUSE ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values \geq 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	168	2.6	5.6	4.1	48
09/03/07 - 09/09/07	168	3.6	5.6	4.9	94
09/10/07 - 09/16/07	168	3.6	5.2	4.4	86
09/17/07 - 09/23/07	168	4.7	6.0	5.3	100
09/24/07 - 09/30/07	168	3.7	5.2	4.4	88
10/01/07 - 10/07/07	168	3.6	5.6	4.3	68
10/08/07 - 10/14/07	83	3.2	5.5	4.6	92
10/15/07 - 10/21/07	83	5.4	6.8	5.9	100
10/22/07 - 10/28/07	168	5.1	6.9	6.2	100
10/29/07 - 11/04/07	168	5.4	6.7	6.2	100
11/05/07 - 11/11/07	168	5.8	6.4	6.0	100
11/12/07 - 11/18/07	168	5.8	6.6	6.2	100
11/19/07 - 11/25/07	168	5.3	7.5	6.4	100
11/26/07 - 12/02/07	168	6.6	7.7	7.1	100
12/03/07 - 12/09/07	168	6.5	8.6	7.8	100
12/10/07 - 12/16/07	168	7.1	8.5	7.8	100
12/17/07 - 12/23/07	168	7.0	8.5	7.8	100
12/24/07 - 12/30/07	168	8.0	8.7	8.4	100
12/31/07 - 12/31/07	24	7.5	8.1	7.8	100

TABLE A-14: WEEKLY DO SUMMARY STATISTICS AT JEFFERSON STREET
ON THE DES PLAINES 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	8.9	11.1	9.8	100
01/08/07 - 01/14/07	168	8.5	12.0	10.2	100
01/15/07 - 01/21/07	168	8.9	12.7	10.6	100
01/22/07 - 01/28/07	168	8.3	10.5	9.3	100
01/29/07 - 02/04/07	168	8.2	11.1	9.3	100
02/05/07 - 02/11/07	168	9.2	10.9	10.1	100
02/12/07 - 02/18/07	168	8.9	10.3	9.5	100
02/19/07 - 02/25/07	84	7.7	10.2	8.7	100
02/26/07 - 03/04/07	84	9.5	11.7	11.0	100
03/05/07 - 03/11/07	168	9.0	11.9	10.4	100
03/12/07 - 03/18/07	168	8.2	11.9	9.5	100
03/19/07 - 03/25/07	168	6.2	11.6	8.5	100
03/26/07 - 04/01/07	168	6.0	8.2	6.9	100
04/02/07 - 04/08/07	168	6.4	11.1	8.5	100
04/09/07 - 04/15/07	168	7.1	11.6	8.9	100
04/16/07 - 04/22/07	168	7.2	11.6	9.3	100
04/23/07 - 04/29/07	168	5.5	11.4	7.5	100
04/30/07 - 05/06/07	168	5.5	10.1	7.1	100
05/07/07 - 05/13/07	168	3.5	9.8	7.2	99
05/14/07 - 05/20/07	168	3.5	8.6	5.8	96
05/21/07 - 05/27/07	168	2.9	7.7	4.8	76
05/28/07 - 06/03/07	168	2.2	6.7	4.0	52
06/04/07 - 06/10/07	168	2.5	6.4	4.1	49
06/11/07 - 06/17/07	168	2.4	6.4	4.7	82
06/18/07 - 06/24/07	168	3.5	7.5	4.5	79
06/25/07 - 07/01/07	168	3.4	6.2	4.6	83
07/02/07 - 07/08/07	168	2.0	6.8	4.5	77
07/09/07 - 07/15/07	168	3.2	7.0	4.8	84
07/16/07 - 07/22/07	168	3.3	7.1	5.1	88
07/23/07 - 07/29/07	168	3.4	7.1	5.1	93
07/30/07 - 08/05/07	168	3.8	6.6	5.1	95
08/06/07 - 08/12/07	168	3.9	6.9	5.0	98
08/13/07 - 08/19/07	168	4.2	6.4	5.0	100
08/20/07 - 08/26/07	168	3.7	7.5	5.6	99

TABLE A-14 (Continued): WEEKLY DO SUMMARY STATISTICS AT
JEFFERSON STREET ON THE DES PLAINES 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	
08/27/07 - 09/02/07	167	4.5	7.1	5.6	100
09/03/07 - 09/09/07	83	5.2	6.9	5.9	100
09/10/07 - 09/16/07	85	5.2	7.7	6.3	100
09/17/07 - 09/23/07	168	5.6	7.7	6.4	100
09/24/07 - 09/30/07	168	4.7	7.4	5.6	100
10/01/07 - 10/07/07	168	4.3	7.2	5.3	100
10/08/07 - 10/14/07	83	4.5	6.6	5.4	100
10/15/07 - 10/21/07	83	5.7	8.5	6.5	100
10/22/07 - 10/28/07	168	5.7	9.1	7.1	100
10/29/07 - 11/04/07	168	5.9	10.5	7.7	100
11/05/07 - 11/11/07	168	6.3	11.3	8.1	100
11/12/07 - 11/18/07	168	6.9	10.0	7.8	100
11/19/07 - 11/25/07	168	6.6	8.6	7.5	100
11/26/07 - 12/02/07	168	7.9	11.1	9.0	100
12/03/07 - 12/09/07	168	8.2	10.9	9.8	100
12/10/07 - 12/16/07	168	7.7	12.0	9.7	100
12/17/07 - 12/23/07	164	8.3	11.3	9.9	100
12/24/07 - 12/30/07	165	9.6	11.3	10.2	100
12/31/07 - 12/31/07	24	10.3	11.7	10.9	100

TABLE A-15: WEEKLY DO SUMMARY STATISTICS AT C&W INDIANA RAILROAD
ON THE LITTLE 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	9.9	11.2	10.7	100
01/08/07 - 01/14/07	168	10.5	11.9	11.3	100
01/15/07 - 01/21/07	168	11.1	12.4	11.7	100
01/22/07 - 01/28/07	168	11.2	12.3	11.6	100
01/29/07 - 02/04/07	168	11.1	11.7	11.5	100
02/05/07 - 02/11/07	168	10.4	11.5	11.0	100
02/12/07 - 02/18/07	168	9.4	11.8	11.0	100
02/19/07 - 02/25/07	168	7.5	10.9	9.2	100
02/26/07 - 03/04/07	168	6.6	10.1	8.7	100
03/05/07 - 03/11/07	168	9.4	10.1	9.9	100
03/12/07 - 03/18/07	167	9.3	10.2	9.7	100
03/19/07 - 03/25/07	168	9.1	10.5	9.8	100
03/26/07 - 04/01/07	168	8.5	10.9	9.6	100
04/02/07 - 04/08/07	168	8.7	12.4	10.4	100
04/09/07 - 04/15/07	168	10.7	18.3	14.1	100
04/16/07 - 04/22/07	168	14.2	19.8	16.8	100
04/23/07 - 04/29/07	168	6.5	14.0	9.4	100
04/30/07 - 05/06/07	168	5.0	14.4	9.2	100
05/07/07 - 05/13/07	167	3.9	12.2	7.0	99
05/14/07 - 05/20/07	168	1.0	8.3	4.5	70
05/21/07 - 05/27/07	59	3.2	10.7	5.4	93
05/28/07 - 06/10/07			NO DATA		
06/11/07 - 06/17/07	108	0.2	9.3	4.6	61
06/18/07 - 06/24/07	168	2.8	9.3	5.4	95
06/25/07 - 07/01/07	168	4.3	7.8	6.1	100
07/02/07 - 07/08/07	168	5.5	9.2	7.1	100
07/09/07 - 07/15/07	168	4.5	12.1	8.3	100
07/16/07 - 07/22/07	168	4.7	11.0	7.6	100
07/23/07 - 07/29/07	168	2.6	8.6	5.8	93
07/30/07 - 08/05/07	168	4.0	10.4	7.0	100
08/06/07 - 08/12/07	168	3.8	10.1	6.8	99
08/13/07 - 08/19/07	168	4.7	8.9	6.2	100
08/20/07 - 08/26/07	168	2.9	6.4	4.9	85
08/27/07 - 09/02/07	167	3.3	9.1	6.2	92

TABLE A-15 (Continued): WEEKLY DO SUMMARY STATISTICS AT
C&W INDIANA RAILROAD ON THE LITTLE 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	
09/03/07 - 09/09/07	168	5.8	8.2	7.2	100
09/10/07 - 09/16/07	168	6.5	7.9	7.3	100
09/17/07 - 09/23/07	168	7.2	9.0	7.9	100
09/24/07 - 09/30/07	168	6.9	8.9	7.8	100
10/01/07 - 10/07/07	168	6.1	8.4	7.1	100
10/08/07 - 10/14/07	168	6.3	8.5	7.4	100
10/15/07 - 10/21/07	168	7.0	8.3	7.6	100
10/22/07 - 10/28/07	168	7.2	8.9	8.1	100
10/29/07 - 11/04/07	168	8.0	9.5	8.6	100
11/05/07 - 11/11/07	168	8.3	10.5	9.4	100
11/12/07 - 11/18/07	168	7.1	10.1	8.7	100
11/19/07 - 11/25/07	168	9.1	10.0	9.5	100
11/26/07 - 12/02/07	168	9.1	12.1	10.8	100
12/03/07 - 12/09/07	168	11.3	12.5	12.0	100
12/10/07 - 12/16/07	168	10.3	12.6	11.7	100
12/17/07 - 12/23/07	168	11.2	12.9	12.2	100
12/24/07 - 12/30/07	168	12.4	13.4	12.9	100
12/31/07 - 12/31/07	24	12.0	12.8	12.4	100

TABLE A-16: WEEKLY DO SUMMARY STATISTICS AT HALSTED STREET
ON THE LITTLE 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	5.7	8.8	7.5	100
01/08/07 - 01/14/07	168	6.8	8.5	7.6	100
01/15/07 - 01/21/07	87	7.6	8.8	8.2	100
01/22/07 - 01/28/07	108	6.9	7.9	7.3	100
01/29/07 - 02/04/07	87	7.0	8.0	7.5	100
02/05/07 - 02/25/07			NO DATA		
02/26/07 - 03/04/07	108	6.6	8.8	7.5	100
03/05/07 - 03/11/07	167	5.5	8.3	6.7	100
03/12/07 - 03/18/07	167	5.5	7.5	6.5	100
03/19/07 - 03/25/07	168	5.7	8.2	6.5	100
03/26/07 - 04/01/07	168	5.0	8.9	6.4	100
04/02/07 - 04/08/07	168	5.2	8.7	6.9	100
04/09/07 - 04/15/07	168	6.2	9.9	7.5	100
04/16/07 - 04/22/07	168	4.5	12.1	8.2	100
04/23/07 - 04/29/07	168	5.2	10.6	6.9	100
04/30/07 - 05/06/07	168	5.5	10.7	7.4	100
05/07/07 - 05/13/07	168	5.0	9.9	7.0	100
05/14/07 - 05/20/07	168	3.5	8.1	5.8	97
05/21/07 - 05/27/07	168	3.1	9.9	6.5	99
05/28/07 - 06/03/07	168	2.5	6.3	4.2	65
06/04/07 - 06/10/07	168	2.4	6.2	4.4	76
06/11/07 - 06/17/07	168	2.2	13.0	6.2	90
06/18/07 - 06/24/07	168	3.8	7.9	5.2	99
06/25/07 - 07/01/07	168	3.6	8.1	5.7	98
07/02/07 - 07/08/07	168	4.4	8.6	6.1	100
07/09/07 - 07/15/07	168	3.6	10.9	6.9	99
07/16/07 - 07/22/07	168	4.4	10.5	6.6	100
07/23/07 - 07/29/07	168	3.9	8.7	5.5	99
07/30/07 - 08/05/07	168	3.7	10.9	6.2	96
08/06/07 - 08/12/07	168	3.7	13.1	6.2	99
08/13/07 - 08/19/07	168	4.3	10.2	5.9	100
08/20/07 - 08/26/07	168	0.0	6.4	4.2	71
08/27/07 - 09/02/07	168	4.2	8.7	6.2	100
09/03/07 - 09/09/07	168	5.1	7.3	6.1	100

TABLE A-16 (Continued): WEEKLY DO SUMMARY STATISTICS AT
HALSTED STREET ON THE LITTLE 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	
09/10/07 - 09/16/07	168	5.4	7.7	6.6	100
09/17/07 - 09/23/07	168	5.7	7.5	6.7	100
09/24/07 - 09/30/07	168	4.7	6.8	5.6	100
10/01/07 - 10/07/07	168	4.4	6.9	5.9	100
10/08/07 - 10/14/07	168	5.9	7.9	7.0	100
10/15/07 - 10/21/07	168	5.5	8.3	6.7	100
10/22/07 - 10/28/07	168	4.8	7.3	6.2	100
10/29/07 - 11/04/07	168	5.4	6.7	6.1	100
11/05/07 - 11/11/07	168	5.5	7.3	6.7	100
11/12/07 - 11/18/07	168	5.9	8.5	6.8	100
11/19/07 - 11/25/07	168	6.5	8.5	7.4	100
11/26/07 - 12/02/07	167	6.4	8.4	7.2	100
12/03/07 - 12/09/07	168	7.1	8.8	7.9	100
12/10/07 - 12/16/07	168	6.2	7.8	7.3	100
12/17/07 - 12/23/07	168	6.5	8.9	7.6	100
12/24/07 - 12/30/07	168	7.1	8.6	7.8	100
12/31/07 - 12/31/07	24	7.4	8.2	7.8	100

TABLE A-17: WEEKLY DO SUMMARY STATISTICS AT CICERO AVENUE
ON THE CALUMET-SAG CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/07 - 01/07/07	168	7.4	9.6	8.4	100
01/08/07 - 01/14/07	168	4.8	15.0	8.1	100
01/15/07 - 01/21/07	167	7.2	10.5	8.9	100
01/22/07 - 01/28/07	168	7.8	9.6	8.4	100
01/29/07 - 02/04/07	168	8.7	11.0	9.6	100
02/05/07 - 02/11/07	168	8.6	10.4	9.3	100
02/12/07 - 02/18/07	168	8.5	9.6	9.2	100
02/19/07 - 02/25/07	168	8.1	10.5	9.0	100
02/26/07 - 03/04/07	168	8.0	11.3	9.9	100
03/05/07 - 03/11/07	168	8.0	10.0	8.9	100
03/12/07 - 03/18/07	167	7.0	9.6	8.3	100
03/19/07 - 03/25/07	60	7.8	9.3	8.4	100
03/26/07 - 04/01/07	109	6.0	7.6	6.8	100
04/02/07 - 04/08/07	168	6.9	8.6	7.8	100
04/09/07 - 04/15/07	168	8.0	9.4	8.6	100
04/16/07 - 04/22/07	168	7.0	9.8	8.4	100
04/23/07 - 04/29/07	168	5.0	10.3	7.2	100
04/30/07 - 05/06/07	168	5.1	8.6	6.7	100
05/07/07 - 05/13/07	168	4.4	9.5	6.5	100
05/14/07 - 05/20/07	168	1.7	7.4	4.4	76
05/21/07 - 05/27/07	168	4.1	9.1	5.9	100
05/28/07 - 06/03/07	168	2.1	5.3	3.7	90
06/04/07 - 06/10/07	168	2.6	6.7	4.2	92
06/11/07 - 06/17/07	60	2.5	5.3	3.9	93
06/18/07 - 06/24/07	109	2.8	5.3	4.1	99
06/25/07 - 07/01/07	59	3.5	5.7	4.5	100
07/02/07 - 07/08/07			NO DATA		
07/09/07 - 07/15/07	109	3.9	9.9	6.1	100
07/16/07 - 07/22/07	168	4.1	9.0	6.0	100
07/23/07 - 07/29/07	168	3.0	6.5	5.0	100
07/30/07 - 08/05/07	168	4.1	11.2	6.6	100
08/06/07 - 08/12/07	168	3.1	7.9	5.3	100
08/13/07 - 08/19/07	168	3.7	6.2	5.2	100
08/20/07 - 08/26/07	168	1.8	6.4	4.9	92

TABLE A-17 (Continued): WEEKLY DO SUMMARY STATISTICS AT
CICERO AVENUE ON THE CALUMET-SAG CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	168	4.7	6.5	5.4	100
09/03/07 - 09/09/07	168	4.7	6.1	5.5	100
09/10/07 - 09/16/07	168	5.4	7.2	6.2	100
09/17/07 - 09/23/07	168	5.6	7.3	6.4	100
09/24/07 - 09/30/07	168	4.1	6.5	5.4	100
10/01/07 - 10/07/07	168	4.5	6.3	5.5	100
10/08/07 - 10/14/07	168	5.3	7.1	6.3	100
10/15/07 - 10/21/07	60	6.4	7.3	6.9	100
10/22/07 - 11/04/07			NO DATA		
11/05/07 - 11/11/07	108	7.1	10.3	8.0	100
11/12/07 - 11/18/07	168	5.9	7.4	6.7	100
11/19/07 - 11/25/07	168	5.5	7.9	6.8	100
11/26/07 - 12/02/07	168	7.2	8.8	8.0	100
12/03/07 - 12/09/07	168	7.5	9.4	8.2	100
12/10/07 - 12/16/07	168	7.8	9.6	8.5	100
12/17/07 - 12/23/07	168	7.7	9.5	8.6	100
12/24/07 - 12/30/07	168	7.9	10.3	9.0	100
12/31/07 - 12/31/07	24	7.8	8.2	8.0	100

TABLE A-18: WEEKLY DO SUMMARY STATISTICS AT 104TH AVENUE
ON THE CALUMET-SAG CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/07 - 01/07/07	168	7.2	10.2	8.6	100
01/08/07 - 01/14/07	168	8.3	10.4	9.3	100
01/15/07 - 01/21/07	168	8.7	11.0	10.1	100
01/22/07 - 01/28/07	166	8.8	10.4	9.4	100
01/29/07 - 02/04/07	168	9.6	11.2	10.3	100
02/05/07 - 02/11/07	168	8.0	10.9	9.5	100
02/12/07 - 02/18/07	168	7.8	8.7	8.3	100
02/19/07 - 02/25/07	168	7.8	9.8	8.6	100
02/26/07 - 03/04/07	168	9.2	11.4	10.3	100
03/05/07 - 03/11/07	167	7.9	11.3	9.5	100
03/12/07 - 03/18/07	167	7.4	8.8	8.2	100
03/19/07 - 03/25/07	168	7.0	9.1	7.9	100
03/26/07 - 04/01/07	168	5.8	7.4	6.6	100
04/02/07 - 04/08/07	168	6.7	9.5	8.3	100
04/09/07 - 04/15/07	168	8.4	10.0	9.2	100
04/16/07 - 04/22/07	61	8.2	9.4	8.8	100
04/23/07 - 04/29/07			NO DATA		
04/30/07 - 05/06/07	109	5.8	7.9	6.8	100
05/07/07 - 05/13/07	168	6.8	10.5	8.1	100
05/14/07 - 05/20/07	61	4.8	8.1	7.1	100
05/21/07 - 06/03/07			NO DATA		
06/04/07 - 06/10/07	157	3.1	5.3	4.5	100
06/11/07 - 06/17/07	168	3.5	9.9	6.1	100
06/18/07 - 06/24/07	168	3.8	8.5	5.0	100
06/25/07 - 07/01/07	59	3.9	5.3	4.5	100
07/02/07 - 07/08/07			NO DATA		
07/09/07 - 07/15/07	109	4.8	6.9	5.6	100
07/16/07 - 07/22/07	168	4.0	9.0	5.8	100
07/23/07 - 07/29/07	168	2.9	6.3	4.5	97
07/30/07 - 08/05/07	60	3.4	5.4	4.2	100
08/06/07 - 08/12/07			NO DATA		
08/13/07 - 08/19/07	107	4.2	5.8	4.9	100
08/20/07 - 08/26/07	58	4.1	5.5	5.0	100
08/27/07 - 10/07/07			NO DATA		

TABLE A-18 (Continued): WEEKLY DO SUMMARY STATISTICS AT
104TH AVENUE ON THE CALUMET-SAG CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
10/08/07 - 10/14/07	107	5.4	6.3	5.9	100
10/15/07 - 10/21/07	59	5.1	6.7	6.2	100
10/22/07 - 11/04/07		NO DATA			
11/05/07 - 11/11/07	106	7.0	8.8	8.3	100
11/12/07 - 11/18/07	168	5.2	7.7	6.9	100
11/19/07 - 11/25/07	56	5.9	7.3	6.7	100
11/26/07 - 12/02/07	110	6.5	9.5	8.5	100
12/03/07 - 12/09/07	168	7.7	10.2	8.7	100
12/10/07 - 12/16/07	168	8.2	9.6	8.8	100
12/17/07 - 12/23/07	60	9.0	9.8	9.3	100
12/24/07 - 12/31/07		NO DATA			

TABLE A-19: WEEKLY DO SUMMARY STATISTICS AT ROUTE 83
ON THE CALUMET-SAG CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/07 - 01/07/07	168	7.3	10.2	8.5	100
01/08/07 - 01/14/07	168	8.8	10.5	9.6	100
01/15/07 - 01/21/07	168	9.3	11.1	10.0	100
01/22/07 - 01/28/07	168	8.1	9.9	9.0	100
01/29/07 - 02/04/07	167	7.4	11.0	9.8	100
02/05/07 - 02/11/07	168	8.7	11.2	10.0	100
02/12/07 - 02/18/07	168	8.0	8.7	8.3	100
02/19/07 - 02/25/07	168	7.8	9.4	8.6	100
02/26/07 - 03/04/07	168	9.0	11.1	10.0	100
03/05/07 - 03/11/07	168	8.3	11.1	9.6	100
03/12/07 - 03/18/07	58	7.9	8.5	8.1	100
03/19/07 - 03/25/07	109	6.8	8.8	7.5	100
03/26/07 - 04/01/07	168	5.8	7.4	6.6	100
04/02/07 - 04/08/07	168	6.8	9.2	8.1	100
04/09/07 - 04/15/07	168	8.0	9.7	9.1	100
04/16/07 - 04/22/07	168	7.0	10.7	8.9	100
04/23/07 - 04/29/07	168	5.1	11.1	7.5	100
04/30/07 - 05/06/07	168	5.4	7.9	6.3	100
05/07/07 - 05/13/07	168	6.0	10.3	8.3	100
05/14/07 - 05/20/07	167	3.2	9.0	5.8	100
05/21/07 - 05/27/07	168	3.1	7.7	4.9	100
05/28/07 - 06/03/07	168	2.3	5.0	3.2	57
06/04/07 - 06/10/07	168	2.2	4.9	3.6	79
06/11/07 - 06/17/07	168	3.8	9.7	5.8	100
06/18/07 - 06/24/07	168	2.9	8.6	4.8	98
06/25/07 - 07/01/07	168	2.8	6.1	4.1	96
07/02/07 - 07/08/07	168	3.8	7.2	5.7	100
07/09/07 - 07/15/07	168	2.5	9.9	5.3	97
07/16/07 - 07/22/07	59	4.1	6.6	5.2	100
07/23/07 - 07/29/07	109	3.3	6.0	4.5	100
07/30/07 - 08/05/07	168	4.0	9.0	5.7	100
08/06/07 - 08/12/07	168	3.2	6.3	4.5	100
08/13/07 - 08/19/07	168	4.0	6.6	5.0	100
08/20/07 - 08/26/07	168	2.5	5.4	4.2	90

TABLE A-19 (Continued): WEEKLY DO SUMMARY STATISTICS AT
ROUTE 83 ON THE CALUMET-SAG CHANNEL DURING 2007

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/27/07 - 09/02/07	168	3.4	6.6	4.9	100
09/03/07 - 09/09/07	167	3.9	6.0	4.9	100
09/10/07 - 09/16/07	168	4.0	6.8	5.5	100
09/17/07 - 09/23/07	168	5.7	6.8	6.2	100
09/24/07 - 09/30/07	168	4.0	6.0	5.1	100
10/01/07 - 10/07/07	168	3.5	5.6	4.9	100
10/08/07 - 10/14/07	168	5.0	6.3	5.8	100
10/15/07 - 10/21/07	168	5.5	6.9	6.1	100
10/22/07 - 10/28/07	168	5.2	7.0	6.0	100
10/29/07 - 11/04/07	168	5.7	7.2	6.5	100
11/05/07 - 11/11/07	168	5.4	8.3	7.4	100
11/12/07 - 11/18/07	168	6.1	7.8	7.0	100
11/19/07 - 11/25/07	168	4.9	7.8	6.8	100
11/26/07 - 12/02/07	168	3.7	9.4	7.0	100
12/03/07 - 12/09/07	168	7.9	9.9	8.8	100
12/10/07 - 12/16/07	168	8.0	9.6	8.5	100
12/17/07 - 12/23/07	168	8.7	10.4	9.4	100
12/24/07 - 12/30/07	168	9.3	10.6	10.1	100
12/31/07 - 12/31/07	24	9.4	9.6	9.5	100