

3745-1-03

**Analytical methods and availability of documents.**

## (A) Analytical methods.

- (1) All methods of analysis used in applying any of the chemical-specific and bacteriological criteria in this chapter shall be in accordance with those prescribed in 40 C.F.R. 136, ~~"Manual of Ohio EPA Laboratory Standard Operating Procedures, Volumes I, II and III,"~~ and ~~"Standard Methods for the Examination of Water and Wastewater,"~~ as cited in paragraph (B) of this rule, except for chlorophyll a and pheophytin a, which shall be in accordance with EPA method 445.0, and free cyanide, which shall be in accordance with ASTM D7237-10, as cited in paragraph (B) of this rule.
- (2) All methods of sample collection and preservation used in applying any of the chemical-specific and bacteriological criteria in this chapter shall be in accordance with ~~"Manual of Ohio EPA Surveillance Methods and Quality Assurance Practices~~Surface Water Field Sampling Manual for water quality parameters and flows" as cited in paragraph (B) of this rule.
- (3) Methods for conducting whole-effluent toxicity tests shall be in accordance with those prescribed in 40 C.F.R. 136, ~~and "Manual of Ohio EPA Laboratory Standard Operating Procedures, Volume IV,"~~ as cited in paragraph (B) of this rule.
- (4) Mixing zones for thermal discharges will be determined in accordance with "Guidelines for the Submittal of Demonstrations Pursuant to Sections 316(a) and 316(b) of the Clean Water Act and Chapter 3745-1 of the Administrative Code," as cited in paragraph (B) of this rule.
- (5) Methods, data collection and data analysis requirements for applying the biological criteria in rule 3745-1-07 of the Administrative Code shall be in accordance with ~~"Biological Criteria for the Protection of Aquatic Life,"~~ ~~and "Manual of Ohio EPA Laboratory Standard Operating Procedures, Volumes I, II, III and IV,"~~ as cited in paragraph (B) of this rule.

## (B) Availability of documents. The following documents are cited in this chapter.

- (1) Code of Federal Regulations (~~CFR~~C.F.R.) references. The Code of Federal Regulations can generally be found in public libraries, and can be viewed electronically online at ~~<http://www.gpoaccess.gov/cfr/index.html>~~ <http://www.gpo.gov/fdsys/> and purchased by writing to: "Superintendent of Documents. Attn: New Orders, PO Box 371954, Pittsburgh, PA 15250-7954." The regulations listed in this paragraph are those effective ~~June 1, 2007~~ July 1, 2014, except for 50 C.F.R.

17, which is effective October 1, 2014.

(a) 40 C.F.R. 124.8, "Procedures for Decisionmaking, Subpart A - General Program Requirements - Fact Sheet."

(b) 40 C.F.R. 124.56, "Procedures for Decisionmaking, Subpart D - Specific Procedures Applicable to NPDES Permits - Fact Sheets."

(c) 40 C.F.R. 131, "Water Quality Standards."

(d) 40 C.F.R. 132, "Water Quality Guidance for the Great Lakes System."

~~(d)~~(e) 40 C.F.R. 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants."

~~(e)~~(f) 40 C.F.R. 230.10, "Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material - Restrictions on discharge."

~~(f)~~(g) 40 C.F.R. 400 to 471, "Subchapter N - Effluent Guidelines and Standards."

~~(g)~~(h) 50 C.F.R. 17, "Endangered and Threatened Wildlife and Plants."

(2) Federal statute references. These laws can generally be found in public libraries, and can be viewed electronically online at <http://www.gpoaccess.gov/uscode/index.html> ~~http://www.gpo.gov/fdsys~~ and purchased by writing to: "Superintendent of Documents. Attn: New Orders, PO Box 371954, Pittsburgh, PA 15250-7954." The laws listed in this paragraph are those as amended through ~~June 1, 2007~~ July 1, 2014.

(a) "Federal Water Pollution Control Act (commonly referred to as the Clean Water Act)," 33 U.S.C. sections 1251 et seq to 1387.

(b) "Endangered Species Act," 16 U.S.C. sections 1531 et seq to 1544.

(c) "Federal Insecticide, Fungicide and Rodenticide Act," 7 U.S.C. 136 ~~et seq.~~

(d) "Safe Drinking Water Act," 42 U.S.C. sections 300f et seq to 300j-26.

(3) Other references. The availability of these documents is provided with each paragraph.

- (a) "Biological Criteria for the Protection of Aquatic Life." These documents are available on the internet at <http://www.epa.state.oh.us/dsw/bioassess/BioCriteriaProtAqLife.html> <http://epa.ohio.gov/dsw/bioassess/BioCriteriaProtAqLife.aspx>.
- (i) "Biological Criteria for the Protection of Aquatic Life: Volume I: The Role of Biological Data in Water Quality Assessment, Ohio EPA, Ecological Assessment Section, Division of Water Quality Planning & Assessment, July 24, 1987, updated February 15, 1988."
- (ii) "Biological Criteria for the Protection of Aquatic Life: Volume II: Users Manual for Biological Field Assessment of Ohio Surface Waters, Ohio EPA, Ecological Assessment Section, Division of Water Quality Planning & Assessment, October 30, 1987, updated January 1, 1988, amended September 30, 1989, updated November 8, 2006."
- (iii) "Biological Criteria for the Protection of Aquatic Life: Volume III: Standardized Biological Field Sampling and Laboratory Methods for Assessing Fish and Macroinvertebrate Communities, Ohio EPA, Ecological Assessment Section, Division of ~~Water Quality Planning & Assessment~~ Surface Water, ~~September 30, 1989, updated November 8, 2006~~ June 26, 2015."
- (iv) "The Qualitative Habitat Evaluation Index [QHEI]: Rationale, Methods, and Application, Ohio EPA, Ecological Assessment Section, Division of Water Quality Planning & Assessment, November 6, 1989."
- (v) "Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI), Ohio EPA Technical Bulletin EAS/2006-06-1, Ohio EPA, Division of Surface Water, June 2006."
- (vi) "Methods for Assessing Habitat in Lake Erie Shoreline Waters Using the Qualitative Habitat Evaluation Index (QHEI) Approach (Version 2.1), Ohio EPA, Division of Surface Water, June 2010."
- (b) "Corps of Engineers Wetlands Delineation Manual, U.S. Army Corps of Engineers, Wetlands Research Program Technical Report Y-87-1, January 1987." This document is available on the internet at

~~<http://www.lrh.usace.army.mil/permits/wetlands/>~~  
<http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf>.

- (c) "Guidance for Water Quality-based Decisions ~~and the~~: The TMDL Process, U.S. EPA Office of Water, EPA 440/4-91-001, April 1991." This document is available on the internet at ~~<http://www.epa.gov/waterscience/pe/watqual.html>~~[http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/decisions\\_index.cfm](http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/decisions_index.cfm).
- (d) "Guidelines for Carcinogen Risk Assessment, Risk Assessment Forum, U.S. Environmental Protection Agency, Washington, DC, EPA/630/P-03/001F, March 2005." This document is available on the internet at ~~<http://www.epa.gov/iris/background.html>~~<http://www2.epa.gov/osa/guidelines-carcinogen-risk-assessment>.
- (e) "Guidelines for the Submittal of Demonstrations Pursuant to Sections 316(a) and 316(b) of the Clean Water Act and Chapter 3745-1 of the Administrative Code, Ohio Environmental Protection Agency, Division of Industrial Wastewater, September 30, 1978." This document is available on the internet at ~~<http://www.epa.state.oh.us/dsw/guidance/guidance.html>~~  
<http://epa.ohio.gov/dsw/guidance/guidance.aspx>.
- (f) "Inland Lakes Sampling Procedure Manual, Ohio EPA, Division of Surface Water, 2015." This document is available on the internet at [http://epa.ohio.gov/dsw/document\\_index/docindx.aspx](http://epa.ohio.gov/dsw/document_index/docindx.aspx).
- ~~(f) "Manual of Ohio EPA Laboratory Standard Operating Procedures, Volumes I, II, III and IV, 2002." These documents are available from "Ohio EPA, Division of Environmental Services, 8995 East Main Street, Building #22, Reynoldsburg, Ohio 43068."~~
- ~~(g) "Manual of Ohio EPA Surveillance Methods and Quality Assurance Practices 2006, Ohio EPA, Division of Surface Water, Division of Environmental Services." This document is available on the internet at [http://www.epa.state.oh.us/dsw/document\\_index/docindx.html](http://www.epa.state.oh.us/dsw/document_index/docindx.html).~~
- ~~(h)~~(g) "Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000), Office of Science and Technology, Office of Water, U.S. Environmental Protection Agency, Washington, DC, EPA-822-B-00-004, October 2000." This document is available on the internet at <http://www.epa.gov/waterscience/criteria/humanhealth/method/index.html>.

- (h) "Methods for Determination of Chemical Substances in Marine and Estuarine Matrices - 2nd Edition. Method 445.0 In Vitro Determination of Chlorophyll a and Pheophytin a in Marine and Freshwater Algae by Fluorescence. Microbiological and Chemical Exposure Assessment Research Division, National Exposure Research Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio, EPA-600-R-97-072, September 1997." This document is available on the internet at <http://www.epa.gov/microbes/documents/marinmet.pdf>.
- (i) "Recommendations for and Documentation of Biological Values for Use in Risk Assessment (U.S. EPA, 1988), EPA/600/6-87/008." This document is available on the internet at <http://www.epa.gov/iris/backgr-d.htm> <http://www.epa.gov/iris/backgrd.html>.
- (j) "Registry of Toxic Effects of Chemical Substances (National Institute for Occupational Safety and Health, Cincinnati, Ohio, July 1997)." This document is available on the internet at <http://0-www.cdc.gov.mill1.sjlibrary.org/niosh/97-119.html> <http://www.cdc.gov/niosh/docs/97-119/>.
- ~~(k) "Standard Methods for the Examination of Water and Wastewater, 21st Edition, American Public Health Association, American Water Works Association and Water Environment Federation, 2005." This document is available on the internet at <http://www.standardmethods.org/>.~~
- ~~(k)~~ (k) "Standard Practice Guide for Conducting Bioconcentration Tests with Fishes and Saltwater Bivalve Molluscs. Standard E 1022. Molluscs. Designation E 1022 - 8494. Pages 606-622. American Society for Testing and Materials, Philadelphia, PA. (1990) ASTM International, West Conshohocken, PA, 2013." This document is available on the internet at [www.astm.org](http://www.astm.org).
- (l) "Standard Test Method for Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection. Standard D7237-10. ASTM International, West Conshohocken, PA, 2010." This document is available on the internet at [www.astm.org](http://www.astm.org).
- (m) "Surface Water Field Sampling Manual for water quality parameters and flows, Ohio EPA, Division of Surface Water, July 2015." This document is available on the internet at [http://epa.ohio.gov/dsw/document\\_index/docindx.aspx](http://epa.ohio.gov/dsw/document_index/docindx.aspx).

- (~~m~~)(n) "Water Quality Standards Handbook, U.S. EPA Office of Water, ~~EPA-823-B-94-005~~EPA-820-B-14-008, ~~August 1994~~January 2015." This document is available on the internet at <http://www.epa.gov/waterscience/standards/policy.htm>  
<http://water.epa.gov/scitech/swguidance/standards/handbook/index.cfm>.
- (~~n~~)(o) "The Wildlife Exposure Factors Handbook (U.S. EPA, 1993), EPA/600/R-93/187." This document is available on the internet at <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=2799>.

Effective:

Five Year Review (FYR) Dates: 02/25/2016

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Certification

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Date

Promulgated Under: 119.03  
Statutory Authority: 6111.041  
Rule Amplifies: 6111.041  
Prior Effective Dates: 2/14/1978, 4/4/1985, 5/1/1990, 7/31/1999, 10/5/2007