Managing Food-Waste-Management Odors

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Massachusetts Waste Disposal Bans

» About the Waste Bans
» Regulations, Policies & Guidance
» Compliance Assistance for Generators of Waste
» Compliance Assistance for Waste Haulers
» Compliance Assistance for Solid Waste Facility Operators
» Solid Waste Facility Third-Party Inspections & Inspectors
By the Numbers

» Date: October 1, 2014
» Threshold: 1 ton of food waste per week
» Institutions: approximately 3,000 affected
» Sites: 49 facilities accepting food waste
» Capacity: over 350,000 tons per year
» Regulations:
  > Site Assignment Regulations 310 CMR 16.04 and 16.05
  > Waste Ban 310 CMR 19.17
## Types of Facilities

<table>
<thead>
<tr>
<th>Type of Process</th>
<th>Number</th>
<th>Capacity (Ave. TPD)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compost</td>
<td>28</td>
<td>475</td>
</tr>
<tr>
<td>Compost – In Vessel</td>
<td>3</td>
<td>175</td>
</tr>
<tr>
<td>Compost – Site Management</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>Animal Feed</td>
<td>11</td>
<td>n/a</td>
</tr>
<tr>
<td>Anaerobic Digester</td>
<td>4</td>
<td>312</td>
</tr>
<tr>
<td>Totals</td>
<td>49</td>
<td>1,007</td>
</tr>
</tbody>
</table>

* Average, tons per day

Potential Demand: over 4,000 tons per day
Odor Citations

» Most odor citations relate to the place of cover material at landfills

» 310 CMR 19.207: Handling Facility Operation and Maintenance Requirements
  > (1) General...prevent dust, odors, noise and other nuisance conditions...
  > (21) Recycling Operations...(d) ...materials...that cause odor...shall not be accumulated.
Segments of FWM System

» Generators: Businesses and Institutions
  > Responsible for separating food waste from other waste materials
  > Compostable material could be included with food waste

» Haulers: Transporters of Waste Material
  > Risk of transporting prohibited wastes
  > Train employees
  > Educate customers

» Disposal Facilities
  > Reject loads with more than 30% of banned materials
  > Conduct waste stream monitoring and load inspections
Generators – Odor Issues

» Waste Reduction
  > Less than one ton of food waste per week

» On-site Treatment / Management
  > Pulpers/shredders, Dehydrators, Composters

» On-site Storage
  > Bins, Dumpsters – covered and leak proof
  > Outside Storage - odors, rodents
Haulers – Odor Issues

» Food Waste Storage Bins
  > Compatible with transfer truck
  > Access to bins

» Leakage
  > During loading and transport

» Frequency of pick-ups
  > Multiple pick-ups per week, particularly in summer

» Contaminants
FWM Facilities – Odor Issues

» Receiving
  > Dumping of FWM from haulers

» Screening and Sorting
  > Removing of contaminants
  > Preparing FWM for processing

» Side Stream Wastes
  > Bypass materials
  > Bulking materials

» Processing
Case Study –
City of Marlborough, MA
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City of Marlborough, MA
Perceptions / Expectations

» Food Waste Management Facilities:
   a) Odors are not emitted when a facility is managed and operated correctly.
   b) Food waste is a potentially odorous product and odors from a facility are emitted occasionally.
   c) Odors are a natural process of decomposition and off-site impacts are to be expected.

» Food Waste Recycling:
   a) Is a low cost way to dispose of food waste.
   b) Is a higher cost option compared to landfiling, but landfiling has been banned.
   c) Is a process that has higher costs, but brings value to a material the is considered a waste.
Questions

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