

Chapter 2

Definitions^{1, 2, 3}

Agricultural Land: Land on which a food crop, a feed crop, or a fiber crop is grown, including land used or suitable for use as a range or pasture, a sod farm, or a Christmas tree farm.

Authorized Land Site: A land application site that has been authorized by the Michigan Department of Environmental Quality (MDEQ) to permit land application of septage waste.

Certified Local Health Department: A city, county, or district department of health certified under section 11716.

Cover Crop: A crop planted primarily for the purpose of protecting and improving soil between periods of crop production. Cover crops may not necessarily be grown for harvest.

Cropping Year: The period of time covering 365 days when septage application and management practices are implemented at a land site. The period is from January 1 to December 31 of the calendar year.

Department: The department of environmental quality or its authorized agent.

Director: The director of the department of environmental quality or his or her designee.

Domestic Septage: Liquid or solid material removed from a septic tank, cesspool, portable toilet, type III marine sanitation device, or similar storage or treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar facility that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease interceptor, grease trap, or other appurtenance used to retain grease or other fatty substances contained in restaurant waste.

Domestic Sewage: Waste and wastewater from humans or household operations.

Domestic Treatment Plant Septage: Biosolids generated during the treatment of domestic sewage in a treatment works and transported to a receiving facility or managed in accordance with a residuals management program approved by the department.

Erosion: Detachment and movement of soil or rock by water, wind, ice, or gravity.

Eutrophication: Nutrient enrichment of lakes, ponds, and other bodies of water that stimulates the growth of aquatic organisms (e.g., algae and aquatic weeds), which leads to a deficiency of oxygen in the body of water.

Fallow Land: A land site that is plowed or unplowed but not seeded with actively growing planned crops or vegetation for a period of time.

Feed Crops: Crops produced primarily for consumption by animals.

Fiber Crops: Crops such as flax and cotton.

Field: (see Site)

Food Crops: Crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

Food Establishment Septage: Material pumped from a grease interceptor, grease trap, or other appurtenance used to retain grease or other fatty substances contained in restaurant wastes, and which is blended into a uniform mixture, consisting of not more than 1 part of that restaurant-derived material per 3 parts of domestic septage, prior to land application or disposed of at a receiving facility.

Governmental Unit: A county, township, municipality, or regional authority.

Groundwater: Water below the land surface in the saturated zone.

Incorporation: The mechanical mixing of surface-applied septage waste with the soil.

Injection: The pressurized placement of septage waste below the surface of soil.

Isolation Distance: The horizontal distance from the perimeter of MDEQ authorized septage application land site and a particular object (e.g., drinking water well, home, road, property line, etc.) being considered.

Land Application: A systematic and planned disposal of septage waste by surface or injection methods in a given field.

Land Manager: The person who applies septage waste, grows and/or harvests the crop(s) at the department authorized land site. There may be more than one person involved in the process.

Land (or field) Rotation: A planned system of site management where septage is applied on a specific authorized area of land during a cropping year. This is followed by a time period of no septage application and growing a crop on that specific area during the next cropping year.

Land Site Management: The sum total of all tillage (mechanical manipulation) operations, cropping practices, application of septage waste, fertilizer, and lime and/or other treatments applied to the soil.

Lime (or Alkali) Stabilization: This is a method of pathogen and vector attraction reduction involving the mixing of lime and septage.

Location: (see Site)

Mineral Soil: Soil with soil organic matter less than 20 percent. Most soils used by land applicators fall into this category.

Mottling: Spots or blotches of different colors or shades of colors interspersed with the dominant color that occurs in the subsoil of a soil profile, indicating a seasonal high water table.

New Land Site: A land site that is not currently permitted for which land application of septage waste is proposed.

Organic Soil: Soil with organic matter equal to or greater than 20 percent.

Pasture: Land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

Pathogen: A disease-causing agent. Pathogen includes, but is not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Planned Crop or Vegetation: This is a specific type of crop or vegetation proposed by the licensee to be grown at the land site as part of a nutrient management plan.

Ponding: The presence of septage waste liquid on soil surface after one hour of application if injection is the method used and after 6 hours if surface application is the method used.

Portable Toilet: A moveable receptacle designed to hold human waste temporarily in a sanitary manner.

Public Contact Site: Land with high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Runoff: Rainwater, leachate, septage waste, or other liquid that flows overland on any part of a land surface and runs off the land surface.

Runoff Controls: These are management practices developed and implemented at the septage waste land application site designed to reduce potential runoff from the site.

Screened or Ground Septage: Septage, as defined in the law, that has been screened through a screen of not greater than ½-inch mesh or slats separated by a gap of not greater than 3/8-inch before land application. Septage may be processed through a sewage grinder designed to not pass solids larger than ½-inch in diameter.

Septage Applicator Vehicle: The equipment that applies septage to the land site by surface application or injection.

Septage Waste: The fluid mixture of untreated and partially treated sewage solids, liquids, and sludge of human or domestic origin that is removed from a wastewater system. Septage waste consists only of food establishment septage, domestic septage, domestic treatment plant septage, sanitary sewer cleanout septage, or any combination of these.

Where the word “septage” alone is used in this guidance manual, “septage waste” is implied.

Septage Waste Storage Facility: A structure that receives septage waste for storage but not for treatment.

Service or Servicing: Cleaning, removing, transporting, or disposing, by application to land or otherwise, of septage waste.

Site: A location or locations on a parcel or tract, as those terms are defined in section 102 of the land division act, 1967 PA 288, MCL 560.102, proposed or used for the disposal of septage waste on land.

Site Permit: A permit issued under section 11709 authorizing the application of septage waste to a site.

Soil (or Land) Degradation: The decline in soil quality such that it is not capable of supporting good plant growth.

Soil Fertility: The status of a soil with respect to the amount and availability of nutrients to plants for plant growth.

Soil Horizon: A layer of soil, approximately parallel to the soil surface, differing in properties and characteristics from adjacent layers below or above.

Soil Map: A map showing the distribution of soil types or other soil mapping units in relation to prominent physical and cultural features of the earth's surface.

Soil Profile: A vertical section of the soil through all its horizons and extending into the parent material.

Soil Series: There is at least one dominant soil series at each land site. Soil series consists of soils that have similar horizons. The soil horizons are similar in color, texture, structure, consistence, and composition (mineral and organic).

Soil Structure: The arrangement of primary soil particles into secondary particles, units, or peds. The secondary units are classified on the basis of size, shape, and degree of distinctness into classes, types, and grades respectively.

Soil Survey (County): This is a publication of the Natural Resources Conservation Service.

Soil Fertility Test: The laboratory analysis of a soil sample to determine soil pH and the amount and forms of plant-available nutrients using specific methods. Soil fertility testing is used to have a basis for knowing how much lime and nutrients to add to a soil to achieve maximum or optimum crop production. Soil test results are typically provided in a soil test report, along with nutrient and lime recommendations.

Soil Textural Class: Grouping into soil textural units based on the soil texture, e.g., sandy loam.

Soil Texture: The relative proportions of sand, silt, and clay. It also refers to the fineness or coarseness of the soil.

Surface Water: Means any of the following:

- ❖ The Great Lakes and their connecting waterways.
- ❖ Inland Lakes (greater than 5 acres).
- ❖ Rivers.
- ❖ Streams.
- ❖ Impoundments and perennial open drains.
- ❖ Ponds and wetlands. Wetlands may not have perennial standing water. Setbacks must be maintained from all perennial ponds and wetlands unless a site-specific variance is requested in accordance with Section 11720 of Part 117.

Stover: The materials that are left after harvest. For instance, corn stover consists of stalks and leaves that remain in the field after corn has been harvested.

Tank: An enclosed container placed on a septage waste vehicle to carry or transport septage waste.

Type I Public Water Supply, Type IIa Public Water Supply, Type IIb Public Water Supply, and Type III Public Water Supply: Those terms, respectively, as described in R 325.10502 of the Michigan Administrative Code.

Type III Marine Sanitation Device: That term as defined in 33 CFR 159.3, which means a device that is designed to prevent the overboard discharge of treated or untreated sewage or any waste derived from sewage

Vehicle Calibration: A systematic standardization of a vehicle to determine the quantity of material disposed over a given area. In land application of septage, vehicle calibration involves the standardization of the vehicle to give the quantity of septage applied per acre.

Water Table: The upper surface of groundwater or that level below which the soil is saturated with water.

Water Table (Seasonal High): The highest level that the water table reaches during the year. That level fluctuates throughout the year due to the season, rainfall, topography, and other factors.

Wetlands: Those areas that are inundated or saturated by surface water or groundwater at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Winter Months: Winter months are defined as December 21 to March 21.

2.1 References

1. Brady, Nyle C. and Weil, Ray R. 2002. The Nature and Properties of Soils. 13th Ed. Prentice Hall, Upper Saddle River, New Jersey 07458.
2. Michigan Septage Law. Part 117, NREPA. Enacted 2004.
3. USEPA. Federal Septage Law, CFR 40. Part 503 Standards for the Use or Disposal of Sewage Sludge. Effective 1993.