

3745-599-01

**Beneficial use and harbor sediment authorization - applicability.****(A) ~~This~~ Beneficial use.**

~~(1)~~ (1) This chapter ~~is the program chapter for~~ authorizes the beneficial use of the following wastes, including instances where the waste is commingled with other materials, that are placed on land or burned unless otherwise excluded as provided in rule 3745-599-05 of the Administrative Code:

~~(1)(a)~~ (a) Foundry sands that are a solid waste, industrial waste, or other waste.

~~(2)(b)~~ (b) Material resulting from the treatment of a public water system's source water supply for drinking or industrial purposes that are a solid waste, industrial waste, or other waste.

~~(3)(c)~~ (c) Solid waste, industrial waste, or other waste for use as fuel or as an ingredient in a combustion unit.

~~(4)(d)~~ (d) ~~Material excavated or dredged from a federal navigational channel during harbor or navigation maintenance activities.~~ Lake Erie dredge that is a solid waste or an other waste.

~~(5)(e)~~ (e) Sewage sludge incinerator ash.

~~(B)~~ (B) ~~This beneficial use program chapter establishes a regulatory framework for beneficial use of a beneficial use byproduct and contains definitions, exclusions, and authorization and permit procedures applicable to the beneficial use of a beneficial use byproduct.~~

~~(C)(2)~~ (2) When a beneficial use byproduct has been managed and beneficially used in accordance with this chapter, the beneficial use byproduct that has been beneficially used is not a solid waste under Chapter 3734. of the Revised Code.

(B) Harbor sediment authorization. This chapter authorizes the director to issue a harbor sediment authorization for lake Erie dredge that the director determines is neither a solid waste nor an other waste. A harbor sediment authorization issued in accordance with this chapter does not authorize the placement of any material into waters of the state.

[Comment: Placement of materials into waters of the state may require an authorization pursuant to Chapter 6111. of the Revised Code.]

~~(D)(C)~~ (C) Compliance with this chapter, or permits authorized hereunder, does not relieve any person of obligations under state or federal laws and rules.

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3745-599-02

**Beneficial use and harbor sediment authorization - definitions.**

As used in this chapter, terms are defined as follows:

**(A)**

- (1) "Agronomic benefit" means the promotion or enhancement of plant growth and includes but is not limited to increases in soil fertility and moisture retention.
- (2) "Asphalt" means a brown-black solid or semisolid mixture of bitumens obtained from native deposits or as a petroleum byproduct that is used in paving, roofing, and waterproofing.
- (3) "Asphalt concrete" means a composite material consisting of asphalt binder and mineral aggregate that is mixed together then laid down in layers and compacted.

**(B)**

- (1) "Beneficial use" means the use of a beneficial use byproduct as an ingredient, as a product, or in a manner that contributes to a manufacturing process or product that does not constitute disposal or cause pollution of any waters of the state. A beneficial use may include but is not limited to ~~use~~ the following:
  - (a) Use for agronomic benefit; as a replacement of a raw material; as a soil amendment, fertilizer, or structural fill; or as a fuel.
  - (b) Use as a replacement of a raw material.
  - (c) Use as a soil amendment.
  - (d) Use as a fertilizer.
  - (e) Use as structural fill.
  - (f) Use as a fuel.
- (2) "Beneficial use byproduct" means a solid waste, industrial waste, or other waste having properties necessary or preferred for beneficial use.
- (3) "Best management practices" or "BMPs" means activities, prohibitions or practices, maintenance procedures, and other management practices intended to prevent or reduce the pollution of waters of the state. BMPs also include treatment, operating procedures, and practices intended to control site runoff,

spillage or leaks, sludge or waste disposal, or drainage from raw material and beneficial use byproduct storage.

(C)

(1) "Cement" means a ~~pozzolanic~~pozzolanic material that can bind other materials together, is a powder, and to which both of the following apply:

(a) Includes a mixture of calcined limestone and clay.

(b) Sets and hardens independently.

(2) "Cement concrete" means a construction material that solidifies and hardens independently after mixing with water and that includes cement mixed with any of the following:

(a) Cementitious materials such as fly ash or slag cement.

(b) Aggregate (generally a coarse aggregate such as gravel, limestone, or granite, plus a fine aggregate such as sand).

(c) Chemical admixtures.

(3) "Chip and seal pavement" means a pavement surface treatment that combines a layer of asphalt with a layer of fine aggregate, constructed by evenly distributing a thin base of asphalt onto an existing pavement and then embedding finely graded aggregate into the pavement.

(4) "Controlled low-strength material" means a self-consolidating cementitious mixture that is intended to result in a compressive strength of twelve hundred pounds per square inch or less.

(5) "Cyanobacteria" means photosynthesizing bacteria, also called blue-green algae, which naturally occur in marine and fresh water ecosystems and may produce cyanotoxins that at sufficiently high concentraions can pose a risk to public health.

(6) "Cyanotoxin" means a toxin produced by cyanobacteria, which include liver toxins, nerve toxins, and skin toxins.

(D)

(1) "Director" means the director of environmental protection or the director's authorized representative.

- (2) "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, emitting, or placing of any beneficial use byproduct into or on any land or ground or surface water or into the air, except if the disposition or placement constitutes storage, treatment, or beneficial use in accordance with this chapter.
  - (3) "Distributor" means a person that provides a beneficial use byproduct to another person for beneficial use.
  - (4) "Drinking water source protection area for a public water system using ground water" means the surface and subsurface area surrounding a public water system's supply well that will provide water to the well within five years as delineated or endorsed by Ohio EPA under the wellhead protection program and the source water assessment and protection program.
- (E) "Emergency management zone" or "EMZ" means the surface and subsurface area in the immediate vicinity of a public water system intake as delineated or endorsed by the Ohio EPA under the source water assessment and protection program within which the public water supply owner or operator has little or no time to respond to potential contamination from a spill, release, or weather related event. The standard emergency management zone boundary consists of a semi-circle that extends five hundred feet upstream of the intake and one hundred feet downstream of the intake, except as modified due to local conditions.
- (F) [Reserved.]
- (G)
- (1) "Generator" means a person who generates a beneficial use byproduct.
  - (2) "Ground water" means any water below the surface of the earth in a zone of saturation.
  - (3) "Grout" means a construction material used to embed rebar in masonry walls, connect sections of pre-cast concrete, fill voids, or seal joints. Grout is generally composed of a mixture of water, cement, sand, and sometimes fine gravel.
- (H) "Hazardous waste" means waste that is listed specifically as hazardous waste or exhibits one or more characteristics of hazardous waste as defined in rule 3745-51-03 of the Administrative Code.
- (I) "Industrial waste" has the same meaning as in section 6111.01 of the Revised Code.
- (J) [Reserved.]

(K) [Reserved.]

(L) ~~"Liquid~~

(1) "Lake Erie dredge" means material excavated or dredged from either a federal navigation channel during harbor or navigation maintenance activities or from adjacent or connected commercial maritime port facilities.

(2) "Liquid waste" means industrial waste or other waste that contains free liquids as determined by the paint filter liquids test in accordance with method 9095B of the "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)" as described in rule 3745-599-03 of the Administrative Code.

(M)

(1) "Masonry unit" means manufactured building product that includes but is not limited to materials composed of burned clay, concrete, stone, glass, gypsum, sand, or other residuals.

(2) "Material change" means the composition of the beneficial use byproduct has changed such that either of the following occurs:

(a) The concentration of a known constituent exceeds the concentration limits established in the general or individual beneficial use permit issued pursuant to this chapter.

(b) A new constituent is present in the beneficial use byproduct that was not present or known at the time of the previous characterization.

(N) "Nuisance" means anything which is injurious to human health or offensive to the senses; interferes with the comfortable enjoyment of life or property; and affects a community, neighborhood, or any considerable number of persons (although the extent of annoyance or damage inflicted upon individual persons may be unequal).

(O)

(1) "Ohio EPA" means Ohio environmental protection agency.

(2) "Open burning" has the same meaning as in section 3734.01 of the Revised Code.

(3) "Open dumping" has the same meaning as in section 3734.01 of the Revised Code.

(4) "Other waste" has the same meaning as in section 6111.01 of the Revised Code.

(P)

(1) "Permittee" means any person covered under an effective permit issued pursuant to this chapter.

(2) "Person" means an individual, the state, any political subdivision of the state or other state or local body, the United States and any agency or instrumentality thereof, and any legal entity or organization defined as a person under section 1.59 of the Revised Code, or other entity.

(Q) [Reserved.]

(R) "Representative sample" means a sample of a universe or whole (~~e.g., waste pile, lagoon, ground water~~) that can be expected to exhibit the average properties of the universe or whole.

(S) ~~"Solid~~

(1) "Sediment processing facility" means a site or location to which lake Erie dredge is transferred and at which the lake Erie dredge is dewatered, blended, amended, or otherwise managed prior to distribution or use.

(2) "Solid waste" has the same meaning as in Chapter 3734. of the Revised Code. As used in the definition of solid waste for the purposes of this chapter, "unwanted" means discarded by the generator or used in a manner that shows the generator no longer reasonably needs or desires the beneficial use byproduct. Unwanted does not include beneficially used in accordance with this chapter.

(T) [Reserved.]

(U) [Reserved.]

(V) [Reserved.]

(W) "Waters of the state" has the same meaning as in section 6111.01 of the Revised Code.

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3745-599-03

**Beneficial use and harbor sediment authorization -  
incorporation by reference.**

Incorporation by reference. The text of the incorporated materials is not included in the rules contained in this chapter. The materials are hereby made a part of this chapter. For materials subject to change, only the specific version specified in this rule is incorporated. Any amendment or revision to a referenced document is not incorporated unless and until this rule has been amended to specify the new version.

(A) Availability. The materials incorporated by reference are available as follows:

- (1) Code of federal regulations (C.F.R.). Information and copies may be obtained by writing to: "U.S. Government ~~Printing~~Publishing Office, P.O. Box 979050, St. Louis, MO 63197-9000." The full text of the C.F.R. is also available in electronic format at ~~http://www.gpoaccess.gov/cfr/~~https://www.ecfr.gov. The C.F.R. compilations are also available for inspection and copying at most public libraries and "The State Library of Ohio."
- (2) Federal statutes. The full text is available in electronic format at ~~http://www.gpo.gov/fdsys/~~https://www.govinfo.gov/. These laws are also available for inspection and copying at most public libraries and "The State Library of Ohio."
- (3) Specifications of the "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods, third edition, including Volume IV, Field Manual (SW-846)." Information and copies may be obtained by writing to: "National Technical Information Service, U.S. Department of Commerce, ~~5285 Port Royal Rd.~~5301 Shawnee Road, Springfield~~Alexandria, VA 22161~~22312." The full text is also available in electronic format at https://www.epa.gov/hw-sw846/sw-846-compendium. These test methods are also available for inspection and copying at most public libraries and "The State Library of Ohio."
- (4) Specifications of the "American Society for Testing and Materials" (ASTM). Information and copies may be obtained by writing to: "ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania ~~19426~~19428-2959." These documents are available for purchase at http://www.astm.org.
- (5) Other publications. The availability of these documents is provided in paragraph (B)(4) of this rule. However, many of the documents are also available for inspection and copying at most public libraries and "The State Library of Ohio."

(B) Incorporated materials.

- (1) Appropriate "Code of Federal Regulations," the regulations listed in this rule are those effective on ~~July 1, 2016~~October 18, 2018 and include 40 C.F.R. Part 241, "Solid Wastes Used as Fuels or Ingredients in Combustion Units."
- (2) Appropriate "Federal Statutes," the statutes listed in this rule are those versions of the laws amended through September ~~128, 2016~~2018, including "Permits for dredged or fill material, 33 U.S.C. 1344."
- (3) Appropriate "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)," as amended through July ~~2016~~2018 including the following:
  - (a) Method 1311, "Toxicity Characteristic Leaching Procedure."
  - (b) Method 1312, "Synthetic Precipitation Leaching Procedure."
  - (c) Method 3050B, "Acid Digestion of Sediments, Sludges, and Soils."
  - (d) Method 3500C "Organic Extraction and Sample Preparation."
  - (e) Method 6010D, "Inductively Coupled Plasma-Optical Emission Spectrometry."
  - (f) Method 7000B or 7010, "Flame Atomic Absorption Spectrophotometry," or "Graphite Furnace Atomic Absorption Spectrophotometry."
  - (g) Method 8081B, "Organochlorine Pesticides by Gas Chromatography."
  - (h) Method 8082A, "Polychlorinated Biphenyls (PCBs) by Gas Chromatography Guidance."
  - (i) Method ~~8260B~~8260D, "Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS)."
  - (j) Method ~~8270D~~8270E, "Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)."
  - (k) Method 9095B, "Paint Filter Liquids Test."
- (4) ASTM D3987-12, "Standard Practice for Shake Extraction of Solid Waste with Water;" adopted November 1, 2012.
- (5) Other publications as follows:

- (a) American Public Health Association, American Water Works Association, and Water Environment Federation "Standard Methods for the Examination of Water and Wastewater;" ~~22nd~~23rd Edition, ~~2014~~2017. The full text of this document is available in electronic format at: [www.standardmethods.org/](http://www.standardmethods.org/).
- (b) Battelle Memorial Institute, "Visual Sample Plan Version ~~7.7.11~~ User's Guide;" ~~May~~October, ~~2016~~2018. The full text is also available in electronic format at: ~~<http://vsp.pnnl.gov>~~<https://vsp.pnnl.gov>.
- (c) Ohio environmental protection agency, "Rainwater and Land Development Manual;" ~~2014~~April 25, 2018. The full text is available in electronic format at: ~~[http://epa.ohio.gov/dsw/storm/technical\\_guidance.aspx](http://epa.ohio.gov/dsw/storm/technical_guidance.aspx)~~[https://epa.ohio.gov/dsw/storm/technical\\_guidance](https://epa.ohio.gov/dsw/storm/technical_guidance).
- (d) Ohio environmental protection agency, "Total (Extracellular and Intracellular) Microcystins - ADDA by ELISA Analytical Methodology Version 2.2," November 2015. The full text is available in electronic format at: <https://epa.ohio.gov/Portals/28/documents/labcert/Ohio%20EPA%20DES%20701.0%20Version%202.2.pdf>.
- ~~(d)~~(e) Ohio hydrologic soil groups. A listing of these soils can be found on the United States department of agriculture, natural resources conservation services web site at: ~~[www.oh.nrcs.usda.gov/technical/soils/](http://www.oh.nrcs.usda.gov/technical/soils/)~~<https://www.nrcs.usda.gov/wps/portal/nrcs/main/oh/soils/>.
- ~~(e) Precipitation forecasts.~~
- (f) Soil temperatures. The Ohio agricultural research and development center at the Ohio state university provides daily site specific data at several sites around Ohio for soil temperatures at the following internet address: <http://www.oardc.ohio-state.edu/newweatherweather1/>.
- (g) United States environmental protection agency, "Beneficial Use Compendium: A Collection of Resources and Tools to Support Beneficial Use Evaluations, EPA 530-R-16-009," June 2016. The full text is available in electronic format at: ~~[https://www.epa.gov/sites/production/files/2016-06/documents/ben\\_use\\_compendium\\_062216.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/ben_use_compendium_062216.pdf)~~[https://www.epa.gov/sites/production/files/2016-06/documents/ben use compendium 062216.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/ben_use_compendium_062216.pdf).

- (h) United States environmental protection agency, "Determination of microcystins and nodularin in drinking water by solid phase extraction and liquid chromatography/tandem mass spectrometry (LC/MS/MS) (EPA Method 544)," September 8, 2015. The full text is available in electronic format at: [https://cfpub.epa.gov/si/si\\_public\\_record\\_report.cfm?Lab=NERL&dirEntryId=306953](https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NERL&dirEntryId=306953).
- (i) United States environmental protection agency, "Determination of Total Microcystins and Nodularins in Drinking Water and Ambient Water by ADDA Enzyme-Linked Immunosorbent Assay (EPA Method 546)," August 2016. The full text is available in electronic format at: <https://www.epa.gov/sites/production/files/2016-09/documents/method-546-determination-total-microcystins-nodularins-drinking-water-ambient-water-adda-enzyme-linked-immunosorbent-assay.pdf>.
- (j) United States environmental protection agency, "Ecological Soil Screening Levels for Aluminum," November 2003. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_aluminum.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_aluminum.pdf).
- (k) United States environmental protection agency, "Ecological Soil Screening Levels for Antimony," February 2005. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_antimony.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_antimony.pdf).
- (l) United States environmental protection agency, "Ecological Soil Screening Levels for Arsenic," March 2005. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_arsenic.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_arsenic.pdf).
- (m) United States environmental protection agency, "Ecological Soil Screening Levels for Barium," February 2005. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_barium.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_barium.pdf).
- (n) United States environmental protection agency, "Ecological Soil Screening Levels for Beryllium," February 2005. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_beryllium.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_beryllium.pdf).
- (o) United States environmental protection agency, "Ecological Soil Screening Levels for Cadmium," March 2005. The full text is

available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_cadmium.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_cadmium.pdf).

- (p) United States environmental protection agency, "Ecological Soil Screening Levels for Chromium," April 2008. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_chromium.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_chromium.pdf).
- (q) United States environmental protection agency, "Ecological Soil Screening Levels for Cobalt," March 2005. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_cobalt.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_cobalt.pdf).
- (r) United States environmental protection agency, "Ecological Soil Screening Levels for Copper," February 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_copper.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_copper.pdf).
- (s) United States environmental protection agency, "Ecological Soil Screening Levels for DDT and Metabolites," April 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_ddt.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_ddt.pdf).
- (t) United States environmental protection agency, "Ecological Soil Screening Levels for Dieldrin," April 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_dieldrin.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_dieldrin.pdf).
- (u) United States environmental protection agency, "Ecological Soil Screening Level for Iron," November 2003. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_iron.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_iron.pdf).
- (v) United States environmental protection agency, "Ecological Soil Screening Levels for Lead," March 2005. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_lead.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_lead.pdf).
- (w) United States environmental protection agency, "Ecological Soil Screening Levels for Manganese," April 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_manganese.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_manganese.pdf).

- (x) United States environmental protection agency, "Ecological Soil Screening Levels for Nickel," March 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_nickel.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_nickel.pdf).
- (y) United States environmental protection agency, "Ecological Soil Screening Levels for Pentachlorophenol," April 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_pcp.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_pcp.pdf).
- (z) United States environmental protection agency, "Ecological Soil Screening Levels for Polycyclic Aromatic Hydrocarbons (PAHs)," June 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_pah.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_pah.pdf).
- (aa) United States environmental protection agency, "Ecological Soil Screening Levels for Selenium," July 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_selenium.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_selenium.pdf).
- (bb) United States environmental protection agency, "Ecological Soil Screening Levels for Silver," September 2006. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_silver.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_silver.pdf).
- (cc) United States environmental protection agency, "Ecological Soil Screening Levels for Vanadium," April 2005. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_vanadium.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_vanadium.pdf).
- (dd) United States environmental protection agency, "Ecological Soil Screening Levels for Zinc," June 2007. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl\\_zinc.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/eco-ssl_zinc.pdf).
- (ee) United States environmental protection agency, "Integrated Risk Information System," August 30, 2018. The full text is available in electronic format at: <https://www.epa.gov/iris>.
- ~~(h)~~(ff) United States environmental protection agency internet-based resources relating to BMPs for erosion and sedimentation, including the sector specific "Industrial Storm Water Fact Sheet Series;" ~~December, 2006~~July 2017. The full text is available in electronic format

at: ~~www.epa.gov/npdes/stormwater/msgp~~ <https://www.epa.gov/npdes/industrial-stormwater-fact-sheet-series>.

(gg) United States environmental protection agency, "Background Information for the Leaching Environmental Assessment Framework (LEAF) Test Methods," November 2010. The full text is available in electronic format at: [https://clu-in.org/download/remed/EPA\\_LEAF\\_P1009TQ9.pdf](https://clu-in.org/download/remed/EPA_LEAF_P1009TQ9.pdf).

(h)(hh) United States environmental protection agency, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012;" Fifth Edition, October 2002. The full text is available in electronic format at: <https://www.epa.gov/cwa-methods/acute-toxicity-wet-methods>.

(i)(ii) United States environmental protection agency, "Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79/020;" March, 1983. The full text is available in electronic format at: <http://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=30000Q10.txt>.

(k)(jj) United States environmental protection agency, "Methodology for Evaluating—the Beneficial UseUses of Industrial Non-Hazardous Secondary Materials, EPA 530-R-16-011;" April 2016. The full text is available in electronic format at: [https://www.epa.gov/sites/production/files/2016-07/documents/methodology\\_for\\_evaluating\\_beneficial\\_use\\_of\\_secondary\\_materials\\_4-14-16.pdf](https://www.epa.gov/sites/production/files/2016-07/documents/methodology_for_evaluating_beneficial_use_of_secondary_materials_4-14-16.pdf).

(l)(kk) United States environmental protection agency, "National Management Measures to Control Nonpoint Source Pollution from Urban Areas, EPA-841-B-05-004;" November, 2005. The full text is available in electronic format at: ~~[https://www.epa.gov/sites/production/files/2015-09/documents/urban\\_guidance\\_0.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/urban_guidance_0.pdf)~~ [https://www.epa.gov/sites/production/files/2015-09/documents/urban\\_guidance\\_0.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/urban_guidance_0.pdf).

(m)(ll) United States environmental protection agency, "National Menu of Best Management Practices (BMPs) for Stormwater;" July, ~~2016~~2018. The full text is available in electronic format at: <https://www.epa.gov/npdes/national-menu-best-management-practices--bmps-stormwater#edu>.

(n)(mm) United States environmental protection agency, "RCRA Waste Sampling Draft Technical Guidance, Planning, Implementation, and Assessment, EPA 530-D-02-002;" as amended through August 2002. Information and copies may be obtained by writing to

"U.S. Environmental Protection Agency, ~~Ariel Rios Building~~, 1200 Pennsylvania Avenue N.W., Washington, DC 20460." The full text is also available in electronic format at: ~~<http://nepis.epa.gov/Exec/Query/PURL.cgi?Dockey=P1005SBQ.txt>~~[https://www.epa.gov/sites/production/files/2015-10/documents/rwsdtg\\_0.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/rwsdtg_0.pdf).

~~(o)~~(nn) United States environmental protection agency, "Regional Screening Levels," May ~~2016~~2018. The full text is available in electronic format at: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables> ~~may 2016~~.

(oo) United States environmental protection agency, "Regional Screening Levels - User's Guide," May 2018. The full text is available in electronic format at: <https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide>.

~~(p)~~(pp) United States environmental protection agency, "Risk Assessment of Spent Foundry Sands In Soil-Related Applications, EPA-530-R-14-003;" October 2014. The full text is available in electronic format at: ~~<https://www.epa.gov/smm/risk-assessment-spent-foundry-sands-soil-related-applications>~~ [https://www.epa.gov/sites/production/files/2016-03/documents/risk assessment sfs in soil.pdf](https://www.epa.gov/sites/production/files/2016-03/documents/risk%20assessment%20sfs%20in%20soil.pdf).

~~(q)~~(qq) United States environmental protection agency, technical support center for monitoring and site characterization, "Statistical Software ProUCL ~~5.05.1~~ for Environmental Applications for Data Sets with and without Nondetect Observations, EPA-600-R-07-041;" ~~September, 2013~~June 2016. The full text is available in electronic format at: ~~<http://www.epa.gov/osp/hstl/tsc/software.htm>~~<https://www.epa.gov/land-research/proucl-software>.

(rr) United States environmental protection agency, "Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens," March 2005. The full text is available in electronic format at: <https://www.epa.gov/risk/supplemental-guidance-assessing-susceptibility-early-life-exposure-carcinogens>.



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Prior Effective Dates: 03/31/2017

3745-599-05

**Beneficial use and harbor sediment authorization - general exclusions.**

General exclusions. This chapter is not applicable to the following materials, including instances when a beneficial use byproduct or lake Erie dredge is commingled with the material:

- (A) Agricultural additives regulated pursuant to Chapter 905. of the Revised Code and rules adopted thereunder.
- (B) Compost regulated pursuant to Chapter 3734. of the Revised Code and rules adopted thereunder.
- (C) Hazardous waste regulated pursuant to Chapter 3734. of the Revised Code and rules adopted thereunder.
- (D) Liquid wastes regulated pursuant to Chapter 6111. of the Revised Code and rules adopted thereunder other than liquid wastes resulting from the treatment of source water for drinking or industrial purposes from a public water system.
- (E) Sewage, sewage sludge, sludge, sludge materials, and biosolids for which an authorization has been issued under Chapter 6111. of the Revised Code and rules adopted thereunder.
- (F) Waste from oil and gas exploration and production operations including brine, regulated pursuant to Chapter 1509. of the Revised Code and rules adopted thereunder.
- (G) Material ~~authorized under section 6111.32 of the Revised Code.~~  
~~[Comment: For the purposes of this rule, material authorized under section 6111.32 of the Revised Code means material used for activities specified in division (C) of section 6111.32 of the Revised Code and that have received a 401 water quality certification pursuant to Chapter 3745-32 of the Administrative Code.~~
- (H) Materials injected into a well pursuant to Chapter 6111. of the Revised Code and rules adopted thereunder.
- (I) Used oil regulated pursuant to Chapter 3745-279 of the Administrative Code.

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6111.34  
Prior Effective Dates: 03/31/2017

3745-599-20

**Beneficial use and harbor sediment authorization - prohibitions.****(A) ~~No~~ Beneficial use prohibitions.**

(1) ~~No~~ person shall beneficially use a beneficial use byproduct except as authorized in accordance with this chapter.

~~(B)~~(2) Except in accordance with an effective national pollutant discharge elimination system permit, no person shall place or cause to be placed a beneficial use byproduct in a location where it results in a discharge to waters of the state.

~~(C)~~(3) Except as authorized by section 6111.32 of the Revised Code and in accordance with a water quality certification issued under Chapter 3745-32 of the Administrative Code, and a permit issued under 33 U.S.C. 1344, as described in rule 3745-599-03 of the Administrative Code, if applicable, no person shall beneficially use a beneficial use byproduct by placing the beneficial use byproduct into waters of the state.

~~(D)~~(4) No person shall beneficially use, manage, or store a beneficial use byproduct in a manner or location where the beneficial use may endanger public health, safety, or the environment.

~~(E)~~(5) No person shall beneficially use, manage, or store a beneficial use byproduct in a manner or in a location that creates a nuisance, or causes or contributes to water pollution or air pollution.

~~(F)~~(6) No person shall conduct, permit, or allow disposal of a beneficial use byproduct unless authorized by this chapter or by Chapter 3704., 3734., or 6111. of the Revised Code. In the event that any of these activities occur, or have occurred at a property, the person responsible for the activity, the owner of the property, or the person who allows or allowed the activity to occur, shall promptly remove and dispose or otherwise manage the beneficial use byproduct in accordance with Chapters 3734. and 6111. of the Revised Code, and shall submit verification to Ohio EPA that the beneficial use byproduct has been properly managed.

**(B) No person shall use, manage, or place lake Erie dredge in any location except in accordance with this chapter or as authorized under section 6111.33 of the Revised Code.**

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6111.32, 6111.33, 6111.34  
Prior Effective Dates: 03/31/2017

3745-599-60

**Approved sampling and characterization procedures for the beneficial use of a beneficial use byproduct.**

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, test methods, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-599-03 of the Administrative Code titled "Beneficial use - incorporation by reference."]

- (A) A characterization required by a permit issued pursuant to this chapter shall be conducted in accordance with the permit.
- (B) A characterization required by this chapter to determine whether a beneficial use byproduct can be beneficially used shall be conducted in accordance with one or a combination of the following applicable methods or other methods deemed acceptable by the director:
- (1) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)," including the following:
    - (a) Method 1311, "Toxicity Characteristic Leaching Procedure."
    - (b) Method 1312, "Synthetic Precipitation Leaching Procedure."
    - (c) Method 3050B, "Acid Digestion of Sediments, Sludges, and Soils."
    - (d) Method 3500C "Organic Extraction and Sample Preparation."
    - (e) Method 6010D, "Inductively Coupled Plasma-Optical Emission Spectrometry."
    - (f) Method 7000B or 7010, "Flame Atomic Absorption Spectrophotometry," or "Graphite Furnace Atomic Absorption Spectrophotometry."
    - (g) Method 8081B, "Organochlorine Pesticides by Gas Chromatography."
    - (h) Method 8082A, "Polychlorinated Biphenyls (PCBs) by Gas Chromatography Guidance."
    - (i) Method ~~8260B~~ 8260D, "Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS)."
    - (j) Method ~~8270D~~ 8270E, "Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)."
    - (k) Method 9095B, "Paint Filter Liquids Test."

(2) Methods described in the following publications:

- (a) "Standard Methods for the Examination of Water and Wastewater."
- (b) "Methods for Chemical Analysis of Water and Wastes (EPA 600/4-79/020)."
- (c) "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, (EPA-821-R-02-012)."

(3) Other United States environmental protection agency methods or other methods that demonstrate to the satisfaction of the director that the results of the analysis adequately represent constituent concentrations in the beneficial use byproduct.

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Rule Amplifies: 3734.02, 6111.03, 6111.32, 6111.035  
Prior Effective Dates: 03/31/2017



3745-599-400

**Harbor sediment authorization.**

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, test methods, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-599-03 of the Administrative Code titled "Beneficial use and harbor sediment authorization - incorporation by reference."]

(A) Upon consideration of the criteria set forth in rule 3745-599-410 of the Administrative Code, the director may issue or renew a harbor sediment authorization for lake Erie dredge that is not a hazardous waste and that is unlikely to create a nuisance or adversely affect public health, safety, or the environment. Lake Erie dredge that is covered by and managed in accordance with an effective harbor sediment authorization is neither a solid waste nor an other waste for the purposes of Chapters 3734. and 6111. of the Revised Code, except to the extent that earthen materials are regulated pursuant to those chapters. A harbor sediment authorization may include but is not limited to the following:

(1) Requirements pertaining to the management and storage of lake Erie dredge during handling of the lake Erie dredge, including setbacks and isolation distances. At a minimum, the director may consider the following in determining appropriate requirements:

(a) Ohio environmental protection agency's "Rainwater and Land Development Manual."

(b) United States environmental protection agency's internet-based resources relating to BMPs for erosion and sedimentation, including the sector specific "Industrial Storm Water Fact Sheet Series."

(c) United States environmental protection agency's "National Menu of Best Management Practices (BMPs) for Stormwater."

(d) United States environmental protection agency's "National Management Measures to Control Nonpoint Source Pollution from Urban Areas, EPA-841-B-05-004."

(e) Ohio hydrologic soil groups.

(f) Precipitation forecasts.

(g) Soil temperatures.

(h) Other BMPs listed in Chapter 3745-40 of the Administrative Code.

(2) Testing and sampling requirements.

- (3) Record keeping and reporting requirements.
- (4) The identification of the lake Erie dredge covered under the harbor sediment authorization, including the geographic location and timeframe during which the lake Erie dredge is excavated.
- (5) Expiration procedures.
- (6) Renewal procedures.
- (B) Administrative change. The director may make an administrative change to a harbor sediment authorization to correct typographical errors.
- (C) Modification. The director may modify a harbor sediment authorization in response to changes in applicable laws, rules, or other factors affecting compliance with the terms and conditions of the harbor sediment authorization.
- (D) Suspension or revocation.
  - (1) Suspension. The director may suspend a harbor sediment authorization if the director determines that an emergency exists requiring immediate action to protect the public health or safety or the environment. The director may issue an emergency order, without notice or hearing, reciting the existence of the emergency and requiring that such action be taken as necessary to meet the emergency. The emergency order shall take effect immediately. Any person to whom the emergency order is directed shall comply immediately, but on application to the director shall be afforded a hearing as soon as possible and not later than thirty days after application. On the basis of the hearing, the director shall continue the emergency order in effect, revoke, or modify the emergency order. No emergency order shall remain in effect for more than one hundred twenty days after issuance.
  - (2) Revocation. The director may revoke a harbor sediment authorization during the authorization's term if any of the following occur:
    - (a) A change in applicable laws, rules, or other factors affecting compliance with the terms and conditions of the harbor sediment authorization.
    - (b) The director finds that the relevant data and available information no longer supports issuance of a harbor sediment authorization for the lake Erie dredge.

- (c) The director determines that a nuisance or an adverse impact to public health, safety, or the environment has occurred or is likely to occur from the lake Erie dredge covered by the harbor sediment authorization.
  - (d) A constituent of concern is identified that has not been evaluated when issuing or renewing the harbor sediment authorization.
  - (e) If at any time the lake Erie dredge to which the harbor sediment authorization applies no longer meets the criteria set forth in rule 3745-599-410 of the Administrative Code. If revocation occurs pursuant to this paragraph, evaluation of the lake Erie dredge is required prior to issuance of a new harbor sediment authorization.
- (3) If the director proposes to revoke a harbor sediment authorization, the director shall public notice the proposed revocation in accordance with Chapter 3745-49 of the Administrative Code.
- (4) Except as provided in paragraph (E) of this rule, if the director suspends or revokes a harbor sediment authorization, any lake Erie dredge identified in the harbor sediment authorization shall be considered a solid waste or an other waste as provided in Chapters 3734. and 6111. of the Revised Code and the rules adopted thereunder.
- (E) Lake Erie dredge that has been land applied or removed from a sediment processing facility for distribution or use while covered under an effective harbor sediment authorization may be regulated pursuant to Chapter 3734. or 6111. of the Revised Code only to the extent that earthen materials are regulated pursuant to those chapters.

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3745-599-410

**Criteria for issuance of a harbor sediment authorization.**

[Comment: For dates of non regulatory government publications, publications of recognized organizations and associations, test methods, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-599-03 of the Administrative Code titled "Beneficial use and harbor sediment authorization - incorporation by reference."]

(A) When determining whether to issue a harbor sediment authorization for lake Erie dredge pursuant to rule 3745-599-400 of the Administrative Code, the director may consider at a minimum the following criteria:

- (1) The geographic area from which the lake Erie dredge was excavated.
- (2) The extent to which the lake Erie dredge has been dewatered.
- (3) A characterization of the lake Erie dredge through analysis of all constituents reasonably expected to be present in the lake Erie dredge and sufficient samples as necessary for a statistical analysis.
- (4) Comparisons of constituent concentrations to established screening levels, restrictions, or standards that include but are not limited to the following:
  - (a) United States environmental protection agency, "Ecological Soil Screening Levels for Aluminum."
  - (b) United States environmental protection agency, "Ecological Soil Screening Levels for Antimony."
  - (c) United States environmental protection agency, "Ecological Soil Screening Levels for Arsenic."
  - (d) United States environmental protection agency, "Ecological Soil Screening Levels for Barium."
  - (e) United States environmental protection agency, "Ecological Soil Screening Levels for Beryllium."
  - (f) United States environmental protection agency, "Ecological Soil Screening Levels for Cadmium."
  - (g) United States environmental protection agency, "Ecological Soil Screening Levels for Chromium."
  - (h) United States environmental protection agency, "Ecological Soil Screening Levels for Cobalt."

- (i) United States environmental protection agency, "Ecological Soil Screening Levels for Copper."
- (j) United States environmental protection agency, "Ecological Soil Screening Levels for DDT and Metabolites."
- (k) United States environmental protection agency, "Ecological Soil Screening Levels for Dieldrin."
- (l) United States environmental protection agency, "Ecological Soil Screening Levels for Iron."
- (m) United States environmental protection agency, "Ecological Soil Screening Levels for Lead."
- (n) United States environmental protection agency, "Ecological Soil Screening Levels for Manganese."
- (o) United States environmental protection agency, "Ecological Soil Screening Levels for Nickel."
- (p) United States environmental protection agency, "Ecological Soil Screening Levels for Pentachlorophenol."
- (q) United States environmental protection agency, "Ecological Soil Screening Levels for Polycyclic Aromatic Hydrocarbons (PAHs)."
- (r) United States environmental protection agency, "Ecological Soil Screening Levels for Selenium."
- (s) United States environmental protection agency, "Ecological Soil Screening Levels for Silver."
- (t) United States environmental protection agency, "Ecological Soil Screening Levels for Vanadium."
- (u) United States environmental protection agency, "Ecological Soil Screening Levels for Zinc."
- (v) Resident soil screening levels contained in the United States environmental protection agency, "Regional Screening Levels."
- (w) United States environmental protection agency "Regional screening level (RSL) User's Guide."

- (x) United States environmental protection agency "Integrated Risk Information System."
- (y) United States environmental protection agency "Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens."
- (z) Information regarding ambient background concentrations.
- (5) Information obtained from the army corps of engineers, the national oceanic and atmospheric association, Ohio EPA, the United States environmental protection agency, or any other relevant information deemed acceptable by the director.
- (6) Whether methods are being employed to ensure that the lake Erie dredge is not commingled with solid waste or other contaminants.
- (7) The concentration of cyanotoxins in the lake Erie dredge.
- (8) Any additional criteria deemed necessary by the director.
- (B) A characterization of lake Erie dredge may be conducted by means of testing and analysis in accordance with one or a combination of the following applicable methods or other methods deemed acceptable by the director:
  - (1) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)," including the following:
    - (a) Method 1311, "Toxicity Characteristic Leaching Procedure."
    - (b) Method 1312, "Synthetic Precipitation Leaching Procedure."
    - (c) Method 3050B, "Acid Digestion of Sediments, Sludges, and Soils."
    - (d) Method 3500C "Organic Extraction and Sample Preparation."
    - (e) Method 6010D, "Inductively Coupled Plasma-Optical Emission Spectrometry."
    - (f) Method 7000B or 7010, "Flame Atomic Absorption Spectrophotometry," or "Graphite Furnace Atomic Absorption Spectrophotometry."
    - (g) Method 8081B, "Organochlorine Pesticides by Gas Chromatography."
    - (h) Method 8082A, "Polychlorinated Biphenyls (PCBs) by Gas Chromatography Guidance."

- (i) Method 8260D, "Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)."
- (j) Method 8270E, "Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry(GC/MS)."
- (k) Method 9095B, "Paint Filter Liquids Test."

(2) Methods described in the following publications:

- (a) American Public Health Association, American Water Works Association, and Water Environment Federation, "Standard Methods for the Examination of Water and Wastewater."
- (b) "Methods for Chemical Analysis of Water and Wastes (EPA 600/4-79/020)."
- (c) Ohio environmental protection agency, "Total (Extracellular and Intracellular) Microcystins -ADDA by ELISA Analytical Methodology."
- (d) United States environmental protection agency, "Determination of microcystins and nodularin in drinking water by solid phase extraction and liquid chromatography/tandem mass spectrometry (LC/MS/MS) (EPA Method 544)."
- (e) United States environmental protection agency, "Determination of Total Microcystins and Nodularins in Drinking Water and Ambient Water by ADDA Enzyme-Linked Immunosorbent Assay (EPA Method 546)."

(3) United States environmental protection agency "Leaching Evaluation Assessment Framework for inorganic constituents."

(4) Other United States environmental protection agency methods or other methods that demonstrate to the satisfaction of the director that the results of the analysis adequately represent constituent concentrations in the lake Erie dredge.



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