

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)	
)	
WATER QUALITY STANDARDS AND)	R08-9
EFFLUENT LIMITATIONS FOR THE)	(Rulemaking - Water)
CHICAGO AREA WATERWAY SYSTEM)	
AND THE LOWER DES PLAINES RIVER:)	
PROPOSED AMENDMENTS TO 35 Ill.)	
Adm. Code Parts 301, 302, 303 and 304)	
)	

NOTICE OF FILING

To: ALL COUNSEL OF RECORD
(Service List Attached)

PLEASE TAKE NOTICE that on the 14th Day of July, 2008, I filed with the Office of the Clerk of the Illinois Pollution Control Board the attached July 7, 2008 Correspondence from the Metropolitan Water Reclamation District of Greater Chicago to the Illinois Environmental Protection Agency, copies of which are hereby served upon you.

Dated: July 14, 2008

**METROPOLITAN WATER RECLAMATION
DISTRICT OF GREATER CHICAGO**

By: 
One of Its Attorneys

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PROOF OF SERVICE

The undersigned, a non-attorney, certifies, under penalties of perjury pursuant to 735 ILCS 5/1-109, at that true copies of the forgoing Notice of Filing and July 7, 2008 Correspondence from the Metropolitan Water Reclamation District of Greater Chicago to the Illinois Environmental Protection Agency were mailed via U.S. Mail, first class postage prepaid, from One North Wacker Drive, Suite 4400, Chicago, Illinois to All Counsel of Record on the attached Service List, on this 14th Day of July, 2008.



Jeaninne Roraff

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*** * * * * PC #76 * * * * ***

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Protecting Our Water Environment

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July 7, 2008

Ms. Marcia Willhite, Bureau Chief
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P. O. Box 19276
Springfield, Illinois 62794-9276

SUBJECT: Effluent Temperature Measurement Adjustment at the Stickney Water Reclamation Plant

As you are aware, the Metropolitan Water Reclamation District of Greater Chicago (District) transmitted a letter to Mr. Rob Sulski of your staff on June 4, 2007 concerning temperature issues. Enclosed with the letter were effluent temperature data and associated statistics for the North Side, Calumet and Stickney Water Reclamation Plants (WRPs) for the years 2001 through 2006. The District has concluded that some of those data from the Stickney WRP – in particular, data from the years 2005 and 2006 – are of uncertain reliability. This letter is to inform the Agency of the District's recent conclusions on this issue and to explain the basis for those conclusions.

The Stickney WRP (SWRP) has historically used remote sensors for temperature measurement. Through 2004, the SWRP effluent was monitored with a remote sensor located near the waterway, outside of the facility fence-line. Due to concerns about the security of the sampling equipment, in 2005 the SWRP effluent sampler was moved inside the fence-line, to a location next to the effluent channel. The remote temperature sensor was not available once the effluent sampling location was relocated. From 2005 until the present, the temperature was measured with a temperature probe auxiliary to the pH electrode inside this new sampling structure. The temperature measurement was taken from either the on-line sampler flow or a grab sample from the effluent channel.

Because the District is not required to measure temperature for regulatory compliance purposes, there has been no quality assurance check on the data collection or the temperature measurement device. After reviewing the data and methods used to determine effluent temperature from 2005 to present, we feel that these data are not reliable and therefore should be excluded from the database that is being used to develop new water quality standards for the Chicago Area Waterways System.

Ms. Marcia Willhite

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July 7, 2008

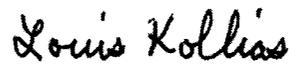
SUBJECT: Effluent Temperature Measurement Adjustment at the Stickney
Water Reclamation Plant

To address the concerns with the effluent temperature measurements, the SWRP effluent temperature will now be reported using the data collected from the continuous monitor in the SWRP effluent channel. This temperature sensor and accompanying transmitter will be calibrated to laboratory standards using a NIST-calibrated thermometer. The calibration will include multiple points to ensure linearity. After the initial calibration, an annual calibration program will be implemented for both sensor and transmitter, in accordance with Standard Methods.

To assess the potential impact of excluding the 2005-2006 data, we have prepared two tables, which are enclosed. Table 1 shows the data submitted with the June 4, 2007, letter; this table includes summaries of temperature measurements from 2001 through 2006. Table 2 does not include the 2005 and 2006 data, so it shows summaries of the temperature measurements from 2001 through 2004. We feel that this table better represents Stickney WRP's effluent temperature characteristics.

Please feel free to contact me to discuss this matter.

Very truly yours,



Louis Kollias
Director of Research and Development

LK:CO'C:nu
Attachments
cc: Lanyon
Feldman
Jamjun
Hill
Granato
O'Connor

**TABLE 1: BASIC STATISTICS OF TEMPERATURE (°F) IN THE
OUTFALL OF STICKNEY WATER RECLAMATION PLANT (WRP)
DURING 2001 THROUGH 2006**

Period	Observation	Minimum	Percentile			Mean	Maximum
			25 th	50 th Median	75 th		
January	186	45.1	50.7	52.5	54.3	52.6	62.4
February*	169	44.8	48.6	52.3	53.6	51.6	61.5
March	186	45.5	50.4	52.5	54.0	52.3	58.5
April 1-15	90	47.5	52.7	55.1	57.0	55.0	63.5
April 16-30	90	53.8	56.8	58.7	60.8	58.8	64.8
May 1-15	90	52.5	59.2	61.5	63.3	61.1	72.3
May 16-31	96	55.8	60.4	64.0	65.9	63.7	76.6
June 1-15	90	58.8	63.5	66.3	72.5	67.6	82.2
June 16-30	90	64.0	67.8	70.1	74.5	70.9	84.0
July	186	67.6	71.6	73.7	79.0	75.2	85.8
August	186	68.0	72.5	74.8	80.6	76.5	85.8
September 1-15	90	69.6	72.9	74.3	80.2	76.3	98.2
September 16-30	90	65.3	70.3	72.7	76.6	73.8	97.9
October 1-15	90	60.3	66.4	69.3	73.2	69.8	85.8
October 16-31	96	58.6	64.0	66.1	69.4	66.8	76.1
November	180	54.7	61.3	62.8	66.2	63.7	76.1
December	186	49.6	54.1	57.4	59.9	57.1	66.6

*Included data for February 29 of 2004.

**TABLE 2: BASIC STATISTICS OF TEMPERATURE (°F) IN THE
OUTFALL OF STICKNEY WATER RECLAMATION PLANT (WRP)
DURING 2001 THROUGH 2004**

Period	Observation	Minimum	Percentile			Mean	Maximum
			25 th	50 th Median	75 th		
January	124	45.1	50.1	51.6	53.2	51.5	57.2
February*	113	44.8	48.2	50.7	53.2	50.6	59.5
March	124	45.5	49.6	51.9	53.9	51.8	57.7
April 1-15	60	47.5	52.4	54.5	56.4	54.4	60.4
April 16-30	60	54.0	56.2	58.2	60.0	58.1	62.2
May 1-15	60	52.5	56.7	60.7	62.8	60.2	68.4
May 16-31	64	55.8	59.9	61.6	64.6	62.2	75.4
June 1-15	60	58.8	62.6	64.4	66.3	64.6	71.8
June 16-30	60	64.0	66.7	68.5	70.1	68.4	73.8
July	124	67.6	70.8	72.3	73.9	72.3	76.5
August	124	68.0	72.1	73.2	74.8	73.5	77.5
September 1-15	60	69.6	72.4	73.4	74.3	73.5	79.3
September 16-30	60	65.3	68.9	71.5	74.0	71.7	84.6
October 1-15	60	60.3	65.6	67.5	70.8	68.0	75.0
October 16-31	64	59.9	64.0	65.7	68.1	66.0	72.0
November	120	54.7	60.8	62.2	64.2	62.5	70.5
December	124	50.5	54.4	57.6	59.9	57.3	66.6

*Included data for February 29 of 2004.

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IEPA ATTACHMENT NO. W

June 4, 2007

Mr. Rob Sulski
Illinois Environmental Protection Agency
9511 West Harrison Street
Des Plaines, Illinois 60016

Dear Mr. Sulski:

Subject: Chicago Area Waterways Use Attainability Analysis Draft Standards

This letter is a follow-up to our March 23, 2007, letter to the Illinois Environmental Protection Agency regarding the subject matter. The Metropolitan Water Reclamation District of Greater Chicago (District) would like to amend our comments in the attachment to the March 23, 2007, letter. In Item 14, we state that the Chicago Sanitary and Ship Canal (CSSC) downstream of California Avenue, including the Collateral Channel, should be added to the list of noncontact recreation waters. We would like to rescind this comment. We agree with the January 18, 2007, draft water quality standards in which the CSSC is designated as nonrecreational waters.

As you requested, we enclose the effluent temperatures, with associated statistics, for the North Side, Calumet and Stickney Water Reclamation Plants for the years 2001 through 2006 (Tables 1 through 3).

You also requested that we determine the aqueous carbon dioxide concentration in the waterway. The District determines alkalinity, pH and water temperature, among other parameters, at our ambient water quality monitoring (AWQM) sites. The carbonate alkalinity concentration is determined by potentiometric titration to endpoint pH. To determine the aqueous carbon dioxide concentration, we assume that all alkalinity consists of HCO₃⁻, CO₃²⁻ and OH⁻, which overestimates the carbonate concentration because it ignores other sources of alkalinity. We used relations provided in *Water Quality* (Tchobanoglou, G. and Schroeder, E., Addison-Wesley Publishing, 1985), to compute H₂CO₃*. The following equations were used:

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$$\text{Alkalinity (mole/liter)} = [\text{HCO}_3^-] + [\text{CO}_3^{2-}] + [\text{OH}^-] \quad (1)$$

JUN 6 2007

Div. Water Pollution Control
Field Operations
Section - Reg. 2