Program Considerations

Food Recovery from Residential Programs
• Why are we here?
• Residential programs overview and considerations
  – Program Barriers
  – Program Enablers
• Context
• Wrap Up
What’s In the Landfill?
EPA 2012 Waste Characterization Study

Total MSW Discards (by material):
2012 - 164 Million Tons (after recycling and composting)

- Organic waste in landfills decomposes anaerobically into Methane, which is 23 times more dangerous than CO$_2$ as a Green House Gas (GHG)
- As a result, local and state governments are banning the landfilling of organic waste, and instead promoting diversion to composting facilities
- Average household in the US generates 300-400 pounds of food scraps per year.


www.natur-tec.com
EPA: The Food Recovery Hierarchy

Food Recovery Hierarchy

Source Reduction
Reduce the volume of surplus food generated

Feed Hungry People
Donate extra food to food banks, soup kitchens and shelters

Feed Animals
Divert food scraps to animal feed

Industrial Uses
Provide waste oils for rendering and fuel conversion and food scraps for digestion to recover energy

Composting
Create a nutrient-rich soil amendment

Landfill/Incineration
Last resort to disposal

Most Preferred

Least Preferred
Residential Programs

The number of communities in the U.S. with residential food waste collection service has grown by more than 50 percent since 2009.

Rhodes Yepsen

BIOCYCLE NATIONWIDE SURVEY

RESIDENTIAL FOOD WASTE COLLECTION IN THE U.S.

lectors to each household, and many encourage use of approved compostable bags, to assist with the daily routine of collecting food scraps, and increasing participation rates. Varied rate structures, or pay-as-you-throw (PAYT) schemes, are another method communities with SSO collection use to increase participation, showing residents how to save money by reducing the size of their trash can.

An even more aggressive approach is less-than-weekly trash collection, which appears to be a growing trend as programs is collection, so communities stand to achieve significant savings by reducing trash collection frequency,” says Anderson. “Besides the economic benefit, less-than-weekly collection will get everyone to participate in food waste composting, regardless of their environmental inclination. If we truly want to capture all of the organics that are creating methane in landfills, not just the easy stuff, this is the only way.”

Table 1 lists communities in the U.S. with curbside collection programs for source separated organics. Figure 1 provides a summary of programs by state. The sidebar describes a few residential drop-off programs, and a follow-up article will look at grassroots curbside collection programs across the U.S., where people have started small businesses or cooperatives to collect residential food waste in their cars, pickup trucks or bicycle trailers.
Residential Programs

- Cambridge
- Minneapolis
- New York City
- Sunnyvale

Photo Credits: City of Minneapolis

Photo Credits: City of Cambridge
Questions Asked

PROGRAM DETAILS
Is the program a pilot program or on-going?
How long has the program been in place?
How many households does the program cover?
Is the program voluntary or mandatory?
   If mandatory, are there enforcement measures and/or penalties?
   If voluntary, are there incentives?
Curbsides pick-up or drop off?
   If pick-up, is the hauler(s) private or a public hauler?
   If pick-up, how many times weeks are the organic scraps collected?
Does the program accept food scraps and proteins?
Does the program accept compostable plastics?
What participation rate (est. HH or % of HH)?

OUTREACH
What did you do for outreach and program education?
When launching the program, did you provide in-home collection bins? How about compostable bags?
How long before the program started did you initiate your outreach efforts?

LESSONS LEARNED
What do you feel the enablers to success are to the program?
What do you feel the barriers to success are to the program?
Any other input that might be helpful?
Shared Program Details

• Phased Pilot Programs
  – Minneapolis is now active program, no longer pilot
  – Both NYC and Minneapolis plan on rolling out city wide programs

• Size varies: 530 HHLD to 137,000 HHLD

• Voluntary (Sunnyvale is mandatory)

• Both curbside collection and drop off are available
  – Sunnyvale collection only for first phase, but will add drop off option moving forward

• Allow food scraps, including protein and dairy

• Allow BPI certified compostable bags
Program Barriers

• Cleanliness and odors
• Vectors
• Confusion
  – What and where?
  – Language barriers?
• Lack of interest
  – Don’t like to be “forced” to participate
• Cost (compostable bags)
• Timing
Program Enablers

• Pilot in highly dense area to encourage peer behavior and to create route density

• Allow for plenty of time to prepare for program (12-18 months)
  – Frequent outreach PRIOR to program KO

• Effective communication and messaging
  – Why are we doing this? “Greater Good” & Environmental Impact
  – Multiple languages, consistent colors, images, etc.

• Effective communication channels
  – Direct mailings, city website, social media, neighborhood and community events, local newspapers and newsletters
  – Dedicated program website for FAQ’s and program details
Program Enablers

- Provide starter kits - kitchen scraps bin, dedicated curbside bin and compostable bags (coupons from manufacturers and retailers)

- Allow for compostable bags to prevent odors, reduce washing, and vector concerns

- Residential engagement – feedback, communication....and PATIENCE!

- Be flexible, apply lessons learned between program phases...it’s a journey.

Photos and Graphics Courtesy of City of Minneapolis
Home Set Up Guide

Photos and Graphics Courtesy of City of Minneapolis
WHAT IS THE FOOD SCRAP RECYCLING PROGRAM?

Food scraps make up 40% of what is thrown in the landfill. Sunnyvale wants to keep food scraps out of the landfill and is implementing the pilot program to find the best way to do that. The results of this program will help determine if it can be rolled out cost-effectively City-wide.

Photos and Graphics Courtesy of: City of Sunnyvale

It's easy to make a difference
Compost these items and more!

Recycling organics, including food scraps and non-recyclable paper, is an easy way to put your trash to better use and make a difference!

Why participate?
Reduce waste: More than one-third of our trash is organic material that can be composted. Most families can divert up to 10 pounds of materials to organics recycling each week.

Compost more: You can compost more materials with curbside organics recycling even if you already compost in your backyard. Materials you can put in your curbside organics cart that cannot get in your backyard compost bin include meat, bones, dairy products, and compostable plastics.

Save money: By participating in the recycling and organics recycling programs, you may be able to switch to a smaller garbage cart and save $3/month on your bill!

Sign up now!
Sign up now by calling 612-673-2917 or emailing SRFastStart@Minneapolis.gov

Photos and Graphics Courtesy of: City of Minneapolis
Instructions come in three difference languages: English, Spanish, and Chinese
Education & Messaging

Photos and Graphics Courtesy of: City of Sunnyvale

www.natur-tec.com
Education & Messaging

Photos and Graphics Courtesy of: City of Sunnyvale
Organics Collection
Cost vs. Benefit

• Energy usage
  – Cars represent 15-20%, of our energy usage, house heating and cooling represents 20-25%

• Landfill considerations
  – 80-85% of what is in a landfill can be diverted to recycling and compost streams. Landfills are mankind's largest producers of methane (CH₄) gas which is 23 times MORE dangerous as a GHG than carbon dioxide (CO₂)

• Capital and operational costs:
  – Prius cost $20k, FasTracks $4.3k / HHLD
  – Energy efficient HAVOC $10k / HHLD
  – Mass transit in Atlanta (MARTA): $40,000 / HHLD

An organic collection program is between $0-$500/HHLD and costs an average of $2-3 /HHLD/week to operate

Special Thanks to Rod Muir from the Sierra Club and Sure-Close for above information
Very Special Thanks to the Experts!

Ms. Kellie Kish & Ms. Angela Brenny  
City of Minneapolis  
www.Minneapolismn.gov/organics

Ms. Sandy Jensen  
City of Sunnyvale  
www.savesealseperate.com

Mr. Andrew Hoyles & Mr. Brett Mons  
New York City  
http://www1.nyc.gov/assetdsnynyzerowaste

Ms. Randi Mail  
City of Cambridge  
www.cambridgaMA.gov/CompostPickup
Curb to Compost Toolkit

http://compostfoundation.org/c2c/Home/tabid/100/Default.aspx
Thank You!!

Rick Lombardo
Director of Business Development
Natur-Tec®
Phone: 517.230.5995
Email: rlombardo@ntic.com