Objectives

- Regulatory framework and approach
- Establishing a food scraps composting facility
- Operational requirements
- Ohio’s Food Scraps Management Initiative
Currently 7 Rules

<table>
<thead>
<tr>
<th>Rule Number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>3745-27-40</td>
<td>Authorized feedstocks, bulking agents, and additives and classification of composting facilities</td>
</tr>
<tr>
<td>3745-27-41</td>
<td>Notification requirements for class II, III and IV composting facilities</td>
</tr>
<tr>
<td>3745-27-42</td>
<td>Permit to install application for class I composting facilities</td>
</tr>
<tr>
<td>3745-27-43</td>
<td>Additional criteria for approval of permit to install applications for class I composting facilities</td>
</tr>
<tr>
<td>3745-27-45</td>
<td>Composting facility operations</td>
</tr>
<tr>
<td>3745-27-46</td>
<td>Standards for compost products</td>
</tr>
<tr>
<td>3745-27-47</td>
<td>Closure of composting facilities</td>
</tr>
</tbody>
</table>
Facility Classification

IV
- Yard waste
- Bulking agent

III
- Yard waste
- Bulking agent
- Animal waste
- Ag veg waste

II
- Yard waste
- Bulking agent
- Animal waste
- Ag veg waste
- Food scraps
  - Industrial
  - Carcasses / rendering

I
- Yard waste
- Bulking agent
- Animal waste
- Ag veg waste
- Food scraps
- Industrial
- MSW
- Carcasses / rendering

Requires Director’s approval
# Required Authorizations

<table>
<thead>
<tr>
<th></th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
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<tbody>
<tr>
<td><strong>Registration</strong></td>
<td></td>
<td><img src="check%EF%BF%BD%EF%BF%BD%E8%89%B2.png" alt="Green Check" /></td>
<td><img src="check%E7%B7%91%E8%89%B2.png" alt="Green Check" /></td>
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<tr>
<td><strong>License</strong></td>
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<td><strong>Financial Assurance</strong></td>
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<td><strong>Permit to Install</strong></td>
<td><img src="check%E7%B7%91%E8%89%B2.png" alt="Green Check" /></td>
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<tr>
<td><strong>Size limitation</strong></td>
<td></td>
<td></td>
<td>135,000 sq.ft.</td>
<td></td>
</tr>
</tbody>
</table>
About licensing…

- License is like a Permit to Operate
- Establishes Amount of Maximum Daily Waste Receipt (AMDWR)
- Mandatory Inspections
  - Prior to commencement of operations
  - Biweekly during first 3 months
  - Quarterly then on
<table>
<thead>
<tr>
<th>AMDWR (tons)</th>
<th>Annual Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 or less</td>
<td>$300</td>
</tr>
<tr>
<td>13 to 25</td>
<td>$600</td>
</tr>
<tr>
<td>26 to 50</td>
<td>$1,200</td>
</tr>
<tr>
<td>51 to 75</td>
<td>$1,800</td>
</tr>
<tr>
<td>76 to 100</td>
<td>$2,500</td>
</tr>
<tr>
<td>101 to 200</td>
<td>$6,260</td>
</tr>
<tr>
<td>201 to 500</td>
<td>$15,000</td>
</tr>
<tr>
<td>501 or more</td>
<td>$30,000</td>
</tr>
</tbody>
</table>
Proposed Update Feedstock Types

- Type D feedstocks are source-separated raw, harvested vegetables, fruits, and grains, and the paper from packaging that...

- Type D1 feedstocks are source-separated vegetables, fruits, and grains processed for human or animal consumption...

- Type E feedstocks are source-separated dairy products processed for human consumption such as, cheese, butter, milk, yogurt, eggs and cream, and meats processed for...

"Food scraps" means food residuals including but not limited to vegetables, fruits, grains, dairy products, meats, and the biodegradable packaging that may be commingled.
Facility Siting Criteria
Siting Criteria (Class II)

- 200 ft from surface waters of the state
- 200 ft from a public water supply well, developed spring or private potable water well
- 250 ft from a domicile
- Not in a regulatory floodplain
- Not on a national park or national recreation area
- Not on a state park or established state park purchase area
# Construction Requirements

Based on performance standards

No construction materials specified

## Site preparation

- 1-6% slope
- Pad shall allow equipment operation during inclement weather
- Install leachate collection / management structures as needed
  - Options:
    - BMP’s
    - Ponds
    - Tanks
- Inspection prior to operation
Construction Requirements
Surface Water & Leachate

Based on performance standards

Increased stringency when substantial threat

Operate & Monitor

- Divert from materials placement area
- Control run-off, run-on & erosion
- Windrows parallel to slope
- No ponding around wastes or compost
- Monitor ground water as required by director or health commissioner
Good Water Management

Filter strip
Not-so-good Water Management
Operational Requirements
Composting Methods

- Windrows
- In-vessel
- Aerated static pile
- Others by approval

EarthTub®
“Dry Batch” Anaerobic Digestion & Aerobic Composting
Specific to Food Scraps

- Notify 7 days before first acceptance
- Shred incidental paper
- Start composting in a timely manner
- Have a stockpile of biofilter material
- Control any free liquid
Nuisances/Health Hazards

- Prevent nuisances and/or health hazards caused by:
  - Odors
  - Dust
  - Noise
  - Fires
  - Vectors (insects, rodents, etc.)
  - Scattered litter
Equipment

- Operable equipment of adequate size & quantity available at all times

- Adequate equipment, materials & services available at or near the facility for control of fires
Contingency Plan

- Address the following
  - Discovery of prohibited material
  - Fires
  - Explosions
  - Spills
  - Equipment failure

- Be available at the facility
Access

- Maintain access roads to allow access during inclement weather conditions
- Limit access by non-employees during non-operating hours
- Keep away domestic & farm animals
Containers

- **Non-biodegradable**
  - Removed prior to incorporating into process

- **Biodegradable**
  - Shredded or managed to increase surface area
Proposed New Definitions

- Compostable serviceware means an item such as bowls, plates, cups, cutlery, and films, that meets ASTM D6400 or D6868...

- Compostable containers means a container composed of materials such as vegetable matter, paper, cardboard, and plastic that meets ASTM D6400 or D6868...
Quality Standards

- Heavy metals & Boron
- Pathogens
  - Fecal coleiforms
  - Salmonella
- Inerts
- Maturity
- NPK
- Salinity
- pH
- Total organic carbon
Testing Frequency

- ALL compost must be tested prior to distribution
- Minimum of one composite sample for each 10,000 cubic yards or less
- Re-test if add new compost
Ohio Food Scraps Initiative

- Launched June 2007
  - Provide education
  - Identify funding
  - Facilitate partnerships
  - Increase infrastructure

- Regional projects
Education

Food Scrap Management

Did you know that each American throws away an average of 1.3 pounds of food scraps every day? Each year, residents in Ohio generate enough food scraps to pile on a football field over a half mile high! Food scrap waste generated by all households in the United States could be piled on a football field more than 16 miles high.

The top two portions of the U.S. waste stream (paper and yard waste) have been successfully diverted from landfills through recycling and composting efforts, with recovery rates of 50 percent and 62 percent, respectively. Paired in comparison, the food scrap recovery rate is less than three percent.

Across the nation states are exploring ways to reduce pollution and encourage alternative methods of waste management such as recycling. Although some food scrap management programs are being implemented at the local level (universities, business locations, etc.), more can be done to help reduce the need for food scrap disposal.

U.S. Waste Generation by Category

Regulations for Community and Commercial Food Scrap Composting Facilities

At nearly 96 million tons, food scraps are the third largest segment of waste generated each year. Unfortunately, less than three percent of this waste is diverted from landfills to more environmentally friendly disposal options such as composting. Food scraps include leftover portions of meats (post-consumer food scraps) and trimmings from food preparation activities (pre-consumer food scraps).

Diverting this material from landfills creates environmental and financial benefits. Successful composting requires the completion of a form that includes facility location and general contact information, planned operation and processing information, a draft of the intended financial assurance instrument, and a statement certifying compliance with the established siting criteria. The registration form must be accompanied by a detailed plan drawing. There is no fee for registration. Copies of the registration form are available online at www.epa.ohio.gov/portals/34/document/guidance/pdf/451.pdf.
Stakeholder Meetings

- **September 2007**
  - Grocers, Farmers, Composters, Haulers, Solid Waste Districts, regulatory partners and others

- **March 2008**
  - Haulers (large and small)

- **June 2008**
  - Composters (commercial and institutional)
Partnerships

- Composting Pilot Project
- Supermarket Training Manual

[Logos for Ohio EPA and Ohio Grocers Foundation]
2008
- July 1 – Oct 31
- 24 stores
- Produce, deli, bakery, floral
- 654 tons
- Estimated 9,810 tons/yr
The Time is Now!

You can recycle your food scraps & sodded paper for composting!

CITY OF HURON
RESIDENTIAL FOOD SCRAP RECYCLING

EASY AS 1, 2, 3

1. Separate your food recyclables into an organics container. You can use cardboard boxes or paper containers for your collection.

2. Carry your food recyclables outside to your yard waste container.

3. Empty your organics container at Barnes Nursery. There it will be converted into compost.

Residential Co-collection
www.epa.ohio.gov/dsiwm

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