

Waste Management Inc. of Florida

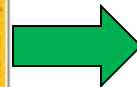
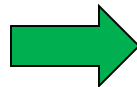
Organics Recycling Program

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Florida Organics Recycling Facilities

Locations	Vista Facility: Apopka, FL Okeechobee Facility: Okeechobee, FL
Feedstocks	Vista: Food and yard wastes Okeechobee: Biosolids, food and yard waste
Throughput	30,000 tons of feedstock annually
Composting System	Below ground in bunker, above ground aeration systems
Products	Bulk compost, compost blends and bagged products
Facility Start	Vista: September 2011 Okeechobee: July 2011
Environmental	Fully permitted, technology exceeds City and State Requirements



What is Organic Material?

Material from plant or animal origins that contain carbon and nitrogen. When combined in a proper recipe these materials are broken down through natural decomposition by a range of microorganisms including bacteria and fungi.

The result is compost!

•e.g.-fruits, vegetables, brush, grass, leaves, woody material, crop residues, fish remains.



Managing Odors

Most common reason Compost Facilities FAIL = ODORS

MAINTAIN PROPER RECIPE – balanced microbial activity

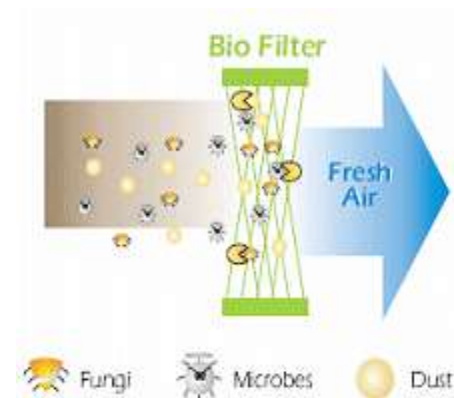
- **Yard waste to food waste blend (C:N ratio) ideally 25-35:1**
- **Particle size to allow for airflow (pile porosity)**
- **Proper moisture content (varies by stage, 45-60%)**
- **Control pile run-off liquids**

MAINTAIN PROPER AERATION

- **Pile oxygen needs to be above 5-8%**

TREAT PROCESS AIR

- **Air treated through biofiltration**



Composting Technology at Florida Organics Recycling Facilities

- **In floor Aerated Bunker system, Covered Aerated Static Pile system design with a Data Acquisition and Control System that assists in pile management and produces a high-quality finished compost product**
- **Food and yard residuals are mixed to a specific recipe, placed in a pile (batch) with temperature probes inserted, and covered.**
- **Piles are turned up to 3 times over a 50-60 day cycle**
- **Advanced negative air control system that forces air through the compost pile and filters to manage odors**



Composting Process-Receiving



Composting Process-Recipe



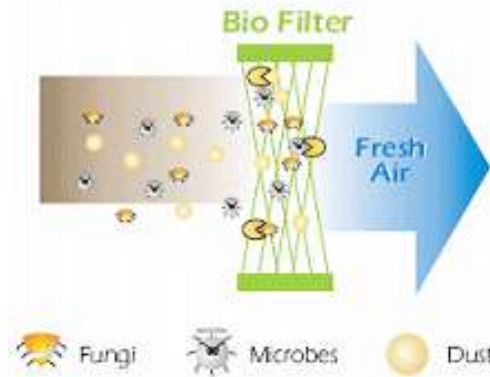
Composting Process-Mixing



Composting Process-Aeration System



Composting Process-Air Treatment



Curing / Screening



Finished Compost / End User



Challenges to Organics Recycling

- Barrier to entry: Investment and Market Price
- Few end users if bio-solids in mix
- Customers not willing to pay premium over cost of disposal in landfill/WTE
- Today, rarely overcomes economic hurdles unless Mandatory and Subsidized in high disposal market (West Coast of US)



Benefits of Organics Recycling

- Improves overall diversion percentage for businesses and municipalities, more so than standard recycling programs
- Conventions and Groups expect host hotels and event spaces to have food diversion as part of their sustainability initiatives
- Having standard recycling efforts along with Organics helps earn business for vendors, hotels and convention spaces
- To reach corporate sustainability goals for many businesses, it is impossible to do so, without implementing an Organics program

