



# Expanding Composting from Yard Debris to Wasted Food: Why and How

MRC Conference  
May 18, 2017

Cary Oshins  
Associate Director, USCC



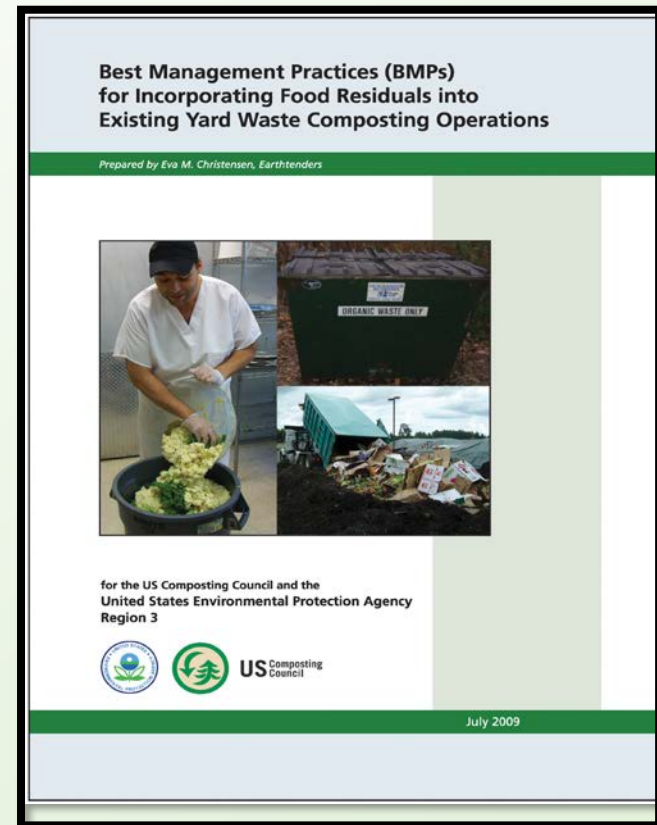
**Nature's Way to Grow!**



**US** Composting  
Council®

# Expanding Composting from Yard Debris to Wasted Food: Why and How

- Why
  - Benefits and challenges
- How: BMPs
  - Collection
  - Receiving
  - Processing
  - Site Design
  - Troubleshooting



**Nature's Way to Grow!**



**US Composting Council®**





# US Composting Council (USCC)

- The US Composting Council (USCC) advances compost manufacturing and promotes compost use to enhance soils and provide economic and environmental benefits for our members and society.
- Established in 1990
- 501(c)6 Trade and Professional Association



**Nature's Way to Grow!**



**US** Composting  
Council®

A photograph showing a pair of hands cupped together, holding a mound of dark, rich soil. The hands are positioned on the right side of the bottom banner, partially overlapping the US Composting Council logo.

# Areas of Engagement

- Market Development
  - Seal of Testing Assurance
  - Consumer Use Programs
- Annual Conference
- Professional Certification: CCOM™
- Advocacy
  - State Policy Support
  - National Issues
- Membership
  - Communication & Networking
  - B2B
  - State Chapters:  
**Welcome MOC!!**

CCREF—Our "Sister" Organization  
Supporting Research and Education

**Nature's Way to Grow!**



**US** Composting  
Council®



# Why add wasted food to yard debris compost site?

## **FOOD WASTE STATS** (from ReFED Report)

- 63M tons (85% at consumer level)
- \$218 Billion (92% at consumer level)
- Consumes 21% of fresh water, 19% of fertilizer, 18% of cropland, 21% of landfill volume
- National goal: Reduce by 50% by 2030
- Centralized composting has the largest potential (in tons) for managing the wasted food

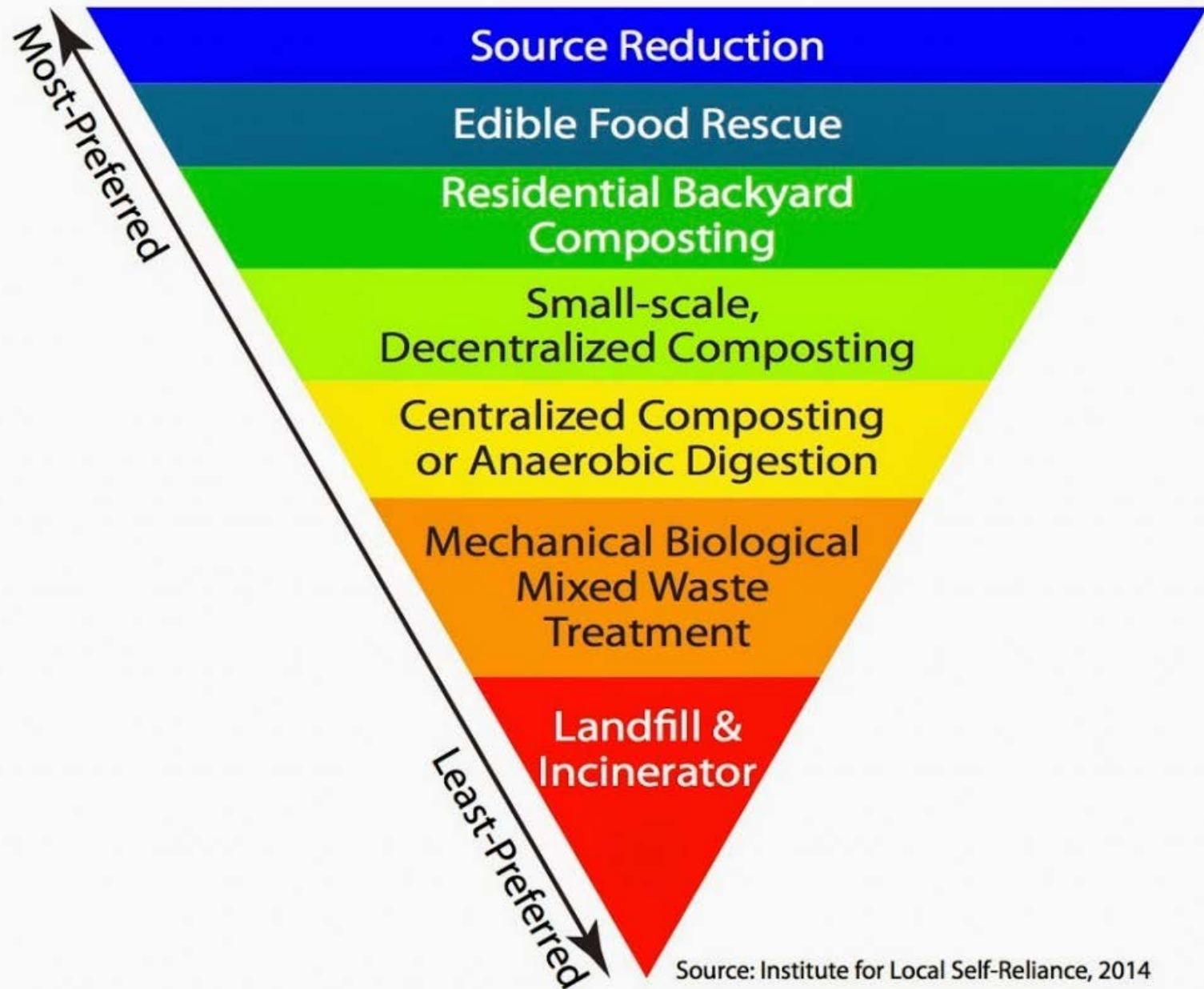
**Nature's Way to Grow!**



**US** Composting  
Council®



# Hierarchy For Reducing & Recycling Food Scraps And Other Organic Discards



Source: Institute for Local Self-Reliance, 2014

# Why add wasted food to yard debris compost site?

## Public

- Avoids problems with landfills and incinerators
  - Reduced GHGs
- Green jobs
- Local economy
- Benefits of compost use

## Composter

- Provide community service
- Increased revenue
  - Service (tip) fees
  - Compost sales
- Higher nutrient content compost?

**Nature's Way to Grow!**



**US** Composting  
Council®



# Challenges with adding food scraps to yard debris sites

- Change in regulatory tier
  - Permit requirements
- Increased costs
  - Contamination
  - Pad construction
  - Risks of odors, vectors
- Change in product markets
  - Organic ag
  - Fresh food crops

**Nature's Way to Grow!**



**US** Composting  
Council®







# Policies to support increased composting of food scraps

- Bans/collection mandates
  - No ban without a plan!
- Food recovery/waste reduction goals
- PAYT, per-ton disposal surcharge
- Loans, grants, technical assistance
- Minimum OM standards for new construction
- Healthy soil/green infrastructure initiative

**Nature's Way to Grow!**



**US** Composting  
Council®

# Diverting organics

- Better separation=lower processing costs
- Sources
  - Food processors
  - Food distributors
  - Groceries
  - Large industrial kitchens
  - Restaurants, institutions
  - Individuals
    - Curbside
    - Dropoff



**Nature's Way to Grow!**



**US** Composting  
Council®



# Working with generators

- Audit
- Plan
- Enlist
- Educate
- Reward
- Feedback
- Educate

**Nature's Way to Grow!**



# Contamination



# Hauling— connecting generator to composter



- Self haul vs contract/commercial
- Toters vs Dumpsters
- Contracts—contamination
- Generator tracking

**Nature's Way to Grow!**



**US** Composting  
Council®



# Receiving

- LOTS of bulking agent to absorb liquids

**Nature's Way to Grow!**



**US** Composting  
Council®







# Receiving

- LOTS of bulking agent to absorb liquids
- Manual vs mechanical pre-screen
- Receiving building to contain odors
- On time/immediate management

**Nature's Way to Grow!**



**US** Composting  
Council®







# Compostables

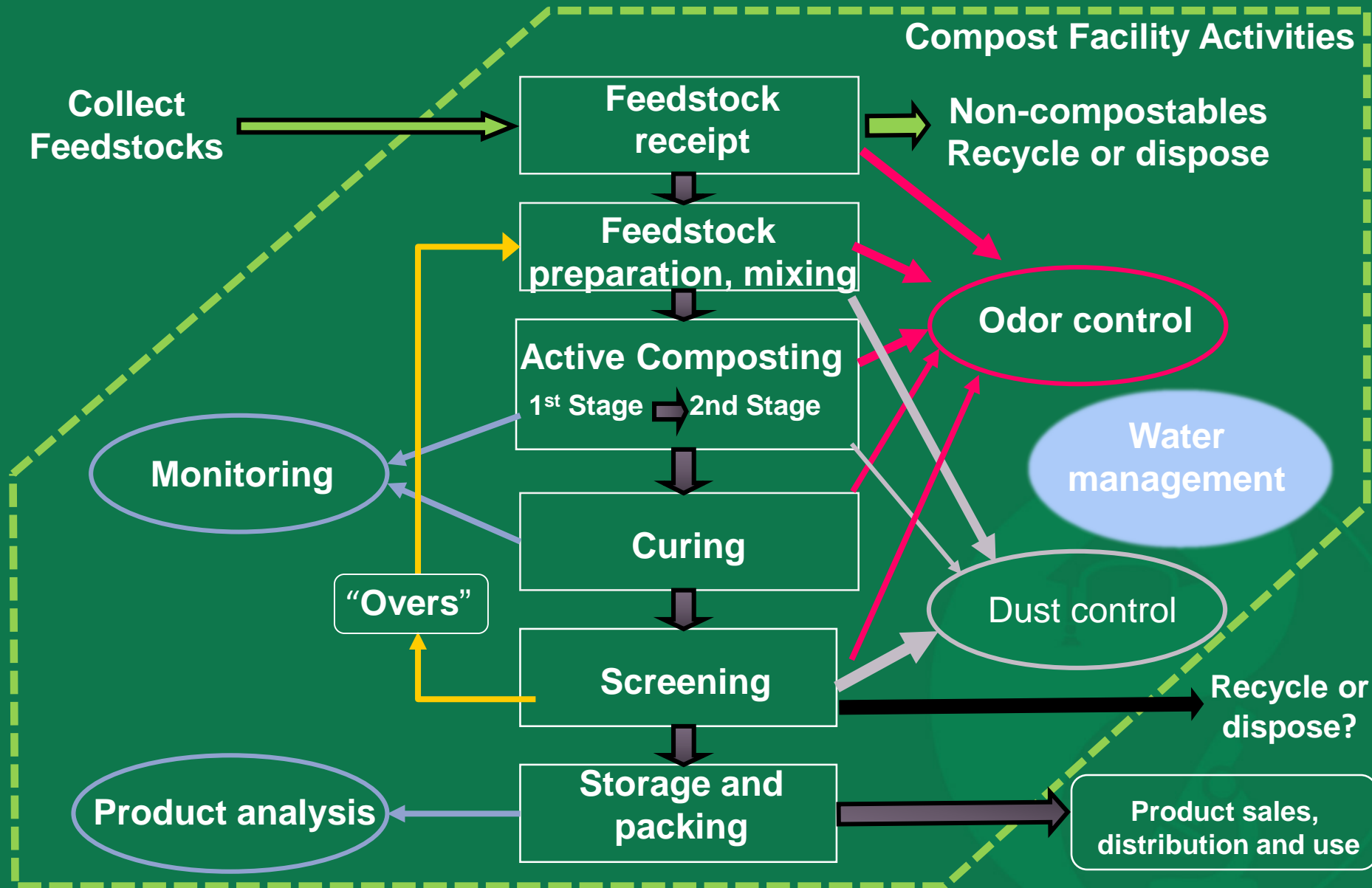
- BPI-Certified will disintegrate in <90 days, fully compost in 180 days
  - Maintaining good operating practices: H<sup>2</sup>O, BD, T<sup>o</sup>
- Enable more food to be collected
- Some increase in compost
- Beware of greenwashing
- NOT allowed in compost for certified organic farms

**Nature's Way to Grow!**



**US** Composting  
Council®

# Flow of Materials and Activities at the Compost Facility



# Processing

- Screen sizing before and after
- Grinding
- Composting
  - Windrow vs Forced aeration systems
  - Meeting PFRP (pathogen control standards)
  - Recipe changes

**Nature's Way to Grow!**



**US** Composting  
Council®





3

2

2

1

1

CAUTION  
Keep Back

# Sizing/layout

- Increased total throughput
  - More bulking agent to balance more wet, dense, high-N food
- Increased screening
  - Load checking
- Reduced footprint technologies?
- Pad surface improvement?

**Nature's Way to Grow!**



**US** Composting  
Council®





# Odors and vectors

- Vectors (flies, birds, rodents, etc) attracted to exposed, decomposing food
- Covers control odors and vectors

**Nature's Way to Grow!**



**US** Composting  
Council®





Aeration trenches under the Gore covers.  
Three phase composting. 2 phases under the covers + 1 curing phase.



Designed so that when hot air hits the fabric, it condenses and drips back in and helps control odors.  
No biofiltration.

**Cedar Grove Composting  
Seattle, WA region**

GORE covered systems  
Aerated static piles



# Odors and vectors

- Vectors (flies, birds, rodents, etc) attracted to exposed, decomposing food
- Covers control odors and vectors
- Site maintenance in KEY

**Nature's Way to Grow!**



**US** Composting  
Council®





# Markets and products

- Adding food will increase nutrients
  - Increase bacterial dominance?
- Organic Ag market?
  - No compostables (yet)

**Nature's Way to Grow!**



**US** Composting  
Council®



# Want to learn more?



## CCREF Compost Operations Training Courses

- July 24-28, Brooklyn, NY
- September 11-15, Raleigh, NC
- October 30-Nov 3, Ft Collins, CO

<http://compostfoundation.org/Education/COTC>

**Nature's Way to Grow!**



**US** Composting  
Council®



SAVE THE DATE FOR

# COMPOST 2018

Game On! Building Sustainable Communities

✓ January 22-23 | Westin Peachtree | Atlanta, GA  
exhibitors

✓ Workshops and technical sessions

✓ Equipment Demonstrations

✓ Networking, receptions and fun!

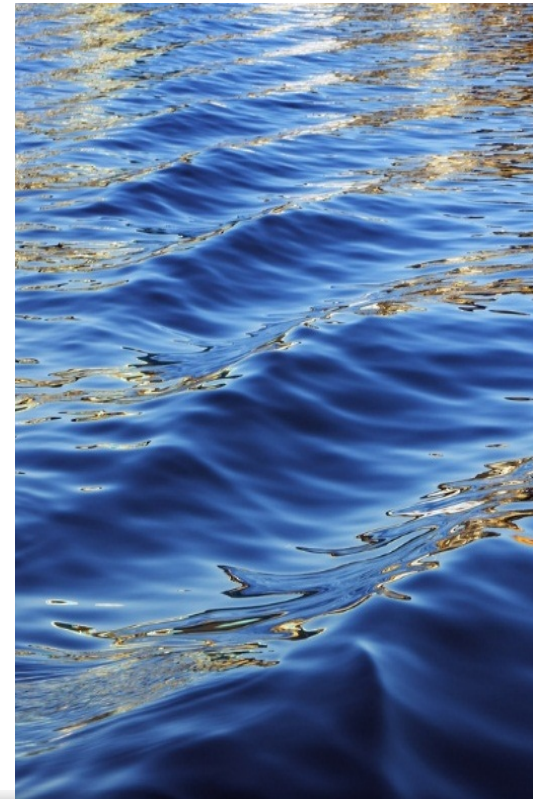
<http://compostconference.com/>



# Thanks!

Cary Oshins

[cary.oshins@compostingcouncil.org](mailto:cary.oshins@compostingcouncil.org)



**Nature's Way to Grow!**



**US** Composting Council®