



Ohio Administrative Code

Rule 3745-1-03 Analytical methods and availability of documents.

Effective: October 10, 2024

(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 and 405-471, except for chlorophyll a and pheophytin a, which shall be in accordance with EPA method 445.0 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 "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, 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" as cited in paragraph (B) of this rule.

(B) Availability of documents. The following documents are cited in this chapter or used to administer requirements of this chapter.

(1) Code of Federal Regulations (C.F.R.) references. The Code of Federal Regulations can generally be found in public libraries, and can be viewed electronically online at <http://govinfo.gov> 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 July 1, 2022, except for 50 C.F.R. 17, which is effective October 1, 2021.

(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."

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

(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."

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

(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://govinfo.gov> 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 July 1, 2022.

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

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

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



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

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

(a) Ohio EPA references. These documents are available on the internet at <http://epa.ohio.gov/divisions-and-offices/surface-water/reports-data/biological-criteria-for-the-protection-of-aquatic-life> unless otherwise noted.

(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 Surface Water, 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."



(vii) "Field Methods for Evaluating Primary Headwater Streams in Ohio 2020, Version 4.1," Ohio EPA Division of Surface Water, Columbus, Ohio. 129 pp. This document is available on the internet at http://epa.ohio.gov/static/Portals/35/wqs/headwaters/PHWHManual_2020_Ver_4_1_May_2020_Final.pdf

(viii) "Surface Water Field Sampling Manual, Ohio EPA, Division of Surface Water, May 19, 2021." This document is available on the internet at <http://epa.ohio.gov/static/Portals/35/bioassess/2021-DSW-FieldSamplingManual-Main.pdf>

(ix) "Surface Water Field Sampling Manual - Appendix I Inland Lakes Sampling Procedure Manual, Ohio EPA, Division of Surface Water, April 22, 2019." This document is available on the internet at http://epa.ohio.gov/static/Portals/35/bioassess/Inland_Lake_Sampling_Manual_2019_Update_web.pdf.

(b) "Ambient Water Quality Criteria to Address Nutrient Pollution in Lakes and Reservoirs, U.S. EPA Office of Water, EPA-822-R-21-005, August 2021." This document is available on the internet at <http://epa.gov/system/files/documents/2021-08/nutrient-lakes-reservoirs-report-final.pdf>

(c) "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://nrcs.usda.gov/Internet/FSE_DOCUMENTS/16/nrcs143_020653.pdf.

(d) "Development of a Multimetric Index for Assessing the Biological Condition of the Ohio River, Emery et. al., Transactions of the American Fisheries Society 132:791-808, 2003." This document is available on the internet at <http://orsanco.org/wp-content/uploads/2016/11/Development-of-a-Multimetric-Index-for-Assessing-the-Biological-Condition-of-the-Ohio-River.pdf>.

(e) "Guidance for Water Quality-based Decisions: 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://epa.gov/sites/default/files/2018-10/documents/guidance-water-tmdl-process.pdf>.



- (f) "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://epa.gov/risk/guidelines-carcinogen-risk-assessment>.
- (g) "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://epa.ohio.gov/static/Portals/35/guidance/316guidelines.pdf>.
- (h) "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://epa.gov/waterscience/criteria/humanhealth/method/index.html>.
- (i) "Methods for Determination of Chemical Substances in Marine and Estuarine Matrices - 2nd Edition. Method 445.0, Revision 1.6, September 1997, 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, Revision 1.6, September 1997." This document is available on the internet at <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=30003K0S.txt>.
- (j) "ORSANCO 2021 Ohio River Pool Assessments: Dashields, Hannibal, Markland, and McAlpine Pools. ORSANCO, 2022." This document is available on the internet at <http://orsanco.org/wp-content/uploads/2016/11/2021PoolReportUpdated0622.pdf>.
- (k) "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 <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=500022JL.txt>.
- (l) "Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin, U.S. EPA Office of Water, EPA-822-R-19-001, May 2019." This document is available on the internet at <http://epa.gov/wqc/recreational-water->



quality-criteria-and-methods#rec1.

(m) "Recreational Water Quality Criteria. U.S. EPA Office of Water, EPA-820-F-12-058, 2012."

This document is available on the internet at <http://epa.gov/wqc/recreational-water-quality-criteria-and-methods#rec1>

(n) "Registry of Toxic Effects of Chemical Substances (RTECS) (National Institute for Occupational Safety and Health, Cincinnati, Ohio, July 1997)." This document is available on the internet at <http://cdc.gov/niosh/docs/97-119/>.

(o) "Standard Guide for Conducting Bioconcentration Tests with Fishes and Saltwater Bivalve Mollusks. Standard E 1022. Molluscs. Designation E1022-94. ASTM International, West Conshohocken, PA, 2013." This document is available by contacting Ohio EPA, Division of Surface Water, 50 W. Town Street, Suite 700, Columbus, OH 43215.

(p) "Water Quality Standards Handbook, U.S. EPA Office of Water, EPA-823-B-17-001, January 2017." This document is available on the internet at <http://water.epa.gov/scitech/swguidance/standards/handbook/index.cfm>.

(q) "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>.