

OFFICE OF THE SECRETARY OF STATE

JESSE WHITE • Secretary of State

December 21, 2012

POLLUTION CONTROL BOARD
JOHN THERRIAULT ASSISTANT CLERK
100 W RANDOLPH ST, STE 11-500
CHICAGO, IL 60601

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CLERK'S OFFICE
JAN 07 2013
STATE OF ILLINOIS
Pollution Control Board

Dear JOHN THERRIAULT ASSISTANT CLERK

Your rules Listed below met our codification standards and have been published in Volume 36, Issue 52 of the Illinois Register, dated 12/28/2012.

ADOPTED RULES

Introduction	
35 Ill. Adm. Code 301	18863
Point of Contact: Nancy Miller	
Water Quality Standards	
35 Ill. Adm. Code 302	18871
Point of Contact: Nancy Miller	
Water Use Designations and Site-Specific Water Quality Standards	
35 Ill. Adm. Code 303	18898
Point of Contact: Nancy Miller	

If you have any questions, you may contact the Administrative Code Division at (217) 782 - 7017.



OFFICE OF THE SECRETARY OF STATE

JESSE WHITE * Secretary of State
Administrative Code Division
Attn: Illinois Register
111 East Monroe

CERTIFICATION OF REVIEW AND APPROVAL

Heading of Part: Introduction

Code Citation: 35 Ill. Adm. Code 301

THE OFFICE OF THE SECRETARY OF STATE

INDEX DEPARTMENT

ADMINISTRATIVE CODE DIVISION

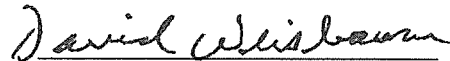
certifies that the attached rule of the:

POLLUTION CONTROL BOARD

viewed and approved on this 12th day of December, 2012

Statutory Authority:

415 ILCS 5 /



Signature of Officer

Director

Title of Officer

ILLINOIS REGISTER

POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENT

- 1) Heading of the Part: Introduction
- 2) Code Citation: 35 Ill. Adm. Code 301
- 3) Section Numbers: Adopted Action:
301.106 Amend
- 4) Statutory Authority: Implementing Sections 5, 10, 13, 21, 22, 22.01, and 22.2 and authorized by Sections 27 of the Environmental Protection Act [415 ILCS 5/5, 10, 13, 21, 22, 22.01, 22.2, and 27].
- 5) Effective Date of Amendment: DEC 12 2012
- 6) Does this rulemaking contain an automatic repeal date? No.
- 7) Does this amendment contain incorporations by reference? Yes.
- 8) The text of the adopted amendment is on file in the Board's Chicago office at the James R. Thompson Center, 100 W. Randolph Street, Suite 11-500, and is available there for public inspection.
- 9) Notice of Proposal Published in Illinois Register: April 13, 2012; 36 Ill. Reg. 5713.
- 10) Has JCAR issued a Statement of Objections to this amendment? No.
- 11) Differences between proposal and final version: Changes were made to reflect corrections to an address for the American Public Health Association and to update the edition number and date of publication for the reference material.
- 12) Have all the changes agreed upon by the agency and JCAR been made as indicated in the agreements letter issued by JCAR? Yes.
- 13) Will this amendment replace emergency amendments currently in effect? No.
- 14) Are there any amendments pending on this Part? No.
- 15) Summary and Purpose of Amendment: These amendments to 35 Ill. Adm. Code 301.106, 302 Subparts B, C, E, F and 303.312 update the current General Use and Lake Michigan Basin water quality standards for boron, fluoride, and manganese, and correct a

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significant error in the derivation of the zinc chronic standard. In addition, these amendments adds incorporations by reference to cyanide test methods, amends requirements for publication of water quality criteria, corrects errors and cross-references, eliminates STORET references, and clarifies references to cyanide, mercury, chloride and toluene water quality standards. Finally, the Board repeals an obsolete site-specific fluoride standard. Essentially, the Board is adopting IEPA's proposal to update and correct the standards with minor modifications and additions.

- 16) Information and questions regarding this adopted amendment shall be directed to:

Kathleen Crowley
Illinois Pollution Control Board
100 W. Randolph Street, Suite 11-500
Chicago, IL 60601
312-814-6929
Kathleen.Crowley@illinois.gov

Copies of the Board's opinions and orders may be requested from the Clerk of the Board at the address listed in #8 above or by calling 312/814-3620. Please refer to the docket number R11-18 in your request. The Board order is also available from the Board's Web site (www.ipcb.state.il.us).

The full text of the Adopted Amendments begins on the next page:

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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENT

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 301
INTRODUCTION

Section	
301.101	Authority
301.102	Policy
301.103	Repeals
301.104	Analytical Testing
301.105	References to Other Sections
301.106	Incorporations by Reference
301.107	Severability
301.108	Adjusted Standards
301.200	Definitions
301.205	Act
301.210	Administrator
301.215	Agency
301.220	Aquatic Life
301.221	Area of Concern
301.225	Artificial Cooling Lake
301.230	Basin
301.231	Bioaccumulative Chemicals of Concern
301.235	Board
301.240	CWA
301.245	Calumet River System
301.247	Chicago Area Waterway System
301.250	Chicago River System
301.255	Combined Sewer
301.260	Combined Sewer Service Area
301.265	Construction
301.267	Conversion Factor
301.270	Dilution Ratio
301.275	Effluent
301.280	Hearing Board
301.282	Incidental Contact Recreation
301.285	Industrial Wastes
301.290	Institute

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301.295	Interstate Waters
301.300	Intrastate Waters
301.301	Lake Michigan Lakewide Management Plan
301.305	Land Runoff
301.307	Lower Des Plaines River
301.310	Marine Toilet
301.311	Method Detection Level
301.312	Minimum Level
301.313	Metals Translator
301.315	Modification
301.320	New Source
301.323	Primary Contact Recreation
301.324	Non-contact Recreation and Non-recreational
301.325	NPDES
301.330	Other Wastes
301.331	Outlier
301.335	Person
301.340	Pollutant
301.341	Pollutant Minimization Program
301.345	Population Equivalent
301.346	Preliminary Effluent Limitation
301.350	Pretreatment Works
301.355	Primary Contact
301.356	Projected Effluent Quality
301.360	Public and Food Processing Water Supply
301.365	Publicly Owned Treatment Works
301.370	Publicly Regulated Treatment Works
301.371	Quantification Level
301.372	Reasonable Potential Analysis
301.373	Same Body of Water
301.375	Sanitary Sewer
301.380	Secondary Contact
301.385	Sewage
301.390	Sewer
301.395	Sludge
301.400	Standard of Performance
301.405	STORET
301.410	Storm Sewer
301.411	Total Maximum Daily Load
301.413	Total Metal

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301.415	Treatment Works
301.420	Underground Waters
301.421	Wasteload Allocation
301.425	Wastewater
301.430	Wastewater Source
301.435	Watercraft
301.440	Waters
301.441	Water Quality Based Effluent Limitation
301.442	Wet Weather Point Source
301.443	Whole Effluent Toxicity
301.APPENDIX A	References to Previous Rules

AUTHORITY: Implementing Section 13 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/13 and 27].

SOURCE: Filed with the Secretary of State January 1, 1978; amended at 3 Ill. Reg. 25, p. 190, effective June 21, 1979; amended at 5 Ill. Reg. 6384, effective May 28, 1981; codified at 6 Ill. Reg. 7818; amended in R88-1 at 13 Ill. Reg. 5984, effective April 18, 1989; amended in R88-21(A) at 14 Ill. Reg. 2879, effective February 13, 1990; amended in R99-8 at 23 Ill. Reg. 11277, effective August 26, 1999; amended in R02-11 at 27 Ill. Reg. 158, effective December 20, 2002; amended in R08-9(A) at 35 Ill. Reg. 15071, effective August 23, 2011; amended in R11-18 at 36 Ill. Reg. _____, effective _____.

Section 301.106 Incorporations by Reference

- a) Abbreviations. The following abbreviated names are used for materials incorporated by reference:

"ASTM" means American Society for Testing and Materials.

"GPO" means Superintendent of Documents, U.S. Government Printing Office.

"NTIS" means National Technical Information Service.

"Standard Methods" means "Standard Methods for the Examination of Water and Wastewater", available from the American Public Health Association.

"USEPA" means United States Environmental Protection Agency.

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NOTICE OF ADOPTED AMENDMENT

- b) The Board incorporates the following publications by reference:

American Public Health Association et al., 800 I-015 Fifteenth Street, N.W.,
Washington, D.C. 20001-3710, (202)777-2742~~20005~~.

Standard Methods for the Examination of Water and Wastewater, 21st~~16th~~
Edition, 2005~~1985~~.

ASTM. American Society for Testing and Materials, 100 Barr Harbor Drive,
West Conshohocken, PA 19428-2959, (610)832-9585

ASTM Standard E 724-80 "Standard Practice for Conducting Static Acute
Toxicity Tests with Larvae of Four Species of Bivalve Molluscs",
approved 1980.

ASTM Standard E 729-80 "Standard Practice for Conducting Static Acute
Toxicity Tests with Fishes, Macroinvertebrates, and Amphibians",
approved 1980.

ASTM Standard E 857-81 "Standard Practice for Conducting Subacute
Dietary Toxicity Tests with Avian Species", approved 1981.

ASTM Standard E 1023-84 "Standard Guide for Assessing the Hazard of a
Material to Aquatic Organisms and Their Uses", approved 1984.

ASTM Standard E 1103-86 "Method for Determining Subchronic Dermal
Toxicity", approved 1986.

ASTM Standard E 1147-87 "Standard Test Method for Partition
Coefficient (n-Octanol/Water) Estimation by Liquid Chromatography",
approved February 27, 1987.

ASTM Standard E 1192-88 "Standard Guide for Conducting Acute
Toxicity Tests on Aqueous Effluents with Fishes, Macroinvertebrates and
Amphibians", approved 1988.

ASTM Standard E 1193-87 "Standard Guide for Conducting Renewal
Life-Cycle Toxicity Tests with Daphnia Magna", approved 1987.

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ASTM Standard E 1241-88 "Standard Guide for Conducting Early Life-Stage Toxicity Tests with Fishes", approved 1988.

ASTM Standard E 1242-88 "Standard Practice for Using Octanol-Water Partition Coefficients to Estimate Median Lethal Concentrations for Fish due to Narcosis", approved 1988.

ASTM Standard E 4429-84 "Standard Practice for Conducting Static Acute Toxicity Tests on Wastewaters with Daphnia", approved 1984.

NTIS. National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, (703)487-4600

SIDES: STORET Input Data Editing System, January 1973, Document Number PB-227 052/8.

Water Quality Data Base Management Systems, February 1984, Document Number AD-P004 768/8.

USEPA. United States Environmental Protection Agency, Office of Health and Environmental Assessment, Washington, D.C. 20460

Mutagenicity and Carcinogenicity Assessment for 1,3-Butadiene, September 1985, Document Number EPA/600/8-85/004A.

Method OIA-1677, DW: Available Cyanide by Flow Injection, Ligand Exchange, and Amperometry, January 2004, Document Number EPA-821-R-04-001.

- c) The Board incorporates the following federal regulations by reference. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202)783-3238:

Procedure 5.b.2 of Appendix F of 40 CFR 132 (1995)

40 CFR 136 (1996)

40 CFR 141 (1988)

40 CFR 302.4 (1988)

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- d) The Board incorporates the following federal regulations by reference, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202)783-3238:

USEPA 1996: The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion. EPA 823-B-96-007 (1996).

- e) This Section incorporates no future editions or amendments.

(Source: Amended at 36 Ill. Reg. _____, effective _____)



OFFICE OF THE SECRETARY OF STATE

JESSE WHITE * Secretary of State
Administrative Code Division
Attn: Illinois Register
111 East Monroe

CERTIFICATION OF REVIEW AND APPROVAL

Heading of Part: Water Quality Standards

Code Citation: 35 Ill. Adm. Code 302

THE OFFICE OF THE SECRETARY OF STATE

INDEX DEPARTMENT

ADMINISTRATIVE CODE DIVISION

certifies that the attached rule of the:

POLLUTION CONTROL BOARD

viewed and approved on this 12th day of December, 2012

Statutory Authority:

415 ILCS 5 /

David Weisbaum

Signature of Officer

Director

Title of Officer

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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENTS

- 1) Heading of the Part: Water Quality Standards
- 2) Code Citation: 35 Ill. Adm. Code 302
- 3) Section Numbers: Adopted Action:
302.208 Amend
302.303 Amend
302.304 Amend
302.504 Amend
302.510 Amend
302.553 Amend
302.595 Amend
302.648 Amend
302.657 Amend
302.669 Amend
- 4) Statutory Authority: Implementing Sections 5, 10, 13, 21, 22, 22.01, and 22.2 and authorized by Sections 27 of the Environmental Protection Act [415 ILCS 5/5, 10, 13, 21, 22, 22.01, 22.2, and 27].
- 5) Effective Date of Amendments: DEC 12 2012
- 6) Does this rulemaking contain an automatic repeal date? No.
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- 9) Notice of Proposal Published in Illinois Register: April 13, 2012; 36 Ill. Reg. 5721.
- 10) Has JCAR issued a Statement of Objections to these amendments? No.
- 11) Differences between proposal and final version:
- 12) Have all the changes agreed upon by the agency and JCAR been made as indicated in the agreements letter issued by JCAR? Yes.

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- 13) Will these amendments replace emergency amendments currently in effect? No.
- 14) Are there any amendments pending on this Part? No.
- 15) Summary and Purpose of Amendments: These amendments to 35 Ill. Adm. Code 301.106, 302 Subparts B, C, E, F and 303.312 update the current General Use and Lake Michigan Basin water quality standards for boron, fluoride, and manganese, and correct a significant error in the derivation of the zinc chronic standard. In addition, the first notice proposal adds incorporations by reference to cyanide test methods, amends requirements for publication of water quality criteria, corrects errors and cross-references, eliminates STORET references, and clarifies references to cyanide, mercury, chloride and toluene water quality standards. Finally, the Board repeals an obsolete site-specific fluoride standard. Essentially, the Board is adopting IEPA's proposal to update and correct the standards with minor modifications and additions.
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NOTICE OF ADOPTED AMENDMENTS

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 302
WATER QUALITY STANDARDS

SUBPART A: GENERAL WATER QUALITY PROVISIONS

Section	
302.100	Definitions
302.101	Scope and Applicability
302.102	Allowed Mixing, Mixing Zones and ZIDs
302.103	Stream Flows
302.104	Main River Temperatures
302.105	Antidegradation

SUBPART B: GENERAL USE WATER QUALITY STANDARDS

Section	
302.201	Scope and Applicability
302.202	Purpose
302.203	Offensive Conditions
302.204	pH
302.205	Phosphorus
302.206	Dissolved Oxygen
302.207	Radioactivity
302.208	Numeric Standards for Chemical Constituents
302.209	Fecal Coliform
302.210	Other Toxic Substances
302.211	Temperature
302.212	Total Ammonia Nitrogen
302.213	Effluent Modified Waters (Ammonia) (Repealed)

SUBPART C: PUBLIC AND FOOD PROCESSING WATER SUPPLY STANDARDS

Section	
302.301	Scope and Applicability
302.302	Algicide Permits
302.303	Finished Water Standards

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302.304	Chemical Constituents
302.305	Other Contaminants
302.306	Fecal Coliform
302.307	Radium 226 and 228

SUBPART D: SECONDARY CONTACT AND
INDIGENOUS AQUATIC LIFE STANDARDS

Section	
302.401	Scope and Applicability
302.402	Purpose
302.403	Unnatural Sludge
302.404	pH
302.405	Dissolved Oxygen
302.406	Fecal Coliform (Repealed)
302.407	Chemical Constituents
302.408	Temperature
302.409	Cyanide
302.410	Substances Toxic to Aquatic Life

SUBPART E: LAKE MICHIGAN BASIN WATER QUALITY STANDARDS

Section	
302.501	Scope, Applicability, and Definitions
302.502	Dissolved Oxygen
302.503	pH
302.504	Chemical Constituents
302.505	Fecal Coliform
302.506	Temperature
302.507	Thermal Standards for Existing Sources on January 1, 1971
302.508	Thermal Standards for Sources Under Construction But Not In Operation on January 1, 1971
302.509	Other Sources
302.510	Incorporations by Reference
302.515	Offensive Conditions
302.520	Regulation and Designation of Bioaccumulative Chemicals of Concern (BCCs)
302.521	Supplemental Antidegradation Provisions for Bioaccumulative Chemicals of Concern (BCCs)
302.525	Radioactivity
302.530	Supplemental Mixing Provisions for Bioaccumulative Chemicals of Concern

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- (BCCs)
- 302.535 Ammonia Nitrogen
 - 302.540 Other Toxic Substances
 - 302.545 Data Requirements
 - 302.550 Analytical Testing
 - 302.553 Determining the Lake Michigan Aquatic Toxicity Criteria or Values – General Procedures
 - 302.555 Determining the Tier I Lake Michigan Acute Aquatic Toxicity Criterion (LMAATC): Independent of Water Chemistry
 - 302.560 Determining the Tier I Lake Michigan Basin Acute Aquatic Life Toxicity Criterion (LMAATC): Dependent on Water Chemistry
 - 302.563 Determining the Tier II Lake Michigan Basin Acute Aquatic Life Toxicity Value (LMAATV)
 - 302.565 Determining the Lake Michigan Basin Chronic Aquatic Life Toxicity Criterion (LMCATC) or the Lake Michigan Basin Chronic Aquatic Life Toxicity Value (LMCATV)
 - 302.570 Procedures for Deriving Bioaccumulation Factors for the Lake Michigan Basin
 - 302.575 Procedures for Deriving Tier I Water Quality Criteria and Values in the Lake Michigan Basin to Protect Wildlife
 - 302.580 Procedures for Deriving Water Quality Criteria and Values in the Lake Michigan Basin to Protect Human Health – General
 - 302.585 Procedures for Determining the Lake Michigan Basin Human Health Threshold Criterion (LMHHTC) and the Lake Michigan Basin Human Health Threshold Value (LMHHTV)
 - 302.590 Procedures for Determining the Lake Michigan Basin Human Health Nonthreshold Criterion (LMHHNC) or the Lake Michigan Basin Human Health Nonthreshold Value (LMHHNV)
 - 302.595 Listing of Bioaccumulative Chemicals of Concern, Derived Criteria and Values

SUBPART F: PROCEDURES FOR DETERMINING WATER QUALITY CRITERIA

- Section
- 302.601 Scope and Applicability
- 302.603 Definitions
- 302.604 Mathematical Abbreviations
- 302.606 Data Requirements
- 302.612 Determining the Acute Aquatic Toxicity Criterion for an Individual Substance – General Procedures
- 302.615 Determining the Acute Aquatic Toxicity Criterion – Toxicity Independent of Water Chemistry

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- 302.618 Determining the Acute Aquatic Toxicity Criterion – Toxicity Dependent on Water Chemistry
- 302.621 Determining the Acute Aquatic Toxicity Criterion – Procedure for Combinations of Substances
- 302.627 Determining the Chronic Aquatic Toxicity Criterion for an Individual Substance – General Procedures
- 302.630 Determining the Chronic Aquatic Toxicity Criterion – Procedure for Combinations of Substances
- 302.633 The Wild and Domestic Animal Protection Criterion
- 302.642 The Human Threshold Criterion
- 302.645 Determining the Acceptable Daily Intake
- 302.648 Determining the Human Threshold Criterion
- 302.651 The Human Nonthreshold Criterion
- 302.654 Determining the Risk Associated Intake
- 302.657 Determining the Human Nonthreshold Criterion
- 302.658 Stream Flow for Application of Human Nonthreshold Criterion
- 302.660 Bioconcentration Factor
- 302.663 Determination of Bioconcentration Factor
- 302.666 Utilizing the Bioconcentration Factor
- 302.669 Listing of Derived Criteria
-
- 302.APPENDIX A References to Previous Rules
- 302.APPENDIX B Sources of Codified Sections
- 302.APPENDIX C Maximum total ammonia nitrogen concentrations allowable for certain combinations of pH and temperature
- 302.TABLE A pH-Dependent Values of the AS (Acute Standard)
- 302.TABLE B Temperature and pH-Dependent Values of the CS (Chronic Standard) for Fish Early Life Stages Absent
- 302.TABLE C Temperature and pH-Dependent Values of the CS (Chronic Standard) for Fish Early Life Stages Present
- 302.APPENDIX D Section 302.206(d): Stream Segments for Enhanced Dissolved Oxygen Protection

AUTHORITY: Implementing Section 13 and authorized by Sections 11(b) and 27 of the Environmental Protection Act [415 ILCS 5/13, 11(b), and 27].

SOURCE: Filed with the Secretary of State January 1, 1978; amended at 2 Ill. Reg. 44, p. 151, effective November 2, 1978; amended at 3 Ill. Reg. 20, p. 95, effective May 17, 1979; amended at 3 Ill. Reg. 25, p. 190, effective June 21, 1979; codified at 6 Ill. Reg. 7818; amended at 6 Ill. Reg. 11161, effective September 7, 1982; amended at 6 Ill. Reg. 13750, effective October 26,

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1982; amended at 8 Ill. Reg. 1629, effective January 18, 1984; peremptory amendments at 10 Ill. Reg. 461, effective December 23, 1985; amended at R87-27 at 12 Ill. Reg. 9911, effective May 27, 1988; amended at R85-29 at 12 Ill. Reg. 12082, effective July 11, 1988; amended in R88-1 at 13 Ill. Reg. 5998, effective April 18, 1989; amended in R88-21(A) at 14 Ill. Reg. 2899, effective February 13, 1990; amended in R88-21(B) at 14 Ill. Reg. 11974, effective July 9, 1990; amended in R94-1(A) at 20 Ill. Reg. 7682, effective May 24, 1996; amended in R94-1(B) at 21 Ill. Reg. 370, effective December 23, 1996; expedited correction at 21 Ill. Reg. 6273, effective December 23, 1996; amended in R97-25 at 22 Ill. Reg. 1356, effective December 24, 1997; amended in R99-8 at 23 Ill. Reg. 11249, effective August 26, 1999; amended in R01-13 at 26 Ill. Reg. 3505, effective February 22, 2002; amended in R02-19 at 26 Ill. Reg. 16931, effective November 8, 2002; amended in R02-11 at 27 Ill. Reg. 166, effective December 20, 2002; amended in R04-21 at 30 Ill. Reg. 4919, effective March 1, 2006; amended in R04-25 at 32 Ill. Reg. 2254, effective January 28, 2008; amended in R07-9 at 32 Ill. Reg. 14978, effective September 8, 2008; amended in R11-18 at 36 Ill. Reg. _____, effective _____.

SUBPART B: GENERAL USE WATER QUALITY STANDARDS

Section 302.208 Numeric Standards for Chemical Constituents

- a) The acute standard (AS) for the chemical constituents listed in subsection (e) shall not be exceeded at any time except for those waters for which a zone of initial dilution (ZID) has been approved by the Agency pursuant to Section 302.102as provided in subsection (d).

- b) The chronic standard (CS) for the chemical constituents listed in subsection (e) shall not be exceeded by the arithmetic average of at least four consecutive samples collected over any period of at least four days, except for those waters in which the Agency has approved a mixing zone or in which mixing is allowed pursuant to Section 302.102as provided in subsection (d). The samples used to demonstrate attainment or lack of attainment with a CS must be collected in a manner that assures an average representative of the sampling period. For the chemical constituents ~~metals~~ that have water quality based standards dependent upon hardness, the chronic water quality standard will be calculated according to subsection (e) using the hardness of the water body at the time the ~~metals~~-sample was collected. To calculate attainment status of chronic metals standards, the concentration of the chemical constituent~~metal~~ in each sample is divided by the calculated water quality standard for the sample to determine a quotient. The water quality standard is attained if the mean of the sample quotients is less than or equal to one for the duration of the averaging period.

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- c) The human health standard (HHS) for the chemical constituents listed in subsection (f) shall not be exceeded when the stream flow is at or above the harmonic mean flow pursuant to Section 302.658 nor shall an annual average, based on at least eight samples, collected in a manner representative of the sampling period, exceed the HHS except for those waters in which the Agency has approved a mixing zone or in which mixing is allowed pursuant to Section 302.102 as provided in subsection (d).
- d) The standard for the chemical constituents of subsections (g) and (h) shall not be exceeded at any time except for those waters in which the Agency has approved a mixing zone or in which mixing is allowed pursuant to Section 302.102. In waters where mixing is allowed pursuant to Section 302.102, the following apply:
- 1) ~~The AS shall not be exceeded in any waters except for those waters for which the Agency has approved a zone of initial dilutions (ZID) pursuant to Section 302.102.~~
 - 2) ~~The CS shall not be exceeded outside of waters in which mixing is allowed pursuant to Section 302.102.~~
 - 3) ~~The HHS shall not be exceeded outside of waters in which mixing is allowed pursuant to Section 302.102.~~
- e) Numeric Water Quality Standards for the Protection of Aquatic Organisms

Constituent	STORET Number	AS (µg/L)	CS (µg/L)
Arsenic (trivalent, dissolved)	22680	$360 \times 1.0^* = 360$	$190 \times 1.0^* = 190$
<u>Boron (total)</u>		<u>40,100</u>	<u>7,600</u>
Cadmium (dissolved)	01025	$e^{A+B \ln(H)} \times \left\{ 1.138672 - \frac{1.138672}{[(\ln(H))(0.041838)]} \right\}^*$	$e^{A+B \ln(H)} \times \left\{ 1.101672 - \frac{1.101672}{[(\ln(H))(0.041838)]} \right\}^*$
		where $A = -2.918$ and $B = 1.128$	where $A = -3.490$ and $B = 0.7852$

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Chromium (hexavalent, total)	01032	16	11
Chromium (trivalent, dissolved)	80357	$e^{A+B \ln(H)} \times 0.316^*$; where $A = 3.688$ and $B = 0.8190$	$e^{A+B \ln(H)} \times 0.860^*$; where $A = 1.561$ and $B = 0.8190$
Copper (dissolved)	01040	$e^{A+B \ln(H)} \times 0.960^*$; where $A = -1.464$ and $B = 0.9422$	$e^{A+B \ln(H)} \times 0.960^*$; where $A = -1.465$ and $B = 0.8545$
Cyanide**	00718	22	5.2
<u>Fluoride (total)</u>		<u>$e^{A+B \ln(H)}$</u> <u>where $A = 6.7319$ and $B = 0.5394$</u>	<u>$e^{A+B \ln(H)}$</u> , but shall not <u>exceed 4.0 mg/L</u> <u>where $A = 6.0445$ and $B = 0.5394$</u>
Lead (dissolved)	01049	$e^{A+B \ln(H)} \times$ $\left\{ 1.46203 - \right.$ $\left. \left[\frac{1}{[(\ln H)(0.1457/2)]} \right] \right\}^*$;	$e^{A+B \ln(H)} \times$ $\left\{ 1.46203 - \right.$ $\left. \left[\frac{1}{[(\ln H)(0.145712)]} \right] \right\}^*$;
		where $A = -1.301$ and $B = 1.273$	where $A = -2.863$ and $B = 1.273$
<u>Manganese</u>		<u>$e^{A+B \ln(H)} \times 0.9812^*$</u> <u>where $A = 4.9187$ and $B = 0.7467$</u>	<u>$e^{A+B \ln(H)} \times 0.9812^*$</u> <u>where $A = 4.0635$ and $B = 0.7467$</u>
Mercury (dissolved)	71890	$2.6 \times 0.85^* = 2.2$	$1.3 \times 0.85^* = 1.1$

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Nickel (dissolved)	01065	$e^{A+B \ln(H)} \times 0.998^*$	$e^{A+B \ln(H)} \times 0.997^*$
		where $A = 0.5173$ and $B = 0.8460$	where $A = -2.286$ and $B = 0.8460$
TRC	500600	19	11
Zinc (dissolved)	01090	$e^{A+B \ln(H)} \times 0.978^*$	$e^{A+B \ln(H)} \times 0.986^*$
		where $A = 0.9035$ and $B = 0.8473$	where $A = -0.4456$ and $B = 0.8473$
Benzene	78124	4200	860
Ethylbenzene	78113	150	14
Toluene	78131	2000	600
Xylene(s)	81551	920	360

where:

- $\mu\text{g/L}$ = microgram per liter
 - e^x = base of natural logarithms raised to the x-power
 - $\ln(H)$ = natural logarithm of Hardness (STORET 00900)
 - *
 - **
- standard to be evaluated using either of the following USEPA approved methods, incorporated by reference at 35 Ill. Adm. Code 301.106: Method OIA-1677, DW: Available Cyanide by Flow Injection, Ligand Exchange, and Amperometry, January 2004, Document Number EPA-821-R-04-001 or Cyanide Amenable to Chlorination, Standard Methods 4500-CN-G (40 CFR 136.3)

f) Numeric Water Quality Standard for the Protection of Human Health

Constituent	STORET	($\mu\text{g/L}$)
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	Number	
Mercury (total)	71900	0.012
Benzene	78124	310

where:

$\mu\text{g/L}$ = micrograms per liter

- g) Single-value standards apply at the following concentrations for these substances: ~~Concentrations of the following chemical constituents shall not be exceeded except in waters for which mixing is allowed pursuant to Section 302.102.~~

Constituent	Unit	STORET Number	Standard
Barium (total)	mg/L	01007	5.0
Boron (total)	mg/L	01022	1.0
Chloride (total)	mg/L	00940	500
Fluoride	mg/L	00951	1.4
Iron (dissolved)	mg/L	01046	1.0
Manganese (total)	mg/L	01055	1.0
Phenols	mg/L	32730	0.1
Selenium (total)	mg/L	01147	1.0
Silver (total)	$\mu\text{g/L}$	01077	5.0

where:

mg/L = milligram per liter and

$\mu\text{g/L}$ = microgram per liter

- h) Water quality standards for sulfate are as follows: ~~The following concentrations for sulfate must not be exceeded except in receiving waters for which mixing is allowed pursuant to Section 302.102:~~

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- 1) At any point where water is withdrawn or accessed for purposes of livestock watering, the average of sulfate concentrations must not exceed 2,000 mg/L when measured at a representative frequency over a 30 day period.
- 2) The results of the following equations provide sulfate water quality standards in mg/L for the specified ranges of hardness (in mg/L as CaCO₃) and chloride (in mg/L) and must be met at all times:

- A) If the hardness concentration of receiving waters is greater than or equal to 100 mg/L but less than or equal to 500 mg/L, and if the chloride concentration of waters is greater than or equal to 25 mg/L but less than or equal to 500 mg/L, then:

$$C = [1276.7 + 5.508 (\text{hardness}) - 1.457 (\text{chloride})] * 0.65$$

where:~~Where,~~

C = sulfate concentration

- B) If the hardness concentration of waters is greater than or equal to 100 mg/L but less than or equal to 500 mg/L, and if the chloride concentration of waters is greater than or equal to 5 mg/L but less than 25 mg/L, then:

$$C = [-57.478 + 5.79 (\text{hardness}) + 54.163 (\text{chloride})] * 0.65$$

where:~~Where~~

C = sulfate concentration

- 3) The following sulfate standards must be met at all times when hardness (in mg/L as CaCO₃) and chloride (in mg/L) concentrations other than specified in (h)(2) are present:
 - A) If the hardness concentration of waters is less than 100 mg/L or chloride concentration of waters is less than 5 mg/L, the sulfate standard is 500 mg/L.

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- B) If the hardness concentration of waters is greater than 500 mg/L and the chloride concentration of waters is 5 mg/L or greater, the sulfate standard is 2,000 mg/L.
- C) If the combination of hardness and chloride concentrations of existing waters are not reflected in subsection (h)(3)(A) or (B), the sulfate standard may be determined in a site-specific rulemaking pursuant to section 303(c) of the Federal Water Pollution Control Act of 1972 (Clean Water Act), 33 USC 1313, and Federal Regulations at 40 CFR 131.10(j)(2).

(Source: Amended at 36 Ill. Reg. _____, effective _____)

SUBPART C: PUBLIC AND FOOD PROCESSING WATER SUPPLY STANDARDS

Section 302.303 Finished Water Standards

Water shall be of such quality that with treatment consisting of coagulation, sedimentation, filtration, storage and chlorination, or other equivalent treatment processes, the treated water shall meet in all respects the requirements of Part ~~611604~~.

(Note: Prior to codification, Table I, Rule 304 of Ch 6: Public Water Supplies)

(Source: Amended at 36 Ill. Reg. _____, effective _____)

Section 302.304 Chemical Constituents

The following levels of chemical constituents shall not be exceeded:

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
Arsenic (total)	01002	0.05
Barium (total)	01007	1.0
<u>Boron (total)</u>		<u>1.0</u>
Cadmium (total)	01027	0.010
<u>Chloride (total)</u>	00940	250-
Chromium	01034	0.05
<u>Fluoride (total)</u>		<u>1.4</u>
Iron (dissolved)	01046	0.3

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Lead (total)	01051	0.05
Manganese (total)	01055	<u>1.00-15</u>
Nitrate-Nitrogen	00620	10-
Oil (hexane-solubles or equivalent)	00550, 00556 or 00560	0.1
Organics		
Pesticides		
Chlorinated Hydro- carbon Insecticides		
Aldrin	39330	0.001
Chlordane	39350	0.003
DDT	39370	0.05
Dieldrin	39380	0.001
Endrin	39390	0.0002
Heptachlor	39410	0.0001
Heptachlor Expoxide	39420	0.0001
Lindane	39782	0.004
Methoxychlor	39480	0.1
Toxaphene	39400	0.0005
Organophosphate Insecticides		
Parathion	39540	0.1
Chlorophenoxy Herbicides		
2,4-Dichlorophenoxy- acetic acid (2,4-D)	39730	0.1
2-(2,4,5-Trichloro- phenoxy)-propionic acid (2,4,5-TP or Silvex)	39760	0.01
Phenols	32730	0.001
Selenium (total)	01147	0.01
Sulphates	00945	250-
Total Dissolved Solids	70300	500-

(Source: Amended at 36 Ill. Reg. _____, effective _____)

SUBPART E: LAKE MICHIGAN BASIN WATER QUALITY STANDARDS

Section 302.504 Chemical Constituents

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The following concentrations of chemical constituents must not be exceeded, except as provided in Sections 302.102 and 302.530:

- a) The following standards must be met in all waters of the Lake Michigan Basin. Acute aquatic life standards (AS) must not be exceeded at any time except for those waters for which the Agency has approved a zone of initial dilution (ZID) pursuant to Sections 302.102 and 302.530. Chronic aquatic life standards (CS) and human health standards (HHS) must not be exceeded outside of waters in which mixing is allowed pursuant to Sections 302.102 and 302.530 by the arithmetic average of at least four consecutive samples collected over a period of at least four days. The samples used to demonstrate compliance with the CS or HHS must be collected in a manner which assures an average representation of the sampling period.

<u>Constituent</u>	<u>STORET</u> <u>Number</u>	<u>Unit</u>	<u>AS</u>	<u>CS</u>	<u>HHS</u>
Arsenic (Trivalent, dissolved)	22680	µg/L	$340 \times 1.0^* = 340$	$340 \times 1.0^* = 148$	NA
<u>Boron (total)</u>		<u>mg/L</u>	<u>40.1</u>	<u>7.6</u>	<u>NA</u>
Cadmium (dissolved)	01025	µg/L	$\exp[A + B \ln(H)] \times \{1.138672 - [(\ln H) (0.041838)]\}^*$; where $A = -3.6867$ and $B = 1.128$	$\exp[A + B \ln(H)] \times \{1.101672 - [(\ln H) (0.041838)]\}^*$; where $A = -2.715$ and $B = 0.7852$	NA
Chromium (Hexavalent, total)	01032	µg/L	16	11	NA
Chromium (Trivalent, dissolved)	80357	µg/L	$\exp[A + B \ln(H)] \times 0.316^*$; where $A = 3.7256$ and $B = 0.819$	$\exp[A + B \ln(H)] \times 0.860^*$; where $A = 0.6848$ and $B = 0.819$	NA
Copper (dissolved)	01040	µg/L	$\exp[A + B \ln(H)] \times 0.960^*$;	$\exp[A + B \ln(H)] \times 0.960^*$;	NA

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			where $A = -1.700$ and $B = 0.9422$	where $A = -1.702$ and $B = 0.8545$	
Cyanide** <u>(Weak acid dissociable)</u>	00718	μg/L	22	5.2	NA
<u>Fluoride (total)</u>		μg/L	$\exp[A + B \ln(H)]$ where $A = 6.7319$ and $B = 0.5394$	$\exp[A + B \ln(H)]$, <u>but shall not exceed 4.0 mg/L</u> where $A = 6.0445$ and $B = 0.5394$	NA
Lead (dissolved)	01049	μg/L	$\exp[A + B \ln(H)] \times \{1.46203 - [(\ln H) (0.145712)]\}^*$; where $A = -1.055$ and $B = 1.273$	$\exp[A + B \ln(H)] \times \{1.46203 - [(\ln H) (0.145712)]\}^*$; where $A = -4.003$ and $B = 1.273$	NA
<u>Manganese (dissolved)</u>		μg/L	$\exp[A + B \ln(H)] \times 0.9812^*$ where $A = 4.9187$ and $B = 0.7467$	$\exp[A + B \ln(H)] \times 0.9812^*$ where $A = 4.0635$ and $B = 0.7467$	NA
Nickel (dissolved)	01065	μg/L	$\exp[A + B \ln(H)] \times 0.998^*$; where $A = 2.255$ and $B = 0.846$	$\exp[A + B \ln(H)] \times 0.997^*$; where $A = 0.0584$ and $B = 0.846$	NA
Selenium (dissolved)	01145	μg/L	NA	5.0	NA
TRC	50060	μg/L	19	11	NA
Zinc (dissolved)	01090	μg/L	$\exp[A + B \ln(H)] \times$	$\exp[A + B \ln(H)] \times$	NA

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			0.978*; where $A = 0.884$ and $B = 0.8473$	0.986*; where $A = 0.884$ and $B = 0.8473$	
Benzene	78124	μg/L	3900	800	310
Chlorobenzene	34301	mg/L	NA	NA	3.2
2,4-Dimethylphenol	34606	mg/L	NA	NA	8.7
2,4-Dinitrophenol	03756	mg/L	NA	NA	2.8
Endrin	39390	μg/L	0.086	0.036	NA
Ethylbenzene	78113	μg/L	150	14	NA
Hexachloroethane	34396	μg/L	NA	NA	6.7
Methylene chloride	34423	mg/L	NA	NA	2.6
Parathion	39540	μg/L	0.065	0.013	NA
Pentachlorophenol	03761	μg/L	$\exp B([pH] + A);$ where $A = -4.869$ and $B = 1.005$	$\exp B([pH] + A);$ where $A = -5.134$ and $B = 1.005$	NA
Toluene	78131	μg/L mg/L	2000	610	51.0
Trichloroethylene	39180	μg/L	NA	NA	370
Xylene(s)	81551	μg/L	1200	490	NA

whereWhere:

NA = Not Applied

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- exp[x] = base of natural logarithms raised to the x-power
ln(H) = natural logarithm of Hardness (~~STORET-00900~~)
* = conversion factor multiplier for dissolved metals
** = standard to be evaluated using either of the following USEPA approved methods, incorporated by reference at 35 Ill. Adm. Code 302.510: Method OIA-1677, DW: Available Cyanide by Flow Injection, Ligand Exchange, and Amperometry, January 2004, Document Number EPA-821-R-04-001 or Cyanide Amenable to Chlorination, Standard Methods 4500-CN-G (40 CFR 136.3).

- b) The following water quality standards must not be exceeded at any time in any waters of the Lake Michigan Basin, unless a different standard is specified under subsection (c) of this Section.

<u>Constituent</u>	<u>STORET Number</u>	<u>Unit</u>	<u>Water Quality Standard</u>
Barium (total)	01007	mg/L	5.0
Boron (total)	01022	mg/L	1.0
Chloride (total)	00940	mg/L	500
Fluoride	00951	mg/L	1.4
Iron (dissolved)	01046	mg/L	1.0
Manganese (total)	01055	mg/L	1.0
Phenols	32730	mg/L	0.1
Sulfate	00945	mg/L	500
Total Dissolved Solids	70300	mg/L	1000

- c) In addition to the standards specified in subsections (a) and (b) of this Section, the following standards must not be exceeded at any time in the Open Waters of Lake Michigan as defined in Section 302.501.

<u>Constituent</u>	<u>STORET Number</u>	<u>Unit</u>	<u>Water Quality Standard</u>
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Arsenic (total)	01002	µg/L	50.0
<u>Boron (total)</u>		<u>mg/L</u>	<u>1.0</u>
Barium (total)	01007	mg/L	1.0
Chloride (<u>total</u>)	00940	mg/L	12.0
<u>Fluoride (total)</u>		<u>mg/L</u>	<u>1.4</u>
Iron (dissolved)	01046	mg/L	0.30
Lead (total)	01051	µg/L	50.0
Manganese (total)	01055	mg/L	0.15
Nitrate-Nitrogen	00620	mg/L	10.0
Phosphorus	00665	µg/L	7.0
Selenium (total)	01147	µg/L	10.0
Sulfate	00945	mg/L	24.0
Total Dissolved Solids	70300	mg/L	180.0
Oil (hexane solubles or equivalent)	00550, 00556 or 00560	mg/L	0.10
Phenols	32730	µg/L	1.0

- d) In addition to the standards specified in subsections (a), (b) and (c) of this Section, the following human health standards (HHS) must not be exceeded in the Open Waters of Lake Michigan as defined in Section 302.501 by the arithmetic average of at least four consecutive samples collected over a period of at least four days. The samples used to demonstrate compliance with the HHS must be collected in a manner which assures an average representation of the sampling period.

<u>Constituent</u>	<u>STORET Number</u>	<u>Unit</u>	<u>Water Quality Standard</u>
Benzene	34030	µg/L	12.0
Chlorobenzene	34301	µg/L	470.0

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2,4-Dimethylphenol	34606	µg/L	450.0
2,4-Dinitrophenol	03757	µg/L	55.0
Hexachloroethane (total)	34396	µg/L	5.30
Lindane	39782	µg/L	0.47
Methylene chloride	34423	µg/L	47.0
Toluene	78131	mg/L	5.60
Trichloroethylene	39180	µg/L	29.0

- e) For the following bioaccumulative chemicals of concern (BCCs), acute aquatic life standards (AS) must not be exceeded at any time in any waters of the Lake Michigan Basin and chronic aquatic life standards (CS), human health standards (HHS), and wildlife standards (WS) must not be exceeded in any waters of the Lake Michigan Basin by the arithmetic average of at least four consecutive samples collected over a period of at least four days subject to the limitations of Sections 302.520 and 302.530. The samples used to demonstrate compliance with the HHS and WS must be collected in a manner that assures an average representation of the sampling period.

<u>Constituent</u>	<u>STORET Number</u>	<u>Unit</u>	<u>AS</u>	<u>CS</u>	<u>HHS</u>	<u>WS</u>
Mercury (total)	71900	ng/L	1,700	910	3.1	1.3
Chlordane	39350	ng/L	NA	NA	0.25	NA
DDT and metabolites	39370	pg/L	NA	NA	150	11.0
Dieldrin	39380	ng/L	240	56	0.0065	NA
Hexachlorobenzene	39700	ng/L	NA	NA	0.45	NA
Lindane	39782	µg/L	0.95	NA	0.5	NA
PCBs (class)	79819	pg/L	NA	NA	26	120
2,3,7,8-TCDD	03556	fg/L	NA	NA	8.6	3.1
Toxaphene	39400	pg/L	NA	NA	68	NA

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~~where~~Where:

- mg/L = milligrams per liter (10^{-3} grams per liter)
- μ g/L = micrograms per liter (10^{-6} grams per liter)
- ng/L = nanograms per liter (10^{-9} grams per liter)
- pg/L = picograms per liter (10^{-12} grams per liter)
- fg/L = femtograms per liter (10^{-15} grams per liter)
- NA = Not Applied

(Source: Amended at 36 Ill. Reg. _____, effective _____)

Section 302.510 Incorporations by Reference

- a) The Board incorporates the following publications by reference:

American Public Health Association et al., Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005. Available from the American Public Health Association, 800 I Street, NW, Washington, D.C. 20001-3710, (202)777-2742.

~~American Public Health Association et al., 1015 Fifteenth Street, N.W., Washington, D.C. 20005, Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1996. Available from the American Public Health Association, 1015 Fifteenth St., NW, Washington, D.C. 20005 (202)789-5600.~~

USEPA. United States Environmental Protection Agency, Office of Health and Environmental Assessment, Washington, D.C. 20460, Method OIA-1677, DW: Available Cyanide by Flow Injection, Ligand Exchange, and Amperometry, January 2004, Document Number EPA-821-R-04-001.

- b) The Board incorporates the following federal regulations by reference. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202) 783-3238:

40 CFR 136 (1996)

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40 CFR 141 (1988)

40 CFR 302.4 (1988)

The Sections of 40 CFR 132 (1996) listed below:

Appendix A

Section I A

Section II

Section III C

Section IV D, E, F, G, H, and I

Section V C

Section VI A, B, C, D, E, and F

Section VIII

Section XI

Section XVII

Appendix B

Section III

Section VII B and C

Section VIII

Appendix C

Section II

Section III A (1 through 6 and 8), B (1 and 2)

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Appendix D

Section III C, D, and E

Section IV

cē) This Section incorporates no future editions or amendments.

(Source: Amended at 36 Ill. Reg. _____, effective _____)

**Section 302.553 Determining the Lake Michigan Aquatic Toxicity Criteria or Values –
General Procedures**

The Lake Michigan Aquatic Life Criteria and Values are those concentrations or levels of a substance at which aquatic life is protected from adverse effects resulting from short or long term exposure in water.

- a) Tier I criteria and Tier II values to protect against acute effects in aquatic organisms will be calculated according to procedures listed at Sections 302.555, 302.560 and 302.563. The procedures of Section 302.560 shall be used as necessary to allow for interactions with other water quality characteristics such as hardness, pH, temperature, etc. Tier I criteria and Tier II values to protect against chronic effects in aquatic organisms shall be calculated according to the procedures listed at Section 302.565.
- b) Minimum data requirements. In order to derive a Tier I acute or chronic criterion, data must be available for at least one species of freshwater animal in at least eight different families such that the following taxa are included:
 - 1) The family Salmonidae in the class Osteichthyes;
 - 2) One other family in the class Osteichthyes;
 - 3) A third family in the phylum Chordata;
 - 4) A planktonic crustacean;
 - 5) A benthic crustacean;
 - 6) An insect;

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- 7) A family in a phylum other than Arthropoda or Chordata; and
- 8) A family from any order of insect or any phylum not already represented.
- c) Data for tests with plants, if available, must be included in the data set.
- d) If data for acute effects are not available for all the eight families listed above, but are available for the family Daphnidae, a Tier II value shall be derived according to procedures in Section 302.563. If data for chronic effects are not available for all the eight families, but there are acute and chronic data available according to Section 302.565(b) so that three acute to chronic ratios (ACRs) can be calculated, then a Tier I chronic criterion can be derived according to procedures in Section 302.565. If three ACRs are not available, then a Tier II chronic value can be derived according to procedures in Section 302.565**(be)**.
- e) Data must be obtained from species that have reproducing wild populations in North America except that data from salt water species can be used in the derivation of an ACR.

(Source: Amended at 36 Ill. Reg. _____, effective _____)

Section 302.595 Listing of Bioaccumulative Chemicals of Concern, Derived Criteria and Values

- a) The Agency shall maintain a listing of toxicity criteria and values derived pursuant to this Subpart. This list shall be made available to the public and updated whenever a new criterion or value is derived~~periodically but no less frequently than quarterly~~, and shall be published when updated in the Illinois Register.
- b) A criterion or value published pursuant to subsection (a) of this Section may be proposed to the Board for adoption as a numeric water quality standard.
- c) The Agency shall maintain for inspection all information including, but not limited to, assumptions, toxicity data and calculations used in the derivation of any toxicity criterion or value listed pursuant to subsection (a) of this Section until adopted by the Board as a numeric water quality standard.

(Source: Amended at 36 Ill. Reg. _____, effective _____)

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SUBPART F: PROCEDURES FOR DETERMINING WATER QUALITY CRITERIA

Section 302.648 Determining the Human Threshold Criterion

The HTC is calculated according to the equation:

$$HTC = ADI/[W + (F \times BCF)]$$

~~where~~Where:

- HTC = Human health protection criterion in milligrams per liter (mg/L);
- ADI = Acceptable daily intake of substance in milligrams per day (mg/d) as specified in Section 302.645;
- W = Per capita daily water consumption equal to 2 liters per day (L/d) for surface waters at the point of intake of a public or food processing water supply, or equal to 0.01 liters per day (L/d) which represents incidental exposure through contact or ingestion of small volumes of water while swimming or during other recreational activities for areas which are determined to be public access areas pursuant to Section ~~302.102~~ 302.201(b)(3), or 0.001 liters per day (L/d) for other General Use waters;
- F = Assumed daily fish consumption in the United States equal to 0.020 kilograms per day (kg/d); and
- BCF = Aquatic organism Bioconcentration Factor with units of liter per kilogram (L/kg) as derived in Sections 302.660 through 302.666.

(Source: Amended at 36 Ill. Reg. _____, effective _____)

Section 302.657 Determining the Human Nonthreshold Criterion

The HNC is calculated according to the equation:

$$HNC = RAI/[W + (F \times BCF)]$$

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~~where~~Where:

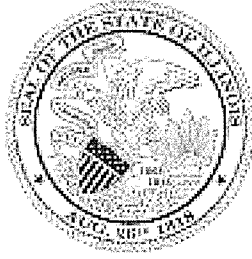
- HNC = Human Nonthreshold Protection Criterion in milligrams per liter (mg/L);
- RAI = Risk Associated Intake of a substance in milligrams per day (mg/d) which is associated with a lifetime cancer risk level equal to a ratio of one to 1,000,000 as derived in Section 302.654;
- W = Per capita daily water consumption equal to 2 liters per day (L/d) for surface waters at the point of intake of a public or food processing water supply, or equal to 0.01 liters per day (L/d) which represents incidental exposure through contact or ingestion of small volumes of water while swimming or during other recreational activities for areas which are determined to be public access areas pursuant to Section ~~302.102~~~~302-201~~(b)(3), or 0.001 liters per day (L/d) for other General Use waters;
- F = Assumed daily fish consumption in the United States equal to 0.020 kilograms per day (kg/d); and
- BCF = Aquatic Life Bioconcentration Factor with units of liter per kilogram (L/kg) as derived in Section 302.663.

(Source: Amended at 36 Ill. Reg. _____, effective _____)

Section 302.669 Listing of Derived Criteria

- a) The Agency shall develop and maintain a listing of toxicity criteria pursuant to this Subpart. This list shall be made available to the public and updated whenever a new criterion is derived~~periodically but no less frequently than quarterly~~; and shall be published when updated in the Illinois Register.
- b) A criterion published pursuant to subsection (a) may be proposed to the Board for adoption as a numeric water quality standard.
- c) The Agency shall maintain for inspection all information including, but not limited to, assumptions, toxicity data and calculations used in the derivation of any toxicity criterion listed pursuant to subsection (a) until adopted by the Board as a water quality standard.

(Source: Amended at 36 Ill. Reg. _____, effective _____)



OFFICE OF THE SECRETARY OF STATE

JESSE WHITE * Secretary of State

Administrative Code Division

Attn: Illinois Register

111 East Monroe

CERTIFICATION OF REVIEW AND APPROVAL

Heading of Part: Water Use Designations and Site-Specific Water Quality Standards

Code Citation: 35 Ill. Adm. Code 303

THE OFFICE OF THE SECRETARY OF STATE

INDEX DEPARTMENT

ADMINISTRATIVE CODE DIVISION

certifies that the attached rule of the:

POLLUTION CONTROL BOARD

viewed and approved on this 12th day of December, 2012

Statutory Authority:

415 ILCS 5 /

A handwritten signature in cursive script that reads "David Weisbaum".

Signature of Officer

Director

Title of Officer

ILLINOIS REGISTER

POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENT

- 1) Heading of the Part: Water Use Designations and Site-Specific Water Quality Standards
- 2) Code Citation: 35 Ill. Adm. Code 303
- 3) Section Numbers: Adopted Action:
303.312 Repeal
- 4) Statutory Authority: Implementing Sections 5, 10, 13, 21, 22, 22.01, and 22.2 and authorized by Sections 27 of the Environmental Protection Act [415 ILCS 5/5, 10, 13, 21, 22, 22.01, 22.2, and 27].
- 5) Effective Date of Amendment: DEC 12 2012
- 6) Does this rulemaking contain an automatic repeal date? No.
- 7) Do this amendment contain incorporations by reference? Yes.
- 8) The text of the adopted amendment is on file in the Board's Chicago office at the James R. Thompson Center, 100 W. Randolph Street, Suite 11-500, and is available there for public inspection.
- 9) Notice of Proposal Published in Illinois Register: April 13, 2012; 36 Ill. Reg. 5756.
- 10) Has JCAR issued a Statement of Objections to this amendment? No.
- 11) Differences between proposal and final version: There were no substantive changes made.
- 12) Have all the changes agreed upon by the agency and JCAR been made as indicated in the agreements letter issued by JCAR? Yes.
- 13) Will this amendment replace emergency amendments currently in effect? No.
- 14) Are there any amendments pending on this Part? No.
- 15) Summary and Purpose of Amendment: These amendments to 35 Ill. Adm. Code 301.106, 302 Subparts B, C, E, F and 303.312 update the current General Use and Lake Michigan Basin water quality standards for boron, fluoride, and manganese, and correct a significant error in the derivation of the zinc chronic standard. In addition, these

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amendments adds incorporations by reference to cyanide test methods, amends requirements for publication of water quality criteria, corrects errors and cross-references, eliminates STORET references, and clarifies references to cyanide, mercury, chloride and toluene water quality standards. Finally, the Board repeals an obsolete site-specific fluoride standard. Essentially, the Board is adopting IEPA's proposal to update and correct the standards with minor modifications and additions.

- 16) Information and questions regarding this adopted amendment shall be directed to:

Kathleen Crowley
Illinois Pollution Control Board
100 W. Randolph Street, Suite 11-500
Chicago, IL 60601
312-814-6929
Kathleen.Crowley@illinois.gov

Copies of the Board's opinions and orders may be requested from the Clerk of the Board at the address listed in #8 above or by calling 312/814-3620. Please refer to the docket number R11-18 in your request. The Board order is also available from the Board's Web site (www.ipcb.state.il.us).

The full text of the Adopted Amendment begins on the next page:

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POLLUTION CONTROL BOARD

NOTICE OF ADOPTED AMENDMENT

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 303
WATER USE DESIGNATIONS AND SITE-SPECIFIC
WATER QUALITY STANDARDS

SUBPART A: GENERAL PROVISIONS

Section	
303.100	Scope and Applicability
303.101	Multiple Designations
303.102	Rulemaking Required (Repealed)

SUBPART B: NONSPECIFIC WATER USE DESIGNATIONS

Section	
303.200	Scope and Applicability
303.201	General Use Waters
303.202	Public and Food Processing Water Supplies
303.203	Underground Waters
303.204	Chicago Area Waterway System and Lower Des Plaines River
303.205	Outstanding Resource Waters
303.206	List of Outstanding Resource Waters
303.220	Primary Contact Recreation Waters
303.225	Incidental Contact Recreation Waters
303.227	Non-Contact Recreation Waters and Non-Recreational Waters

SUBPART C: SPECIFIC USE DESIGNATIONS AND SITE
SPECIFIC WATER QUALITY STANDARDS

Section	
303.300	Scope and Applicability
303.301	Organization
303.311	Ohio River Temperature
303.312	Waters Receiving Fluorspar Mine Drainage (Repealed)
303.321	Wabash River Temperature
303.322	Unnamed Tributary of the Vermilion River
303.323	Sugar Creek and Its Unnamed Tributary

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- 303.326 Unnamed Tributary of Salt Creek, Salt Creek, and Little Wabash River
- 303.331 Mississippi River North Temperature
- 303.341 Mississippi River North Central Temperature
- 303.351 Mississippi River South Central Temperature
- 303.352 Unnamed Tributary of Wood River Creek
- 303.353 Schoenberger Creek; Unnamed Tributary of Cahokia Canal
- 303.361 Mississippi River South Temperature
- 303.400 Bankline Disposal Along the Illinois Waterway/River
- 303.430 Unnamed Tributary to Dutch Creek
- 303.431 Long Point Slough and Its Unnamed Tributary
- 303.441 Secondary Contact Waters (Repealed)
- 303.442 Waters Not Designated for Public Water Supply
- 303.443 Lake Michigan Basin
- 303.444 Salt Creek, Higgins Creek, West Branch of the DuPage River, Des Plaines River
- 303.445 Total Dissolved Solids Water Quality Standard for the Lower Des Plaines River
- 303.446 Boron Water Quality Standard for Segments of the Sangamon River and the Illinois River
- 303.447 Unnamed Tributary of the South Branch Edwards River and South Branch Edwards River
- 303.448 Mud Run Creek

SUBPART D: THERMAL DISCHARGES

Section

- 303.500 Scope and Applicability
- 303.502 Lake Sangchris Thermal Discharges

- 303.APPENDIX A References to Previous Rules
- 303.APPENDIX B Sources of Codified Sections

AUTHORITY: Implementing Section 13 and authorized by Sections 11(b) and 27 of the Environmental Protection Act [415 ILCS 5/13, 11(b) and 27].

SOURCE: Filed with the Secretary of State January 1, 1978; amended at 2 Ill. Reg. 27, p. 221, effective July 5, 1978; amended at 3 Ill. Reg. 20, p. 95, effective May 17, 1979; amended at 5 Ill. Reg. 11592, effective October 19, 1981; codified at 6 Ill. Reg. 7818; amended at 6 Ill. Reg. 11161, effective September 7, 1982; amended at 7 Ill. Reg. 8111, effective June 23, 1983; amended in R87-27 at 12 Ill. Reg. 9917, effective May 27, 1988; amended in R87-2 at 13 Ill. Reg. 15649, effective September 22, 1989; amended in R87-36 at 14 Ill. Reg. 9460, effective May 31, 1990; amended in R86-14 at 14 Ill. Reg. 20724, effective December 18, 1990; amended

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in R89-14(C) at 16 Ill. Reg. 14684, effective September 10, 1992; amended in R92-17 at 18 Ill. Reg. 2981, effective February 14, 1994; amended in R91-23 at 18 Ill. Reg. 13457, effective August 19, 1994; amended in R93-13 at 19 Ill. Reg. 1310, effective January 30, 1995; amended in R95-14 at 20 Ill. Reg. 3534, effective February 8, 1996; amended in R97-25 at 22 Ill. Reg. 1403, effective December 24, 1997; amended in R01-13 at 26 Ill. Reg. 3517, effective February 22, 2002; amended in R03-11 at 28 Ill. Reg. 3071, effective February 4, 2004; amended in R06-24 at 31 Ill. Reg. 4440, effective February 27, 2007; amended in R09-8 at 33 Ill. Reg. 7903, effective May 29, 2009; amended in R09-11 at 33 Ill. Reg. 12258, effective August 11, 2009; amended in R08-9(A) at 35 Ill. Reg. 15078, effective August 23, 2011; amended in R11-18 at 36 Ill. Reg. _____, effective _____.

SUBPART C: SPECIFIC USE DESIGNATIONS AND SITE SPECIFIC WATER QUALITY STANDARDS

Section 303.312 Waters Receiving Fluorspar Mine Drainage (Repealed)

- a) ~~The fluoride standard of Section 302.208 shall not apply to waters which:~~
 - 1) ~~receive effluent from the mines and mills of the fluorspar mining and concentrating industry, and~~
 - 2) ~~have been designated by the Illinois State Water Survey as streams which once in ten years have an average minimum seven day low flow of zero.~~
- b) ~~Such waters shall meet the following standard with regard to fluoride:~~

CONSTITUENT	STORET NUMBER	CONCENTRATION mg/l
Fluoride	0095	5

(Source: Repealed at 36 Ill. Reg. _____, effective _____)