North East Residuals & Biosolids Annual Conference, Exhibit & Tour



Co-sponsored by: New England Water Environment Association & North East Biosolids and Residuals Association

Managing Food-Waste-Management Odors

Wednesday, October 22, 2014

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Energy and Environmental Affairs

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

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

^{*} 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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Perceptions / Expectations

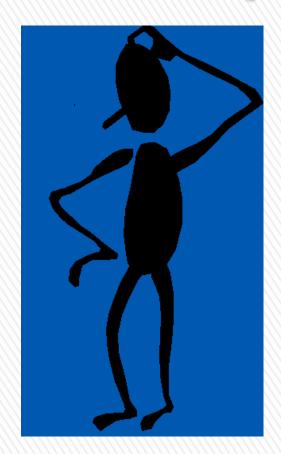
» Food Waste Management Facilities:

- 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 landfilling, but landfilling 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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