

*** DRAFT - NOT YET FILED ***

TO BE RESCINDED

3745-40-01 **Definitions.**

(A) As used in this chapter:

- (1) "Aerobic digestion" means the biochemical decomposition of organic matter in sewage sludge material into carbon dioxide and water by microorganisms in the presence of oxygen.
- (2) "Agronomic rate" means the whole sewage sludge application rate (dry weight basis) intended to provide the food crop, feed crop, fiber crop, cover crop, pasture, or vegetation the appropriate nitrogen for the reasonably expected yield, and to minimize the amount of nitrogen in the sewage sludge that passes to waters of the state.
- (3) "Anaerobic digestion" means the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of oxygen.
- (4) "ASTM D4994-89" means the American society for testing and material (ASTM) standard test methods for standard practice for recovery of viruses from wastewater sludges, as that standard was approved in 2002. ASTM test methods are generally available in public libraries or from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, at 610/832-9555, or on the internet at <http://www.ASTM.org>.
- (5) "Authorized site" means an area of land bordered by fences, tree lines, streams, roads, or other means of demarcation, upon which sewage sludge is land applied.
- (6) "Available water capacity" means the capacity of soils to hold water available for use by most plants.
- (7) "Bedrock" means any continuous or connected solid rock exposed at the surface of the earth or covered by soil or glacial deposits.
- (8) "Bulk sewage sludge" means sewage sludge that is not sold or given away in a bag or other container for application to the land.

- (9) "Class I sludge management facility" means any publicly owned treatment works as defined in 40 C.F.R. 501.2, required to have an approved pretreatment program under 40 C.F.R. 403.8(a) (including any publicly owned treatment works located in a state that has elected to assume local program responsibilities pursuant to 40 C.F.R. 403.10(e)) and any treatment works treating domestic sewage, as defined in 40 C.F.R. 122.2, classified as a class I sludge management facility by the United States environmental protection agency regional administrator in conjunction with the director, because of the potential for its sewage sludge use or disposal practice to affect public health and the environment adversely.
- (10) "Community public water system" means a water system that has at least fifteen service connections used by year-round residents or regularly serves at least twenty-five year-round residents. Examples of community water systems may include, but are not limited to, cities, villages, nursing homes and mobile home parks.
- (11) "Cover crop" means a small grain crop, such as oats, wheat, or barley, not grown for harvest.
- (12) "Crop year" means the period of time for a particular crop to be planted and harvested, or one year's time, whichever is shorter.
- (13) "Cumulative pollutant loading rate" means the maximum amount of an inorganic pollutant that can be applied to an area of land.
- (14) "Dioxin" means all of the seven 2, 3, 7, 8 chlorinated dibenzo-p-dioxin congeners, ten 2, 3, 7, 8 chlorinated dibenzofuran congeners, and twelve coplanar polychlorinated biphenyl congeners in table A-1 of this rule.

Table A-1

CAS number	Congener
1746-01-6	2, 3, 7, 8-tetrachlorodibenzo-p-dioxin
40321-76-4	1, 2, 3, 7, 8-pentachlorodibenzo-p-dioxin
39227-28-6	1, 2, 3, 4, 7, 8-hexachlorodibenzo-p-dioxin

57653-85-7	1, 2, 3, 6, 7, 8-hexachlorodibenzo-p-dioxin
19408-74-3	1, 2, 3, 7, 8, 9-hexachlorodibenzo-p-dioxin
35822-46-9	1, 2, 3, 4, 6, 7, 8-heptachlorodibenzo-p-dioxin
3268-87-9	1, 2, 3, 4, 6, 7, 8, 9-octachlorodibenzo-p-dioxin
51207-31-9	2, 3, 7, 8-tetrachlorodibenzofuran
57117-41-6	1, 2, 3, 7, 8-pentachlorodibenzofuran
57117-31-4	2, 3, 4, 7, 8-pentachlorodibenzofuran
70648-26-9	1, 2, 3, 4, 7, 8-hexachlorodibenzofuran
57117-44-9	1, 2, 3, 6, 7, 8-hexachlorodibenzofuran
72918-21-9	1, 2, 3, 7, 8, 9-hexachlorodibenzofuran
60851-34-5	2, 3, 4, 6, 7, 8-hexachlorodibenzofuran
67562-39-4	1, 2, 3, 4, 6, 7, 8-heptachlorodibenzofuran
55673-89-7	1, 2, 3, 4, 7, 8, 9-heptachlorodibenzofuran
39001-02-0	1, 2, 3, 4, 6, 7, 8, 9-octachlorodibenzofuran
32598-13-3	3, 3', 4, 4'-tetrachlorobiphenyl
70362-50-4	3, 4, 4', 5-tetrachlorobiphenyl
57465-28-8	3, 3', 4, 4', 5-pentachlorobiphenyl
32598-14-4	2, 3, 3', 4, 4'-pentachlorobiphenyl
31508-00-6	2', 3, 4, 4', 5-pentachlorobiphenyl
65510-44-3	2, 3', 4, 4', 5'-pentachlorobiphenyl
74472-37-0	2, 3, 4, 4', 5-pentachlorobiphenyl
32774-16-6	3, 3', 4, 4', 5, 5'-hexachlorobiphenyl
38380-08-4	2, 3, 3', 4, 4', 5-hexachlorobiphenyl
69782-90-7	2, 3, 3', 4, 4', 5'-hexachlorobiphenyl
52663-72-6	2, 3', 4, 4', 5, 5'-hexachlorobiphenyl

39635-31-9	2, 3, 3', 4, 4', 5, 5'-heptachlorobiphenyl
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- (15) "Director" means director of the Ohio environmental protection agency.
- (16) "Disposal" means the final use of sewage sludge, including, but not limited to, land application, land reclamation, surface disposal, or disposal in a landfill or an incinerator.
- (17) "Division" means the Ohio environmental protection agency division of surface water, with any division approvals or authorizations manifested through its chief.
- (18) "Domestic septage" means either liquid or solid material removed from a septic tank, cesspool, portable toilet, type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.
- (19) "Dry weight basis" means calculated on the basis of having been dried at one hundred five degrees Celsius until reaching a constant mass (i.e., essentially one hundred per cent solids content).
- (20) "Effective neutralizing power" has the same meaning as in division (N) of section 905.51 of the Revised Code.
- (21) "Endangered Species Act" means "Endangered Species Act, 16 U.S.C. section 1533, as amended through June 1, 2007.
- (22) "Environmental Regulations and Technology - Control of Pathogens and Vector Attraction in Sewage Sludge" means "Environmental Regulations and Technology - Control of Pathogens and Vector Attraction in Sewage Sludge, USEPA/625/R-92/013, revised July 2003", United States environmental protection agency, national center for environmental publications and information, 11029 Kenwood road, Cincinnati, OH 45242.
- (23) "Exceptional quality sludge" means sewage sludge that meets all of the following qualifications:
- (a) Satisfies the class A pathogen standards in paragraphs (N)(1) to (N)(6) of

rule 3745-40-05 of the Administrative Code;

- (b) Satisfies one of the vector attraction reduction requirements in paragraphs (Q)(1) to (Q)(8) of rule 3745-40-05 of the Administrative Code;
 - (c) Does not exceed the ceiling concentration limitations for metals listed in paragraph (F)(1) of rule 3745-40-05 of the Administrative Code; and
 - (d) Does not exceed the concentration limitations for metals listed in paragraph (F)(3) of rule 3745-40-05 of the Administrative Code.
- (24) "Facility storage of sewage sludge" means the storage of sewage sludge at the permittee's treatment works.
- (25) "Feed crops" means crops produced primarily for consumption by animals.
- (26) "Fiber crops" means crops such as flax and cotton.
- (27) "Field storage of sewage sludge" means an area where sewage sludge may be stored for greater than thirty days but not to exceed ninety days.
- (28) "Fineness index" has the same meaning as in division (O) of section 905.51 of the Revised Code.
- (29) "Food crops" means crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.
- (30) "Frequently flooded" means an authorized site or area of an authorized site that has been flooded an average of more than once in two years. Frequently flooded, and the months when flooding is expected, shall be determined by consulting the appropriate "National Cooperative Soil Survey" publication.
- (31) "Grade" means the percentage of total Kjeldahl nitrogen, available phosphorus, and soluble potassium stated in the same terms and order.
- (32) "Grassed waterway" means a natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion and conducts surface water away from cropland.
- (33) "Ground cover" means vegetation canopy or crop residue on agricultural land.

- (34) "Ground water source water assessment and protection area" and "wellhead protection area" mean the surface and subsurface area that provides water to a community public water system well(s) as delineated or endorsed by the director.
- (35) "Immediate incorporation" means sewage sludge is mechanically incorporated into the soil within six hours after surface application.
- (36) "Industrial wastewater" means wastewater generated in a commercial or industrial process.
- (37) "Isolation distance" means the distance to a specified object from the nearest edge of the sewage sludge application area.
- (38) "Landfill" means a sanitary landfill facility, as defined in rules adopted under section 3734.02 of the Revised Code, that is licensed under section 3734.05 of the Revised Code.
- (39) "Land application," "land apply," "applied to the land," and "application to the land" mean the spraying or spreading of sewage sludge onto the land surface, the injection of sewage sludge below the land surface, or the incorporation of sewage sludge into the soil for the purposes of conditioning the soil or fertilizing crops or vegetation grown on the soil.
- (40) "Land reclamation" means the returning of disturbed land to productive uses.
- (41) "Land with a high potential for public exposure" means land that does not meet the definition of "land with a low potential for public exposure".
- (42) "Land with a low potential for public exposure" means agricultural land and land reclamation sites.
- (43) "Liming material" has the same meaning as in division (A) of section 905.51 of the Revised Code.
- (44) "Medical care facility" means "home" as defined in section 3721.01 of the Revised Code, "hospital" as defined in section 3727.01 of the Revised Code, "adult care facility" as defined in section 3722.01 of the Revised Code, "nursing facility" as defined in section 5111.20 of the Revised Code and similar facilities.

- (45) "NPDES" means national pollutant discharge elimination system.
- (46) "Nuisance odor" means an emission of any gas, vapor, aerosol or combination thereof from the management of sewage sludge, in whatever quantities, that causes, either alone or in reaction with other air contaminants: injurious effects to public health or the environment or unreasonable interference with the comfortable enjoyment of life or property.
- (47) "Occupied building" means a structure, permanent in nature, occupied or capable of being occupied. "Occupied building" does not include "medical care facility".
- (48) "Occurrence of Pathogens in Distribution and Marketing Municipal Sludges" means "Occurrence of Pathogens in Distribution and Marketing Municipal Sludges, USEPA 600/1-87-014, 1988". This document is available on the internet at <http://www.epa.gov/ncepihom/>.
- (49) "Other container" means an open or closed receptacle. This includes, but is not limited to, a bucket, box and carton and a vehicle or trailer with a load capacity of one metric ton or less.
- (50) "Pasture" means land on which animals feed directly on vegetation such as legumes, grasses, grain stubble or stover.
- (51) "Pathogen" means disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.
- (52) "Permittee" means the holder of a valid NPDES permit or the holder of an approved sewage sludge management plan.
- (53) "pH" means the logarithm of the reciprocal of the hydrogen ion concentration measured at twenty-five degrees Celsius or measured at another temperature and then converted to an equivalent value at twenty-five degrees Celsius.
- (54) "Phosphorus index" means an assessment technique for determining the relative risk of phosphorus movement from various landforms to waters of the state. Factors assessed include, but are not limited to, proximity to waters of the state, slope, soil and weather conditions, soil type, buffer strips, soil surface condition, surface and sub-surface drainage, and application method.
- (55) "Pollutant" means an organic substance, an inorganic substance, a combination

of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the administrator of the United States environmental protection agency, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

- (56) "Regional storage of sewage sludge" means an area of land or constructed facility engineered for the storage of sewage sludge destined for land application on more than one site.
- (57) "Representative sample" means a sample of a universe or whole which can be expected to exhibit the average properties of the universe or whole.
- (58) "Runoff" means rainwater, leachate or other liquid that drains overland on any part of a land surface and runs off of the land surface.
- (59) "Same day incorporation" means incorporation of sewage sludge within twenty-four hours after surface application.
- (60) "Sewage" means any liquid waste containing sludge, sludge materials, or animal or vegetable matter in suspension or solution, and may include household wastes as commonly discharged from residences and wastes discharged from commercial, institutional, or similar facilities.
- (61) "Sewage sludge" means a solid, semi-solid, or liquid residue generated during the treatment of sewage in a treatment works and shall include sewage sludge materials,, including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator, grit and screenings generated during preliminary treatment of domestic sewage in a treatment works, animal manure, residue generated during treatment of animal manure, or domestic septage.
- (62) "Sewage sludge facility" means an entity that performs treatment on or is responsible for the disposal of sewage sludge.
- (63) "Sinkhole" means a surface depression produced when underlying material, such as carbonate bedrock, dissolves resulting in a direct conduit to groundwater.

- (64) "Sludge" means sewage sludge and a solid, semi-solid, or liquid residue that is generated from an industrial wastewater treatment process and that is applied to land for agronomic benefit. "Sludge" does not include ash generated during the firing of sludge in a sludge incinerator, grit and screening generated during preliminary treatment of sewage in a treatment works, animal manure, residue generated during treatment of animal manure, or domestic septage.
- (65) "Sludge management" means the use, storage, treatment, or disposal of, and management practices related to, sludge and sludge materials.
- (66) "Sludge management permit" means a permit for sludge management that is issued under division (J) of section 6111.03 of the Revised Code.
- (67) "Sludge materials" means solid, semi-solid, or liquid materials derived from sludge, or mixed with sludge, and includes products from a treatment works that result from the treatment, blending, or composting of sludge.
- (68) "Soil phosphorus test" means a soil test procedure using the "Bray-Kurtz P1 extraction" or the "Mehlich 3 extraction" that produces an index of plant available phosphorus expressed in either parts per million or pounds per acre.
- (69) "Specific oxygen uptake rate (SOUR)" means the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in the sewage sludge or sewage sludge material.
- (70) "Staging area" means field placement of sewage sludge at the time of delivery in such a manner as to facilitate land application within twenty-four hours. Staging includes the transfer of liquid sewage sludge from transport vehicles to land application equipment for injection.
- (71) "Standard of fineness" means standard of fineness as defined in section 905.54 of the Revised Code.
- (72) "Standard Methods for the Examination of Water and Wastewater" means "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/>.
- (73) "Stockpile area" means an area where sewage sludge may be stored for greater than twenty-four hours but not to exceed thirty days.

- (74) "Storage of sewage sludge" means the placement of sludge on land on which the sludge remains for not longer than two years, but does not include the placement of sludge on land for treatment.
- (75) "Surface application" and "surface apply" mean the placement of sewage sludge on the land for agronomic benefit. "Surface application" includes immediate incorporation and same day incorporation.
- (76) "Surface disposal" means the placement of sludge on an area of land for disposal including, but not limited to, monofills, surface impoundments, lagoons, waste piles, or dedicated disposal sites.
- (77) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" means "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, USEPA publication SW-846, third edition (September 1994)". This document is available on the internet at <http://www.epa.gov/sw-846/main.htm>.
- (78) "Total solids" means the materials in sewage sludge or sewage sludge material that remain as residue when the sewage sludge or sewage sludge material is dried at one hundred three to one hundred five degrees Celsius.
- (79) "Treatment" means the preparation of sewage sludge for final use or disposal and includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge.
- (80) "Treatment works" means any plant, disposal field, lagoon, dam, pumping station, building sewer connected directly to treatment works, incinerator, or other works used for the purpose of treating, stabilizing, blending, composting, or holding sewage, sludge, sludge materials, industrial waste, or other waste, except as otherwise defined.
- (81) "Underground injection control (UIC) class V drainage well" means a drainage well used to drain surface fluid, primarily storm runoff, into a subsurface formation which may include, but is not limited to, an agricultural or stormwater drainage well and an identified unsealed gas/oil well.
- (82) "Unstabilized solids" means organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- (83) "Use" means, but is not limited to, the land application of sewage sludge for

agronomic benefit.

- (84) "Vector attraction" means the characteristic of sewage sludge that attracts rodents, flies, mosquitos, or other organisms capable of transporting infectious agents.
- (85) "Vegetation" means, but is not restricted to, pasture, range land, or forest.
- (86) "Volatile solids" means the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at five hundred fifty degrees Celsius in the presence of excess air.
- (87) "Water Pollution Control Act" means the "Federal Water Pollution Control Act" (commonly referred to as the "Clean Water Act") 33 U.S.C. 1251 et seq. as amended through July 1, 2007.
- (88) "Waters of the state" means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and other bodies or accumulations of water, surface and underground, natural or artificial, regardless of the depth of the strata in which underground water is located, that are situated wholly or partly within, or border upon, this state, or are within its jurisdiction, except those private waters that do not combine or effect a junction with natural surface or underground waters.
- (89) "40 C.F.R." means Title 40 of the Code of Federal Regulations, effective June 1, 2007.

[Comment: 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> and purchased by writing to: "Superintendent of Documents. Attn: New Orders, PO Box 371954, Pittsburgh, PA 15250-7954."]

Effective:

R.C. 119.032 review dates:

Certification

Date

Promulgated Under:	119.03
Statutory Authority:	6111.03, 6111.042
Rule Amplifies:	6111.03, 6111.042
Prior Effective Dates:	4/8/2002, 10/1/2007