

**GUIDELINES FOR
YARD WASTE
COMPOSTING
FACILITIES**

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**Prepared by DNREC
89 Kings Highway
Dover, Delaware 19901**

**For further information contact Debra Nielsen at (302)739-9403
e-mail address Debra.Nielsen@state.de.us
Or visit our website at
www.dnrec.state.de.us/DNREC2000/Divisions/AWM/YardWaste/index.asp**

GUIDELINES FOR YARD WASTE COMPOSTING FACILITY

Authority: 7 Delaware Code 6025 and 7 Delaware Code 6003

Purpose:

The purpose of this document is to provide instructions and operating procedures for the operation of a yard waste composting facility.

Applicability:

This guidance applies to all persons, municipalities, and counties who own or operate a yard waste composting facility.

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I. INTRODUCTION

Composting has been demonstrated to be an effective waste management technique that can produce a useful end-product while diverting a portion of the waste stream from disposal.

These guidelines have been established with input from the public via the Yard Waste Management Committee and the Yard Waste Guidance Committee to promote yard waste composting and reuse in the State while providing protection to human health and the environment. Health or environmental problems resulting from the improper operation of a yard waste composting facility will be treated in the same manner as health or environmental problems at other solid waste management facilities.

This document is intended to apply strictly to yard waste composting facilities. This topic was discussed extensively by the committee, and a decision was made to address guidelines for mulch production in the future if it becomes necessary with representatives of those business sectors.

II. DEFINITIONS

“Organic Yard Waste” means plant material residues resulting from lawn maintenance and other horticultural, gardening and landscaping activities and includes grass, leaves, prunings, brush, shrubs, garden material, Christmas trees and tree limbs up to 4 inches in diameter. “Organic Yard Waste” does not include de minimus plant material residues inadvertently mixed with inorganic contaminants, e.g., soils, stones, or trash not suitable for composting which may continue to be land filled.

“Yard Waste Composting Facility” means a facility that is used to compost organic yard waste. The term includes land affected during the lifetime of the operation, including, but not limited to, areas where composting actually occurs, support facilities, borrow areas, offices, equipment sheds, air and water pollution control and treatment systems, access roads, associated on-site or contiguous collection and transportation activities, and other activities in which the natural surface has been disturbed as a result of or incidental to operation of the facility.

“Compost” is an organic soil conditioner that has been stabilized to a humus-like product, that is free of viable human and plant pathogens and plant seeds, that does not attract

insects or vectors, that can be handled or stored without nuisance, and that is beneficial to the growth of plants. ¹

“Composting” is the biological decomposition and stabilization of organic substrates, under conditions that allow development of thermophilic temperatures as a result of biologically produced heat, to produce a final product that is stable, free of pathogens, and plant seeds, and can be beneficially applied to land. ²

“Mulch” is an aesthetic ground cover that is used as a horticultural, above-ground dressing; for decoration, moisture control, weed control, erosion control, temperature control, or other similar purposes.

III. EXEMPTIONS

The following activities are exempted from these guidelines:

1. Mulch production by mulching companies, landscapers, tree services, municipalities, and institutions; as long as these facilities are not also producing compost.
2. Composting, on a private property, yard waste originating on the property.
3. Compost that is made in a community composting operation, which is used only by members of the community, and made by composting yard waste generated in that community. This exception does not apply to municipal or county composting operations, even if the compost is given away.
4. Disposal or land application on a farm of the agricultural wastes that are generated on a farm, or result from the operation of a farm. The disposal or land application must be conducted in a manner that is in compliance with all federal, state, and local regulatory requirements and that does not threaten human health or the environment.
5. Creation of brush piles on the property on which the material was generated.
6. The use of vegetative matter and untreated ground wood products to construct berms on the property on which the materials were generated.
7. In-house composting of yard trimmings by landscapers, tree services or soil processors, with end product used by that company for its operations or incorporated into processed soil, i.e., with no compost being sold or distributed off site. This exemption is limited to operations that have up to a maximum of 500 cubic yards of compost and/or organic yard waste on the site at any given time. Sites meeting these characteristics are strongly encouraged to follow

¹ The Practical Handbook of Compost Engineering, Robert T. Haug, Lewis Publishers, 1993, p. 374.

² The Practical Handbook of Compost Engineering, Robert T. Haug, Lewis Publishers, 1993, p. 1

standard composting methodology, which is available upon request, in order to avoid impacting human health and the environment. Operations determined to be causing an impact to human health or the environment must take corrective measures, and may lose their exempt status if they are not properly maintained.

IV. GRANDFATHERING OF MUNICIPAL SITES

Municipal composting operations existing as of the effective date of these guidelines will be grandfathered from those criteria they cannot meet provided they are not impacting human health and the environment. Operations determined to be causing an impact to human health or the environment must take corrective measures and may lose their “grandfathered” status if they are not properly maintained.

V. TECHNICAL GUIDANCE FOR THE OPERATION OF A YARD WASTE COMPOSTING FACILITY

A person, municipality, or county that operates a yard waste composting facility shall comply with these guidelines.

General Requirements

The following operational information must be submitted to the Department on the attached Yard Waste Composting Facility Application Form:

- a) The name, address, and telephone number of the operator of the facility.
- b) The sponsoring municipality or county (where applicable).
- c) The location of the facility, including identification of the site by outlying perimeter site boundaries on a United States Geological Survey 7.5 minute topographic map.
- d) Proof of ownership or lease agreement.
- e) A general site plan drawn to scale for the facility indicating the following:
 - i. The location of access roads and gates in relation to public and private roads, wells, and property lines.
 - ii. The location of the tipping area.
 - iii. The location of the processing area, including compost piles and windrows.
 - iv. The location of storage and cutting areas.

- v. Surface water controls.
- f) An operational narrative describing:
- i. The yard waste collection methods that will be employed by the facility.
 - ii. The methods that will be utilized at the facility to construct compost piles.
 - iii. The proposed dimensions of compost piles and windrows at the facility.
 - iv. The source of supplemental water that will be used to maintain an optimal 50 percent moisture content of compost piles or windrows at the facility.
 - v. The proposed method of turning windrows, the turning frequency for composting at the facility and the method for determining that frequency.
 - vi. The proposed duration of the composting process, including curing time, storage time, and compost distribution.
 - vii. A plan for the marketing and distribution of the finished compost.
 - viii. A residue disposal plan, including the location of disposal sites.
 - ix. Provisions for emergency response.
- g) The projected volume of yard waste that will be processed by the facility during the calendar year and the maximum amount of yard waste that the facility is capable of managing.

Siting Restrictions

Yard waste composting operations, including storage, composting, and curing, shall not occur in the following areas or the following distances, unless the operator takes special precautions and receives written authorization from the Department:

- a) In a 100 year flood plain.
- b) Within 300 feet measured horizontally from an occupied dwelling.
- c) Within 25 feet of a property line.

- d) Within 100 feet of a water source.
- e) Within 3 feet of a regional groundwater table.
- f) Within 100 feet of a perennial stream.

Access control

1. A gate or other barrier shall be maintained at all potential vehicular access points to block unauthorized access to the site.
2. Access to the site shall be limited to those times when an attendant is on duty.

Operational Requirements

1. No person, municipality, or county shall bring or receive any material at a yard waste composting facility other than those meeting the definition of “organic yard waste” or those that have otherwise been approved by the Department.
2. The Department may limit the use of grass clippings at a yard waste composting facility if a site adversely affects the citizens or environment of the State. Grass clipping shall not be brought to or received at a yard waste composting facility unless:
 - a) Bags or other collection containers are emptied of all grass clippings within 48 hours of delivery to the facility.
 - b) Grass clippings are incorporated into the windrows of partially composted leaves or other yard waste within 48 hours of delivery to the facility.
 - c) Grass clippings are incorporated into the partially composted windrows of partially composted leaves or other yard waste at a ratio not to exceed one part grass clippings to three parts yard waste, by volume.
3. No more than 3,000 cubic yards of yard waste shall be placed, stored, or processed on any acre of a facility where composting activity occurs or is planned to occur.
4. A person, municipality, or county operating a yard waste facility shall, for the duration of yard waste composting activities, identify the operation by posting and maintaining signs that are clearly visible at the junction of each access road and public road. The signs shall be easily seen and read. They should be constructed of a durable, weather-resistant material. The sign wording shall include the name, address, and telephone number of the person(s), municipality(ies), county(ies), operating the facility, the operating hours, and the materials that can be received

by the facility. Private businesses should be afforded the same access and financial assistance made available to government entities to meet this requirement.

5. Each Yard waste composting facility shall be operated in a manner which results in active biological decomposition of the vegetative material received.

6. Yard waste compost piles or windrows shall be constructed and maintained as follows.

- a) The compost area shall be constructed in a well drained area with a workable surface and a slope of 2-4 percent to prevent ponding and control surface water.
- b) The size of the compost piles or windrows will be a function of the equipment available to adequately manage the compost piles, and as approved by the Department.
- c) Compost piles or windrows shall be constructed within one week following the receipt of compostable material at the facility.
- d) During the active composting process, the optimal moisture content of the windrows or compost pile shall range from 40 to 60 percent to promote decomposition.
- e) All surface water shall be diverted away from tipping, processing, composting, curing, and storage areas. Surface water controls shall be based on a 24-hour precipitation event to be expected once every 25 years. Proper drainage must be maintained to prevent ponding and excessive moisture.

7. The operator shall maintain sufficient distance between windrows or piles to allow the proper use of equipment during the deposit, removal, and turning of compost.

8. The operator shall establish an adequate frequency for inspecting the facility to detect hot spots in any composting, curing, or storage areas, dust or litter accumulation, surface water accumulation, erosion or sedimentation, vectors, odors, and other problems. The operator shall take necessary corrective action to address all problems in a prompt manner.

9. The operator shall not allow compostable materials or residues to be blown or otherwise deposited offsite.

Residue Disposal

1. The operator shall not allow non-compostable residues or solid waste other than yard waste to accumulate at the facility, and shall provide for disposal or processing.
2. Yard waste and other municipal waste received at the facility that are not suitable for composting shall be removed weekly and disposed of or processed at a permitted waste facility.

Nuisance Control

1. The operator shall not cause or allow the attraction, harborage, or breeding of vectors.
2. The operator shall not cause or allow conditions that are harmful to the environment or public health, or create safety hazards, odors, noise, or other public nuisances.

Emergency Response

1. Adequate space shall be maintained to allow unobstructed movement of emergency personnel and equipment.
2. The operator of each yard waste composting facility shall immediately contact local police or fire departments, the Department of Natural Resources and Environmental Control, and other appropriate state or local emergency response agencies in the event of fire, spill, or other hazards that threaten public health, safety, welfare, or the environment, and whenever necessary in the event of personal injury.

Air Resources Protection

1. The operator shall implement fugitive dust control measures.
2. No person, municipality, or county shall cause or allow open burning at the facility.
3. The management of yard waste shall be conducted in a manner such that excessive odors are not created.

Water Quality Protection

1. The operator shall manage water and control erosion and sedimentation as required by either the Division of Soil and Water Conservation or the Division of Water Resources.

2. The operator shall not cause or allow a point or non-point source pollution discharge from or on the facility to any surface waters of the State and shall operate the facility in a manner to prevent any impact to groundwater.

Alternative Technologies for Composting

1. The Department may approve, on a case by case basis a composting technology which may not meet these technical guidance requirements, provided a clear demonstration can be made that the alternative composting technology employed does not impact human health or the environment.

VI. REGISTRATION OF COMPOST PRODUCT

1. According to the Delaware Department of Agriculture, compost can be considered a fertilizer or a soil amendment. If it sold as a fertilizer, it must contain and claim nutrients. Compost that does not have a nutrient claim is considered to be a soil amendment.
2. Any compost product that is sold or given away in Delaware must be registered with the Department of Agriculture. Compost produced for self-use does not need to be registered with the Department of Agriculture. Compost which is made by a community, and used only by the community members, does not need to be registered.

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
SOLID AND HAZARDOUS WASTE BRANCH

YARD WASTE COMPOSTING FACILITY APPLICATION FORM

Please familiarize yourself with the Delaware Department of Natural Resources and Environmental Control GUIDELINES FOR YARD WASTE COMPOSTING FACILITIES prior to filling out this form.

1.

Operator Name _____
Operator Mailing Address _____

Operator Phone Number _____

2.

Name of Facility _____
Contact person _____
Contact Phone Number _____

Property Owners Name _____
Property Owners Phone _____
Street Address of Facility _____
Including Access Road _____
Name and Legislative # _____
State and Zip Code _____
City, Borough, Township _____
County _____
Sponsoring Municipality _____
(Where applicable)

Attach a 7.5 minute topographical map identifying the yard waste composting facility site boundaries outlined on it.

Provide proof the operator has the legal right to enter the land and perform the approved activities.

3.

Proposed composting method: _____
Total acres of composting facility: _____
The Maximum quantity of yard waste and composted materials to be on the site at any one time: _____
Yard waste in cubic yards: _____
Finished compost in cubic yards: _____

4.

Prepare and include in this application a general site plan³ for the facility which illustrates the location of the following items:

- Access roads in relation to the nearest public and private road, wells, and property lines
- Tipping area
- Gate location
- Surface water controls, erosion and sedimentation controls
- Processing area including location, orientation, and size of compost piles or windrows curing or storage areas
- North arrow
- Scale of drawing

5.

Please address the following items: (attach additional sheets if necessary)

- Provide a complete list of the source(s) of yard waste to be received.
- Describe how the yard waste will be collected and received at the facility.
- Describe the method for inspecting incoming yard waste and for removing unacceptable material.
- Describe the windrow construction methods including equipment to be used.
- Describe the windrow size: Initial dimensions will be _____ wide x _____ high x _____ long.
- Describe the source of supplemental water which will be used to maintain optimal 40-60% moisture content of compost piles or windrows.

³ Please note that a hand drawn sketch that includes site dimensions is acceptable. An engineers drawing is not required.

- Indicate the frequency of windrow turning: _____
- Indicate the temperature range to be maintained: _____
- Indicate the method of windrow turning: _____
- Describe the method for determining turning frequency.

- Describe the approximate duration of the composting cycle: (in days)
- Describe the composting process:

- Describe the curing period for the compost:
- Indicate the time required for storage and distribution:
- Indicate the total time required for composting operation:
- Describe the marketing and distribution plan for the finished compost.

- Describe the residue disposal plan and identify the disposal or processing site(s) to be used.

- Describe the plan for emergency response (fire, police, etc.)

- Outline the public information and education program (attach samples of literature if available).