

# Review of Composting Regulations

Massachusetts Department of Environmental  
Protection  
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# Applicable Regulations



- 310 CMR 16.00 - Site Assignment Regulations for Solid Waste Facilities
  - 310 CMR 16.03 – Exemptions from S.A.
  - 310 CMR 16.04 – General Permits
  - 310 CMR 16.05 – RCC Permits

# Definitions



- Composting or Composted means a process of accelerated biodegradation of organic materials using microorganisms under controlled conditions in the presence of oxygen using windrows or piles, including but not limited to, covered aerated piles or bays. For the purposes of 310 CMR 16.00, composting is not aerobic digestion or conversion.
- Agricultural Material means organic materials produced from the raising and processing of plants and animals as part of agronomic, horticultural, aquacultural or silvicultural operations, including, but not limited to, animal manures, animal products and by-products (including carcasses), bedding materials and plant materials.

# Definitions



- Food Material means material produced from human or animal food production, preparation and consumption activities and which consists of, but is not limited to, fruits, vegetables, grains, and fish and animal products and byproducts.
- Organic Material means any of the following source-separated materials: vegetative material; food material; agricultural material; biodegradable products; biodegradable paper; clean wood; or yard waste. It does not include sanitary wastewater treatment facility residuals.
- Vegetative Material means plant material.
- Yard Waste means deciduous and coniferous seasonal deposition (e.g., leaves), grass clippings, weeds, hedge clippings, garden materials and brush.

# 310 CMR 16.03(2)(c)1. –

## Exemptions



- Activities located at an agricultural unit
  - Composting located at an agricultural unit as defined in 330 CMR 25.02, provided that the owner/operator comply with the regulations and guidelines of Dept. of Agricultural Resources (DAR).
  - If DAR determines the composting at a specific agricultural unit is no longer regulated by DAR then the composting activity is regulated by 310 CMR 16.00.

# 310 CMR 16.03(2)(c)2. –

## Exemptions

- Small composting operations not at a residence
  - Composting less than 20 cy or less than 10 tons per week of vegetative materials, food materials, or animal manures that are generated on-site and combined with bulking material (generated on or off-site)
  - 30-day notification form to MassDEP & BOH



# 310 CMR 16.04 – General Permits - Composting



- Receives no more than 105 tons per week and no more than 30 tons per day of Group 2 organic materials.
- Contains no more than 5,000 cubic yards of organic material per acre.
- Has no more than 50,000 cubic yards total of organic material on site at one time.
- Is located at least 250 feet from any existing water supply well in use at the time the operation begins.

# 310 CMR 16.04 – General Permits



– Owner & Operators shall:

- ensure the operation and its products do not result in an unpermitted discharge of pollutants to air, water or other natural resources, create a public nuisance, or present a significant threat to public health, safety or the environment;
- ensure that the operation incorporates best management practices, including but not limited to:



# Best Management Practices

## General



- employ an appropriate number of properly trained personnel and use equipment for the size and type of the operation
- produce stabilized organic materials
- maintain proper thermal regulation and monitoring to prevent spontaneous combustion and destroy pathogens
- manage stormwater and leachate to prevent ponding and water pollution
- maintain access to water supply for fire control
- ensure that the type and quality of organic materials is sufficient for the operation and that the quality of the operation's products is sufficient for the products to be marketable

# BMPs - Specific



- implement a toxics control plan:
  - minimize entry of toxic materials into the operation
  - is appropriate for the organic materials to be managed at the operation
  - ensures that the final products resulting from the operation do not pose a significant threat to public health, safety or the environment
  - Should toxics be detected in the final products at levels that pose a significant threat to public health, safety or the environment for any likely use of the product, the plan shall also include a contingency plan that identifies steps to be taken to reduce toxics in incoming organic materials, describes corrective actions to be taken for management of the organic materials and products, and identifies how any contaminated products are to be used or disposed

# BMPs - Specific



- implement an odor control plan:
  - appropriate for the size and type of the operation
  - minimize the production and migration of odorous compounds
  - identify specific actions that will be taken to address complaints if unacceptable odors occur beyond the property line of the operation
- implement a vector control plan
  - appropriate for the size and type of the operation
  - minimize the presence of vectors
  - identify specific actions that will be taken to address complaints if unacceptable vectors occur beyond the property line of the operation

# BMPs - Specific



- develop/implement a contingency plan that describes corrective actions to be taken for management of the organic materials and products in the event of the following:
  - equipment breakdowns
  - delivery of unacceptable material
  - spills
  - fires
  - extreme weather conditions
  - other events, including but not limited to the failure of the odor or vector control plan

# BMPs - Specific



- ensure that no more than 25%, by volume, of the total compost mixture shall be a Group 2 Organic Material listed at 310 CMR 16.04(3)(b): Table 1. Example of Organic Materials or other organic materials with a carbon to nitrogen ratio of 30:1 or less
- ensure adequate & appropriate bulking material (Group 1 or other organic materials with a carbon to nitrogen ratio of greater than 30:1) is readily available on-site to mix with incoming Group 2 organic materials or other organic materials with a carbon to nitrogen ratio of 30:1 or less

# BMPs - Specific



- ensure all Group 2 organic material or other organic materials with a carbon to nitrogen ratio of 30:1 or less is mixed into the compost windrows or piles to an extent that it is unrecognizable as a separate material as soon as possible but no later than the close of business each day, or transferred off-site by the close of business on the same day that it is received at the operation; and
- ensure timely and regular aeration of the compost to ensure proper aerobic, temperature, moisture and porosity conditions



**Table 1**  
**Examples of Organic Materials**

| Group 1 Organic Materials |            | Group 2 Organic Materials                                   |           |
|---------------------------|------------|---|-----------|
| Example Materials         | C:N ratio  | Example Materials   | C:N ratio |
| Clean Wood                | 100-1300:1 | Vegetables  | 11-19:1   |
| Cardboard                 | 560:1      | Food material   | 14-16:1   |
| Paper & paper products    | 125-850:1  | Grass Clippings   | 17:1      |
| Leaves                    | 40-80:1    | Green plant material  | 15-19:1   |
| Straw                     | 60-80:1    | Fish waste  | 2-5:1     |
| Corn stalks               | 60-75:1    | Manure  | 6-14:1    |
| Shrub trimmings           | 50:1       | Solid & liquid digestate from aerobic & anaerobic processes | variable  |

# BMPs - Specific

- ensure that the amount of residuals generated does not average more than 5% by weight of the materials received during any quarter
- ensure that all solid and liquid materials produced as a result of the operation are managed in accordance with all other applicable regulations and approvals, including but not limited to, a beneficial use determination





# Administrative Requirements



- maintain accurate records for at least three years to and submit a report to the Department annually by February 15th on a form provided by the Department that shall include, but not be limited to, the amounts and types of organic materials received and composted and the amount of residuals managed during the previous calendar year
- submit a compliance certification
  - Initial certification – electronic submittal thru MassDEP website
  - Annual certification – electronic submittal thru MassDEP website

# 310 CMR 16.05 – RCC Permits



- The composting of organic materials that does not qualify for an exemption pursuant to 310 CMR 16.03 or a general permit pursuant to 310 CMR 16.04, shall apply for a recycling, composting or conversion (RCC) permit pursuant to 310 CMR 16.05.
- A RCC operation that has a RCC permit does not require a site assignment or a solid waste management facility permit pursuant to 310 CMR 19.000: Solid Waste Management provided the owner or operator complies with the permit.

# 310 CMR 16.05 – RCC Permits



- The regulations at 310 CMR 16.05 are a permitting process which includes:
- Pre-application Meeting
  - the location; a description of the technology; type, quantity and quality of all materials received and products or residuals produced and identification of the potential public nuisances and adverse impacts from the operation and the proposed methods for controlling such public nuisances and impacts.
- Application submission
- MassDEP review with draft approval or denial
- Public review process of draft permit

# 310 CMR 16.05 – RCC Permits

- Public review process of draft permit
  - Public notice
  - 30 day public comment period
  - Public hearing if requested or there is sufficient public interest
- MassDEP issues RCC permit decision after comment period or hearing



# Contact Information



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# Resources



**MassDEP:**

**310 CMR 16.00: Site Assignment Regulations**

<https://www.mass.gov/regulations/310-CMR-1600-site-assignment-for-solid-waste-facilities>