Organics Recycling
How Policy Supports Organics Recovery Markets

Josh Kelly, Materials Management Section Chief
State of Vermont, Agency of Natural Resources
31% of food is lost or wasted.

$161 billion annually.

Landfills are the 3\textsuperscript{rd} largest source of methane in the US.

EPA & USDA have set 50% food waste reduction goal by 2030.

(Source: US EPA)
Recycling Rate Stagnation

Vermont  30-36% for more than a decade
U.S.  ~34%
THE PROBLEM

~50% of trash could be recycled, recovered, or composted
2012 – BIG year for Vermont

Universal Recycling (Act 148) passes unanimously

Hey, you can compost that!

That’s recyclable!
Moving from “waste management”
Materials Management
Comprehensive Solid Waste Policy

Required Diversion (bans) = **Motivation**
  - recyclables
  - leaf, yard, and clean wood
  - food scraps

Parallel Collection = **Convenience**

Pay As You Throw = **Incentive**

Recycling in Public Spaces = **Lead by Example**
Baseline Recyclables

**Metal**
- Steel cans and containers
- Aluminum cans, pie plates, clean foil

**Paper**
- News paper, office paper
- Mail, magazines, paper bags, soft cover books
- Cardboard, boxboard

**Plastic**
- #1 & #2

**Glass**
- Bottles and Jars
## Timing

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Food Scraps Summary

Phases for larger food scrap generators, if there is a facility within 20 miles

- 2014 > 104 tons/year  2 tons/wk
- 2015 >  52 tons/year   1 ton/wk
- 2016 >  26 tons/year   1/2 ton/wk
- 2017 >  18  tons/year   1/3 ton/wk
- **2020** all food scraps banned regardless of distance
Food Scraps Details

Residents need not compost meat and bones if they compost at home.

Businesses/Institutions de minimis clause

Photo courtesy of CVSWMD
Bill Emerson Good Samaritan Food Donation Act (1996) – helps protect food donors from liability associated with donated food.
Some of What We’ve Done

• Hauler Meetings
• Town/District Meetings
• Industry Outreach
• Letters & Phone Calls
• Outreach Materials
• Webinars
• Site Visits
• Small Grants
• Partnerships & Collaboration

Tote washing. Photo courtesy of CVSWMD
Materials Management Map
CHELSEA ROYAL DINER

Food Establishment
Restaurant

Estimated Tons Per Week: 0.63

Physical Address:
487 MARLBORO ROAD
BRATTLEBORO
05303

Telephone Number:
Website: http://www.chelsearoyaldiner.com
Facebook Link:

See something incorrect? Click to Submit Correction
View Additional Details
Edit Feature
Facility

Hartford C&D Landfill & Transfer Station
Facility Type: Transfer Station
Accepts:
- Recycling: YES
- E-Waste: YES
- Food Scraps: NO
- Leaf Yard Debris: YES

Trash: YES
HHW: NO
Clean Wood: NO
Specifics:

*Please call to confirm what materials are currently accepted before visiting.

Physical Address:
Get Directions
2590 North Hartland Road
Hartford
05047

Telephone Number: 802-295-9353
Email:
Website: http://www.hartford-vt.org/content/recycling/
See something incorrect? Click to Submit Correction

View Additional Details

Edit Feature
20-mile radius tool
How much food waste do you produce?

Restaurant

\[ \# \text{ Seats} \times \text{ Lbs./meal} \times \text{ Meals/day} \times \text{ days/wk} = \text{ Lbs./wk} \]

\[ 65 \times 1.0 \times 3 \times 7 = 1,365 \]

0.68 tons/week = estimated 35 tons/year

www.newmoa.org/solidwaste/projects/food/
How much food waste do you produce?

Institution
(prison, nursing home, hospital)

\[
\text{# Beds} \times \text{Lbs./meal} \times \text{Meals/day} \times 7 \text{ days/wk} = \text{Lbs./wk}
\]

\[
100 \times 0.5 \times 3 \times 7 = 1,050
\]

0.53 tons/week = estimated 27 tons/year
Compost & Anaerobic Digestion

New Digesters

- Rutland
- Randolph
- St. Albans
Vermont Digesters

**On-Farm Digesters:**
- Permitted to accept food processing residuals
- Not permitted to accept food processing residuals

**Other Digesters:**
- Wastewater Treatment Plant
NEIGHBORHOOD ENERGY, LLC
COVENTRY, VT

DIGESTER TYPE: MIXED PLUG FLOW
YEAR BUILT: 2008
BASE POPULATION: 750 DAIRY COWS
OTHER FEEDSTOCKS: FOOD WASTE
ENGINE SIZE (kW): 225 kW
RECEIVING UTILITY: VT ELECTRIC COOP.
SYSTEM DESIGNER: DVO, INC.
“Clean Power, Cleaner Lake”

- Initial plans for 5 digesters along Lake Champlain
Where Things Stand

RECYCLING (ban >6 months in effect)
• All Facilities accept recyclables
• Haulers are rolling out recycling services
• Recyclables are up!

ORGANICS (off to a great start)
• Food Donation up nearly 30%! (200+ food shelves)
• 10 Composters, 11 Haulers, up to 17 farm ADs
• 2 ton generators diverting; 1 tons outreach ongoing
• Leaf & yard collection growing rapidly
Vermont’s Story

1. Pilot Projects
   Grants, Support, & Recognition for Organics Recycling

2. Rules and Regulations – Find a place for Organics Recycling
   Protection of Food Donors
   Compost Training, Technical Assistance, Siting, and Certification
   Anaerobic Digestion Certification

3. Policy that supports market development
CHALLENGES

- Lack of Funding
- Down Recycling Markets
- Rural State/Economies of Scale

OPPORTUNITIES

- More Awareness Than Ever
- Partnerships, Connections, Leverage
  - (compost/AD coexistence)
- Rural State = Space & Existing Farm Infrastructure
Learning Lessons

- Engage Stakeholders Early and Often
- Ensure Level Playing Field
- Provide a Path Forward for Facilities
- Watch Markets
- Enforce Carefully
- Use Funding to Incentivize Greatest Needs
- Listen and Adapt
Use the SYMBOLS!

Standardized Symbols available free.
Search web for “Universal Recycling VT”

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