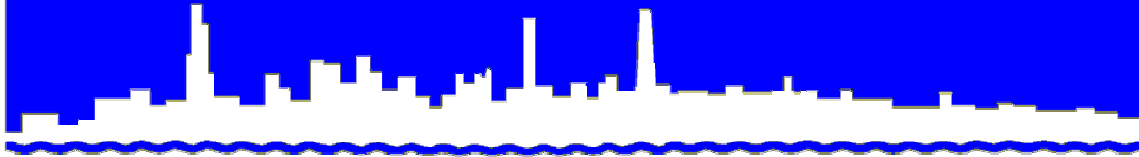


*Protecting Our Water Environment*



*Metropolitan Water Reclamation District of Greater Chicago*

***MONITORING AND RESEARCH  
DEPARTMENT***

*REPORT NO. 09-50*

*CONTINUOUS DISSOLVED OXYGEN MONITORING  
IN THE DEEP-DRAFT CHICAGO WATERWAY SYSTEM  
DURING 2008*

*August 2009*

**Metropolitan Water Reclamation District of Greater Chicago**  
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**CONTINUOUS DISSOLVED OXYGEN MONITORING  
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DURING 2008**

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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 Chicago Area Waterway System (CAWS) 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 CAWS is artificially controlled by hydraulic structures. The CAWS has two river systems, the Calumet River System and the Chicago River System.

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 Monitoring and Research Department (M&R) 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 1998, M&R initiated 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 CAWS.

Data in this report are from 23 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 2008 through December 2008 for the deep-draft waterways of the Chicago River System, Calumet River System, and Des Plaines 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.

Several monitoring stations once managed in past years were re-activated from April through November 2008 to gather data for a special project involving the SEPA stations along the Calumet-Sag Channel. These stations include Romeoville Road on the Chicago Sanitary and Ship Canal (CSSC), and Division Street, River Mile 311.7, and Southwest Highway on the Calumet-Sag Channel. The data collected are included in this report.

### 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 from Lake Michigan to 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 CSSC, 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 CSSC 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. On December 18, 2008 the USEPA approved new DO standards for General Use Waters in the state of Illinois. These new General Use DO standards will be used in the 2009 CDOM report.

## MATERIALS AND METHODS

### Water Quality Monitor

The continuous water quality monitors (monitor) used to collect DO 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<sup>®</sup> 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 2008, cross-sectional DO surveys were conducted in the CAWS and Des Plaines River System to determine if a 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 showed that the differences across the waterway were generally minimal (coefficient of variation < 10%) and equivalent (< 2 mg/L difference) to the DO concentration measured by the monitor at the fixed locations.

## RESULTS

The annual minimum, maximum, and mean DO concentrations measured at all 23 stations during 2008 are shown in Table 2.

The number and percent of measured DO concentrations rejected and removed from the Access<sup>®</sup> database following review during 2008 are summarized in Table 3.

The number and percent of DO concentrations above the applicable IPCB DO standard for each waterway during 2008 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 23 monitoring stations during 2008. The current national one-day minimum DO criterion for adult life stages of fish is 3.0 mg/L (Chapman, 1986).

Individual line drawings showing hourly DO concentrations at each monitoring station are indicated in Figures 2 through 24.

Weekly DO summary statistics during 2008 are presented for each monitoring station in Appendix A, Tables A-1 through A-23.

Summary statistics for dissolved oxygen measurements made during cross-sectional surveys are shown in Appendix Table A-24.

### 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.mwr.org](http://www.mwr.org)) has information regarding CSO events which can be found in the Services and Facilities Section under the title "Combined Sewer Overflows."

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.

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

Monitoring Station	Waterway	Description of Monitoring Station
<u>Chicago River System (Continued)</u>		
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.
Loomis Street	South Branch Chicago River	3.6 miles below junction with Chicago River, water quality monitor on northeast side Loomis Street bridge, 3 feet below water surface.
36 <sup>th</sup> 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 northeast side I-55 bridge, 3 feet below water surface.
Cicero Avenue	Chicago Sanitary and Ship Canal	1.5 miles above Stickney WRP out-fall, 1.1 miles below Crawford Generating Station cooling water discharge, water quality monitor on northeast 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>Chicago River System (Continued)</u>		
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.
Romeoville Road	Chicago Sanitary and Ship Canal	7.1 miles below junction with Calumet-Sag Channel, 5.1 miles above Lockport Lock; water quality monitor on southeast side of Romeoville Road bridge, 3 feet below water surface.
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.

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

Monitoring Station	Waterway	Description of Monitoring Station
<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 out-fall, 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.
Division Street	Calumet-Sag Channel	1.0 mile below junction with Little Calumet River; 0.4 miles above SEPA 3, water quality monitor attached to southwest side Division 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.
River Mile 311.7	Calumet-Sag Channel	6.4 miles below SEPA 3, 0.1 mile above SEPA 4, water quality monitor attached to concrete wall upstream of SEPA 4 intake structure, 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>		
Southwest Highway	Calumet-Sag Channel	0.8 mile below SEPA 4; 7.0 miles above Canal Junction SEPA Station; monitor attached to southeast side of Southwest Highway bridge, three feet below water surface.
104 <sup>th</sup> 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 CONCENTRATIONS<sup>1</sup>

Monitoring Station	Waterway	DO Concentration (mg/L)		
		Minimum	Maximum	Mean
<u>Chicago River System</u>				
Main Street	North Shore Channel	0.1	26.4	8.3
Foster Avenue	North Shore Channel	0.5	10.8	7.8
Addison Street	North Branch Chicago River	0.2	12.8	8.1
Fullerton Avenue	North Branch Chicago River	0.8	12.2	7.6
Kinzie Street	North Branch Chicago River	1.8	13.0	7.2
Clark Street	Chicago River	1.1	13.2	8.7
Loomis Street	South Branch Chicago River	2.2	13.0	7.6
36 <sup>th</sup> Street	Bubbly Creek	0.0	23.6	4.3
Interstate Highway 55	Bubbly Creek	0.0	16.3	5.7
Cicero Avenue	Chicago Sanitary and Ship Canal	0.0	10.9	6.2
B&O Central Railroad	Chicago Sanitary and Ship Canal	2.3	10.7	7.2
Route 83	Chicago Sanitary and Ship Canal	0.5	9.9	6.6
Romeoville Road	Chicago Sanitary and Ship Canal	1.2	8.8	5.1
Lockport Powerhouse	Chicago Sanitary and Ship Canal	1.9	13.1	6.5
<u>Des Plaines River System</u>				
Jefferson Street	Des Plaines River	2.8	12.9	7.9
<u>Calumet River System</u>				
C&W Indiana Railroad	Little Calumet River	0.3	17.0	9.5
Halsted Street	Little Calumet River	0.0	17.8	7.0
Division Street	Calumet-Sag Channel	0.6	11.8	5.6
Cicero Avenue	Calumet-Sag Channel	1.6	12.6	7.3
River Mile 311.7	Calumet-Sag Channel	1.3	14.5	6.5
Southwest Highway	Calumet-Sag Channel	2.1	12.5	6.3
104 <sup>th</sup> Avenue	Calumet-Sag Channel	4.7	11.0	7.8
Route 83	Calumet-Sag Channel	2.4	13.2	7.5

<sup>1</sup>Dissolved 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 CRITERIA<sup>1</sup>

Monitoring Station	Waterway	Number of DO Values Rejected	Percent of DO Values Rejected
<u>Chicago River System</u>			
Main Street	North Shore Channel	626	7
Foster Avenue	North Shore Channel	173	2
Addison Street	North Branch Chicago River	14	<1
Fullerton Avenue	North Branch Chicago River	554	6
Kinzie Street	North Branch Chicago River	3	<1
Clark Street	Chicago River	339	4
Loomis Street	South Branch Chicago River	389	4
36 <sup>th</sup> Street	Bubbly Creek	176	2
Interstate Highway 55	Bubbly Creek	1,122	13
Cicero Avenue	Chicago Sanitary and Ship Canal	1,000	11
B&O Central Railroad	Chicago Sanitary and Ship Canal	173	2
Route 83	Chicago Sanitary and Ship Canal	3,799	43
Romeoville Road	Chicago Sanitary and Ship Canal	646	13
Lockport Powerhouse	Chicago Sanitary and Ship Canal	840	10
<u>Des Plaines River System</u>			
Jefferson Street	Des Plaines River	172	2
<u>Calumet River System</u>			
C&W Indiana Railroad	Little Calumet River	674	8
Halsted Street	Little Calumet River	340	4
Division Street	Calumet-Sag Channel	168	3
Cicero Avenue	Calumet-Sag Channel	180	2
River Mile 311.7	Calumet-Sag Channel	0	0
Southwest Highway	Calumet-Sag Channel	0	0
104 <sup>th</sup> Avenue	Calumet-Sag Channel	4,052	46
Route 83	Calumet-Sag Channel	339	4

<sup>1</sup>Dissolved 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 STANDARD<sup>1</sup>

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	8,158	6,957	85
Foster Avenue	North Shore Channel	4.0	8,611	8,605	>99
Addison Street	North Branch Chicago River	4.0	8,770	8,756	>99
Fullerton Avenue	North Branch Chicago River	4.0	8,230	8,202	>99
Kinzie Street	North Branch Chicago River	4.0	8,781	8,673	99
Clark Street	Chicago River	5.0	8,445	8,369	99
Loomis Street	South Branch Chicago River	4.0	8,395	8,307	99
36 <sup>th</sup> Street	Bubbly Creek	4.0	8,608	3,386	39
Interstate Highway 55	Bubbly Creek	4.0	7,662	5,963	78
Cicero Avenue	Chicago Sanitary and Ship Canal	4.0	7,784	7,144	92
B&O Central Railroad	Chicago Sanitary and Ship Canal	4.0	8,611	8,530	99
Route 83	Chicago Sanitary and Ship Canal	4.0	4,985	4,846	97
Romeoville Road	Chicago Sanitary and Ship Canal	4.0	4,394	3,835	87
Lockport Powerhouse	Chicago Sanitary and Ship Canal	4.0	7,944	7,329	92
<u>Des Plaines River System</u>					
Jefferson Street	Des Plaines River	4.0	8,612	8,550	99
<u>Calumet River System</u>					
C&W Indiana Railroad	Little Calumet River	4.0	8,110	7,614	94
Halsted Street	Little Calumet River	4.0	8,444	8,253	98
Division Street	Calumet-Sag Channel	3.0	4,703	4,601	98
Cicero Avenue	Calumet-Sag Channel	3.0	8,604	8,579	>99
River Mile 311.7	Calumet-Sag Channel	3.0	5,040	5,007	99
Southwest Highway	Calumet-Sag Channel	3.0	5,038	5,018	>99
104 <sup>th</sup> Avenue	Calumet-Sag Channel	3.0	4,732	4,732	100
Route 83	Calumet-Sag Channel	3.0	8,445	8,420	>99

<sup>1</sup>Dissolved 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	3	1	2	5	5	85
Foster Avenue	North Shore Channel	<1	<1	<1	<1	<1	>99
Addison Street	North Branch Chicago River	<1	<1	<1	<1	<1	>99
Fullerton Avenue	North Branch Chicago River	<1	<1	<1	<1	4	96
Kinzie Street	North Branch Chicago River	0	<1	<1	1	8	90
Clark Street	Chicago River	0	<1	<1	<1	<1	99
Loomis Street	South Branch Chicago River	0	0	<1	1	3	96
36 <sup>th</sup> Street	Bubbly Creek	28	12	11	10	8	32
Interstate Highway 55	Bubbly Creek	5	3	5	9	16	62
Cicero Avenue	Chicago Sanitary and Ship Canal	<1	1	2	5	19	73
B&O Central Railroad	Chicago Sanitary and Ship Canal	0	0	<1	1	3	96
Route 83	Chicago Sanitary and Ship Canal	<1	<1	1	2	14	83
Romeoville Road	Chicago Sanitary and Ship Canal	0	<1	1	11	34	54
Lockport Powerhouse	Chicago Sanitary and Ship Canal	0	<1	1	6	18	74
<u>Des Plaines River System</u>							
Jefferson Street	Des Plaines River	0	0	<1	1	7	92
<u>Calumet River System</u>							
C&W Indiana Railroad	Little Calumet River	<1	1	2	3	3	90
Halsted Street	Little Calumet River	<1	<1	<1	2	4	93
Division Street	Calumet-Sag Channel	<1	<1	2	5	20	73
Cicero Avenue	Calumet-Sag Channel	0	<1	<1	1	7	92
River Mile 311.7	Calumet-Sag Channel	0	<1	<1	3	9	87
Southwest Highway	Calumet-Sag Channel	0	0	<1	4	11	84
104 <sup>th</sup> Avenue	Calumet-Sag Channel	0	0	0	0	<1	>99
Route 83	Calumet-Sag Channel	0	0	<1	2	7	90

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

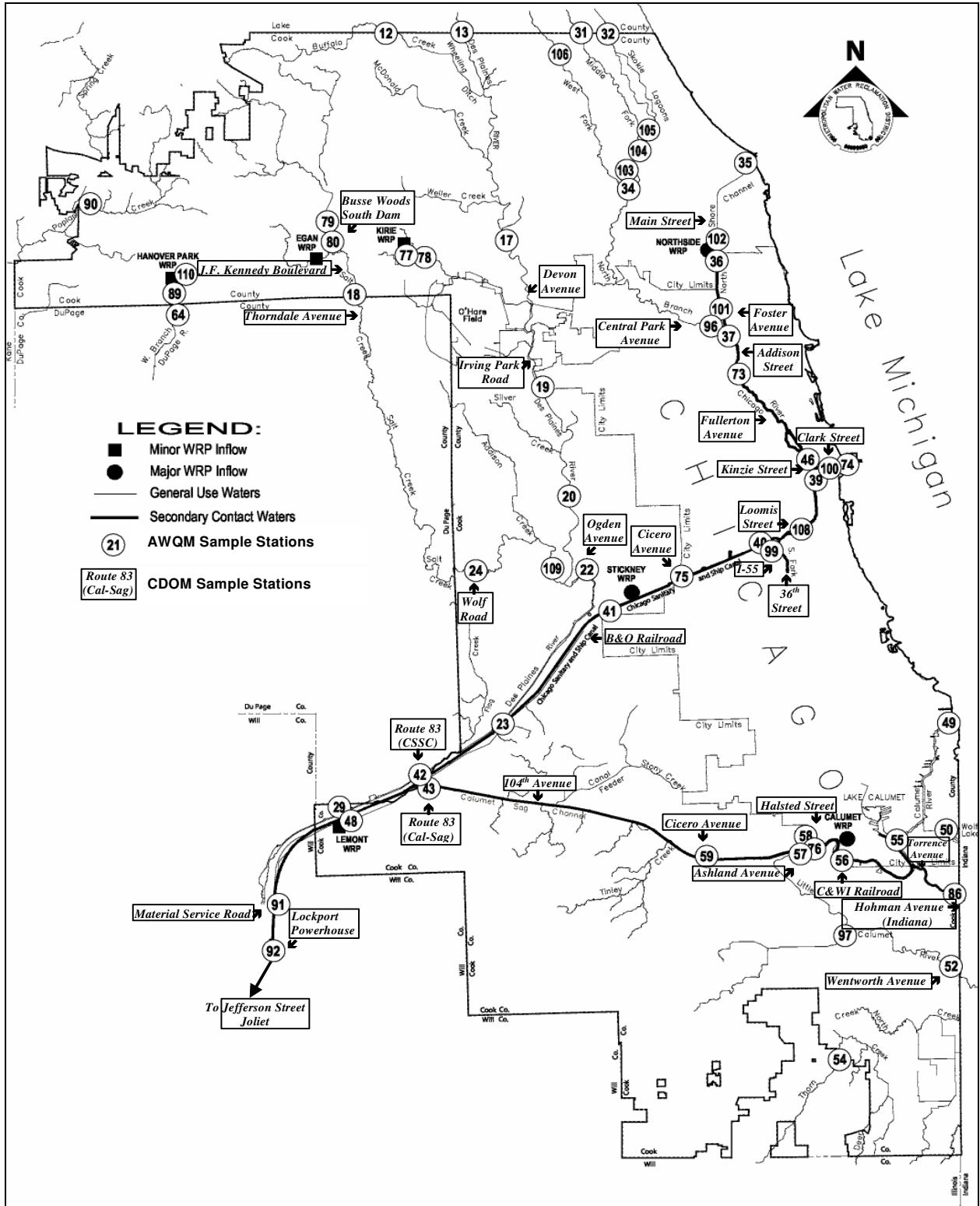




FIGURE 2: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT MAIN STREET ON THE NORTH SHORE CHANNEL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

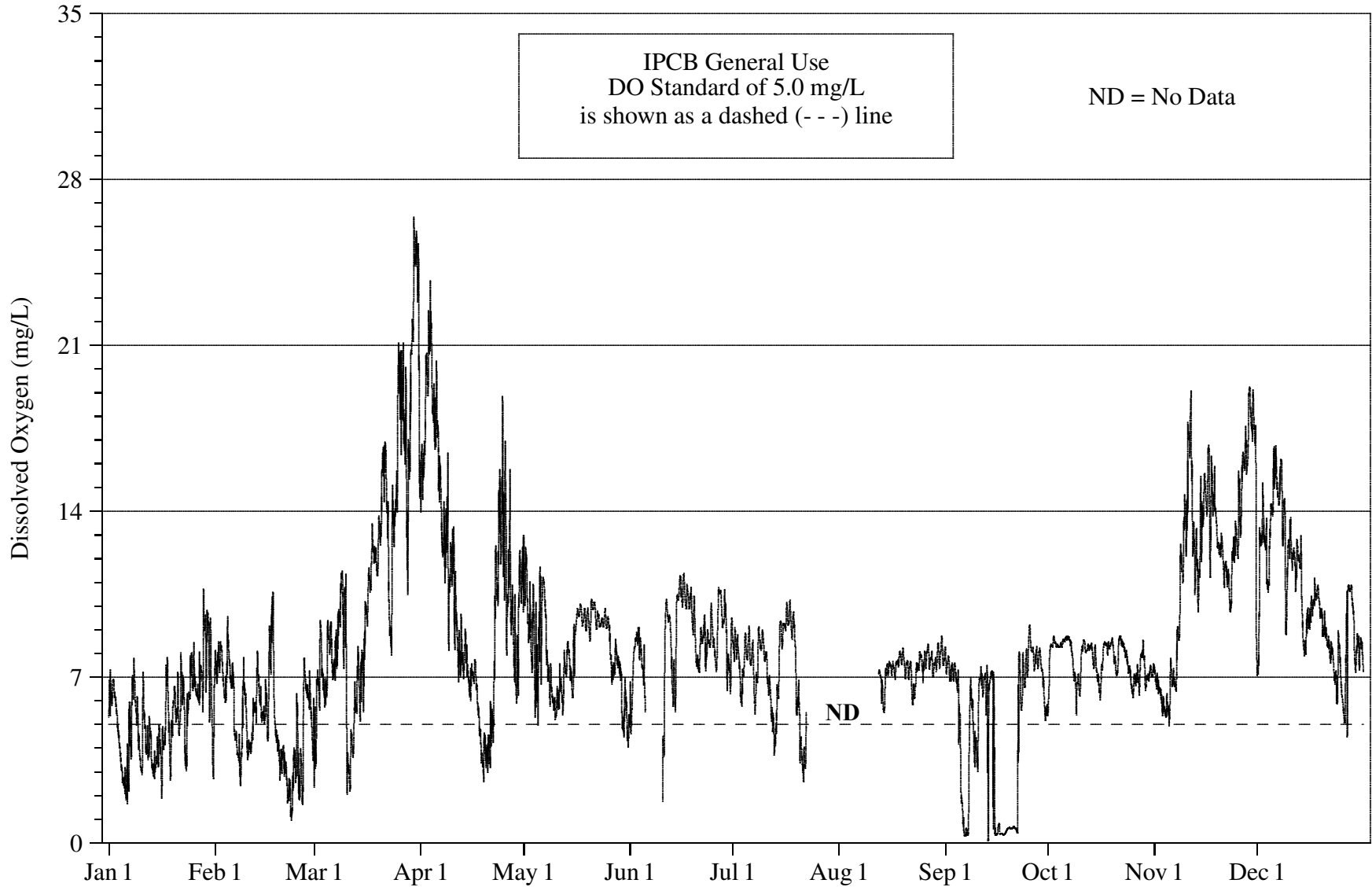


FIGURE 3: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT FOSTER AVENUE ON THE NORTH SHORE CHANNEL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

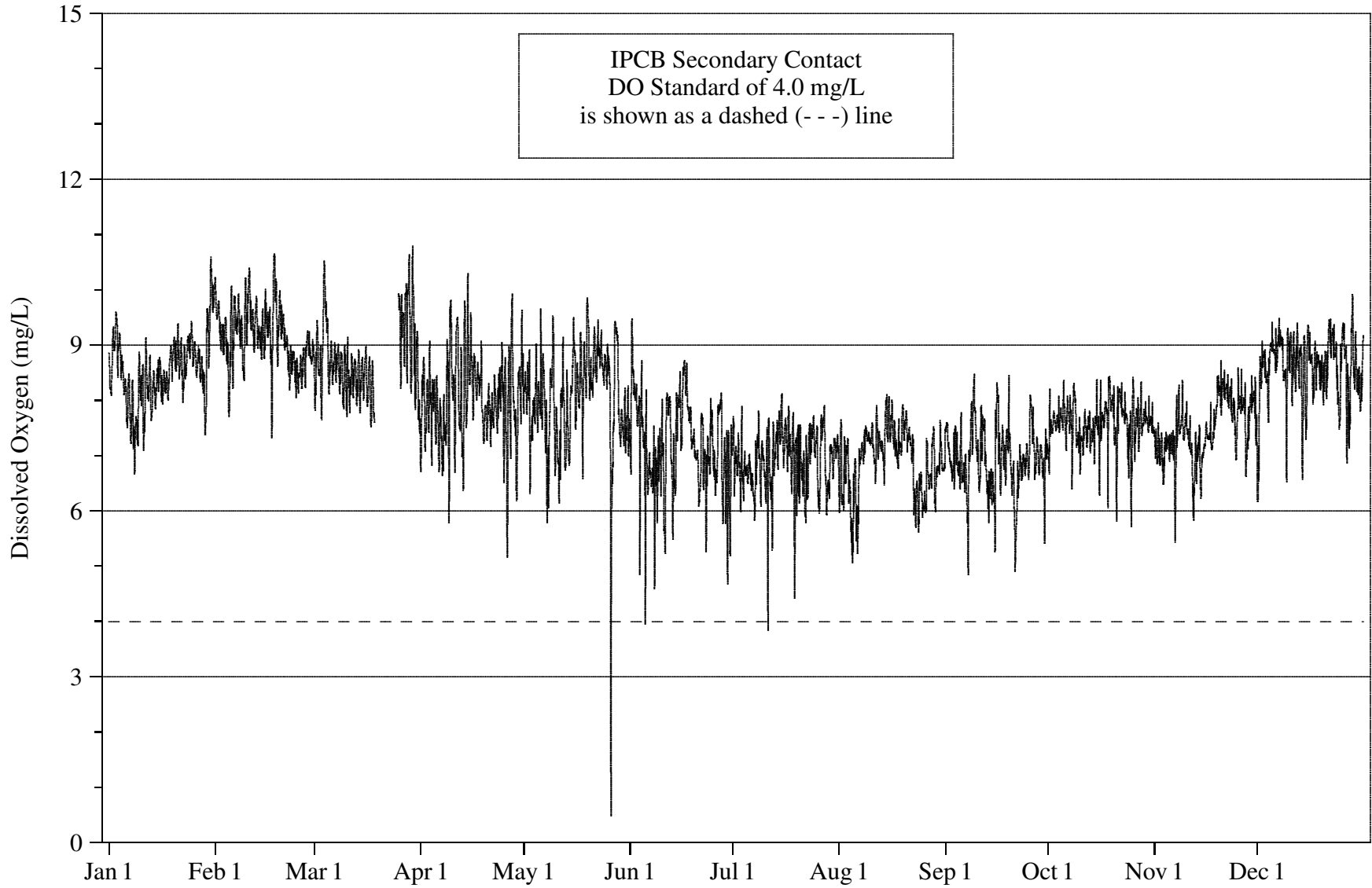


FIGURE 4: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT ADDISON STREET ON THE NORTH BRANCH CHICAGO RIVER FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

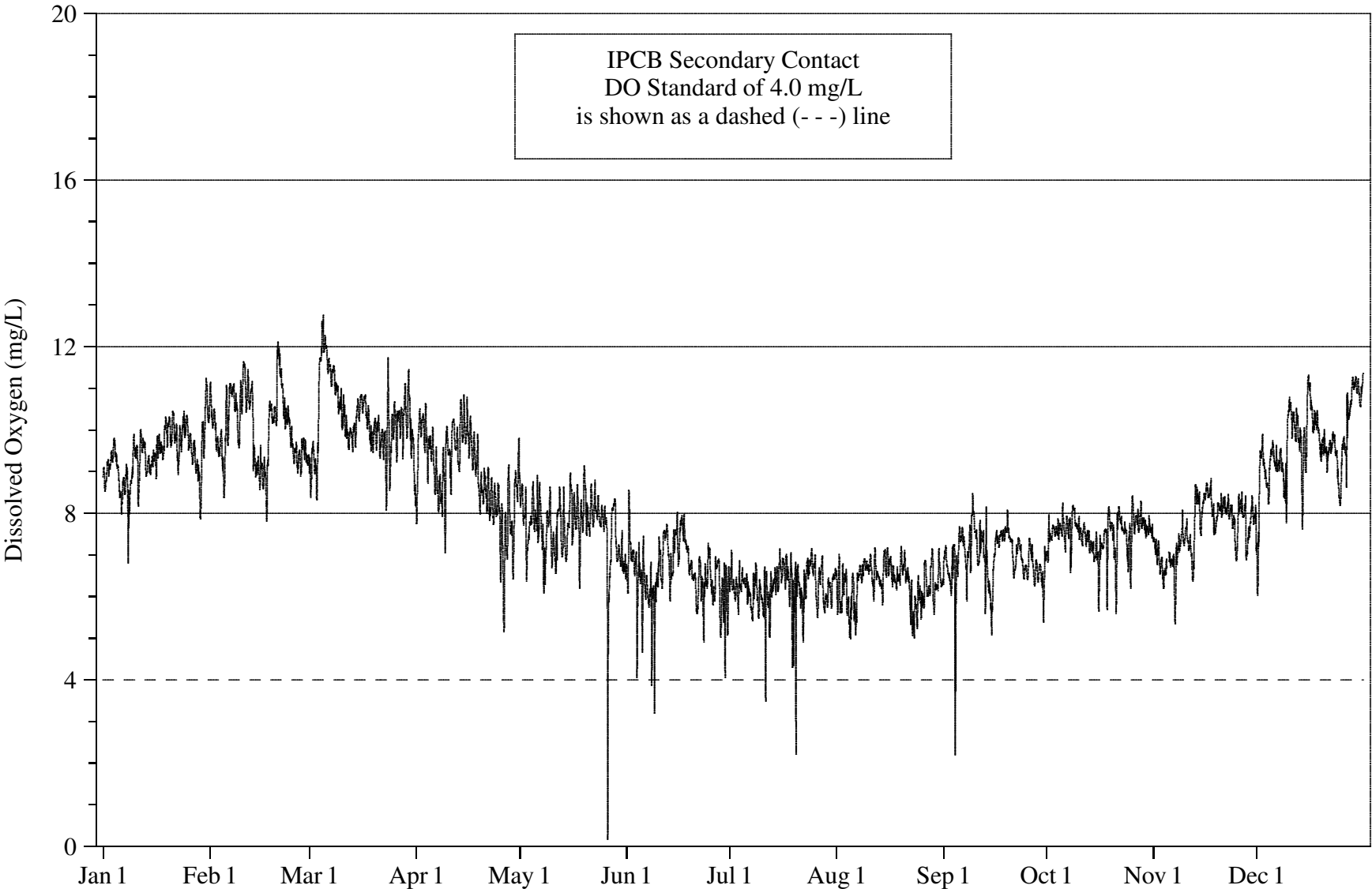


FIGURE 5: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT FULLERTON AVENUE ON THE NORTH BRANCH CHICAGO RIVER FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

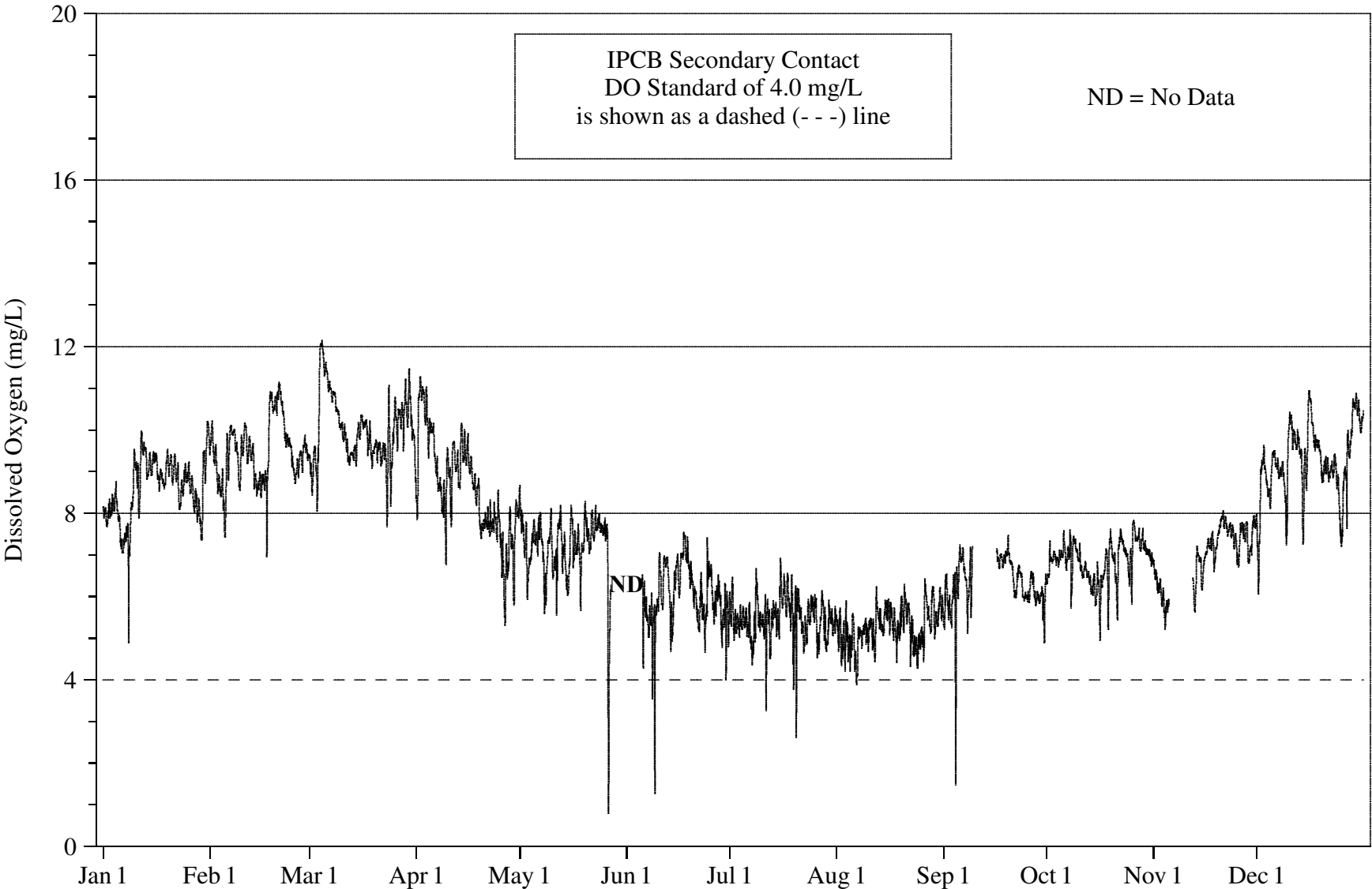


FIGURE 6: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT KINZIE STREET ON THE NORTH BRANCH CHICAGO RIVER FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

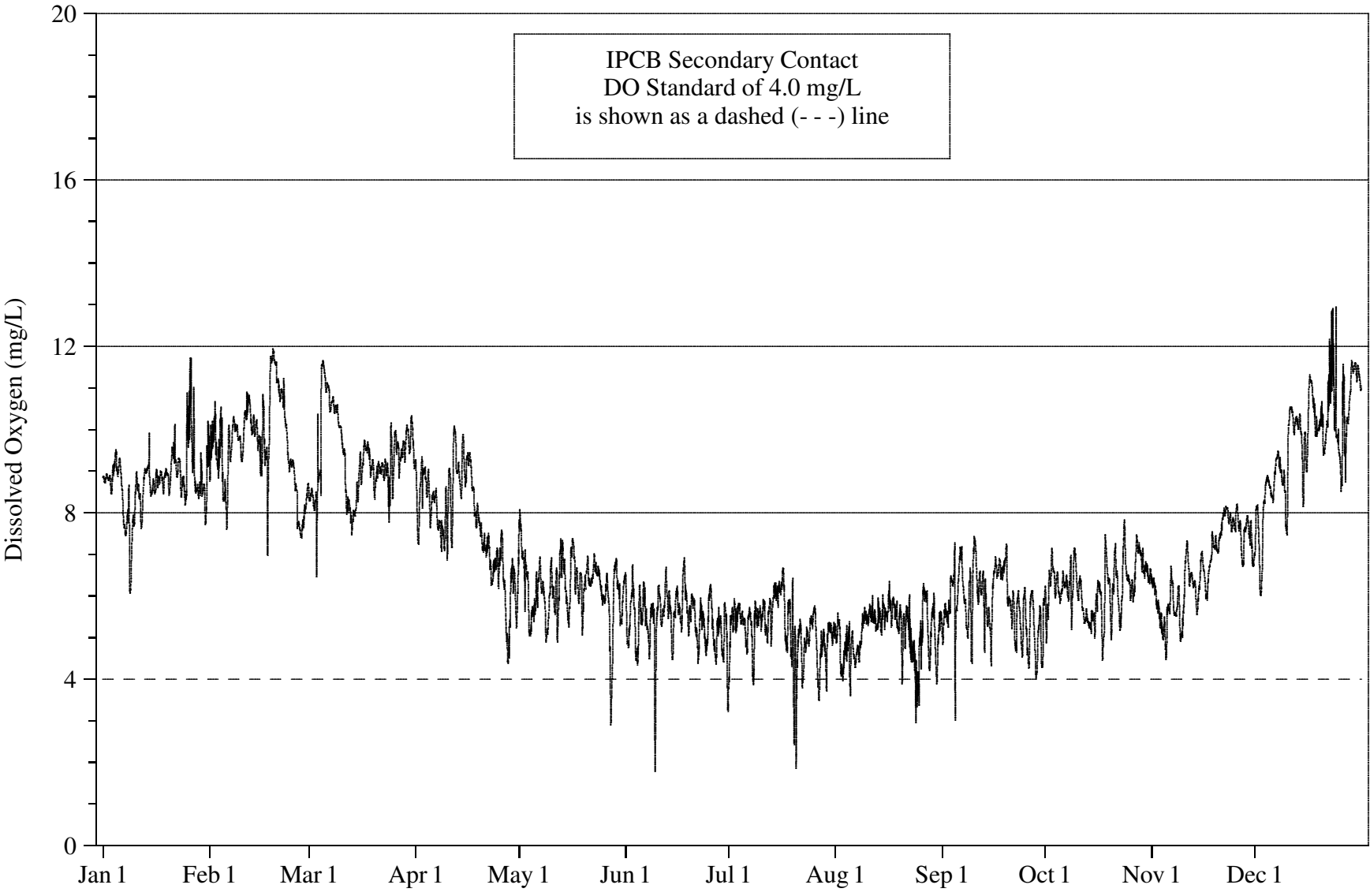


FIGURE 7: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT CLARK STREET ON THE CHICAGO RIVER FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

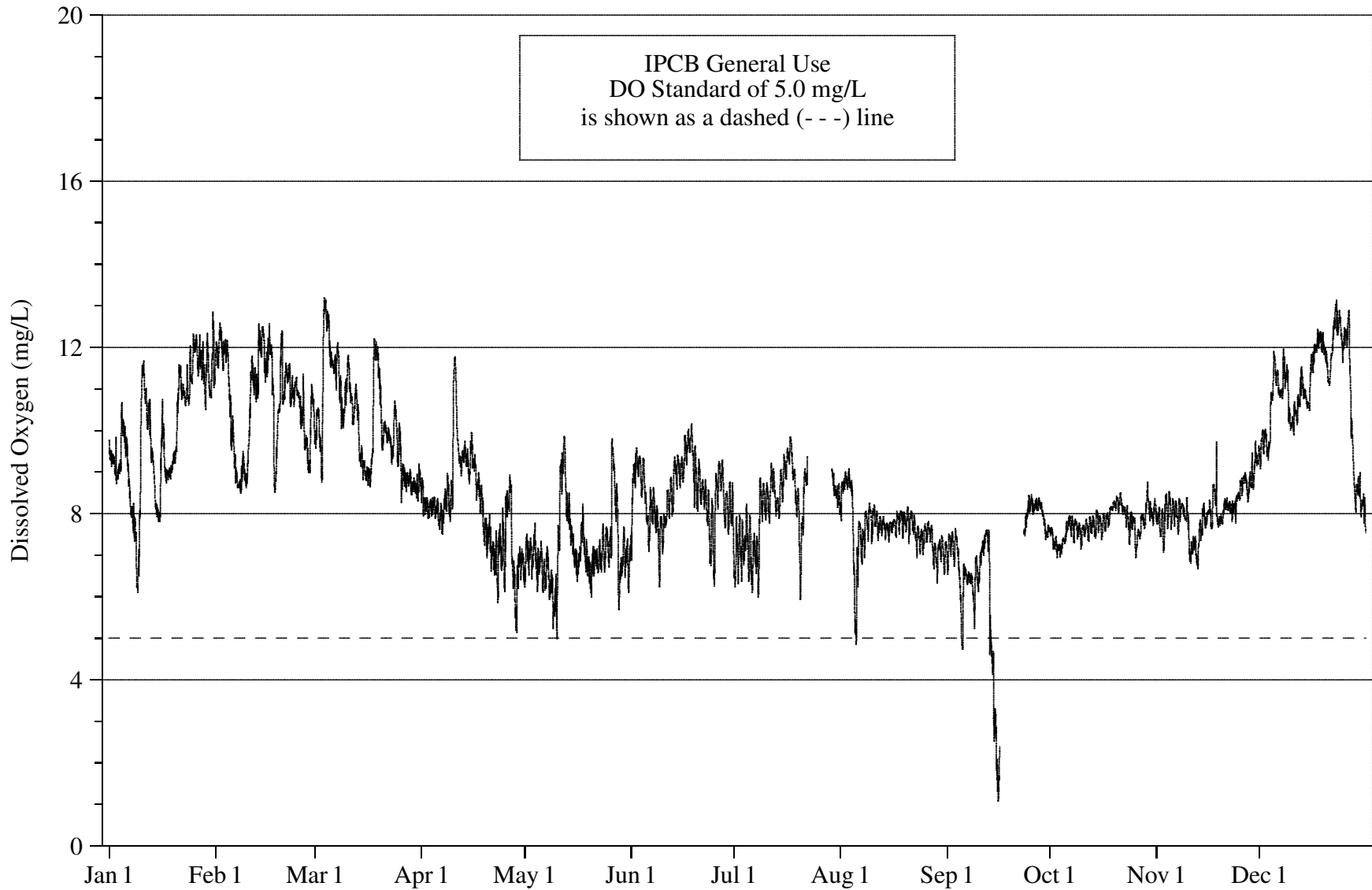


FIGURE 8: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT LOOMIS STREET ON THE SOUTH BRANCH CHICAGO RIVER FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

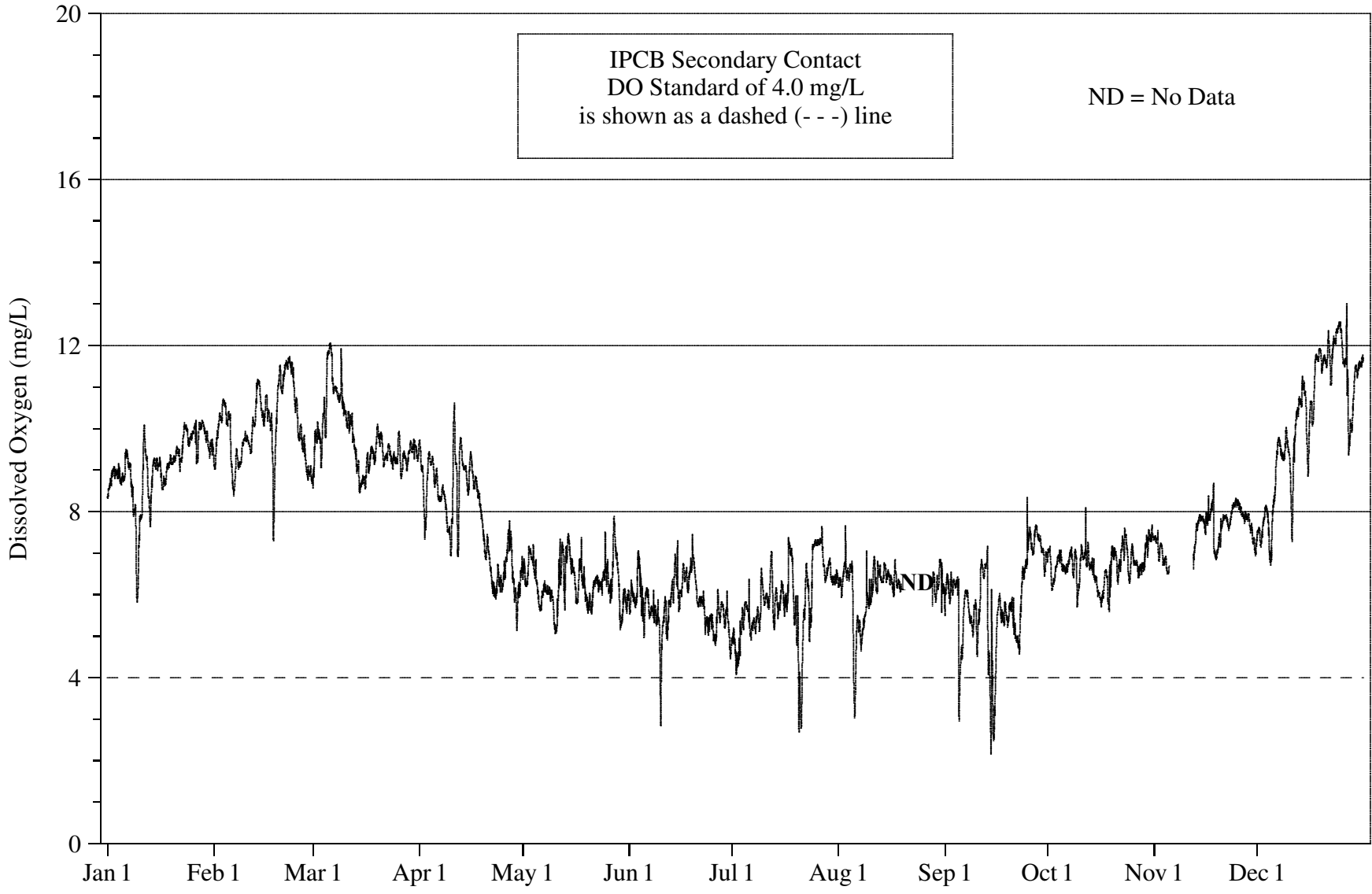


FIGURE 9: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT 36TH STREET ON BUBBLY CREEK FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

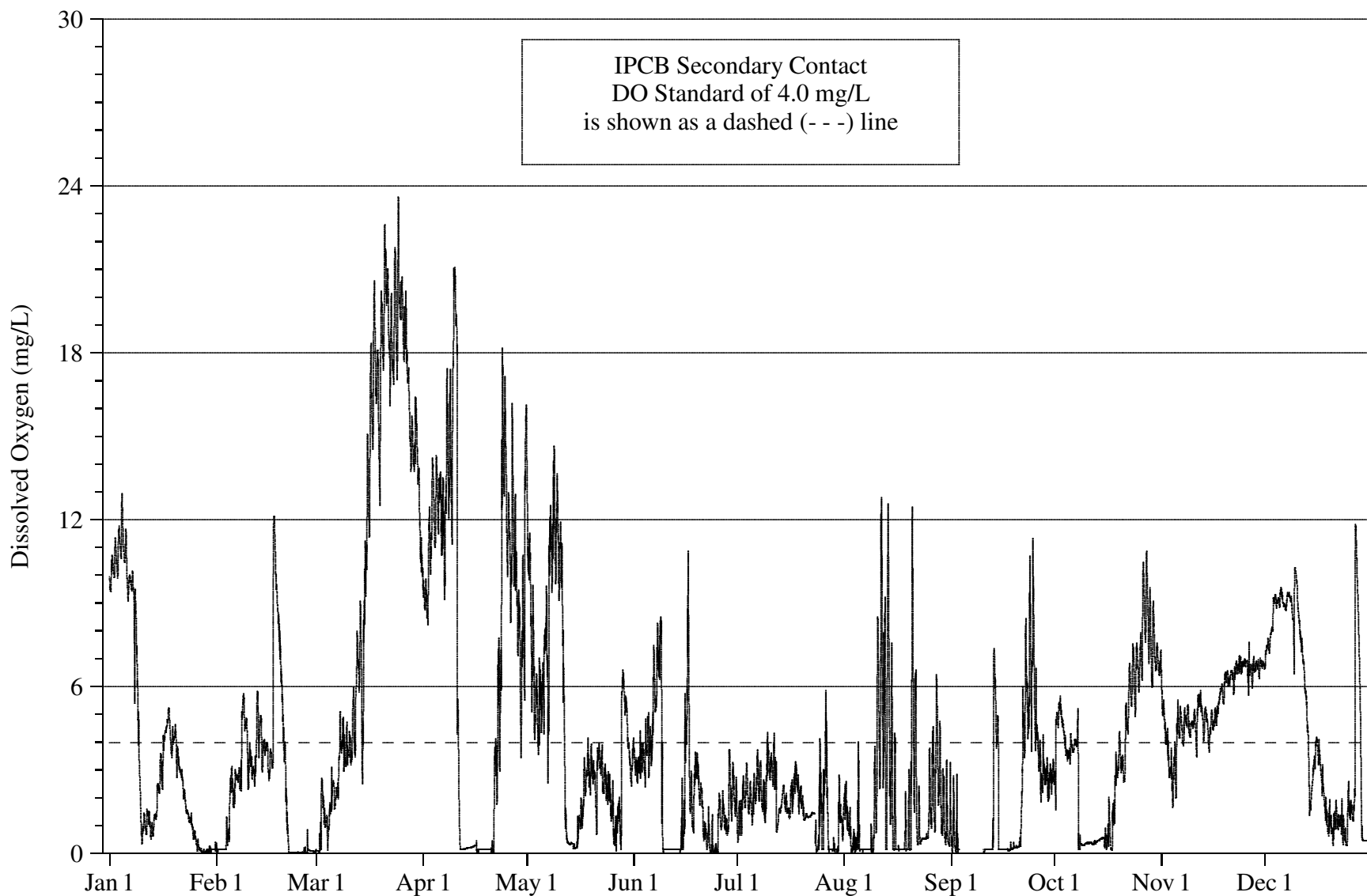




FIGURE 10: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT INTERSTATE HIGHWAY 55 ON BUBBLY CREEK FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

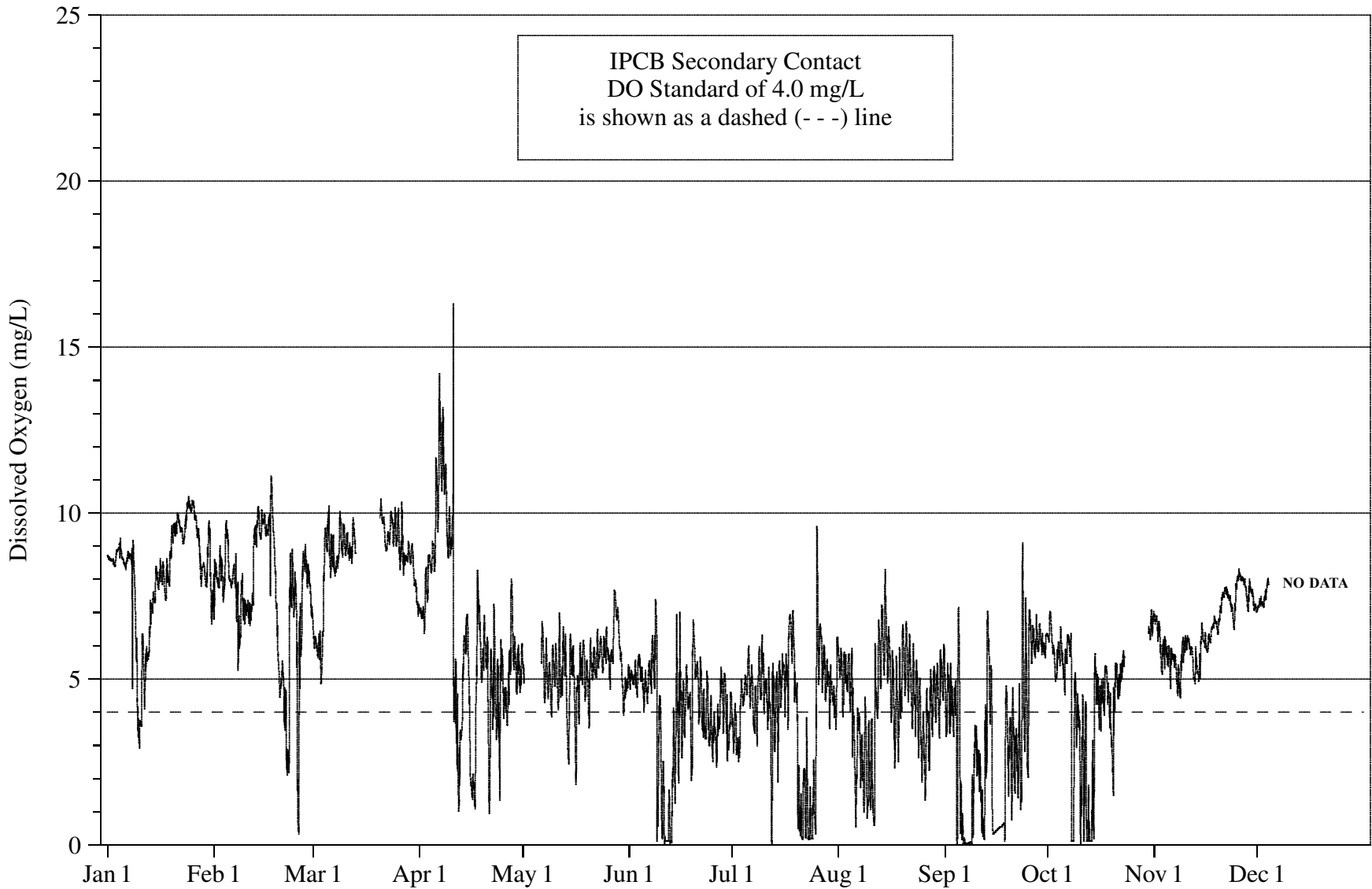


FIGURE 11: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT CICERO AVENUE ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

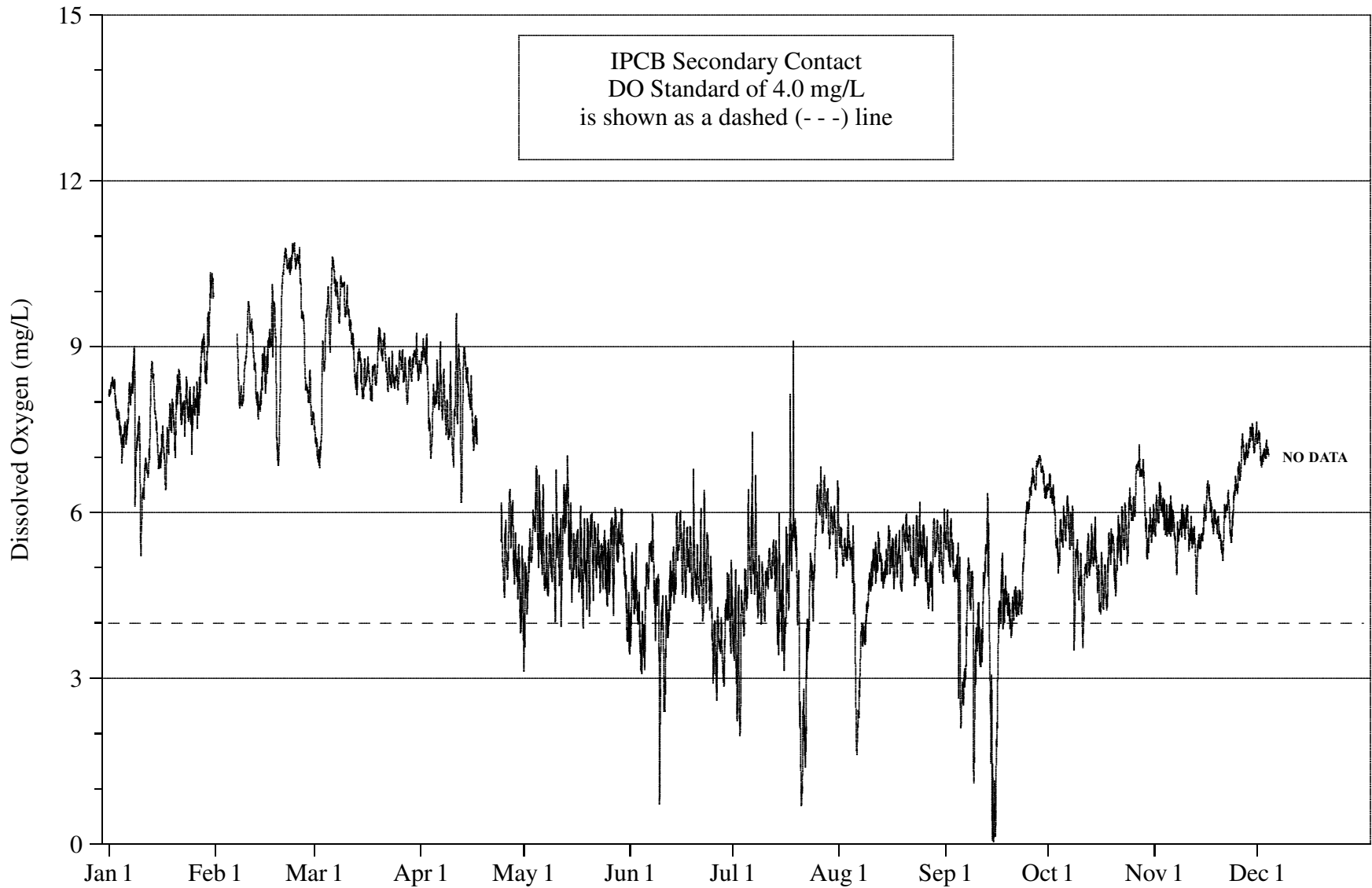


FIGURE 12: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT B&O CENTRAL RAILROAD ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

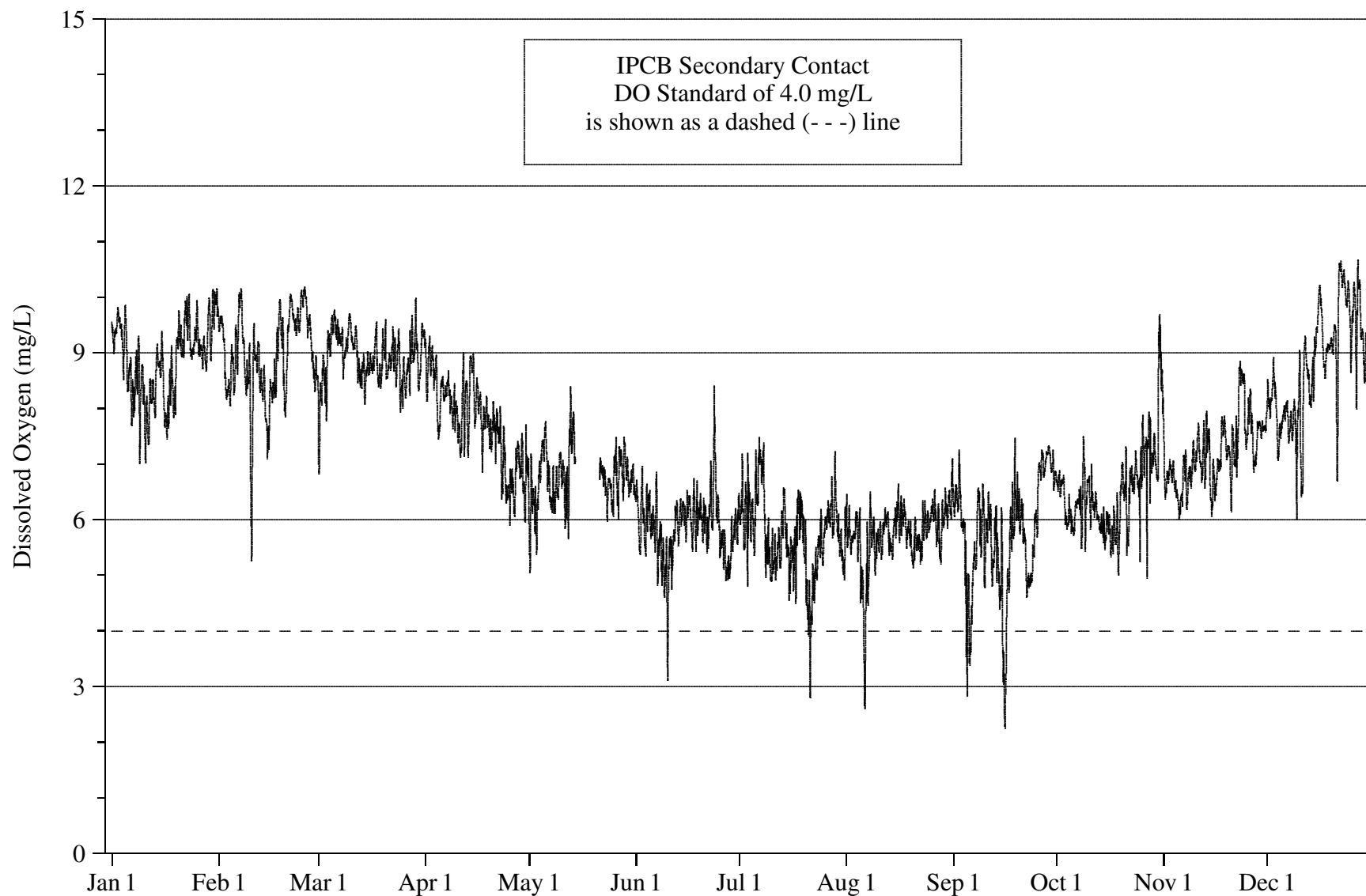


FIGURE 13: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT ROUTE 83 ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

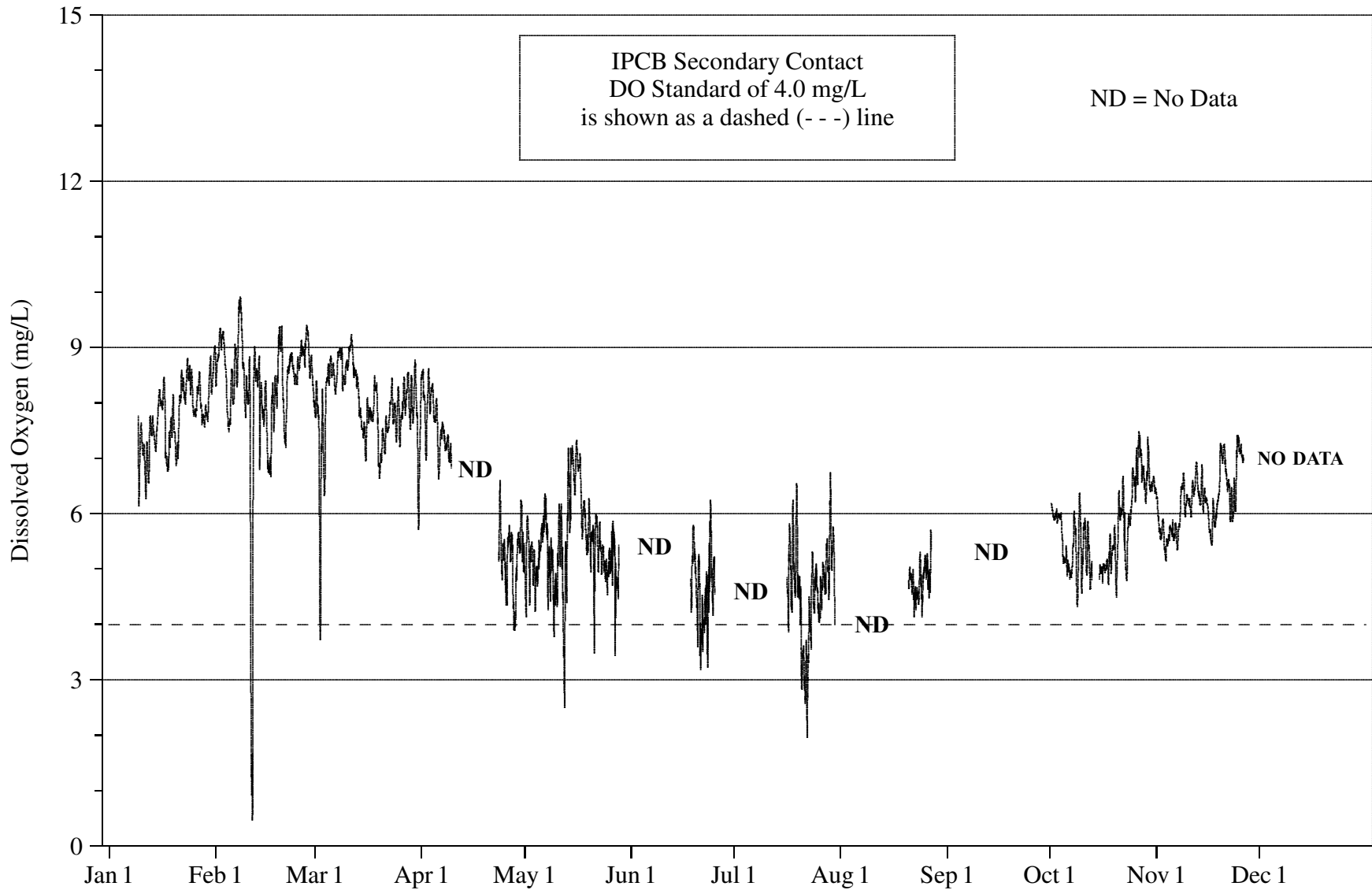


FIGURE 14: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT ROMEOVILLE ROAD ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

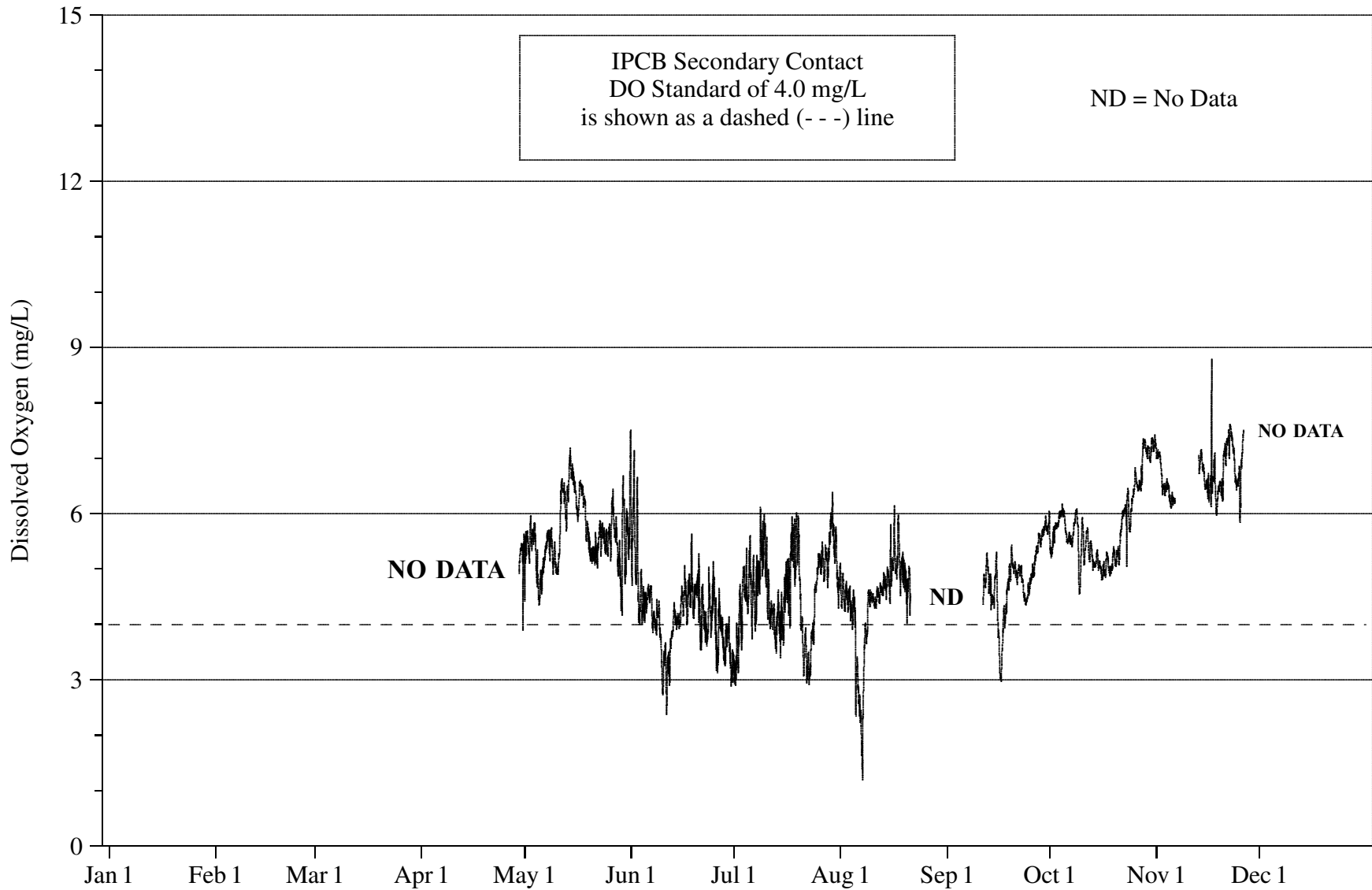


FIGURE 15: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT LOCKPORT POWERHOUSE ON THE CHICAGO SANITARY AND SHIP CANAL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

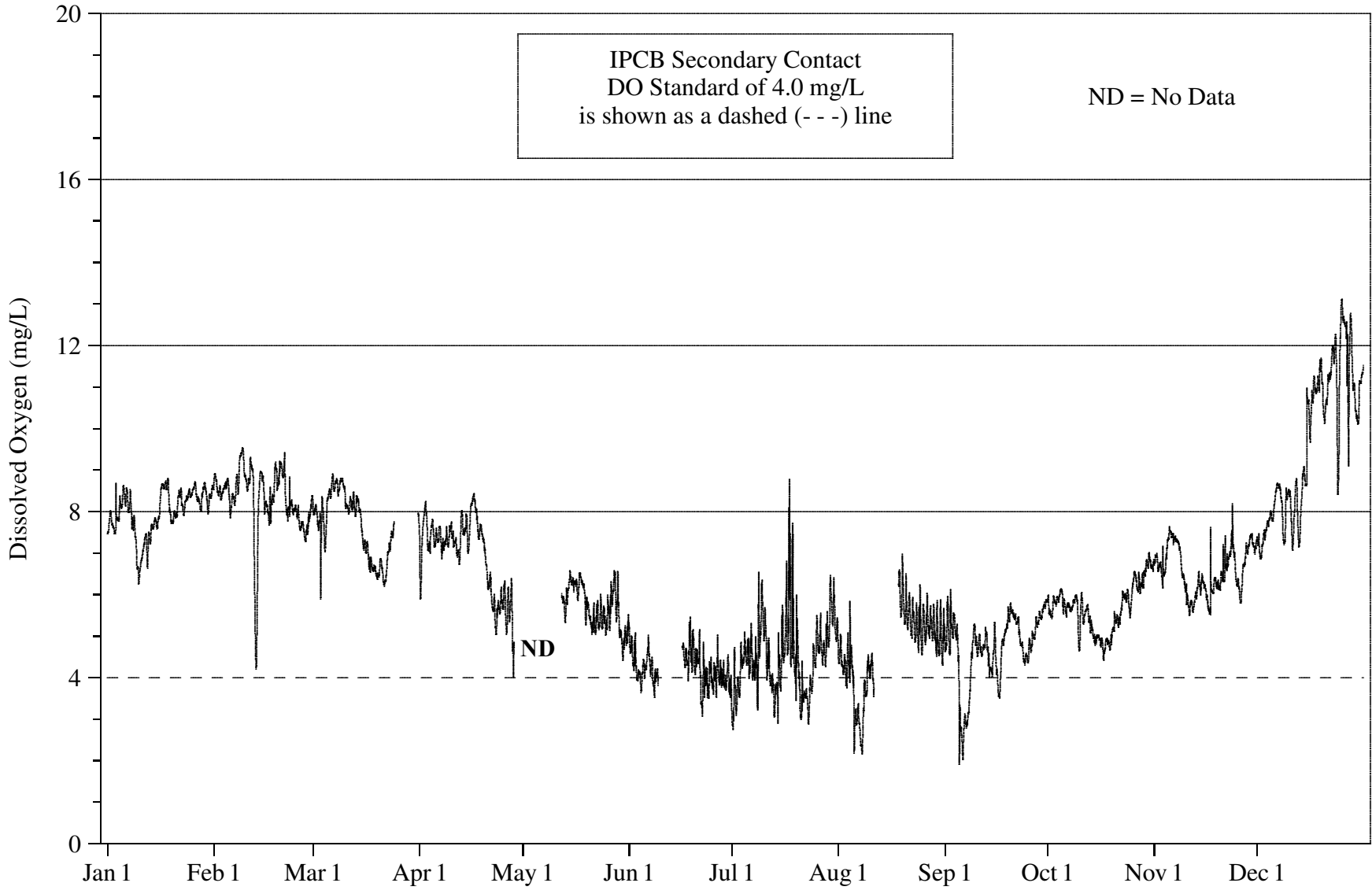


FIGURE 16: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT JEFFERSON STREET ON THE DES PLAINES RIVER FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

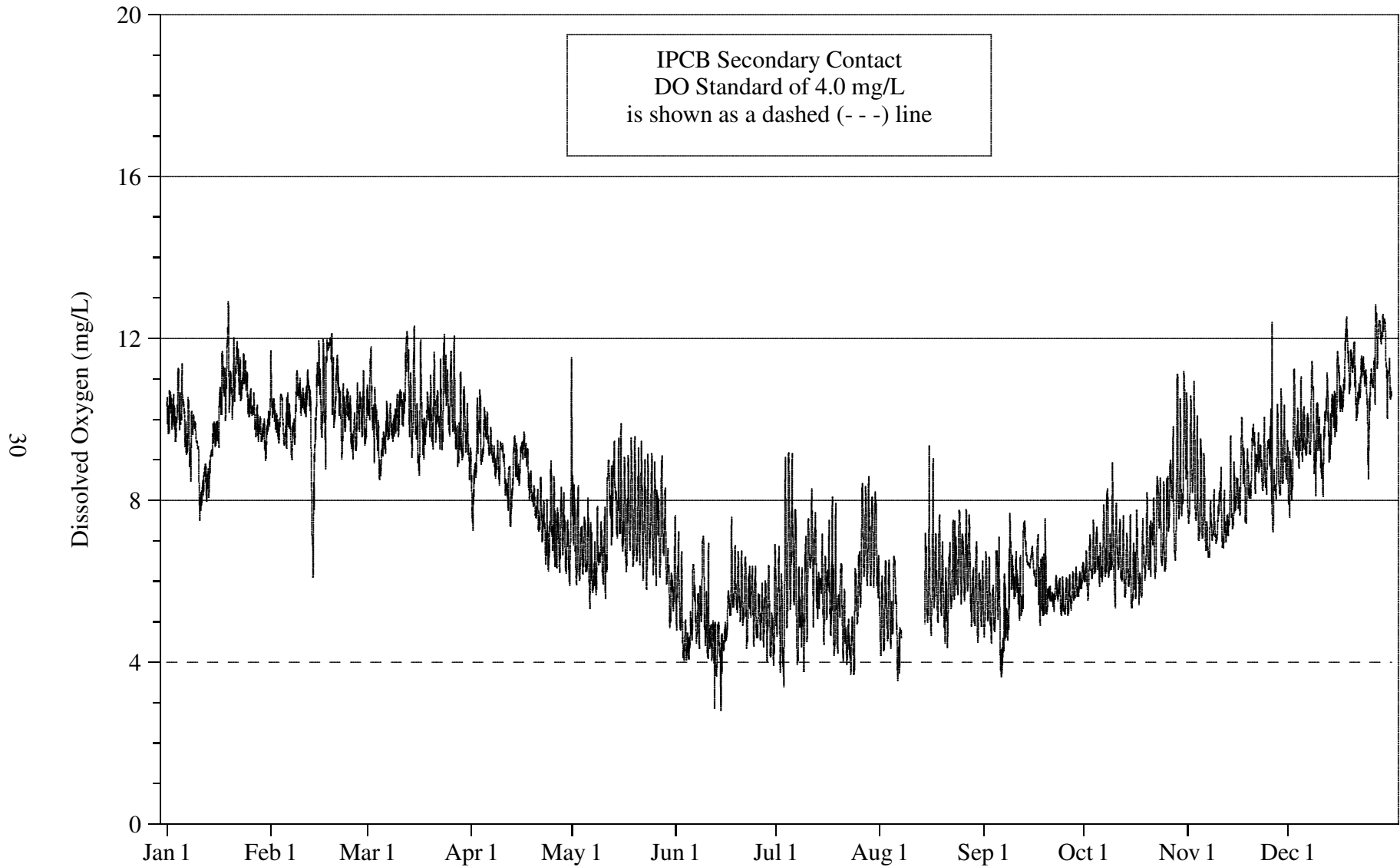


FIGURE 17: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT C&W INDIANA RAILROAD ON THE LITTLE CALUMET RIVER FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

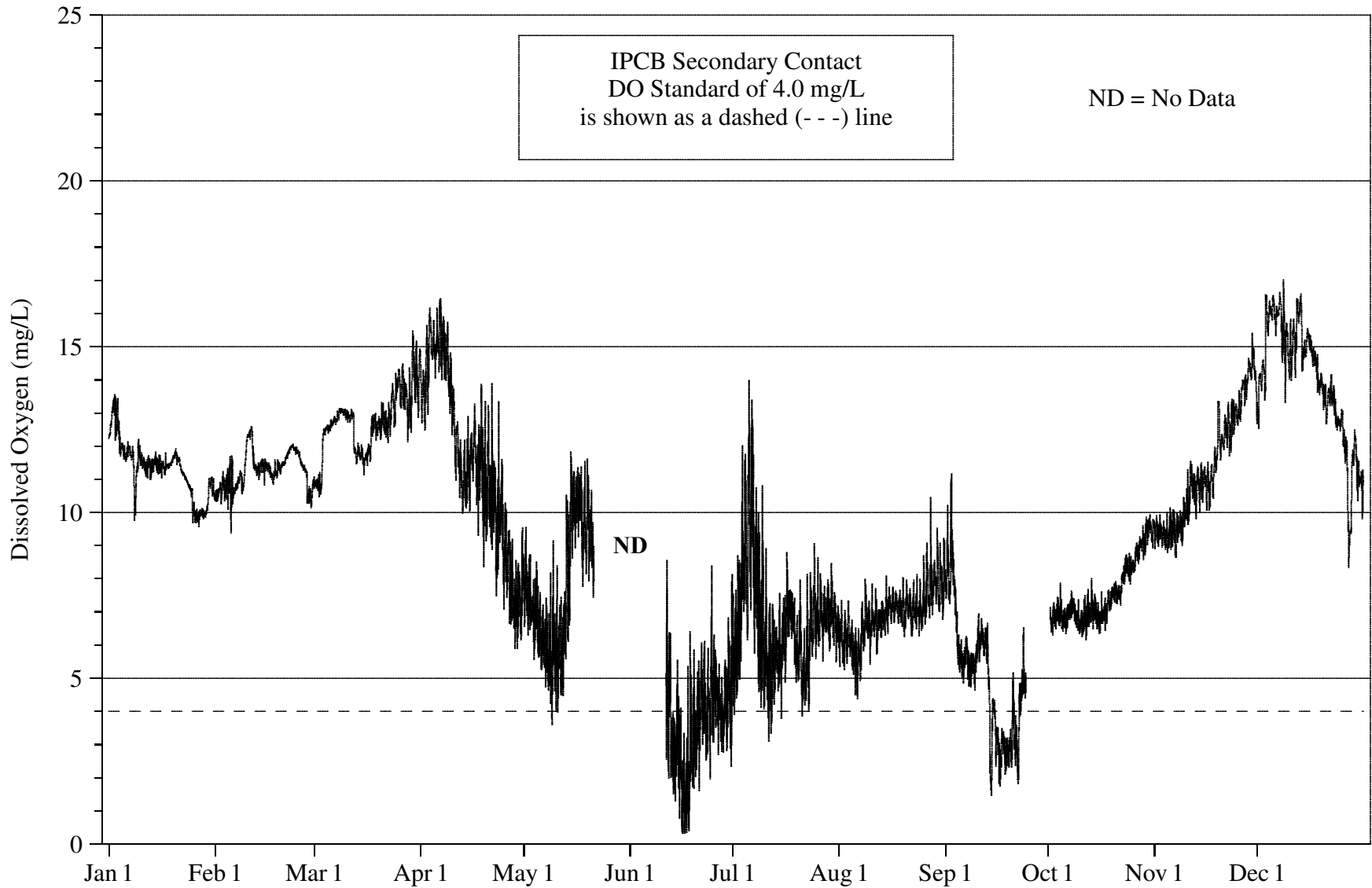




FIGURE 18: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT HALSTED STREET ON THE LITTLE CALUMET RIVER FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

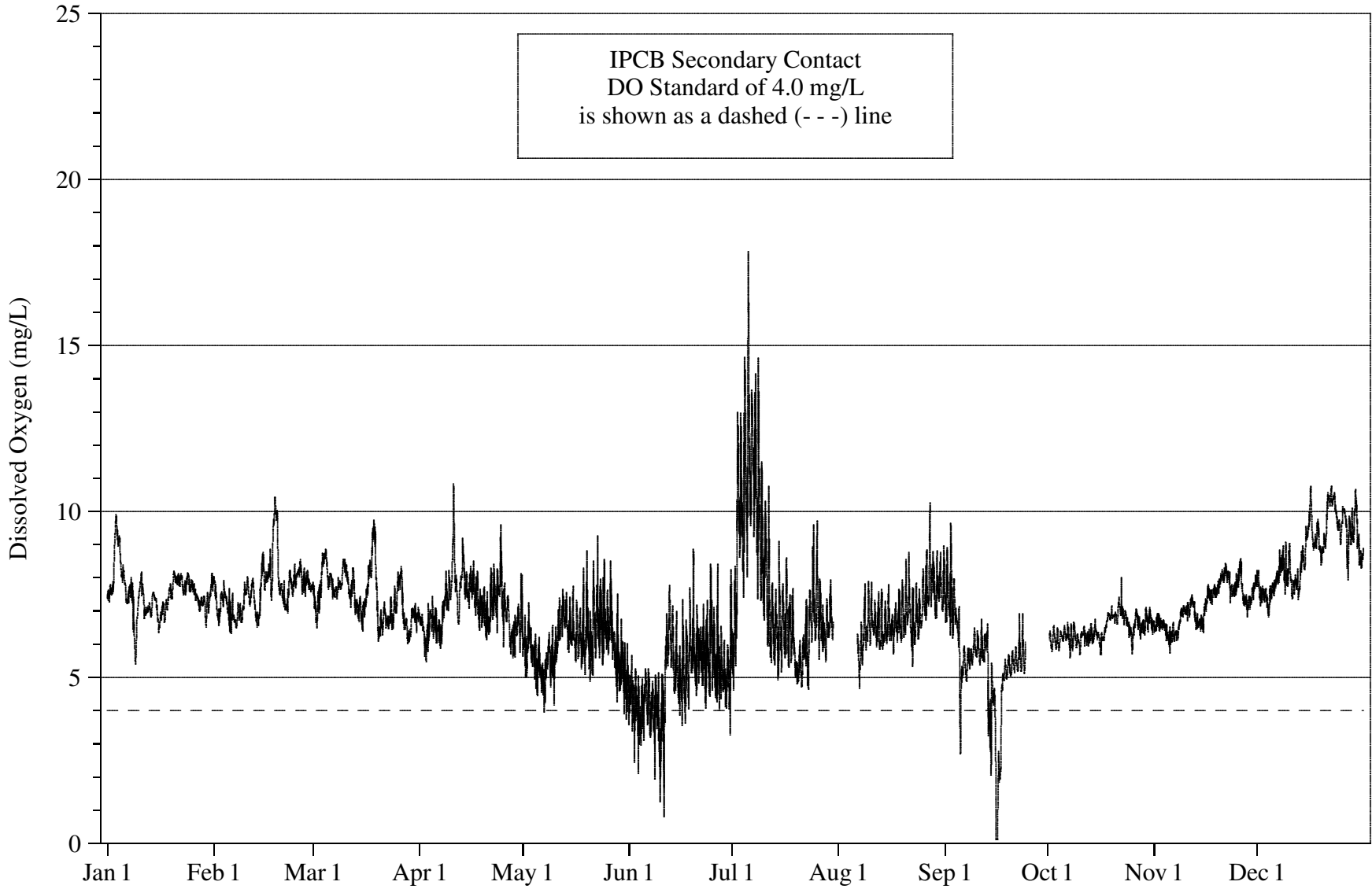


FIGURE 19: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT DIVISION STREET ON THE CALUMET-SAG CHANNEL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

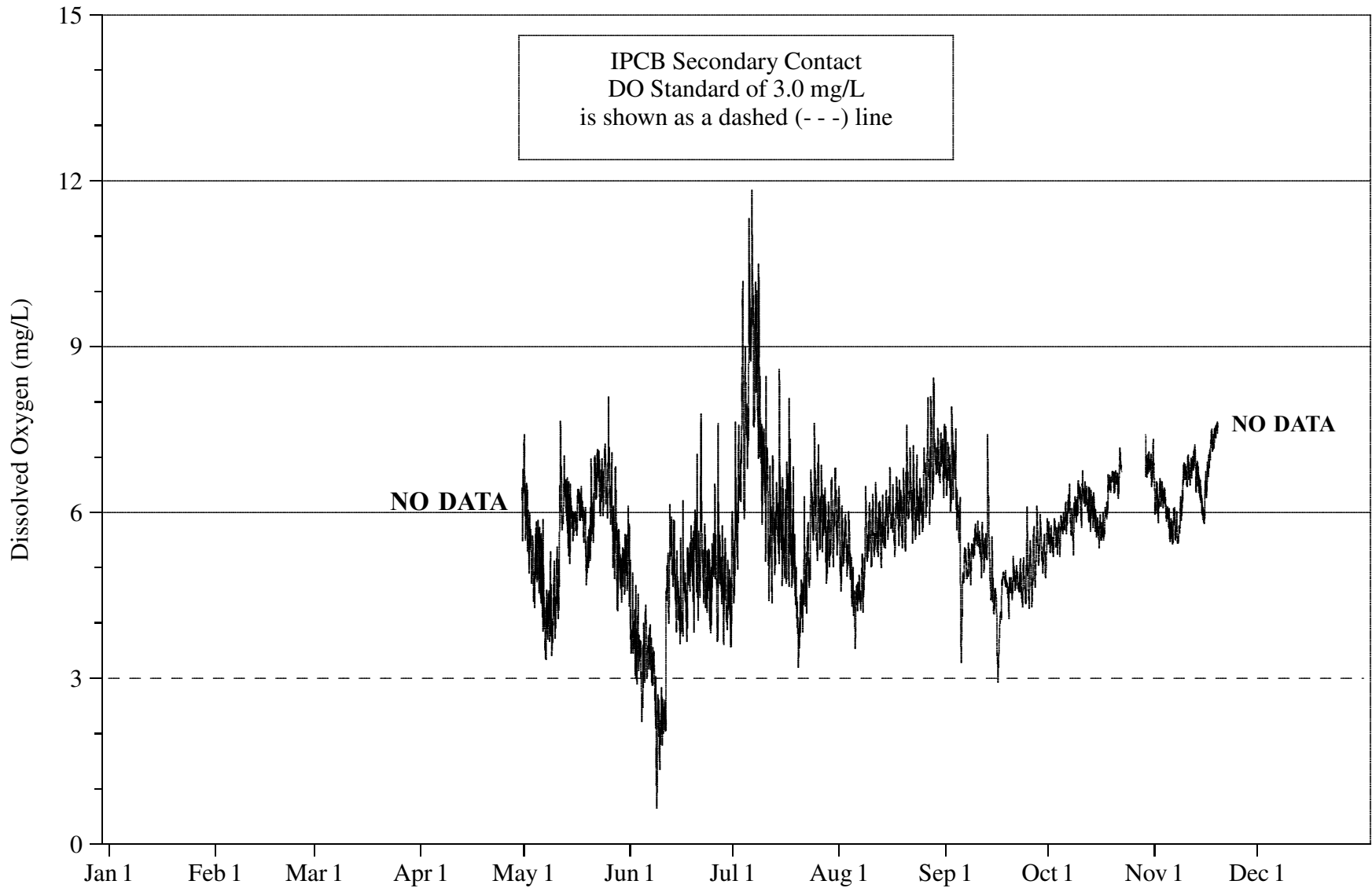


FIGURE 20: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT CICERO AVENUE ON THE CALUMET-SAG CHANNEL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

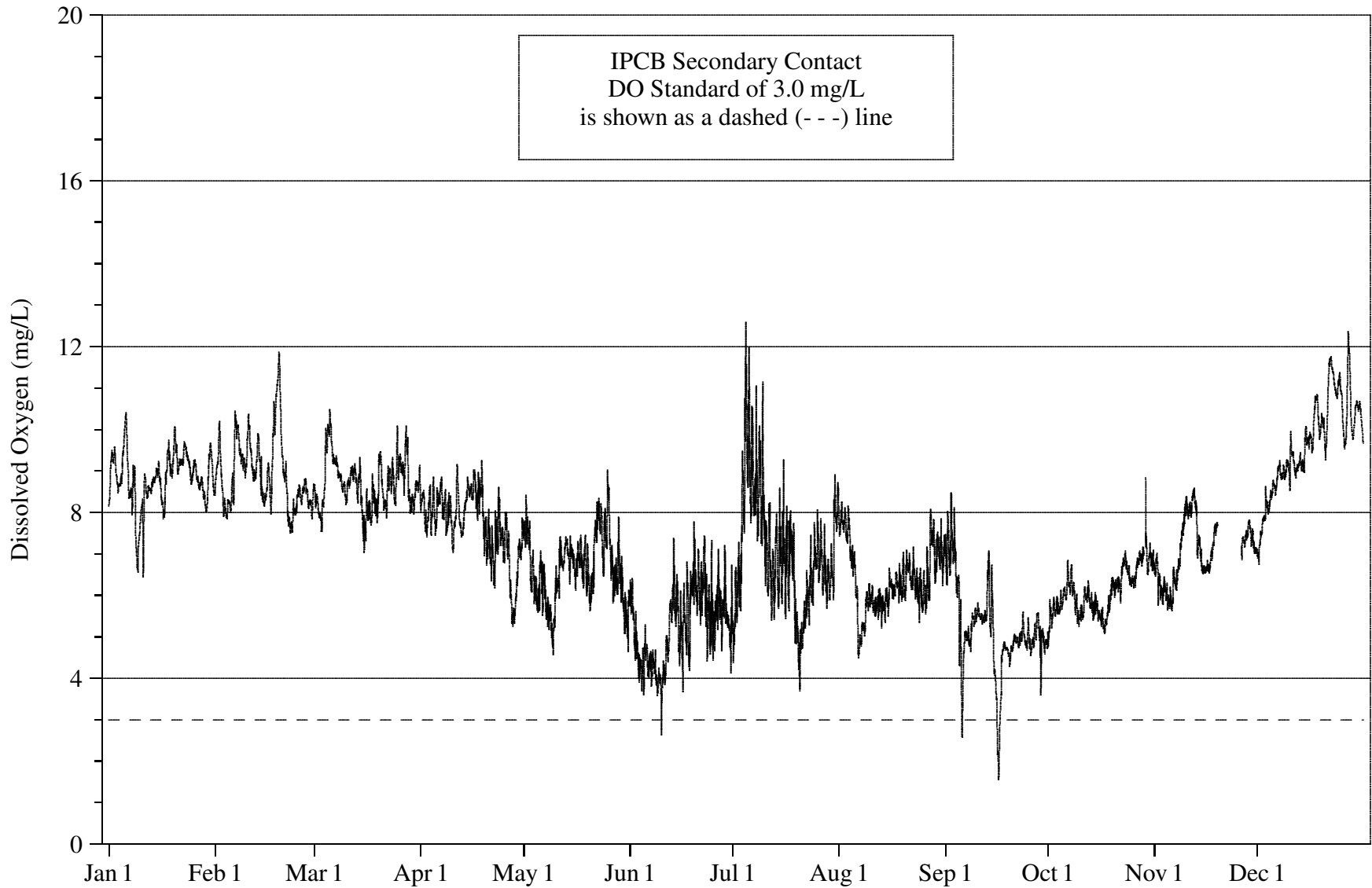


FIGURE 21: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT RIVER MILE 311.7  
ON THE CALUMET-SAG CHANNEL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

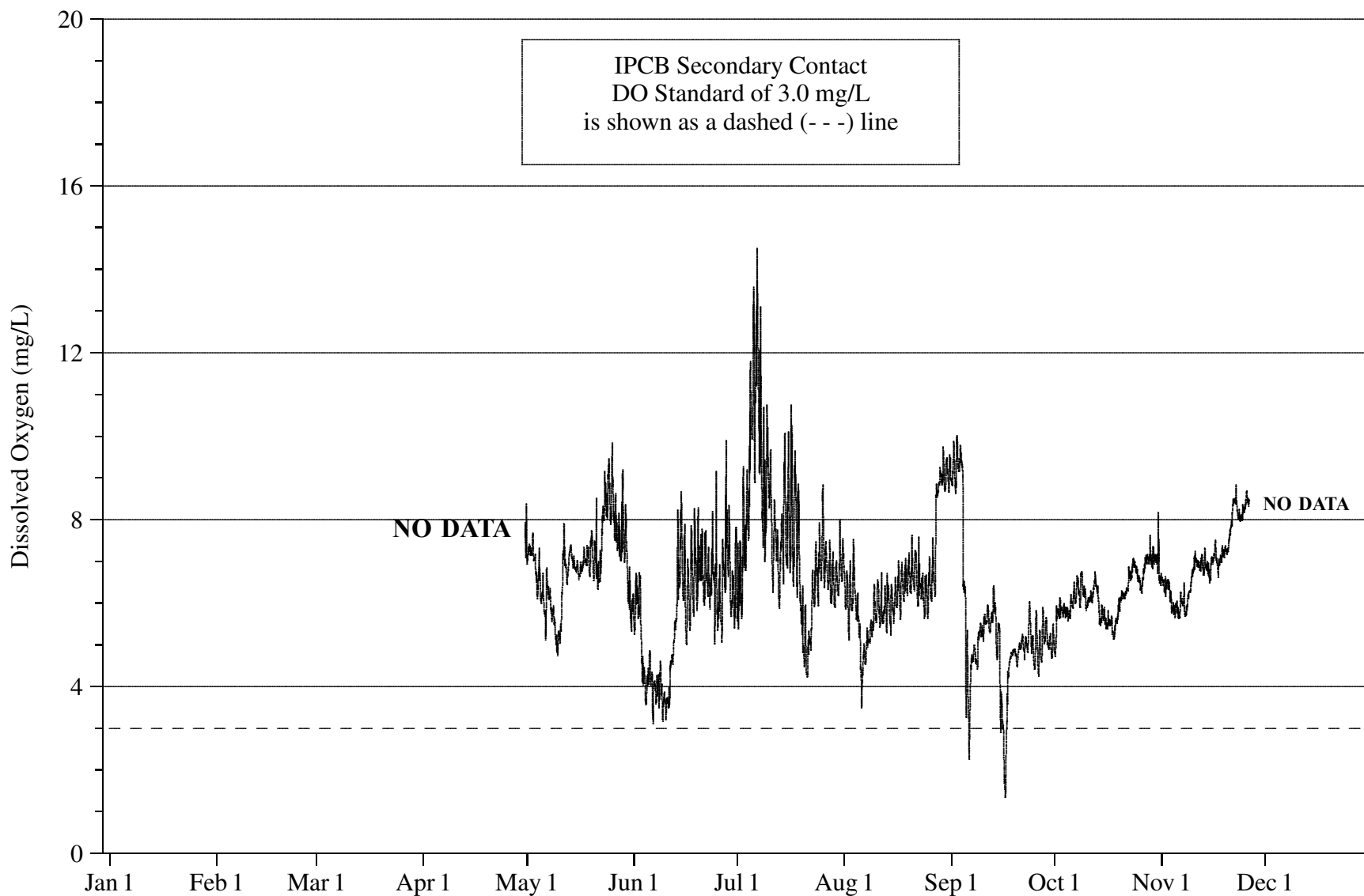


FIGURE 22: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT SOUTHWEST HIGHWAY ON THE CALUMET-SAG CHANNEL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

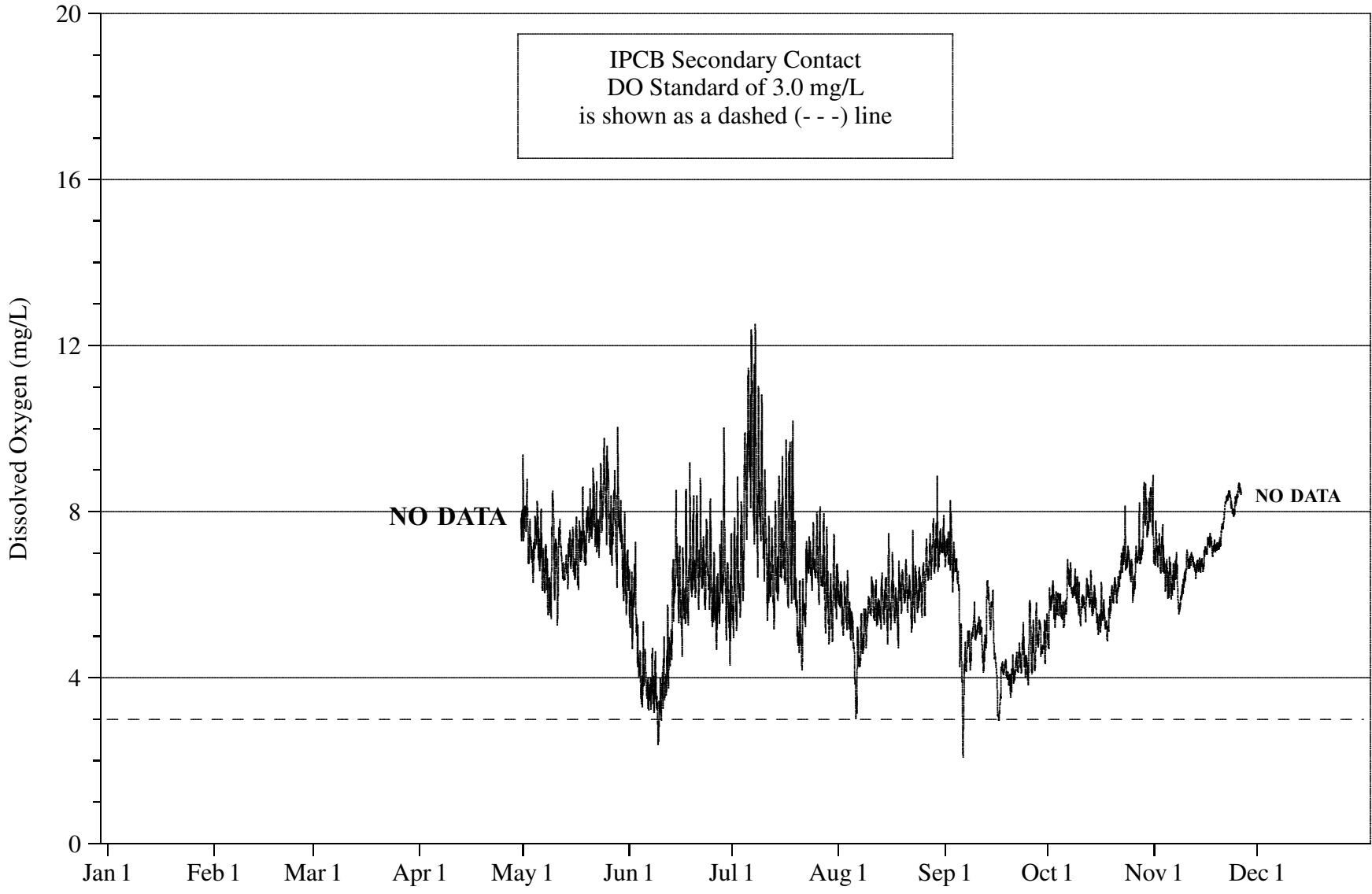


FIGURE 23: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT 104TH AVENUE ON THE CALUMET-SAG CHANNEL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008

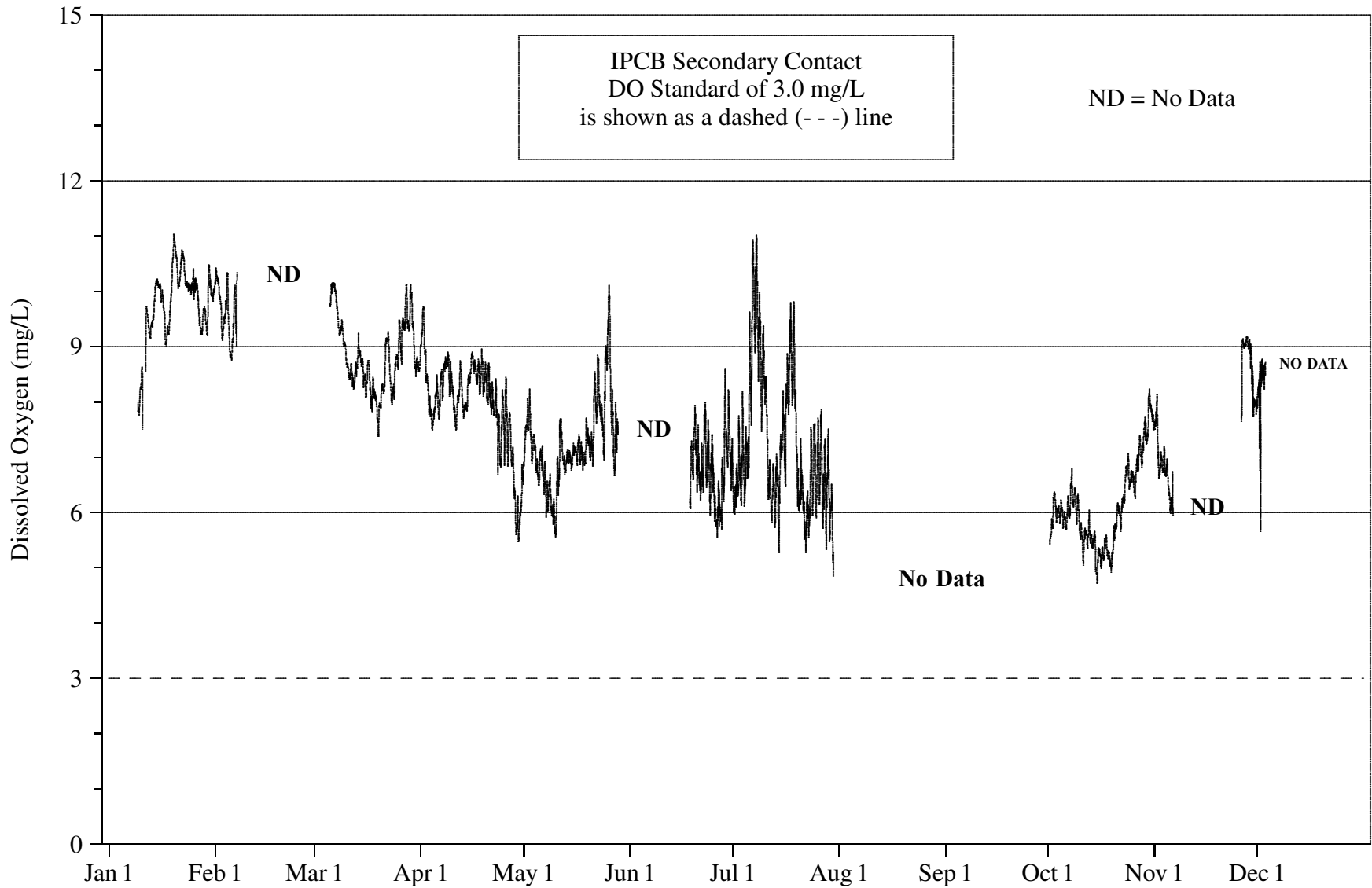
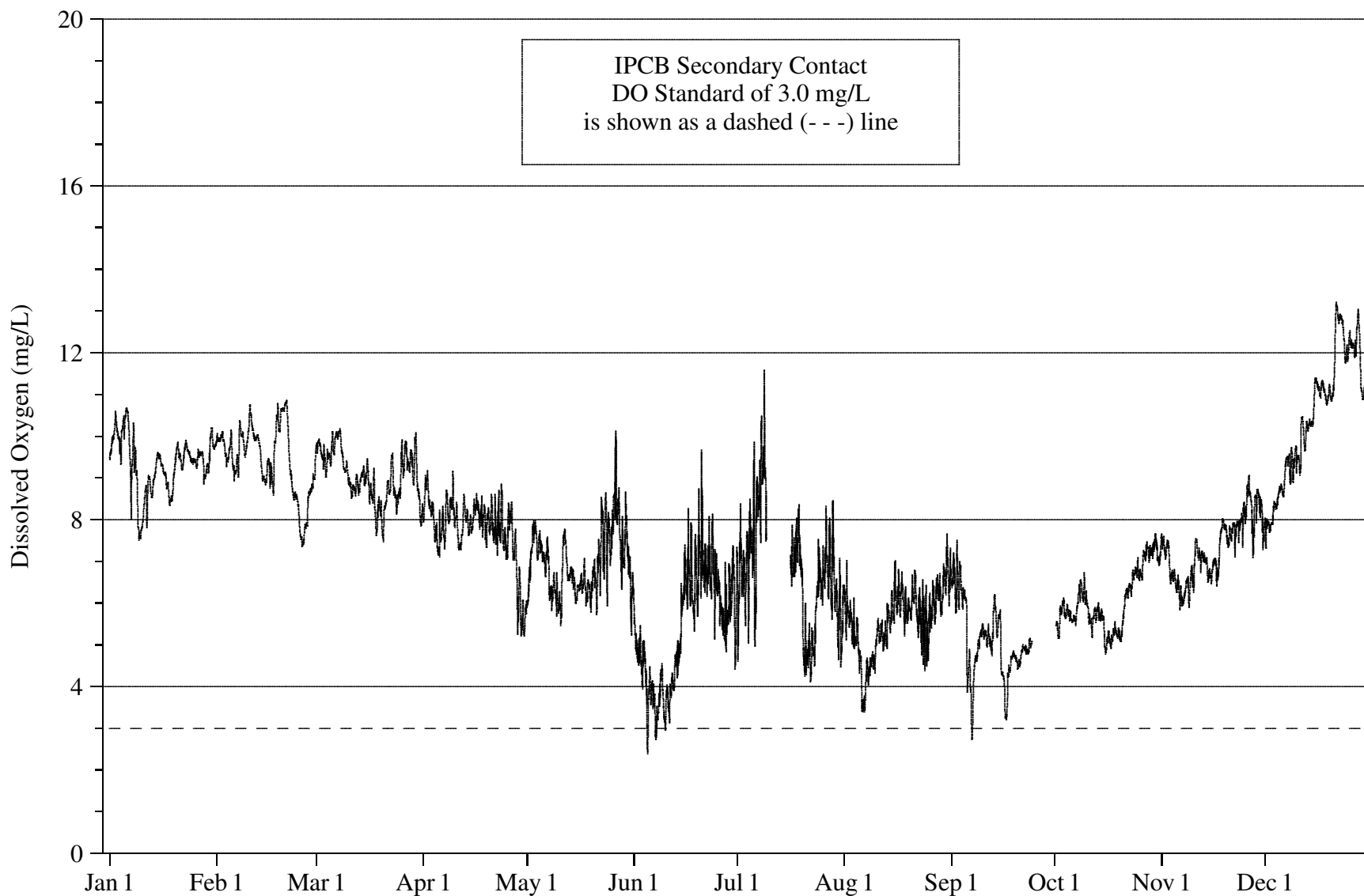


FIGURE 24: DISSOLVED OXYGEN CONCENTRATION MEASURED HOURLY AT ROUTE 83 ON THE CALUMET-SAG CHANNEL FROM JANUARY 1, 2008 THROUGH DECEMBER 31, 2008



## 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.



APPENDIX A

WEEKLY DO SUMMARY STATISTICS AT ALL DEEP-DRAFT  
MONITORING STATIONS DURING 2008

TABLE A-1: WEEKLY DO SUMMARY STATISTICS AT MAIN STREET  
ON THE NORTH SHORE CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 5.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	1.7	7.3	4.4	42
01/07/08 - 01/13/08	168	2.8	7.8	4.8	39
01/14/08 - 01/20/08	168	1.9	7.8	4.6	36
01/21/08 - 01/27/08	168	3.1	8.5	6.2	85
01/28/08 - 02/03/08	168	2.7	10.7	7.4	92
02/04/08 - 02/10/08	168	2.4	9.5	5.5	54
02/11/08 - 02/17/08	168	3.8	10.6	6.2	80
02/18/08 - 02/24/08	168	1.0	9.0	3.5	11
02/25/08 - 03/02/08	168	1.6	9.4	5.3	59
03/03/08 - 03/09/08	168	5.7	11.5	8.3	100
03/10/08 - 03/16/08	167	2.1	11.6	6.5	69
03/17/08 - 03/23/08	168	7.9	16.9	12.8	100
03/24/08 - 03/30/08	168	10.5	26.4	18.5	100
03/31/08 - 04/06/08	168	13.8	25.3	18.3	100
04/07/08 - 04/13/08	168	6.8	16.5	10.5	100
04/14/08 - 04/20/08	168	2.6	8.9	5.7	57
04/21/08 - 04/27/08	168	3.2	18.8	10.5	90
04/28/08 - 05/04/08	168	5.3	13.0	9.3	100
05/05/08 - 05/11/08	168	5.0	11.6	7.6	99
05/12/08 - 05/18/08	168	5.4	10.1	8.3	100
05/19/08 - 05/25/08	168	8.5	10.3	9.5	100
05/26/08 - 06/01/08	168	4.0	9.2	6.5	80
06/02/08 - 06/08/08	86	5.6	9.1	8.0	100
06/09/08 - 06/15/08	131	1.7	11.3	8.5	91
06/16/08 - 06/22/08	168	7.2	11.4	9.4	100
06/23/08 - 06/29/08	168	6.4	10.8	8.9	100
06/30/08 - 07/06/08	168	5.8	9.5	7.9	100
07/07/08 - 07/13/08	168	3.7	9.1	6.8	88
07/14/08 - 07/20/08	168	3.4	10.2	8.1	93
07/21/08 - 07/27/08	37	2.6	5.5	3.7	8
07/28/08 - 08/10/08			NO DATA		
08/11/08 - 08/17/08	130	5.5	7.6	7.1	100
08/18/08 - 08/24/08	168	5.8	8.2	7.4	100
08/25/08 - 08/31/08	168	6.8	8.7	7.8	100

TABLE A-1 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
MAIN STREET ON THE NORTH SHORE CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 5.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
09/01/08 - 09/07/08	168	0.3	8.2	4.8	61
09/08/08 - 09/14/08	168	0.1	7.5	5.7	72
09/15/08 - 09/21/08	168	0.3	7.2	0.8	3
09/22/08 - 09/28/08	168	0.4	9.2	7.4	95
09/29/08 - 10/05/08	168	5.2	8.7	7.6	100
10/06/08 - 10/12/08	168	5.4	8.7	7.8	100
10/13/08 - 10/19/08	168	6.0	8.7	7.9	100
10/20/08 - 10/26/08	168	6.1	8.7	7.6	100
10/27/08 - 11/02/08	168	6.1	8.6	7.1	100
11/03/08 - 11/09/08	168	4.9	14.7	7.9	99
11/10/08 - 11/16/08	168	9.8	19.1	14.1	100
11/17/08 - 11/23/08	168	9.7	16.3	12.5	100
11/24/08 - 11/30/08	168	7.4	19.2	15.3	100
12/01/08 - 12/07/08	167	7.1	16.8	13.2	100
12/08/08 - 12/14/08	168	7.9	16.2	11.8	100
12/15/08 - 12/21/08	168	7.9	11.2	9.6	100
12/22/08 - 12/28/08	168	4.5	10.9	8.0	99
12/29/08 - 12/31/08	72	7.2	10.0	8.2	100

TABLE A-2: WEEKLY DO SUMMARY STATISTICS AT FOSTER AVENUE  
ON THE NORTH SHORE CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	7.5	9.6	8.6	100
01/07/08 - 01/13/08	168	6.7	9.1	8.0	100
01/14/08 - 01/20/08	168	7.8	9.1	8.5	100
01/21/08 - 01/27/08	168	8.0	9.4	8.8	100
01/28/08 - 02/03/08	167	7.4	10.6	9.2	100
02/04/08 - 02/10/08	167	7.7	10.4	9.2	100
02/11/08 - 02/17/08	168	7.3	10.3	9.2	100
02/18/08 - 02/24/08	168	8.0	10.6	9.1	100
02/25/08 - 03/02/08	168	7.7	9.4	8.7	100
03/03/08 - 03/09/08	168	7.7	10.5	8.8	100
03/10/08 - 03/16/08	167	7.7	9.1	8.4	100
03/17/08 - 03/23/08	36	7.5	8.8	8.1	100
03/24/08 - 03/30/08	132	7.8	10.8	9.4	100
03/31/08 - 04/06/08	168	6.7	9.3	7.8	100
04/07/08 - 04/13/08	168	5.8	9.8	8.1	100
04/14/08 - 04/20/08	168	7.2	10.3	8.2	100
04/21/08 - 04/27/08	168	5.2	9.9	7.9	100
04/28/08 - 05/04/08	168	6.2	9.6	7.9	100
05/05/08 - 05/11/08	168	5.8	9.7	7.7	100
05/12/08 - 05/18/08	168	6.6	9.5	8.1	100
05/19/08 - 05/25/08	168	8.0	9.9	8.7	100
05/26/08 - 06/01/08	168	0.5	9.5	7.6	98
06/02/08 - 06/08/08	168	4.0	8.7	7.1	99
06/09/08 - 06/15/08	168	5.2	8.5	7.2	100
06/16/08 - 06/22/08	168	6.1	8.7	7.4	100
06/23/08 - 06/29/08	168	4.7	8.1	6.9	100
06/30/08 - 07/06/08	168	5.2	7.9	6.8	100
07/07/08 - 07/13/08	168	3.8	7.8	6.7	99
07/14/08 - 07/20/08	168	4.4	8.1	7.2	100
07/21/08 - 07/27/08	168	5.8	7.9	7.0	100
07/28/08 - 08/03/08	167	5.9	7.6	6.8	100
08/04/08 - 08/10/08	168	5.1	7.6	6.7	100
08/11/08 - 08/17/08	168	6.5	8.1	7.3	100
08/18/08 - 08/24/08	168	5.6	7.9	7.0	100

TABLE A-2 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
FOSTER AVENUE ON THE NORTH SHORE CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	5.9	7.6	6.7	100
09/01/08 - 09/07/08	168	4.8	7.8	6.9	100
09/08/08 - 09/14/08	168	5.8	8.5	7.1	100
09/15/08 - 09/21/08	168	4.9	8.4	6.8	100
09/22/08 - 09/28/08	168	6.2	8.1	7.0	100
09/29/08 - 10/05/08	168	5.4	8.4	7.4	100
10/06/08 - 10/12/08	168	6.4	8.3	7.5	100
10/13/08 - 10/19/08	168	6.1	8.4	7.6	100
10/20/08 - 10/26/08	168	5.7	8.4	7.6	100
10/27/08 - 11/02/08	168	6.8	8.3	7.5	100
11/03/08 - 11/09/08	167	5.4	8.4	7.2	100
11/10/08 - 11/16/08	168	5.8	8.0	7.1	100
11/17/08 - 11/23/08	168	7.1	8.7	7.9	100
11/24/08 - 11/30/08	168	6.6	8.6	7.7	100
12/01/08 - 12/07/08	168	6.2	9.5	8.5	100
12/08/08 - 12/14/08	168	6.5	9.4	8.6	100
12/15/08 - 12/21/08	168	7.3	9.4	8.6	100
12/22/08 - 12/28/08	168	6.9	9.9	8.7	100
12/29/08 - 12/31/08	72	7.8	9.2	8.4	100

TABLE A-3: WEEKLY DO SUMMARY STATISTICS AT ADDISON STREET  
ON THE NORTH BRANCH CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	8.0	9.8	9.0	100
01/07/08 - 01/13/08	168	6.8	10.0	9.1	100
01/14/08 - 01/20/08	168	8.8	10.3	9.6	100
01/21/08 - 01/27/08	168	8.9	10.5	9.8	100
01/28/08 - 02/03/08	168	7.9	11.2	9.8	100
02/04/08 - 02/10/08	168	8.4	11.6	10.3	100
02/11/08 - 02/17/08	168	7.8	11.6	9.7	100
02/18/08 - 02/24/08	168	9.5	12.1	10.6	100
02/25/08 - 03/02/08	168	8.4	9.8	9.3	100
03/03/08 - 03/09/08	168	8.3	12.8	11.3	100
03/10/08 - 03/16/08	167	9.5	11.0	10.2	100
03/17/08 - 03/23/08	168	8.1	11.7	9.9	100
03/24/08 - 03/30/08	168	8.6	11.4	10.1	100
03/31/08 - 04/06/08	168	7.7	10.6	9.5	100
04/07/08 - 04/13/08	168	7.0	10.7	9.2	100
04/14/08 - 04/20/08	168	8.0	10.8	9.4	100
04/21/08 - 04/27/08	168	5.2	9.1	7.9	100
04/28/08 - 05/04/08	168	6.4	9.8	8.0	100
05/05/08 - 05/11/08	168	6.1	8.9	7.5	100
05/12/08 - 05/18/08	168	6.2	9.0	7.8	100
05/19/08 - 05/25/08	168	7.4	9.1	8.0	100
05/26/08 - 06/01/08	168	0.2	8.6	6.9	97
06/02/08 - 06/08/08	168	3.9	7.4	6.4	99
06/09/08 - 06/15/08	168	3.2	8.0	6.9	99
06/16/08 - 06/22/08	168	5.6	8.0	6.9	100
06/23/08 - 06/29/08	168	4.1	7.3	6.3	100
06/30/08 - 07/06/08	168	5.1	7.1	6.2	100
07/07/08 - 07/13/08	168	3.5	6.8	6.0	99
07/14/08 - 07/20/08	168	2.2	7.2	6.3	99
07/21/08 - 07/27/08	168	4.9	7.1	6.4	100
07/28/08 - 08/03/08	168	5.6	7.0	6.2	100
08/04/08 - 08/10/08	168	5.0	7.0	6.3	100
08/11/08 - 08/17/08	168	5.8	7.2	6.6	100
08/18/08 - 08/24/08	168	5.0	7.2	6.2	100

TABLE A-3 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
ADDISON STREET ON THE NORTH BRANCH CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	5.5	7.2	6.3	100
09/01/08 - 09/07/08	168	2.2	7.7	6.8	98
09/08/08 - 09/14/08	168	5.4	8.5	7.1	100
09/15/08 - 09/21/08	168	5.1	8.1	7.2	100
09/22/08 - 09/28/08	167	6.3	7.4	6.8	100
09/29/08 - 10/05/08	168	5.4	8.3	7.2	100
10/06/08 - 10/12/08	168	6.6	8.2	7.6	100
10/13/08 - 10/19/08	168	5.7	8.2	7.2	100
10/20/08 - 10/26/08	168	5.6	8.4	7.5	100
10/27/08 - 11/02/08	168	6.6	8.3	7.5	100
11/03/08 - 11/09/08	156	5.3	8.1	6.9	100
11/10/08 - 11/16/08	168	6.4	8.7	7.8	100
11/17/08 - 11/23/08	168	7.5	8.8	8.1	100
11/24/08 - 11/30/08	168	6.9	8.5	7.8	100
12/01/08 - 12/07/08	168	6.0	9.9	8.9	100
12/08/08 - 12/14/08	168	7.6	10.8	9.6	100
12/15/08 - 12/21/08	168	9.0	11.3	10.0	100
12/22/08 - 12/28/08	168	8.2	11.3	9.7	100
12/29/08 - 12/31/08	72	10.6	11.4	11.0	100

TABLE A-4: WEEKLY DO SUMMARY STATISTICS AT FULLERTON AVENUE  
ON THE NORTH BRANCH CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	7.0	8.8	7.9	100
01/07/08 - 01/13/08	168	4.9	10.0	8.5	100
01/14/08 - 01/20/08	168	8.5	9.5	9.1	100
01/21/08 - 01/27/08	168	8.0	9.4	8.7	100
01/28/08 - 02/03/08	168	7.4	10.2	9.0	100
02/04/08 - 02/10/08	168	7.4	10.1	9.2	100
02/11/08 - 02/17/08	168	6.9	10.2	9.1	100
02/18/08 - 02/24/08	168	9.1	11.1	10.3	100
02/25/08 - 03/02/08	167	8.4	9.9	9.2	100
03/03/08 - 03/09/08	168	8.1	12.2	10.9	100
03/10/08 - 03/16/08	167	9.1	10.4	9.8	100
03/17/08 - 03/23/08	168	7.7	11.0	9.5	100
03/24/08 - 03/30/08	168	8.2	11.5	10.2	100
03/31/08 - 04/06/08	168	7.9	11.3	10.0	100
04/07/08 - 04/13/08	168	6.8	10.1	8.8	100
04/14/08 - 04/20/08	168	7.4	10.2	8.7	100
04/21/08 - 04/27/08	168	5.3	8.6	7.4	100
04/28/08 - 05/04/08	168	5.8	8.7	7.4	100
05/05/08 - 05/11/08	168	5.6	8.1	7.1	100
05/12/08 - 05/18/08	168	5.7	8.2	7.1	100
05/19/08 - 05/25/08	168	7.0	8.3	7.6	100
05/26/08 - 06/01/08	37	0.8	7.7	5.7	84
06/02/08 - 06/08/08	84	3.5	6.5	5.5	98
06/09/08 - 06/15/08	168	1.3	7.0	6.1	99
06/16/08 - 06/22/08	168	5.2	7.5	6.4	100
06/23/08 - 06/29/08	168	4.0	7.4	5.8	99
06/30/08 - 07/06/08	168	4.8	6.5	5.5	100
07/07/08 - 07/13/08	168	3.3	6.7	5.3	98
07/14/08 - 07/20/08	167	2.6	6.9	5.7	97
07/21/08 - 07/27/08	168	4.5	6.1	5.4	100
07/28/08 - 08/03/08	168	4.2	5.9	5.2	100
08/04/08 - 08/10/08	168	3.9	5.6	5.0	98
08/11/08 - 08/17/08	168	4.4	6.2	5.4	100
08/18/08 - 08/24/08	168	4.3	6.3	5.2	100



TABLE A-4 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
FULLERTON AVENUE ON THE NORTH BRANCH CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	4.4	6.4	5.5	100
09/01/08 - 09/07/08	168	1.5	7.2	6.1	98
09/08/08 - 09/14/08	35	5.1	7.2	6.2	100
09/15/08 - 09/21/08	133	6.0	7.5	6.8	100
09/22/08 - 09/28/08	168	5.8	6.8	6.2	100
09/29/08 - 10/05/08	168	4.9	7.5	6.6	100
10/06/08 - 10/12/08	168	5.7	7.6	6.9	100
10/13/08 - 10/19/08	168	4.9	7.6	6.4	100
10/20/08 - 10/26/08	168	5.4	7.8	7.0	100
10/27/08 - 11/02/08	168	6.1	7.7	7.0	100
11/03/08 - 11/09/08	60	5.2	6.4	5.8	100
11/10/08 - 11/16/08	108	5.6	7.4	6.7	100
11/17/08 - 11/23/08	168	6.6	8.1	7.5	100
11/24/08 - 11/30/08	168	6.7	8.0	7.4	100
12/01/08 - 12/07/08	168	6.1	9.6	8.7	100
12/08/08 - 12/14/08	168	7.2	10.4	9.3	100
12/15/08 - 12/21/08	168	8.6	10.9	9.6	100
12/22/08 - 12/28/08	168	7.2	10.7	8.9	100
12/29/08 - 12/31/08	72	9.9	10.9	10.4	100

TABLE A-5: WEEKLY DO SUMMARY STATISTICS AT KINZIE STREET  
ON THE NORTH BRANCH CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	7.8	9.5	8.9	100
01/07/08 - 01/13/08	168	6.1	9.1	8.1	100
01/14/08 - 01/20/08	168	8.4	9.9	8.8	100
01/21/08 - 01/27/08	168	8.2	11.7	9.3	100
01/28/08 - 02/03/08	168	7.7	10.7	9.1	100
02/04/08 - 02/10/08	168	7.6	10.5	9.5	100
02/11/08 - 02/17/08	168	7.0	10.9	9.9	100
02/18/08 - 02/24/08	168	7.9	11.9	10.6	100
02/25/08 - 03/02/08	168	7.4	9.3	8.2	100
03/03/08 - 03/09/08	168	6.5	11.6	10.3	100
03/10/08 - 03/16/08	167	7.5	10.1	8.7	100
03/17/08 - 03/23/08	168	8.3	9.7	9.1	100
03/24/08 - 03/30/08	168	7.8	10.3	9.5	100
03/31/08 - 04/06/08	168	7.2	10.2	8.6	100
04/07/08 - 04/13/08	168	6.9	10.1	8.3	100
04/14/08 - 04/20/08	168	7.1	9.9	8.5	100
04/21/08 - 04/27/08	168	4.4	7.6	6.6	100
04/28/08 - 05/04/08	168	4.5	8.1	6.3	100
05/05/08 - 05/11/08	168	4.9	6.9	6.0	100
05/12/08 - 05/18/08	168	4.9	7.4	6.4	100
05/19/08 - 05/25/08	166	5.1	7.0	6.3	100
05/26/08 - 06/01/08	168	2.9	6.9	5.7	93
06/02/08 - 06/08/08	168	4.3	6.8	5.5	100
06/09/08 - 06/15/08	168	1.8	6.7	5.5	95
06/16/08 - 06/22/08	168	4.4	6.9	5.6	100
06/23/08 - 06/29/08	168	4.4	6.3	5.2	100
06/30/08 - 07/06/08	168	3.2	5.9	5.2	93
07/07/08 - 07/13/08	168	3.9	6.0	5.4	98
07/14/08 - 07/20/08	168	1.9	6.7	5.4	91
07/21/08 - 07/27/08	168	3.5	5.7	4.9	88
07/28/08 - 08/03/08	168	3.7	5.6	4.9	98
08/04/08 - 08/10/08	168	3.6	5.8	4.9	96
08/11/08 - 08/17/08	168	5.1	6.3	5.6	100
08/18/08 - 08/24/08	168	2.9	6.0	5.0	91

TABLE A-5 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
KINZIE STREET ON THE NORTH BRANCH CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	3.4	6.3	5.2	95
09/01/08 - 09/07/08	168	3.0	7.3	6.0	99
09/08/08 - 09/14/08	168	4.4	7.4	6.0	100
09/15/08 - 09/21/08	168	4.3	7.2	6.3	100
09/22/08 - 09/28/08	168	4.0	6.2	5.2	99
09/29/08 - 10/05/08	168	4.3	7.1	5.9	100
10/06/08 - 10/12/08	168	5.2	7.2	6.2	100
10/13/08 - 10/19/08	168	4.5	7.5	5.8	100
10/20/08 - 10/26/08	168	4.9	7.8	6.3	100
10/27/08 - 11/02/08	168	5.6	7.5	6.6	100
11/03/08 - 11/09/08	168	4.5	6.7	5.5	100
11/10/08 - 11/16/08	168	5.2	7.3	6.4	100
11/17/08 - 11/23/08	168	5.9	8.1	7.4	100
11/24/08 - 11/30/08	168	6.7	8.2	7.5	100
12/01/08 - 12/07/08	168	6.0	9.5	8.2	100
12/08/08 - 12/14/08	168	7.5	10.5	9.5	100
12/15/08 - 12/21/08	168	8.1	11.3	10.1	100
12/22/08 - 12/28/08	168	8.5	13.0	10.4	100
12/29/08 - 12/31/08	72	10.9	11.6	11.4	100

TABLE A-6: WEEKLY DO SUMMARY STATISTICS AT CLARK STREET  
ON THE CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 5.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	8.4	10.7	9.4	100
01/07/08 - 01/13/08	168	6.1	11.7	9.1	100
01/14/08 - 01/20/08	168	7.8	10.7	9.0	100
01/21/08 - 01/27/08	168	10.4	12.3	11.4	100
01/28/08 - 02/03/08	168	10.5	12.9	11.7	100
02/04/08 - 02/10/08	168	8.5	12.2	9.6	100
02/11/08 - 02/17/08	168	10.3	12.6	11.6	100
02/18/08 - 02/24/08	168	8.5	12.4	10.8	100
02/25/08 - 03/02/08	168	8.8	11.3	10.1	100
03/03/08 - 03/09/08	168	8.8	13.2	11.6	100
03/10/08 - 03/16/08	167	8.7	11.8	10.0	100
03/17/08 - 03/23/08	168	8.6	12.2	10.3	100
03/24/08 - 03/30/08	168	8.3	10.7	9.1	100
03/31/08 - 04/06/08	168	7.5	9.2	8.2	100
04/07/08 - 04/13/08	168	7.5	11.8	9.2	100
04/14/08 - 04/20/08	168	6.9	9.9	8.5	100
04/21/08 - 04/27/08	168	5.9	8.9	7.3	100
04/28/08 - 05/04/08	168	5.1	7.8	6.8	100
05/05/08 - 05/11/08	168	5.0	9.3	6.7	99
05/12/08 - 05/18/08	168	6.4	9.9	7.7	100
05/19/08 - 05/25/08	168	6.0	7.8	6.9	100
05/26/08 - 06/01/08	168	5.7	9.8	7.6	100
06/02/08 - 06/08/08	168	7.1	9.6	8.5	100
06/09/08 - 06/15/08	168	6.2	9.4	8.3	100
06/16/08 - 06/22/08	168	8.0	10.2	9.1	100
06/23/08 - 06/29/08	168	6.3	9.3	8.2	100
06/30/08 - 07/06/08	168	6.1	8.7	7.3	100
07/07/08 - 07/13/08	168	6.0	9.2	8.1	100
07/14/08 - 07/20/08	168	5.9	9.8	8.6	100
07/21/08 - 07/27/08	34	7.5	9.4	8.6	100
07/28/08 - 08/03/08	133	7.8	9.1	8.6	100
08/04/08 - 08/10/08	168	4.8	8.8	7.5	99
08/11/08 - 08/17/08	168	7.3	8.1	7.7	100
08/18/08 - 08/24/08	168	6.9	8.2	7.7	100

TABLE A-6 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
CLARK STREET ON THE CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 5.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	6.3	7.8	7.2	100
09/01/08 - 09/07/08	168	4.7	7.6	6.7	95
09/08/08 - 09/14/08	168	2.5	7.6	6.3	82
09/15/08 - 09/21/08	34	1.1	3.3	2.1	0
09/22/08 - 09/28/08	133	7.5	8.4	8.1	100
09/29/08 - 10/05/08	168	6.9	8.0	7.4	100
10/06/08 - 10/12/08	168	7.2	8.0	7.7	100
10/13/08 - 10/19/08	168	7.4	8.3	7.9	100
10/20/08 - 10/26/08	168	6.9	8.5	7.9	100
10/27/08 - 11/02/08	168	7.4	8.8	8.0	100
11/03/08 - 11/09/08	168	7.1	8.5	8.0	100
11/10/08 - 11/16/08	168	6.7	8.3	7.6	100
11/17/08 - 11/23/08	168	7.6	9.7	8.1	100
11/24/08 - 11/30/08	168	7.8	9.7	8.8	100
12/01/08 - 12/07/08	168	9.1	11.9	10.4	100
12/08/08 - 12/14/08	168	9.9	12.0	10.8	100
12/15/08 - 12/21/08	168	10.5	12.4	11.7	100
12/22/08 - 12/28/08	168	8.3	13.1	11.8	100
12/29/08 - 12/31/08	72	7.5	9.0	8.3	100

TABLE A-7: WEEKLY DO SUMMARY STATISTICS AT LOOMIS STREET  
ON THE SOUTH BRANCH CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	8.3	9.5	8.9	100
01/07/08 - 01/13/08	168	5.8	10.1	8.3	100
01/14/08 - 01/20/08	168	8.5	9.5	9.1	100
01/21/08 - 01/27/08	168	9.0	10.2	9.7	100
01/28/08 - 02/03/08	168	9.0	10.7	9.9	100
02/04/08 - 02/10/08	167	8.4	10.7	9.6	100
02/11/08 - 02/17/08	168	9.4	11.2	10.3	100
02/18/08 - 02/24/08	167	7.3	11.7	10.8	100
02/25/08 - 03/02/08	168	8.6	10.7	9.5	100
03/03/08 - 03/09/08	168	9.1	12.1	10.8	100
03/10/08 - 03/16/08	167	8.5	10.6	9.5	100
03/17/08 - 03/23/08	168	8.9	10.1	9.5	100
03/24/08 - 03/30/08	168	8.8	9.9	9.4	100
03/31/08 - 04/06/08	168	7.3	9.7	8.9	100
04/07/08 - 04/13/08	168	6.9	10.6	8.5	100
04/14/08 - 04/20/08	168	6.9	9.4	8.3	100
04/21/08 - 04/27/08	167	5.9	7.8	6.6	100
04/28/08 - 05/04/08	168	5.1	7.2	6.5	100
05/05/08 - 05/11/08	168	5.1	7.3	5.9	100
05/12/08 - 05/18/08	168	5.6	7.5	6.6	100
05/19/08 - 05/25/08	167	5.5	7.5	6.2	100
05/26/08 - 06/01/08	168	5.2	7.9	6.2	100
06/02/08 - 06/08/08	168	5.0	7.1	5.9	100
06/09/08 - 06/15/08	168	2.8	7.3	5.6	95
06/16/08 - 06/22/08	168	5.6	7.4	6.3	100
06/23/08 - 06/29/08	168	4.8	6.1	5.4	100
06/30/08 - 07/06/08	168	4.1	6.4	5.1	100
07/07/08 - 07/13/08	168	5.1	7.0	5.8	100
07/14/08 - 07/20/08	168	2.7	7.4	5.8	92
07/21/08 - 07/27/08	168	2.8	7.6	6.3	93
07/28/08 - 08/03/08	168	5.9	7.7	6.5	100
08/04/08 - 08/10/08	168	3.0	7.0	5.5	92
08/11/08 - 08/17/08	168	6.0	6.9	6.4	100
08/18/08 - 08/24/08	34	6.1	6.4	6.2	100

TABLE A-7 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
LOOMIS STREET ON THE SOUTH BRANCH CHICAGO RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	86	5.6	6.8	6.3	100
09/01/08 - 09/07/08	168	3.0	6.5	5.8	95
09/08/08 - 09/14/08	168	2.2	7.2	5.5	93
09/15/08 - 09/21/08	168	2.5	6.0	5.2	88
09/22/08 - 09/28/08	168	4.6	8.3	6.7	100
09/29/08 - 10/05/08	168	6.1	7.3	6.8	100
10/06/08 - 10/12/08	168	5.7	8.1	6.8	100
10/13/08 - 10/19/08	168	5.6	7.2	6.3	100
10/20/08 - 10/26/08	168	6.3	7.6	6.9	100
10/27/08 - 11/02/08	168	6.4	7.7	7.1	100
11/03/08 - 11/09/08	58	6.5	7.2	6.8	100
11/10/08 - 11/16/08	110	6.6	8.4	7.7	100
11/17/08 - 11/23/08	168	6.8	8.7	7.7	100
11/24/08 - 11/30/08	168	6.9	8.3	7.8	100
12/01/08 - 12/07/08	168	6.7	9.8	8.1	100
12/08/08 - 12/14/08	168	7.3	11.3	9.8	100
12/15/08 - 12/21/08	168	8.9	12.4	11.1	100
12/22/08 - 12/28/08	168	9.4	13.0	11.5	100
12/29/08 - 12/31/08	72	10.6	11.8	11.4	100

TABLE A-8: WEEKLY DO SUMMARY STATISTICS AT 36TH STREET  
ON BUBBLY CREEK DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	9.1	12.9	10.6	100
01/07/08 - 01/13/08	168	0.3	10.2	3.7	35
01/14/08 - 01/20/08	168	1.2	5.2	3.5	46
01/21/08 - 01/27/08	168	0.0	3.4	1.3	0
01/28/08 - 02/03/08	168	0.0	1.3	0.1	0
02/04/08 - 02/10/08	168	0.3	5.7	3.0	24
02/11/08 - 02/17/08	168	2.4	12.1	4.3	33
02/18/08 - 02/24/08	168	0.0	11.0	3.2	36
02/25/08 - 03/02/08	168	0.0	2.7	0.3	0
03/03/08 - 03/09/08	168	0.1	5.1	2.5	12
03/10/08 - 03/16/08	167	2.5	18.3	7.6	76
03/17/08 - 03/23/08	168	12.5	22.6	18.4	100
03/24/08 - 03/30/08	168	11.8	23.6	17.0	100
03/31/08 - 04/06/08	167	8.2	14.3	11.3	100
04/07/08 - 04/13/08	168	0.1	21.1	8.9	60
04/14/08 - 04/20/08	168	0.0	0.5	0.1	0
04/21/08 - 04/27/08	168	0.0	18.2	9.1	77
04/28/08 - 05/04/08	168	3.4	16.1	8.2	98
05/05/08 - 05/11/08	168	2.5	14.6	9.1	98
05/12/08 - 05/18/08	168	0.2	4.1	1.2	1
05/19/08 - 05/25/08	168	0.7	4.0	2.6	0
05/26/08 - 06/01/08	167	0.0	6.6	3.1	28
06/02/08 - 06/08/08	168	2.4	8.5	4.6	47
06/09/08 - 06/15/08	168	0.0	8.3	0.5	2
06/16/08 - 06/22/08	168	0.1	10.9	2.4	14
06/23/08 - 06/29/08	168	0.0	3.7	1.2	0
06/30/08 - 07/06/08	168	0.4	3.7	1.9	0
07/07/08 - 07/13/08	168	0.8	4.3	2.4	1
07/14/08 - 07/20/08	168	1.2	3.3	2.0	0
07/21/08 - 07/27/08	166	0.0	5.8	1.4	5
07/28/08 - 08/03/08	168	0.0	2.8	0.7	0
08/04/08 - 08/10/08	168	0.0	8.5	0.9	7
08/11/08 - 08/17/08	168	0.0	12.8	3.2	35
08/18/08 - 08/24/08	168	0.0	12.5	1.7	16



TABLE A-8 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
36TH STREET ON BUBBLY CREEK DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	0.2	6.4	2.0	11
09/01/08 - 09/07/08	57	0.0	2.8	0.5	0
09/08/08 - 09/14/08	110	0.0	7.4	1.8	29
09/15/08 - 09/21/08	168	0.0	6.0	0.4	3
09/22/08 - 09/28/08	168	1.8	11.3	4.8	55
09/29/08 - 10/05/08	167	1.6	5.6	3.8	42
10/06/08 - 10/12/08	168	0.0	5.2	1.3	9
10/13/08 - 10/19/08	168	0.1	4.4	1.2	3
10/20/08 - 10/26/08	168	2.6	10.5	5.7	79
10/27/08 - 11/02/08	168	3.4	10.9	6.9	94
11/03/08 - 11/09/08	168	1.6	5.5	4.0	63
11/10/08 - 11/16/08	168	3.5	5.8	4.8	92
11/17/08 - 11/23/08	168	4.9	7.1	6.2	100
11/24/08 - 11/30/08	167	5.7	7.6	6.7	100
12/01/08 - 12/07/08	168	6.7	9.6	8.6	100
12/08/08 - 12/14/08	168	1.4	10.3	6.8	80
12/15/08 - 12/21/08	168	0.3	4.2	2.1	7
12/22/08 - 12/28/08	168	0.3	11.8	3.1	23
12/29/08 - 12/31/08	72	0.3	1.6	0.5	0

TABLE A-9: WEEKLY DO SUMMARY STATISTICS AT INTERSTATE HIGHWAY 55  
ON BUBBLY CREEK DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	8.3	9.2	8.7	100
01/07/08 - 01/13/08	168	2.9	9.2	6.2	82
01/14/08 - 01/20/08	168	7.0	9.7	8.3	100
01/21/08 - 01/27/08	168	8.5	10.5	9.7	100
01/28/08 - 02/03/08	168	6.7	9.8	8.1	100
02/04/08 - 02/10/08	167	5.3	9.8	7.7	100
02/11/08 - 02/17/08	168	6.6	11.1	9.1	100
02/18/08 - 02/24/08	168	2.1	10.3	6.2	85
02/25/08 - 03/02/08	168	0.3	9.0	6.6	93
03/03/08 - 03/09/08	168	4.9	10.2	8.5	100
03/10/08 - 03/16/08	81	8.5	9.8	9.0	100
03/17/08 - 03/23/08	86	8.9	10.4	9.5	100
03/24/08 - 03/30/08	168	7.7	10.3	8.9	100
03/31/08 - 04/06/08	168	6.4	14.2	8.5	100
04/07/08 - 04/13/08	168	1.0	16.3	7.4	71
04/14/08 - 04/20/08	168	1.1	8.3	4.9	74
04/21/08 - 04/27/08	168	0.9	8.0	4.6	73
04/28/08 - 05/04/08	82	4.5	6.9	5.5	100
05/05/08 - 05/11/08	134	3.9	7.0	5.3	99
05/12/08 - 05/18/08	168	1.8	6.6	4.9	79
05/19/08 - 05/25/08	168	3.5	6.6	5.5	98
05/26/08 - 06/01/08	168	3.9	7.7	5.6	98
06/02/08 - 06/08/08	168	4.0	7.4	5.2	100
06/09/08 - 06/15/08	168	0.0	7.0	2.1	19
06/16/08 - 06/22/08	168	1.9	6.8	4.5	72
06/23/08 - 06/29/08	168	2.4	5.3	3.8	33
06/30/08 - 07/06/08	168	2.5	6.0	4.2	60
07/07/08 - 07/13/08	168	0.0	6.3	4.3	73
07/14/08 - 07/20/08	168	0.3	7.1	4.7	77
07/21/08 - 07/27/08	168	0.2	9.6	2.9	35
07/28/08 - 08/03/08	168	3.5	6.3	5.0	93
08/04/08 - 08/10/08	167	0.5	5.9	3.0	20
08/11/08 - 08/17/08	168	0.6	8.3	5.0	79
08/18/08 - 08/24/08	168	2.5	6.7	4.8	85

TABLE A-9 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
INTERSTATE HIGHWAY 55 ON BUBBLY CREEK DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	1.3	6.0	4.1	55
09/01/08 - 09/07/08	168	0.0	7.1	2.8	41
09/08/08 - 09/14/08	168	0.0	7.0	2.5	20
09/15/08 - 09/21/08	168	0.1	4.8	1.8	10
09/22/08 - 09/28/08	167	1.1	9.1	5.0	69
09/29/08 - 10/05/08	168	4.6	7.0	5.9	100
10/06/08 - 10/12/08	168	0.0	6.4	3.3	39
10/13/08 - 10/19/08	168	0.0	5.8	3.6	59
10/20/08 - 10/26/08	82	1.5	5.9	4.9	91
10/27/08 - 11/02/08	86	5.8	7.1	6.6	100
11/03/08 - 11/09/08	168	4.4	6.3	5.5	100
11/10/08 - 11/16/08	168	4.9	6.7	5.8	100
11/17/08 - 11/23/08	168	6.1	7.8	7.0	100
11/24/08 - 11/30/08	168	6.5	8.3	7.6	100
12/01/08 - 12/07/08	82	7.1	8.0	7.4	100
12/08/08 - 12/31/08			NO DATA		

TABLE A-10: WEEKLY DO SUMMARY STATISTICS AT CICERO AVENUE  
ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	6.9	8.4	7.8	100
01/07/08 - 01/13/08	168	5.2	9.0	7.4	100
01/14/08 - 01/20/08	168	6.4	8.5	7.4	100
01/21/08 - 01/27/08	168	7.1	8.9	8.0	100
01/28/08 - 02/03/08	84	8.3	10.3	9.3	100
02/04/08 - 02/10/08	86	7.9	9.8	8.6	100
02/11/08 - 02/17/08	168	7.7	10.1	8.7	100
02/18/08 - 02/24/08	168	6.8	10.9	9.8	100
02/25/08 - 03/02/08	168	6.8	10.8	8.4	100
03/03/08 - 03/09/08	168	7.4	10.6	9.7	100
03/10/08 - 03/16/08	167	8.1	10.1	8.9	100
03/17/08 - 03/23/08	168	8.0	9.3	8.7	100
03/24/08 - 03/30/08	168	8.0	9.2	8.6	100
03/31/08 - 04/06/08	168	7.0	9.2	8.3	100
04/07/08 - 04/13/08	168	6.2	9.6	7.9	100
04/14/08 - 04/20/08	82	7.1	8.7	7.9	100
04/21/08 - 04/27/08	87	4.5	6.4	5.5	100
04/28/08 - 05/04/08	168	3.1	6.8	5.1	93
05/05/08 - 05/11/08	168	3.9	6.8	5.3	99
05/12/08 - 05/18/08	168	3.9	7.0	5.4	99
05/19/08 - 05/25/08	168	4.1	6.0	5.2	100
05/26/08 - 06/01/08	168	3.4	6.1	5.0	86
06/02/08 - 06/08/08	168	3.1	6.0	4.5	76
06/09/08 - 06/15/08	168	0.7	6.0	4.4	74
06/16/08 - 06/22/08	167	4.0	6.8	5.0	100
06/23/08 - 06/29/08	168	2.6	5.6	4.0	50
06/30/08 - 07/06/08	168	2.0	7.4	4.3	65
07/07/08 - 07/13/08	168	4.0	6.7	4.9	98
07/14/08 - 07/20/08	168	0.9	9.1	4.7	78
07/21/08 - 07/27/08	168	0.7	6.8	4.6	68
07/28/08 - 08/03/08	168	4.8	6.6	5.6	100
08/04/08 - 08/10/08	168	1.6	5.8	4.1	55
08/11/08 - 08/17/08	168	4.6	5.8	5.1	100
08/18/08 - 08/24/08	168	4.6	6.2	5.3	100

TABLE A-10 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
CICERO AVENUE ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	4.2	6.1	5.2	100
09/01/08 - 09/07/08	168	2.1	6.0	4.5	68
09/08/08 - 09/14/08	167	0.0	6.3	3.8	49
09/15/08 - 09/21/08	167	0.0	5.3	3.7	68
09/22/08 - 09/28/08	168	4.2	7.0	5.9	100
09/29/08 - 10/05/08	168	4.9	6.8	6.1	100
10/06/08 - 10/12/08	168	3.5	6.3	5.1	90
10/13/08 - 10/19/08	168	4.2	5.9	5.0	100
10/20/08 - 10/26/08	168	4.5	6.9	5.7	100
10/27/08 - 11/02/08	168	5.2	7.2	6.1	100
11/03/08 - 11/09/08	168	4.9	6.3	5.8	100
11/10/08 - 11/16/08	168	4.5	6.6	5.7	100
11/17/08 - 11/23/08	168	5.1	6.5	5.8	100
11/24/08 - 11/30/08	168	6.0	7.6	7.0	100
12/01/08 - 12/07/08	81	6.8	7.5	7.1	100
12/08/08 - 12/31/08			NO DATA		

TABLE A-11: WEEKLY DO SUMMARY STATISTICS AT B&O CENTRAL RAILROAD  
ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	7.7	9.8	9.1	100
01/07/08 - 01/13/08	168	7.0	9.3	8.2	100
01/14/08 - 01/20/08	168	7.5	9.8	8.6	100
01/21/08 - 01/27/08	168	8.7	10.1	9.3	100
01/28/08 - 02/03/08	168	8.2	10.2	9.3	100
02/04/08 - 02/10/08	168	5.3	10.2	8.7	100
02/11/08 - 02/17/08	168	7.1	9.5	8.4	100
02/18/08 - 02/24/08	168	7.8	10.1	9.4	100
02/25/08 - 03/02/08	168	6.8	10.2	9.0	100
03/03/08 - 03/09/08	168	7.8	9.8	9.2	100
03/10/08 - 03/16/08	167	8.1	9.7	8.9	100
03/17/08 - 03/23/08	168	8.4	9.6	8.9	100
03/24/08 - 03/30/08	167	7.9	10.0	8.8	100
03/31/08 - 04/06/08	168	7.4	9.5	8.6	100
04/07/08 - 04/13/08	168	7.1	9.0	8.0	100
04/14/08 - 04/20/08	168	6.8	9.0	8.0	100
04/21/08 - 04/27/08	168	5.9	8.0	7.0	100
04/28/08 - 05/04/08	168	5.0	7.7	6.6	100
05/05/08 - 05/11/08	167	5.8	7.8	6.7	100
05/12/08 - 05/18/08	58	5.7	8.4	7.3	100
05/19/08 - 05/25/08	110	6.0	7.2	6.7	100
05/26/08 - 06/01/08	168	5.5	7.5	6.7	100
06/02/08 - 06/08/08	168	4.8	7.0	5.9	100
06/09/08 - 06/15/08	168	3.1	6.5	5.6	95
06/16/08 - 06/22/08	168	5.4	7.1	6.1	100
06/23/08 - 06/29/08	168	4.9	8.4	5.8	100
06/30/08 - 07/06/08	168	4.8	7.5	6.2	100
07/07/08 - 07/13/08	168	4.9	7.4	5.7	100
07/14/08 - 07/20/08	168	4.1	6.5	5.5	100
07/21/08 - 07/27/08	168	2.8	6.8	5.4	94
07/28/08 - 08/03/08	168	4.9	7.2	5.8	100
08/04/08 - 08/10/08	168	2.6	6.5	5.3	92
08/11/08 - 08/17/08	168	5.3	6.6	5.9	100
08/18/08 - 08/24/08	168	5.1	6.3	5.7	100

TABLE A-11 (Continued): WEEKLY DO SUMMARY STATISTICS AT B&O CENTRAL RAILROAD ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values $\geq$ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	5.2	7.1	6.1	100
09/01/08 - 09/07/08	168	2.8	7.2	5.4	88
09/08/08 - 09/14/08	168	4.4	6.6	5.7	100
09/15/08 - 09/21/08	168	2.3	7.5	5.4	83
09/22/08 - 09/28/08	168	4.6	7.3	6.2	100
09/29/08 - 10/05/08	168	5.7	7.3	6.4	100
10/06/08 - 10/12/08	168	5.4	7.5	6.3	100
10/13/08 - 10/19/08	167	5.0	7.0	5.9	100
10/20/08 - 10/26/08	168	5.2	7.9	6.7	100
10/27/08 - 11/02/08	168	5.0	9.7	7.4	100
11/03/08 - 11/09/08	168	6.0	7.4	6.7	100
11/10/08 - 11/16/08	168	6.1	7.9	7.0	100
11/17/08 - 11/23/08	168	6.1	8.9	7.5	100
11/24/08 - 11/30/08	167	6.9	8.6	7.7	100
12/01/08 - 12/07/08	168	7.1	8.9	7.9	100
12/08/08 - 12/14/08	168	6.0	9.3	8.1	100
12/15/08 - 12/21/08	168	6.7	10.5	9.2	100
12/22/08 - 12/28/08	168	8.0	10.7	9.9	100
12/29/08 - 12/31/08	72	8.5	10.3	9.6	100

TABLE A-12: WEEKLY DO SUMMARY STATISTICS AT ROUTE 83  
ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08			NO DATA		
01/07/08 - 01/13/08	110	6.1	7.8	7.2	100
01/14/08 - 01/20/08	168	6.8	8.5	7.6	100
01/21/08 - 01/27/08	168	7.0	8.8	8.2	100
01/28/08 - 02/03/08	168	7.6	9.3	8.5	100
02/04/08 - 02/10/08	168	7.5	9.9	8.5	100
02/11/08 - 02/17/08	168	0.5	9.0	7.3	92
02/18/08 - 02/24/08	168	7.2	9.4	8.5	100
02/25/08 - 03/02/08	168	3.7	9.4	8.3	98
03/03/08 - 03/09/08	168	6.3	9.0	8.4	100
03/10/08 - 03/16/08	167	6.9	9.2	8.2	100
03/17/08 - 03/23/08	168	6.6	8.5	7.6	100
03/24/08 - 03/30/08	168	6.6	8.8	8.0	100
03/31/08 - 04/06/08	168	5.7	8.6	7.7	100
04/07/08 - 04/13/08	66	6.8	7.6	7.3	100
04/14/08 - 04/20/08			NO DATA		
04/21/08 - 04/27/08	110	3.9	6.6	5.2	98
04/28/08 - 05/04/08	168	3.9	6.2	5.1	96
05/05/08 - 05/11/08	168	3.8	6.4	5.3	98
05/12/08 - 05/18/08	168	2.5	7.3	6.1	93
05/19/08 - 05/25/08	168	3.5	6.3	5.3	99
05/26/08 - 06/01/08	59	3.4	5.9	5.1	98
06/02/08 - 06/15/08			NO DATA		
06/16/08 - 06/22/08	110	3.2	5.8	4.5	77
06/23/08 - 06/29/08	58	3.2	6.2	4.9	93
06/30/08 - 07/13/08			NO DATA		
07/14/08 - 07/20/08	110	2.8	6.5	4.8	87
07/21/08 - 07/27/08	168	2.0	5.4	4.2	68
07/28/08 - 08/03/08	58	4.0	6.7	5.4	98
08/04/08 - 08/17/08			NO DATA		
08/18/08 - 08/24/08	100	4.1	5.3	4.7	100
08/25/08 - 08/31/08	58	4.5	5.7	5.0	100
09/01/08 - 09/28/08			NO DATA		
09/29/08 - 10/05/08	110	5.1	6.2	5.7	100



TABLE A-12 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
ROUTE 83 ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
10/06/08 - 10/12/08	168	4.3	6.4	5.3	100
10/13/08 - 10/19/08	116	4.7	5.8	5.1	100
10/20/08 - 10/26/08	168	4.5	7.5	6.0	100
10/27/08 - 11/02/08	167	5.5	7.4	6.4	100
11/03/08 - 11/09/08	168	5.1	6.7	5.8	100
11/10/08 - 11/16/08	168	5.5	6.9	6.3	100
11/17/08 - 11/23/08	168	5.4	7.3	6.4	100
11/24/08 - 11/30/08	58	6.0	7.4	7.0	100
12/01/08 - 12/31/08			NO DATA		

TABLE A-13: WEEKLY DO SUMMARY STATISTICS AT ROMEOVILLE ROAD  
ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 04/27/08			NO DATA		
04/28/08 - 05/04/08	134	3.9	6.0	5.4	99
05/05/08 - 05/11/08	168	4.4	6.6	5.3	100
05/12/08 - 05/18/08	168	5.5	7.2	6.4	100
05/19/08 - 05/25/08	168	5.0	5.9	5.5	100
05/26/08 - 06/01/08	167	4.2	7.5	5.6	100
06/02/08 - 06/08/08	168	3.8	6.7	4.5	92
06/09/08 - 06/15/08	168	2.4	4.7	3.7	40
06/16/08 - 06/22/08	168	3.5	5.6	4.4	88
06/23/08 - 06/29/08	168	3.1	5.1	4.0	43
06/30/08 - 07/06/08	168	2.9	5.6	4.1	60
07/07/08 - 07/13/08	168	3.5	6.1	4.6	86
07/14/08 - 07/20/08	168	3.4	6.0	4.7	82
07/21/08 - 07/27/08	168	2.9	5.5	4.3	54
07/28/08 - 08/03/08	168	4.1	6.4	5.0	100
08/04/08 - 08/10/08	168	1.2	4.6	3.6	46
08/11/08 - 08/17/08	168	4.3	6.1	4.8	100
08/18/08 - 08/24/08	82	4.0	5.6	4.9	100
08/25/08 - 09/07/08			NO DATA		
09/08/08 - 09/14/08	85	4.3	5.3	4.7	100
09/15/08 - 09/21/08	168	3.0	5.4	4.5	77
09/22/08 - 09/28/08	168	4.4	5.7	5.0	100
09/29/08 - 10/05/08	168	5.2	6.2	5.8	100
10/06/08 - 10/12/08	168	4.6	6.1	5.5	100
10/13/08 - 10/19/08	168	4.8	5.5	5.1	100
10/20/08 - 10/26/08	168	5.0	6.8	6.0	100
10/27/08 - 11/02/08	168	6.3	7.4	7.0	100
11/03/08 - 11/09/08	84	6.1	6.6	6.4	100
11/10/08 - 11/16/08	86	6.1	7.1	6.7	100
11/17/08 - 11/23/08	168	6.0	8.8	6.9	100
11/24/08 - 11/30/08	60	5.8	7.5	6.7	100
12/01/08 - 12/31/08			NO DATA		

TABLE A-14: WEEKLY DO SUMMARY STATISTICS AT LOCKPORT POWERHOUSE  
ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	7.5	8.7	8.0	100
01/07/08 - 01/13/08	168	6.3	8.5	7.3	100
01/14/08 - 01/20/08	168	7.6	8.8	8.1	100
01/21/08 - 01/27/08	168	7.9	8.7	8.3	100
01/28/08 - 02/03/08	168	8.0	8.9	8.5	100
02/04/08 - 02/10/08	168	7.8	9.5	8.7	100
02/11/08 - 02/17/08	168	4.2	9.3	8.0	100
02/18/08 - 02/24/08	168	7.8	9.4	8.5	100
02/25/08 - 03/02/08	168	7.3	8.4	7.8	100
03/03/08 - 03/09/08	168	5.9	8.9	8.3	100
03/10/08 - 03/16/08	167	7.0	8.6	7.9	100
03/17/08 - 03/23/08	168	6.2	7.5	6.7	100
03/24/08 - 03/30/08	13	7.4	7.8	7.5	100
03/31/08 - 04/06/08	156	5.9	8.3	7.4	100
04/07/08 - 04/13/08	168	6.7	8.0	7.3	100
04/14/08 - 04/20/08	168	6.1	8.4	7.5	100
04/21/08 - 04/27/08	168	5.0	6.5	5.8	100
04/28/08 - 05/04/08	11	4.0	5.3	4.6	91
05/05/08 - 05/11/08			NO DATA		
05/12/08 - 05/18/08	159	5.3	6.6	6.1	100
05/19/08 - 05/25/08	168	5.0	6.0	5.5	100
05/26/08 - 06/01/08	168	4.4	6.6	5.4	100
06/02/08 - 06/08/08	168	3.5	5.1	4.2	77
06/09/08 - 06/15/08	12	3.8	4.2	4.1	75
06/16/08 - 06/22/08	156	3.1	5.5	4.4	87
06/23/08 - 06/29/08	168	3.5	5.0	4.0	47
06/30/08 - 07/06/08	168	2.7	5.3	4.1	55
07/07/08 - 07/13/08	168	3.0	6.5	4.5	69
07/14/08 - 07/20/08	168	2.9	8.8	4.8	79
07/21/08 - 07/27/08	168	2.9	5.5	4.1	50
07/28/08 - 08/03/08	168	3.8	6.5	4.9	97
08/04/08 - 08/10/08	168	2.2	5.8	3.6	40
08/11/08 - 08/17/08	10	3.6	4.1	3.8	10
08/18/08 - 08/24/08	156	4.6	7.0	5.6	100

TABLE A-14 (Continued): WEEKLY DO SUMMARY STATISTICS AT LOCKPORT POWERHOUSE ON THE CHICAGO SANITARY AND SHIP CANAL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values $\geq$ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	4.3	6.0	5.1	100
09/01/08 - 09/07/08	168	1.9	6.1	4.2	60
09/08/08 - 09/14/08	168	3.2	5.3	4.6	92
09/15/08 - 09/21/08	168	3.5	5.8	4.9	89
09/22/08 - 09/28/08	168	4.3	5.6	4.9	100
09/29/08 - 10/05/08	168	5.4	6.1	5.8	100
10/06/08 - 10/12/08	168	4.6	6.0	5.6	100
10/13/08 - 10/19/08	168	4.4	5.5	4.9	100
10/20/08 - 10/26/08	168	5.1	6.6	5.8	100
10/27/08 - 11/02/08	168	6.0	7.0	6.6	100
11/03/08 - 11/09/08	168	6.2	7.6	7.0	100
11/10/08 - 11/16/08	168	5.5	6.6	6.0	100
11/17/08 - 11/23/08	168	5.5	8.2	6.5	100
11/24/08 - 11/30/08	168	5.8	7.5	6.8	100
12/01/08 - 12/07/08	168	6.9	8.7	7.8	100
12/08/08 - 12/14/08	168	7.1	9.1	8.1	100
12/15/08 - 12/21/08	168	8.6	11.7	10.7	100
12/22/08 - 12/28/08	168	8.4	13.1	11.7	100
12/29/08 - 12/31/08	72	10.1	11.5	10.8	100

TABLE A-15: WEEKLY DO SUMMARY STATISTICS AT JEFFERSON STREET  
ON THE DES PLAINES RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	9.1	11.4	10.2	100
01/07/08 - 01/13/08	168	7.5	10.5	9.0	100
01/14/08 - 01/20/08	168	9.1	12.9	10.5	100
01/21/08 - 01/27/08	168	9.6	11.9	10.7	100
01/28/08 - 02/03/08	167	9.0	11.7	9.9	100
02/04/08 - 02/10/08	168	9.0	11.2	10.1	100
02/11/08 - 02/17/08	168	6.1	12.0	10.2	100
02/18/08 - 02/24/08	168	9.0	12.1	10.7	100
02/25/08 - 03/02/08	168	8.9	11.8	10.1	100
03/03/08 - 03/09/08	168	8.5	10.8	9.7	100
03/10/08 - 03/16/08	167	8.6	12.3	10.4	100
03/17/08 - 03/23/08	168	9.0	12.1	10.1	100
03/24/08 - 03/30/08	168	8.8	12.1	10.1	100
03/31/08 - 04/06/08	168	7.3	10.7	9.3	100
04/07/08 - 04/13/08	168	7.4	9.6	8.8	100
04/14/08 - 04/20/08	168	7.3	9.7	8.6	100
04/21/08 - 04/27/08	168	6.2	9.0	7.4	100
04/28/08 - 05/04/08	168	5.9	11.5	7.2	100
05/05/08 - 05/11/08	168	5.3	9.0	6.7	100
05/12/08 - 05/18/08	168	6.2	9.9	7.9	100
05/19/08 - 05/25/08	167	5.8	9.6	7.6	100
05/26/08 - 06/01/08	168	4.8	9.1	6.7	100
06/02/08 - 06/08/08	168	4.0	6.8	5.1	100
06/09/08 - 06/15/08	168	2.8	7.1	4.8	91
06/16/08 - 06/22/08	168	4.3	7.6	5.6	100
06/23/08 - 06/29/08	168	4.0	6.4	5.2	100
06/30/08 - 07/06/08	168	3.4	9.2	6.0	92
07/07/08 - 07/13/08	168	3.8	8.3	5.9	98
07/14/08 - 07/20/08	168	4.2	8.1	5.7	100
07/21/08 - 07/27/08	168	3.7	8.4	5.4	92
07/28/08 - 08/03/08	168	4.2	8.6	6.2	100
08/04/08 - 08/10/08	84	3.5	6.6	5.0	93
08/11/08 - 08/17/08	85	4.7	9.3	6.1	100
08/18/08 - 08/24/08	168	4.4	7.8	6.1	100

TABLE A-15 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
JEFFERSON STREET ON THE DES PLAINES RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	4.5	7.8	6.0	100
09/01/08 - 09/07/08	168	3.6	7.1	5.3	95
09/08/08 - 09/14/08	168	4.5	7.7	6.2	100
09/15/08 - 09/21/08	168	4.9	7.5	6.0	100
09/22/08 - 09/28/08	168	5.1	6.4	5.7	100
09/29/08 - 10/05/08	167	5.5	7.5	6.3	100
10/06/08 - 10/12/08	168	5.4	8.9	6.8	100
10/13/08 - 10/19/08	168	5.3	8.2	6.3	100
10/20/08 - 10/26/08	168	6.1	9.0	7.3	100
10/27/08 - 11/02/08	168	6.5	11.2	8.6	100
11/03/08 - 11/09/08	168	6.6	10.5	7.6	100
11/10/08 - 11/16/08	167	6.8	9.6	7.8	100
11/17/08 - 11/23/08	168	7.4	10.1	8.9	100
11/24/08 - 11/30/08	168	7.2	12.4	8.9	100
12/01/08 - 12/07/08	168	7.6	11.2	9.4	100
12/08/08 - 12/14/08	168	8.1	11.4	9.8	100
12/15/08 - 12/21/08	168	9.6	12.5	11.0	100
12/22/08 - 12/28/08	168	8.5	12.8	11.2	100
12/29/08 - 12/31/08	72	10.0	12.6	11.5	100

TABLE A-16: WEEKLY DO SUMMARY STATISTICS AT C&W INDIANA RAILROAD  
ON THE LITTLE CALUMET RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	11.5	13.5	12.4	100
01/07/08 - 01/13/08	168	9.8	12.2	11.4	100
01/14/08 - 01/20/08	168	11.0	11.9	11.5	100
01/21/08 - 01/27/08	168	9.6	11.7	10.7	100
01/28/08 - 02/03/08	168	9.8	11.2	10.5	100
02/04/08 - 02/10/08	168	9.4	12.4	11.1	100
02/11/08 - 02/17/08	168	10.8	12.6	11.5	100
02/18/08 - 02/24/08	168	10.9	12.1	11.6	100
02/25/08 - 03/02/08	168	10.2	11.9	11.0	100
03/03/08 - 03/09/08	168	10.9	13.1	12.7	100
03/10/08 - 03/16/08	167	11.1	13.1	12.2	100
03/17/08 - 03/23/08	168	11.5	13.9	12.7	100
03/24/08 - 03/30/08	168	12.1	15.5	13.8	100
03/31/08 - 04/06/08	168	12.5	16.4	14.6	100
04/07/08 - 04/13/08	168	10.0	15.9	13.0	100
04/14/08 - 04/20/08	168	8.4	13.9	11.3	100
04/21/08 - 04/27/08	168	6.6	13.9	9.4	100
04/28/08 - 05/04/08	168	5.6	9.5	7.4	100
05/05/08 - 05/11/08	168	3.6	9.1	5.9	98
05/12/08 - 05/18/08	168	4.5	11.8	9.0	100
05/19/08 - 05/25/08	62	7.5	11.6	9.2	100
05/26/08 - 06/08/08			NO DATA		
06/09/08 - 06/15/08	107	0.8	8.6	3.4	23
06/16/08 - 06/22/08	168	0.3	6.4	3.0	23
06/23/08 - 06/29/08	168	2.0	8.4	4.3	56
06/30/08 - 07/06/08	168	2.3	14.0	7.6	95
07/07/08 - 07/13/08	167	3.1	11.5	6.3	96
07/14/08 - 07/20/08	167	3.8	8.8	6.4	99
07/21/08 - 07/27/08	168	3.9	9.1	6.3	98
07/28/08 - 08/03/08	168	5.3	8.5	6.6	100
08/04/08 - 08/10/08	168	4.4	8.0	6.2	100
08/11/08 - 08/17/08	168	5.7	8.1	7.0	100
08/18/08 - 08/24/08	168	6.2	8.1	7.1	100
08/25/08 - 08/31/08	168	6.5	10.4	7.8	100

TABLE A-16 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
C&W INDIANA RAILROAD ON THE LITTLE CALUMET RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
09/01/08 - 09/07/08	168	4.8	11.2	6.9	100
09/08/08 - 09/14/08	168	1.5	6.9	5.3	89
09/15/08 - 09/21/08	168	1.8	5.2	3.1	10
09/22/08 - 09/28/08	61	1.8	6.5	4.3	72
09/29/08 - 10/05/08	107	6.3	7.9	6.9	100
10/06/08 - 10/12/08	168	6.2	7.7	6.9	100
10/13/08 - 10/19/08	168	6.4	8.0	7.1	100
10/20/08 - 10/26/08	168	7.2	9.1	8.1	100
10/27/08 - 11/02/08	168	8.5	9.9	9.3	100
11/03/08 - 11/09/08	168	8.6	10.4	9.5	100
11/10/08 - 11/16/08	168	9.6	11.5	10.7	100
11/17/08 - 11/23/08	168	10.1	13.4	12.0	100
11/24/08 - 11/30/08	168	12.4	15.4	13.7	100
12/01/08 - 12/07/08	168	12.5	16.6	15.3	100
12/08/08 - 12/14/08	168	13.3	17.0	15.3	100
12/15/08 - 12/21/08	168	12.7	15.5	14.3	100
12/22/08 - 12/28/08	168	8.3	14.1	12.2	100
12/29/08 - 12/31/08	72	9.8	12.5	11.3	100



TABLE A-17: WEEKLY DO SUMMARY STATISTICS AT HALSTED STREET  
ON THE LITTLE CALUMET RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	7.2	9.9	8.2	100
01/07/08 - 01/13/08	168	5.4	8.2	7.1	100
01/14/08 - 01/20/08	168	6.3	8.2	7.3	100
01/21/08 - 01/27/08	168	7.0	8.1	7.7	100
01/28/08 - 02/03/08	168	6.5	8.1	7.3	100
02/04/08 - 02/10/08	168	6.3	8.0	7.1	100
02/11/08 - 02/17/08	168	6.5	8.9	7.7	100
02/18/08 - 02/24/08	168	7.0	10.4	8.1	100
02/25/08 - 03/02/08	168	6.5	8.5	7.7	100
03/03/08 - 03/09/08	168	7.4	8.9	8.0	100
03/10/08 - 03/16/08	167	6.4	8.5	7.5	100
03/17/08 - 03/23/08	168	6.1	9.7	7.4	100
03/24/08 - 03/30/08	168	6.0	8.3	7.0	100
03/31/08 - 04/06/08	168	5.5	7.4	6.6	100
04/07/08 - 04/13/08	167	5.9	10.8	7.7	100
04/14/08 - 04/20/08	168	6.1	8.5	7.4	100
04/21/08 - 04/27/08	168	5.7	9.6	7.2	100
04/28/08 - 05/04/08	168	4.7	8.1	6.2	100
05/05/08 - 05/11/08	168	4.0	7.4	5.5	99
05/12/08 - 05/18/08	168	5.3	8.3	6.5	100
05/19/08 - 05/25/08	168	4.9	9.3	6.6	100
05/26/08 - 06/01/08	168	3.4	8.5	5.5	96
06/02/08 - 06/08/08	168	1.9	5.3	4.1	60
06/09/08 - 06/15/08	168	0.8	7.8	4.9	72
06/16/08 - 06/22/08	168	3.6	8.9	5.6	98
06/23/08 - 06/29/08	168	4.0	8.4	5.6	100
06/30/08 - 07/06/08	168	3.3	17.8	9.3	99
07/07/08 - 07/13/08	168	5.4	14.6	8.6	100
07/14/08 - 07/20/08	168	4.8	9.1	6.3	100
07/21/08 - 07/27/08	168	4.6	9.7	6.5	100
07/28/08 - 08/03/08	60	5.5	7.9	6.6	100
08/04/08 - 08/10/08	107	4.7	7.9	6.3	100
08/11/08 - 08/17/08	168	5.7	7.8	6.6	100
08/18/08 - 08/24/08	168	5.3	8.8	6.8	100

TABLE A-17 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
 HALSTED STREET ON THE LITTLE CALUMET RIVER DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 4.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	6.5	10.3	7.7	100
09/01/08 - 09/07/08	167	2.7	9.7	6.4	96
09/08/08 - 09/14/08	168	2.0	6.8	5.5	90
09/15/08 - 09/21/08	168	0.0	5.9	4.3	74
09/22/08 - 09/28/08	60	5.1	6.9	5.7	100
09/29/08 - 10/05/08	108	5.8	6.6	6.2	100
10/06/08 - 10/12/08	168	5.6	6.7	6.2	100
10/13/08 - 10/19/08	168	5.7	7.2	6.4	100
10/20/08 - 10/26/08	168	5.7	8.0	6.8	100
10/27/08 - 11/02/08	168	6.2	7.1	6.6	100
11/03/08 - 11/09/08	168	5.7	7.1	6.5	100
11/10/08 - 11/16/08	168	6.4	7.8	7.0	100
11/17/08 - 11/23/08	168	7.2	8.4	7.8	100
11/24/08 - 11/30/08	168	6.8	8.6	7.6	100
12/01/08 - 12/07/08	168	6.8	8.8	7.7	100
12/08/08 - 12/14/08	168	7.3	9.1	8.2	100
12/15/08 - 12/21/08	168	8.3	10.8	9.3	100
12/22/08 - 12/28/08	168	7.9	10.8	9.8	100
12/29/08 - 12/31/08	72	8.3	10.7	9.2	100

TABLE A-18: WEEKLY DO SUMMARY STATISTICS AT DIVISION STREET  
ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 04/27/08			NO DATA		
04/28/08 - 05/04/08	108	4.3	7.4	5.6	100
05/05/08 - 05/11/08	168	3.3	7.6	4.6	100
05/12/08 - 05/18/08	168	5.1	7.0	6.0	100
05/19/08 - 05/25/08	168	4.7	8.1	6.2	100
05/26/08 - 06/01/08	168	3.5	7.1	5.2	100
06/02/08 - 06/08/08	168	0.6	4.7	3.3	76
06/09/08 - 06/15/08	168	1.3	6.1	3.9	64
06/16/08 - 06/22/08	168	3.7	7.8	5.0	100
06/23/08 - 06/29/08	168	3.6	7.6	4.8	100
06/30/08 - 07/06/08	168	3.6	11.8	7.0	100
07/07/08 - 07/13/08	168	4.4	10.5	6.9	100
07/14/08 - 07/20/08	168	3.2	8.6	5.3	100
07/21/08 - 07/27/08	168	3.8	7.6	5.6	100
07/28/08 - 08/03/08	168	4.6	6.8	5.6	100
08/04/08 - 08/10/08	168	3.5	6.5	5.0	100
08/11/08 - 08/17/08	168	5.0	6.8	5.8	100
08/18/08 - 08/24/08	168	5.3	7.6	6.1	100
08/25/08 - 08/31/08	168	5.7	8.4	6.9	100
09/01/08 - 09/07/08	168	3.3	7.9	5.9	100
09/08/08 - 09/14/08	167	4.4	7.4	5.4	100
09/15/08 - 09/21/08	167	2.9	5.2	4.5	99
09/22/08 - 09/28/08	168	4.3	6.1	5.0	100
09/29/08 - 10/05/08	168	4.8	6.0	5.5	100
10/06/08 - 10/12/08	168	5.2	6.8	6.1	100
10/13/08 - 10/19/08	168	5.4	6.7	6.0	100
10/20/08 - 10/26/08	59	6.3	7.2	6.7	100
10/27/08 - 11/02/08	109	5.8	7.4	6.6	100
11/03/08 - 11/09/08	168	5.4	6.9	6.0	100
11/10/08 - 11/16/08	168	5.8	7.2	6.6	100
11/17/08 - 11/23/08	61	6.8	7.6	7.3	100
11/24/08 - 12/31/08			NO DATA		

TABLE A-19: WEEKLY DO SUMMARY STATISTICS AT CICERO AVENUE  
ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	8.1	10.4	9.1	100
01/07/08 - 01/13/08	168	6.4	9.1	8.2	100
01/14/08 - 01/20/08	168	7.9	10.1	9.0	100
01/21/08 - 01/27/08	168	8.5	9.7	9.1	100
01/28/08 - 02/03/08	168	7.9	10.2	8.8	100
02/04/08 - 02/10/08	168	7.8	10.4	9.1	100
02/11/08 - 02/17/08	168	8.0	10.1	8.9	100
02/18/08 - 02/24/08	168	7.5	11.9	9.1	100
02/25/08 - 03/02/08	168	7.5	8.8	8.3	100
03/03/08 - 03/09/08	168	7.5	10.5	9.1	100
03/10/08 - 03/16/08	167	7.0	9.3	8.5	100
03/17/08 - 03/23/08	168	7.7	9.5	8.5	100
03/24/08 - 03/30/08	168	8.0	10.1	8.8	100
03/31/08 - 04/06/08	168	7.4	9.1	8.2	100
04/07/08 - 04/13/08	168	7.0	9.2	7.9	100
04/14/08 - 04/20/08	168	6.7	9.2	8.3	100
04/21/08 - 04/27/08	168	5.3	8.6	7.1	100
04/28/08 - 05/04/08	168	5.3	8.4	6.8	100
05/05/08 - 05/11/08	168	4.6	7.4	6.0	100
05/12/08 - 05/18/08	168	6.1	7.4	6.9	100
05/19/08 - 05/25/08	168	5.6	9.0	7.2	100
05/26/08 - 06/01/08	168	4.6	7.9	6.2	100
06/02/08 - 06/08/08	168	3.6	5.6	4.4	100
06/09/08 - 06/15/08	168	2.6	7.4	4.9	99
06/16/08 - 06/22/08	168	3.7	7.8	5.9	100
06/23/08 - 06/29/08	168	4.4	7.3	5.7	100
06/30/08 - 07/06/08	168	4.1	12.6	7.5	100
07/07/08 - 07/13/08	168	5.4	11.1	7.6	100
07/14/08 - 07/20/08	168	3.7	9.3	6.4	100
07/21/08 - 07/27/08	167	4.7	8.1	6.3	100
07/28/08 - 08/03/08	168	5.7	8.9	7.4	100
08/04/08 - 08/10/08	168	4.5	7.7	5.9	100
08/11/08 - 08/17/08	168	5.2	6.7	5.9	100
08/18/08 - 08/24/08	168	5.4	7.2	6.3	100

TABLE A-19 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
CICERO AVENUE ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	5.6	8.1	6.8	100
09/01/08 - 09/07/08	168	2.6	8.5	6.0	98
09/08/08 - 09/14/08	168	4.6	7.1	5.6	100
09/15/08 - 09/21/08	168	1.6	5.1	4.2	89
09/22/08 - 09/28/08	168	3.6	5.6	5.0	100
09/29/08 - 10/05/08	168	4.4	6.2	5.5	100
10/06/08 - 10/12/08	168	5.3	6.8	6.0	100
10/13/08 - 10/19/08	168	5.1	6.4	5.7	100
10/20/08 - 10/26/08	168	5.8	7.1	6.4	100
10/27/08 - 11/02/08	157	5.8	8.8	6.8	100
11/03/08 - 11/09/08	168	5.6	8.1	6.5	100
11/10/08 - 11/16/08	168	6.5	8.6	7.5	100
11/17/08 - 11/23/08	60	6.5	7.8	7.2	100
11/24/08 - 11/30/08	109	6.9	7.8	7.4	100
12/01/08 - 12/07/08	168	6.8	9.2	8.2	100
12/08/08 - 12/14/08	168	8.5	10.0	9.1	100
12/15/08 - 12/21/08	168	9.3	11.4	10.1	100
12/22/08 - 12/28/08	168	9.5	12.4	10.9	100
12/29/08 - 12/31/08	72	9.7	10.7	10.3	100

TABLE A-20: WEEKLY DO SUMMARY STATISTICS AT RIVER MILE 311.7  
ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 04/27/08			NO DATA		
04/28/08 - 05/04/08	109	6.1	8.4	7.0	100
05/05/08 - 05/11/08	168	4.7	7.9	5.9	100
05/12/08 - 05/18/08	168	6.4	7.4	6.9	100
05/19/08 - 05/25/08	168	6.3	9.8	7.7	100
05/26/08 - 06/01/08	168	5.2	9.2	7.0	100
06/02/08 - 06/08/08	168	3.1	6.7	4.4	100
06/09/08 - 06/15/08	168	3.2	8.7	5.2	100
06/16/08 - 06/22/08	168	5.0	8.3	6.6	100
06/23/08 - 06/29/08	168	5.0	9.9	6.6	100
06/30/08 - 07/06/08	168	5.4	14.5	8.5	100
07/07/08 - 07/13/08	168	5.9	13.1	8.4	100
07/14/08 - 07/20/08	168	4.5	10.8	7.3	100
07/21/08 - 07/27/08	168	4.2	8.8	6.4	100
07/28/08 - 08/03/08	168	5.1	8.0	6.5	100
08/04/08 - 08/10/08	168	3.5	6.6	5.3	100
08/11/08 - 08/17/08	168	5.2	7.0	6.0	100
08/18/08 - 08/24/08	168	5.6	7.6	6.5	100
08/25/08 - 08/31/08	168	5.6	9.7	8.1	100
09/01/08 - 09/07/08	168	2.3	10.0	6.9	95
09/08/08 - 09/14/08	168	4.4	6.4	5.4	100
09/15/08 - 09/21/08	168	1.3	5.3	4.1	85
09/22/08 - 09/28/08	168	4.2	6.0	5.1	100
09/29/08 - 10/05/08	168	4.7	6.2	5.5	100
10/06/08 - 10/12/08	168	5.8	6.8	6.2	100
10/13/08 - 10/19/08	168	5.1	6.5	5.7	100
10/20/08 - 10/26/08	168	6.0	7.1	6.5	100
10/27/08 - 11/02/08	168	6.2	8.2	6.8	100
11/03/08 - 11/09/08	168	5.6	6.8	6.0	100
11/10/08 - 11/16/08	168	6.5	7.5	6.9	100
11/17/08 - 11/23/08	168	6.6	8.8	7.6	100
11/24/08 - 11/30/08	59	8.0	8.7	8.3	100
12/01/08 - 12/31/08			NO DATA		

TABLE A-21: WEEKLY DO SUMMARY STATISTICS AT SOUTHWEST HIGHWAY  
ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 04/27/08			NO DATA		
04/28/08 - 05/04/08	109	6.3	9.4	7.5	100
05/05/08 - 05/11/08	168	5.3	8.5	6.8	100
05/12/08 - 05/18/08	167	6.1	8.6	7.0	100
05/19/08 - 05/25/08	168	6.7	9.8	8.0	100
05/26/08 - 06/01/08	168	4.7	10.0	7.1	100
06/02/08 - 06/08/08	168	3.2	7.3	4.3	100
06/09/08 - 06/15/08	168	2.4	8.5	4.8	94
06/16/08 - 06/22/08	168	4.5	9.2	6.6	100
06/23/08 - 06/29/08	168	4.7	10.0	6.4	100
06/30/08 - 07/06/08	168	4.3	12.4	7.5	100
07/07/08 - 07/13/08	168	5.2	12.5	7.7	100
07/14/08 - 07/20/08	168	4.6	10.2	6.9	100
07/21/08 - 07/27/08	168	4.2	8.1	6.5	100
07/28/08 - 08/03/08	168	4.8	7.6	5.9	100
08/04/08 - 08/10/08	168	3.0	6.4	5.0	100
08/11/08 - 08/17/08	168	4.8	7.5	5.8	100
08/18/08 - 08/24/08	168	4.7	7.5	6.0	100
08/25/08 - 08/31/08	168	5.5	8.9	6.9	100
09/01/08 - 09/07/08	168	2.1	8.3	5.8	96
09/08/08 - 09/14/08	168	4.1	6.3	5.2	100
09/15/08 - 09/21/08	168	3.0	6.1	4.1	98
09/22/08 - 09/28/08	168	3.8	5.9	4.7	100
09/29/08 - 10/05/08	168	4.3	6.3	5.4	100
10/06/08 - 10/12/08	168	5.3	6.8	6.0	100
10/13/08 - 10/19/08	168	4.9	6.6	5.6	100
10/20/08 - 10/26/08	168	5.8	8.1	6.6	100
10/27/08 - 11/02/08	168	6.5	8.9	7.5	100
11/03/08 - 11/09/08	168	5.5	7.7	6.4	100
11/10/08 - 11/16/08	168	6.3	7.4	6.8	100
11/17/08 - 11/23/08	167	6.9	8.5	7.6	100
11/24/08 - 11/30/08	59	7.9	8.7	8.3	100
12/01/08 - 12/31/08			NO DATA		

TABLE A-22: WEEKLY DO SUMMARY STATISTICS AT 104TH AVENUE  
ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08			NO DATA		
01/07/08 - 01/13/08	90	7.5	9.7	8.9	100
01/14/08 - 01/20/08	168	9.0	11.0	10.0	100
01/21/08 - 01/27/08	168	9.2	10.7	10.1	100
01/28/08 - 02/03/08	168	9.1	10.5	9.8	100
02/04/08 - 02/10/08	82	8.8	10.3	9.5	100
02/11/08 - 03/02/08			NO DATA		
03/03/08 - 03/09/08	109	9.0	10.2	9.6	100
03/10/08 - 03/16/08	167	8.1	9.2	8.6	100
03/17/08 - 03/23/08	168	7.4	9.3	8.3	100
03/24/08 - 03/30/08	168	8.0	10.1	9.2	100
03/31/08 - 04/06/08	167	7.5	9.7	8.4	100
04/07/08 - 04/13/08	168	7.5	8.9	8.3	100
04/14/08 - 04/20/08	168	7.8	9.0	8.4	100
04/21/08 - 04/27/08	168	6.7	8.4	7.6	100
04/28/08 - 05/04/08	168	5.5	8.2	6.8	100
05/05/08 - 05/11/08	168	5.6	7.7	6.5	100
05/12/08 - 05/18/08	168	6.7	7.5	7.0	100
05/19/08 - 05/25/08	168	6.8	10.1	7.9	100
05/26/08 - 06/01/08	60	6.7	9.9	7.7	100
06/02/08 - 06/15/08			NO DATA		
06/16/08 - 06/22/08	109	6.1	8.0	6.9	100
06/23/08 - 06/29/08	168	5.5	8.6	6.7	100
06/30/08 - 07/06/08	168	6.0	10.9	7.2	100
07/07/08 - 07/13/08	168	5.7	11.0	8.0	100
07/14/08 - 07/20/08	168	5.3	9.8	7.6	100
07/21/08 - 07/27/08	168	5.3	7.9	6.5	100
07/28/08 - 08/03/08	59	4.8	7.5	6.1	100
08/04/08 - 09/28/08			NO DATA		
09/29/08 - 10/05/08	109	5.4	6.4	6.0	100
10/06/08 - 10/12/08	168	5.1	6.8	5.9	100
10/13/08 - 10/19/08	168	4.7	5.9	5.3	100
10/20/08 - 10/26/08	168	5.4	7.1	6.3	100
10/27/08 - 11/02/08	168	6.6	8.2	7.4	100



TABLE A-22 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
104TH AVENUE ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
11/03/08 - 11/09/08	84	6.0	7.2	6.6	100
11/10/08 - 11/23/08			NO DATA		
11/24/08 - 11/30/08	109	7.7	9.2	8.7	100
12/01/08 - 12/07/08	59	5.7	8.8	8.3	100
12/08/08 - 12/31/08			NO DATA		

TABLE A-23: WEEKLY DO SUMMARY STATISTICS AT ROUTE 83  
ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
01/01/08 - 01/06/08	144	9.3	10.7	10.1	100
01/07/08 - 01/13/08	168	7.5	10.3	8.7	100
01/14/08 - 01/20/08	168	8.3	9.9	9.1	100
01/21/08 - 01/27/08	168	9.2	9.9	9.5	100
01/28/08 - 02/03/08	168	8.8	10.2	9.7	100
02/04/08 - 02/10/08	168	8.9	10.7	9.7	100
02/11/08 - 02/17/08	168	8.6	10.5	9.5	100
02/18/08 - 02/24/08	168	8.1	10.9	9.7	100
02/25/08 - 03/02/08	167	7.4	9.9	8.7	100
03/03/08 - 03/09/08	168	9.0	10.2	9.6	100
03/10/08 - 03/16/08	167	8.4	9.5	8.9	100
03/17/08 - 03/23/08	167	7.5	9.6	8.5	100
03/24/08 - 03/30/08	168	8.1	10.1	9.2	100
03/31/08 - 04/06/08	168	7.1	9.2	8.0	100
04/07/08 - 04/13/08	168	7.3	9.2	8.0	100
04/14/08 - 04/20/08	168	7.3	8.6	8.0	100
04/21/08 - 04/27/08	168	6.8	8.9	7.7	100
04/28/08 - 05/04/08	167	5.2	8.0	6.6	100
05/05/08 - 05/11/08	168	5.5	7.7	6.6	100
05/12/08 - 05/18/08	168	5.9	7.8	6.5	100
05/19/08 - 05/25/08	168	5.7	8.6	7.2	100
05/26/08 - 06/01/08	168	4.8	10.1	7.2	100
06/02/08 - 06/08/08	168	2.4	5.5	4.0	90
06/09/08 - 06/15/08	168	3.0	7.4	4.5	99
06/16/08 - 06/22/08	168	5.3	9.7	6.8	100
06/23/08 - 06/29/08	168	4.8	8.1	6.2	100
06/30/08 - 07/06/08	168	4.4	9.9	6.8	100
07/07/08 - 07/13/08	59	7.4	11.6	9.0	100
07/14/08 - 07/20/08	110	4.3	8.4	6.7	100
07/21/08 - 07/27/08	168	4.1	8.3	6.0	100
07/28/08 - 08/03/08	168	4.5	8.5	5.9	100
08/04/08 - 08/10/08	168	3.4	5.7	4.6	100
08/11/08 - 08/17/08	168	4.8	7.0	5.7	100
08/18/08 - 08/24/08	168	4.4	6.8	5.8	100

TABLE A-23 (Continued): WEEKLY DO SUMMARY STATISTICS AT  
ROUTE 83 ON THE CALUMET-SAG CHANNEL DURING 2008

Monitoring Dates	Number of DO Values	DO Concentration (mg/L)			Percent DO Values ≥ 3.0 mg/L IPCB Standard
		Minimum	Maximum	Mean	
08/25/08 - 08/31/08	168	4.6	7.7	6.2	100
09/01/08 - 09/07/08	168	2.7	7.5	5.6	96
09/08/08 - 09/14/08	168	4.6	6.2	5.3	100
09/15/08 - 09/21/08	168	3.2	5.8	4.5	100
09/22/08 - 09/28/08	58	4.8	5.2	4.9	100
09/29/08 - 10/05/08	110	5.2	6.1	5.7	100
10/06/08 - 10/12/08	168	5.2	6.7	5.9	100
10/13/08 - 10/19/08	168	4.8	6.0	5.4	100
10/20/08 - 10/26/08	168	5.1	7.3	6.4	100
10/27/08 - 11/02/08	168	6.9	7.7	7.3	100
11/03/08 - 11/09/08	168	5.8	7.4	6.5	100
11/10/08 - 11/16/08	168	6.3	7.5	7.0	100
11/17/08 - 11/23/08	168	6.4	8.0	7.6	100
11/24/08 - 11/30/08	168	7.1	9.1	8.2	100
12/01/08 - 12/07/08	168	7.3	9.5	8.5	100
12/08/08 - 12/14/08	168	8.9	10.5	9.8	100
12/15/08 - 12/21/08	168	10.4	13.2	11.3	100
12/22/08 - 12/28/08	168	11.1	13.0	12.3	100
12/29/08 - 12/31/08	72	10.9	11.5	11.2	100

TABLE A-24: SUMMARY STATISTICS FOR DISSOLVED OXYGEN MEASUREMENTS  
MADE DURING CROSS-SECTIONAL SURVEYS

Waterway, Station, and Date	Field Monitor DO (mg/L)	Cross-Sectional Dissolved Oxygen						
		Cross Section Depth Range (feet)	N*	Minimum (mg/L)	Maximum (mg/L)	Mean (mg/L)	Standard Deviation (mg/L)	Coefficient of Variation (%)
<b>North Shore Channel</b>								
<u>Main Street</u>								
04/04/08	18.23	3.1 – 4.8	8	17.89	18.76	18.29	0.29	1.61
08/15/08	7.20	2.9 – 5.3	8	7.23	7.58	7.45	0.14	1.83
11/14/08	14.86	3.1 – 4.3	8	14.50	16.11	15.31	0.66	4.29
<u>Foster Avenue</u>								
04/08/08	8.61	3.2 – 8.2	9	8.47	8.53	8.49	0.02	0.25
08/26/08	7.31	3.5 – 9.2	10	7.34	7.47	7.39	0.04	0.55
11/18/08	7.48	3.2 – 9.2	9	7.58	7.66	7.62	0.03	0.35
<b>North Branch Chicago River</b>								
<u>Addison Street</u>								
04/08/08	7.97	5.8 – 7.4	9	8.21	8.30	8.25	0.03	0.38
08/26/08	6.69	5.6 – 8.3	11	6.66	6.91	6.83	0.06	0.93
11/18/08	7.64	5.7 – 8.7	10	7.68	7.71	7.70	0.01	0.12
<u>Fullerton Avenue</u>								
04/08/08	8.07	7.0–13.2	11	7.76	8.07	7.95	0.09	1.17
08/26/08	5.55	10.3–13.8	12	5.71	6.07	5.85	0.11	1.84
11/18/08	7.19	9.5–13.1	12	7.01	7.08	7.03	0.02	0.31

TABLE A-24 (Continued): SUMMARY STATISTICS FOR DISSOLVED OXYGEN MEASUREMENTS  
MADE DURING CROSS-SECTIONAL SURVEYS

Waterway, Station, and Date	Field Monitor DO (mg/L)	Cross-Sectional Dissolved Oxygen						
		Cross Section Depth Range (feet)	N*	Minimum (mg/L)	Maximum (mg/L)	Mean (mg/L)	Standard Deviation (mg/L)	Coefficient of Variation (%)
<b>North Branch Chicago River</b>								
<u>Kinzie Street</u>								
04/08/08	7.80	9.1 – 20.8	12	7.46	7.61	7.52	0.04	0.55
08/26/08	5.99	10.3 – 19.4	12	6.05	6.22	6.16	0.04	0.69
11/18/08	7.05	11.3 – 21.4	12	7.03	7.11	7.07	0.02	0.27
<b>Chicago River</b>								
<u>Clark Street</u>								
04/08/08	8.63	13.6 – 24.2	12	8.26	9.00	8.85	0.20	2.31
08/26/08	7.60	13.0 – 22.0	12	7.36	7.81	7.70	0.13	1.71
11/18/08	9.72	13.0 – 22.6	12	6.74	8.30	7.82	0.58	7.45
<b>South Branch Chicago River</b>								
<u>Loomis Street</u>								
04/10/08	7.74	13.4 – 22.3	12	7.55	7.68	7.61	0.04	0.52
08/19/08	6.76	13.8 – 23.0	12	6.16	6.80	6.61	0.21	3.22
11/18/08	7.11	14.9 – 21.5	12	6.85	7.22	7.13	0.10	1.46

TABLE A-24 (Continued): SUMMARY STATISTICS FOR DISSOLVED OXYGEN MEASUREMENTS  
MADE DURING CROSS-SECTIONAL SURVEYS

Waterway, Station, and Date	Field Monitor DO (mg/L)	Cross-Sectional Dissolved Oxygen						
		Cross Section Depth Range (feet)	N*	Minimu m (mg/L)	Maximu m (mg/L)	Mean (mg/L)	Standard Deviation (mg/L)	Coefficient of Variation (%)
<b>Bubbly Creek</b>								
<u>36th Street</u>								
04/10/08	18.91	1.5 – 4.2	7	19.58	20.20	19.88	0.23	1.18
08/19/08	0.00	1.7 – 5.0	8	0.21	5.22	3.89	1.66	42.61
11/21/08	6.71	3.7 – 4.8	9	6.74	7.23	6.88	0.15	2.14
<u>Interstate Highway 55</u>								
04/10/08	9.19	4.1 – 10.3	10	9.50	9.69	9.59	0.05	0.53
08/19/08	4.60	5.2 – 11.0	10	0.14	5.34	4.42	1.60	36.12
11/21/08	7.63	5.6 – 11.9	10	6.82	7.72	7.52	0.26	3.46
<b>Chicago Sanitary and Ship Canal</b>								
<u>Cicero Avenue</u>								
04/10/08	6.82	6.8 – 16.2	11	6.94	7.12	7.05	0.06	0.79
08/19/08	5.24	6.1 – 18.9	11	5.37	5.70	5.56	0.11	1.92
11/18/08	5.99	7.8 – 19.4	11	5.81	5.94	5.89	0.04	0.66
<u>B&amp;O Railroad</u>								
04/09/08	8.13	9.6 – 18.2	12	8.19	8.32	8.27	0.04	0.48
08/20/08	6.04	7.2 – 18.6	11	6.00	6.10	6.06	0.03	0.58
11/20/08	6.49	5.8 – 20.9	11	6.51	6.57	6.54	0.02	0.25

TABLE A-24 (Continued): SUMMARY STATISTICS FOR DISSOLVED OXYGEN MEASUREMENTS  
MADE DURING CROSS-SECTIONAL SURVEYS

Waterway, Station, and Date	Field Monitor DO (mg/L)	Cross-Sectional Dissolved Oxygen Samples						Coefficient of Variation (%)
		Cross Section Depth Range (feet)	N*	Minimum (mg/L)	Maximum (mg/L)	Mean (mg/L)	Standard Deviation (mg/L)	
<b>Chicago Sanitary and Ship Canal</b>								
<u>Route 83</u>								
04/09/08	NA**	21.4 – 23.1	12	7.11	7.28	7.19	0.05	0.69
08/20/08	4.64	18.8 – 23.2	12	4.89	4.99	4.94	0.03	0.55
11/20/08	7.29	20.1 – 24.6	12	7.14	7.22	7.19	0.03	0.35
<u>Romeoville Road</u>								
04/09/08	NA	22.4 – 25.5	12	7.57	7.68	7.63	0.04	0.52
08/20/08	4.90	23.5 – 26.1	12	5.10	5.35	5.26	0.07	1.36
11/20/08	6.51	20.8 – 26.1	12	6.71	6.84	6.76	0.04	0.61
<u>Lockport Powerhouse</u>								
04/07/08	7.02	22.4 – 27.9	12	6.90	7.18	7.04	0.09	1.22
08/18/08	NA	18.7 – 29.2	12	5.47	6.47	5.94	0.36	6.00
11/17/08	7.61	22.6 – 31.9*	12	5.94	6.27	6.09	0.09	1.44
<b>Little Calumet River</b>								
<u>C&amp;WI Railroad</u>								
04/09/08	14.09	9.5 – 15.7	12	13.77	14.52	14.22	0.21	1.48
08/20/08	7.51	8.8 – 12.5	12	7.46	8.20	7.71	0.26	3.32
11/19/08	13.46	6.7 – 14.2	11	12.47	13.09	12.72	0.22	1.71

TABLE A-24 (Continued): SUMMARY STATISTICS FOR DISSOLVED OXYGEN MEASUREMENTS  
MADE DURING CROSS-SECTIONAL SURVEYS

Waterway, Station, and Date	Field Monitor DO (mg/L)	Cross Section Depth Range (feet)	Cross-Sectional Dissolved Oxygen Samples					Coefficient of Variation (%)
			N*	Minimum (mg/L)	Maximum (mg/L)	Mean (mg/L)	Standard Deviation (mg/L)	
<b>Little Calumet River</b>								
<u>Halsted Street</u>								
04/09/08	7.29	6.2 – 14.3	11	7.02	7.65	7.28	0.27	3.65
08/20/08	7.55	4.5 – 14.2	10	6.92	8.08	7.37	0.36	4.95
11/19/08	7.96	5.3 – 12.5	11	7.42	7.63	7.57	0.06	0.77
<b>Calumet-Sag Channel</b>								
<u>Cicero Avenue</u>								
04/09/08	7.98	8.5 – 12.0	12	8.30	8.39	8.34	0.03	0.38
08/20/08	7.19	8.5 – 13.0	12	6.77	7.02	6.90	0.07	1.05
11/19/08	7.40	8.7 – 10.6	12	7.11	7.32	7.19	0.08	1.08
<u>Division Street</u>								
04/09/08	NA	6.5 – 13.2	11	8.10	8.16	8.13	0.02	0.26
08/20/08	6.63	5.0 – 13.0	11	6.96	7.27	7.07	0.12	1.69
11/19/08	NA	4.9 – 12.4	11	7.46	7.57	7.52	0.03	0.42
<u>104th Avenue</u>								
04/09/08	8.42	5.6 – 13.6	9	8.42	8.71	8.53	0.11	1.24
08/20/08	6.20	4.9 – 13.7	10	6.65	7.24	6.88	0.19	2.78
11/19/08	7.12	6.5 – 13.5	10	7.03	7.12	7.08	0.03	0.43



TABLE A-24 (Continued): SUMMARY STATISTICS FOR DISSOLVED OXYGEN MEASUREMENTS  
MADE DURING CROSS-SECTIONAL SURVEYS

Waterway, Station, and Date	Field Monitor DO (mg/L)	Cross-Sectional Dissolved Oxygen Samples						
		Cross Section Depth Range (feet)	N*	Minimum (mg/L)	Maximum (mg/L)	Mean (mg/L)	Standard Deviation (mg/L)	Coefficient of Variation (%)
<b>Calumet Sag Channel</b>								
<u>Southwest Highway</u>								
04/09/08	NA	9.1 – 15.0	12	8.17	8.36	8.29	0.05	0.66
08/20/08	6.81	6.1 – 15.0	11	7.04	7.83	7.28	0.25	3.43
11/19/08	NA	6.0 – 13.6	9	7.08	7.21	7.13	0.04	0.53
<u>River Mile 311.7</u>								
04/09/08	NA	7.5 – 13.3	11	8.55	8.74	8.63	0.07	0.81
08/20/08	7.70	4.6 – 13.5	10	6.60	7.57	6.96	0.39	5.65
11/19/08	7.17	4.3 – 13.1	10	7.03	7.21	7.14	0.06	0.87
<u>Route 83</u>								
04/09/08	8.97	6.5 – 12.5	11	8.35	8.87	8.53	0.17	2.01
08/20/08	6.68	8.8 – 13.5	12	6.77	7.13	6.92	0.10	1.52
11/19/08	7.82	6.6 – 13.3	11	7.52	7.65	7.57	0.04	0.47
<b>Des Plaines River</b>								
<u>Jefferson Street</u>								
04/07/08	8.94	8.9 – 22.2	12	8.54	8.78	8.65	0.09	1.02
08/18/08	6.05	12.5 – 22.4	12	5.71	6.01	5.86	0.10	1.75
11/17/08	9.14	13.7 – 23.5	12	8.88	9.02	8.95	0.05	0.54

\*Number of DO measurements made across transect during cross-sectional survey.

\*\*NA = No Analysis.