



Contamination in Commercial Composting

Dakota County School Recycling Workshop

Presented by: Jake Duame

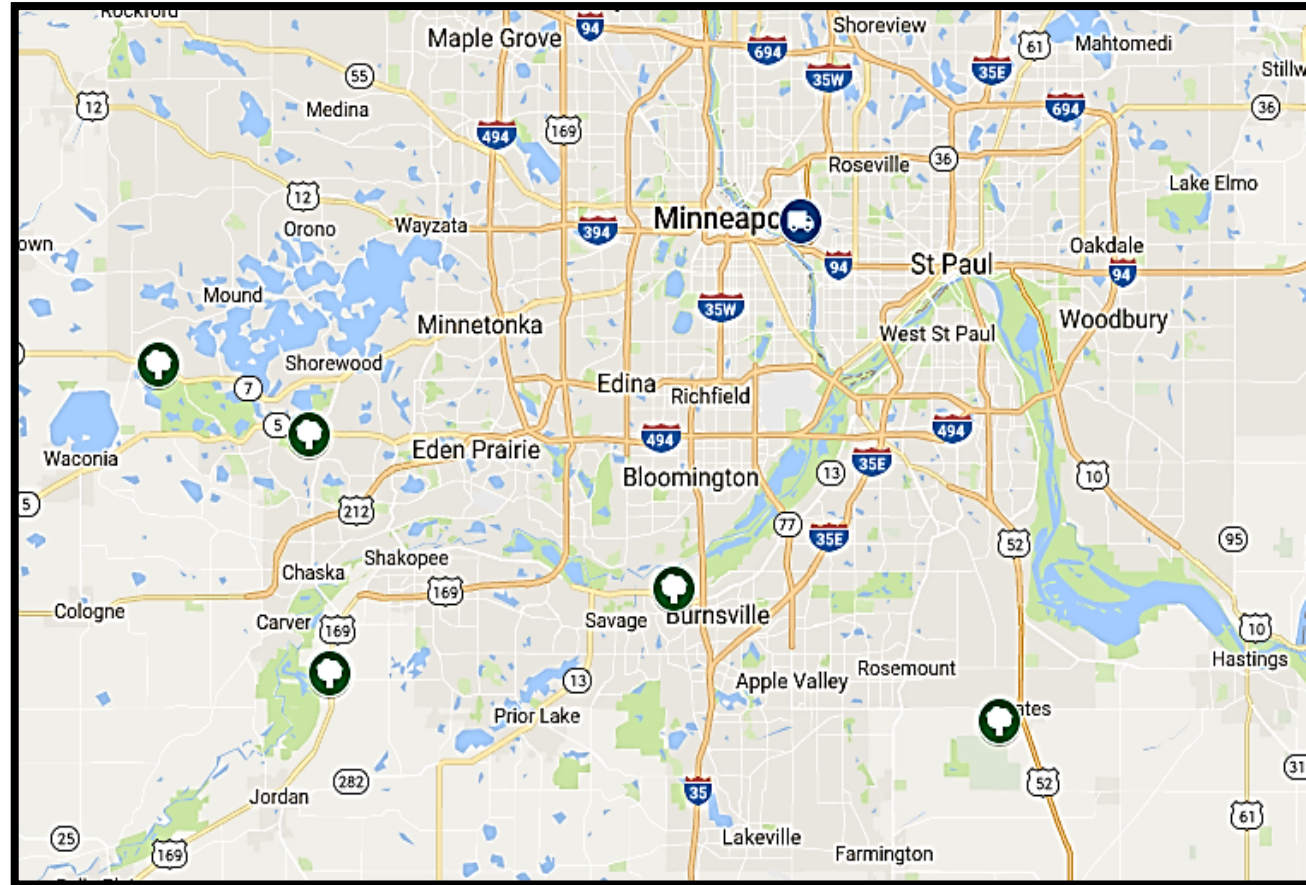
Specialized Environmental Technologies, Inc.

July 18, 2023



COMPANY OVERVIEW

- Specialized Environmental Technologies, a WM subsidiary
- Operate four local composting sites
- Members of the US Composting Council and MN Composting Council
- ~250,000 yd³ of brush and yard waste
- ~20,000 tons of organics received annually
- ~100,000 yd³ of compost and soil blends sold annually



The
MULCH
STORE

Adapting the process to reduce contamination

- Review and Update Acceptable Material List
 - All food scraps including meat, bones, and dairy
- Uncoated paper products
- ALL BPI certified compostable products
- Offer Education to Haulers and Generators



What is BPI Certified?

- The product breaks down yielding H₂O, CO₂ and biomass
- Biodegrades at a rate similar to other known compostable materials
- Leaves no visible, distinguishable or toxic residue
- Certified compostable products **MUST** have this label stamped on product or packaging
- Visit www.bpiworld.org



Adapting the process to reduce contamination (continued)

- Inspect incoming loads for quality control
- Reject contaminated loads
- Provide feedback to customers

Specialized Environmental Technologies

Load Inspection Form

Date: _____ Time: _____ Inspection performed by: _____

Hauler: _____ Truck #: _____ Ticket #: _____ Net Weight (tons): _____

Source (city, county, transfer, etc.): _____

Overall Quality of Load (circle one)

Light: 1-2% contamination by volume
Moderate: 3-4% contamination by volume
Heavy: 4-5% contamination by volume
Rejected: greater than 5% contamination by volume -corrective action required

% contamination is estimated based on the inspector's discretion

Description of Contamination (Check all that apply)

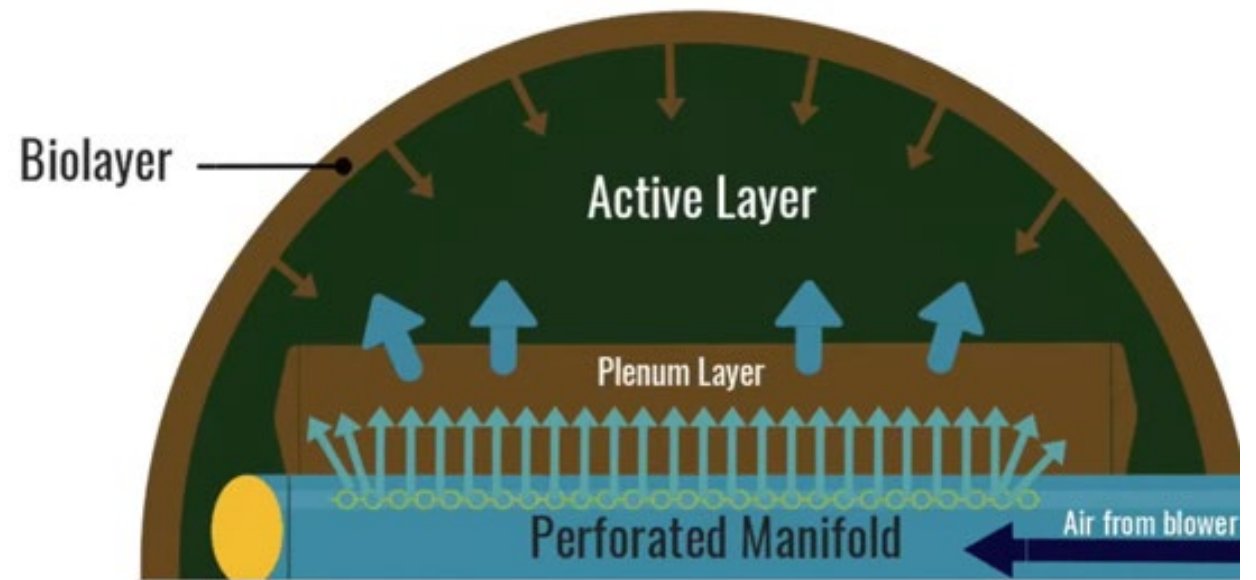
	Light	Moderate	Heavy	Notes
Plastic trash bags	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Plastic cups or bottles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Plastic wrap/film	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Glass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Plastic coated paper/cartons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Steel/aluminum cans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Plastic silverware	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Styrofoam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tin trays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Buckets/pails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
HHW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
C&D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other (describe): _____				_____
Unacceptable material (fee to be assessed): _____				
What, if any, corrective actions will be taken: _____				

Additional notes/specific origin of contamination: _____				



Ideal Conditions for Composting

- C:N ratio of 25:1
- 40-60% Moisture Content
- Oxygen levels above 8%



1. Air exits perforations in manifold
2. Air slowed & diffused by plenum layer
3. Air promotes aerobic composting in active layer
4. Biofiltration layer traps heat and prevents odor escape

Screening Equipment



Non-Compostables from the Cafeteria



More Non-Compostables from the Cafeteria



Plastic Utensils



More Plastic Utensils



Reusable Utensils



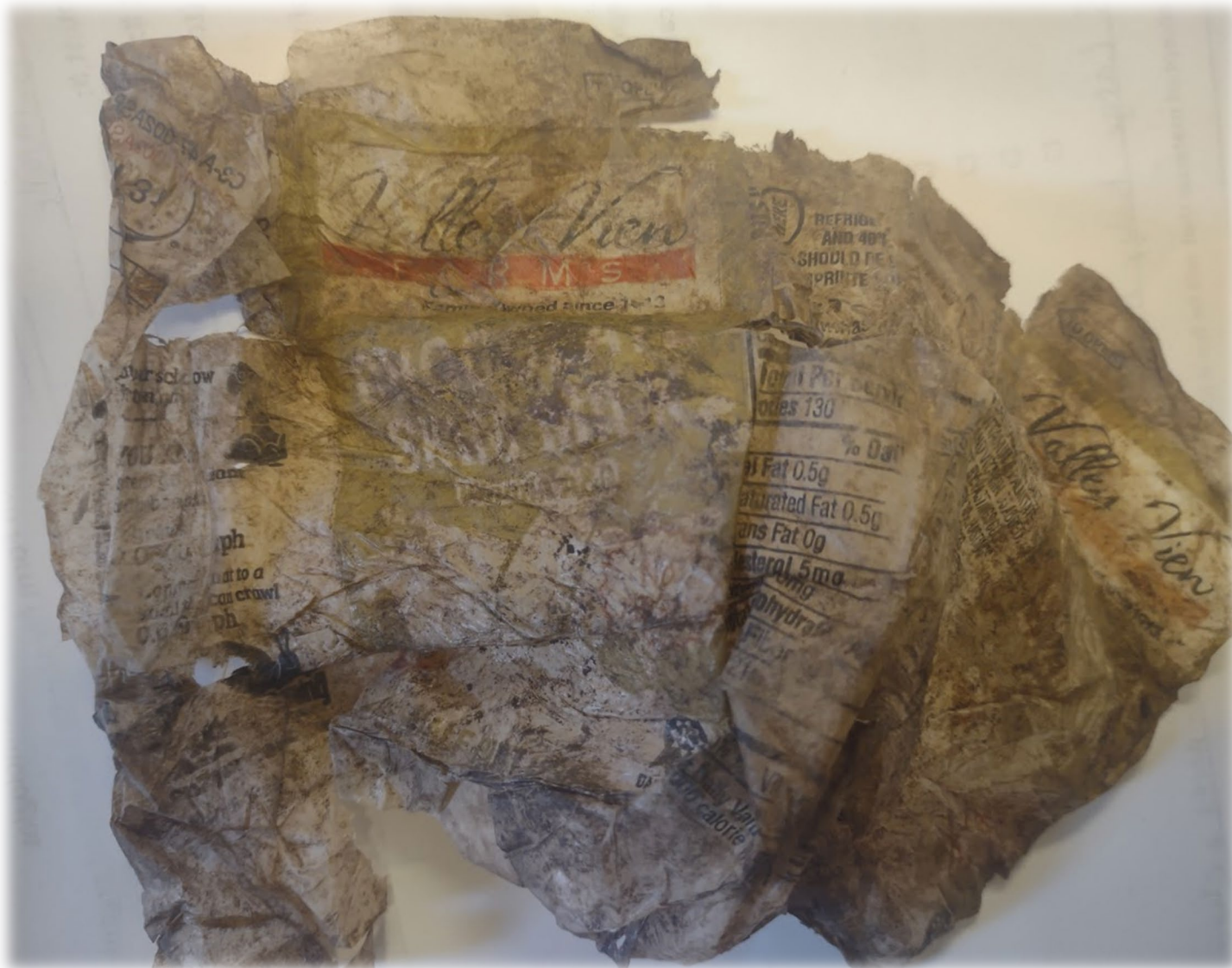
Milk Cartons



More milk cartons

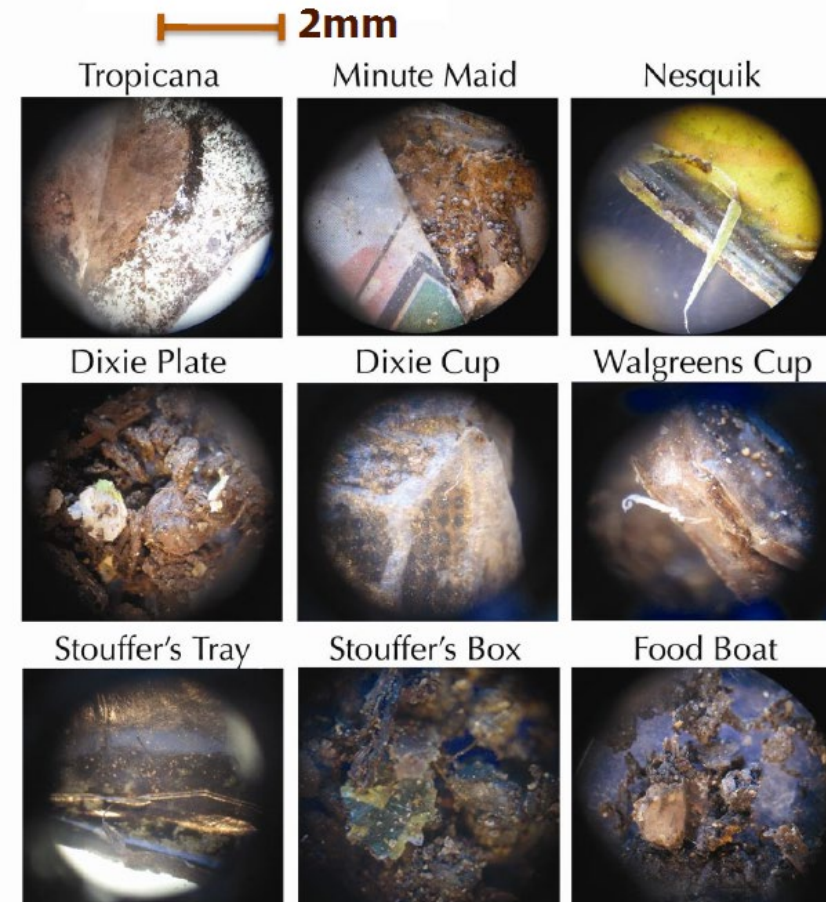


Old Milk Cartons



The Environmental Hazard of Composting Plastic-Coated Paper Products

- www.ecocycle.org/specialreports/microplasticsincompost



Fiber Trays Stacked Together



Clean Organics...



...Makes Clean Compost!



Environmental benefits of organics recycling and compost

- Waste Prevention

- Saves valuable landfill space
- Low BTU output through incineration
- Reduces greenhouse gas emissions
- Creates a marketable commodity out of waste

- Compost use

- Improves water holding capacity
- Increases filtration rates in soil
- Reduces erosion and runoff
- Increases nutrients and organic matter in soil



Compost Markets and Uses

- Erosion Control
- Rain Garden Media
- Gardening
- Landscaping
- State Highway Projects
- Topdressing Lawns



Questions?

Jake Duame
jduame@setmn.com
612-366-5207



Specialized
Environmental
Technologies, Inc.

The
MULCH
STORE



facebook.com/SETthemulchstore

Specialized Environmental Technologies, Inc. Company
4250 Creekview Circle, Suite 201
Minnetrista, MN 55375
952-946-6999