

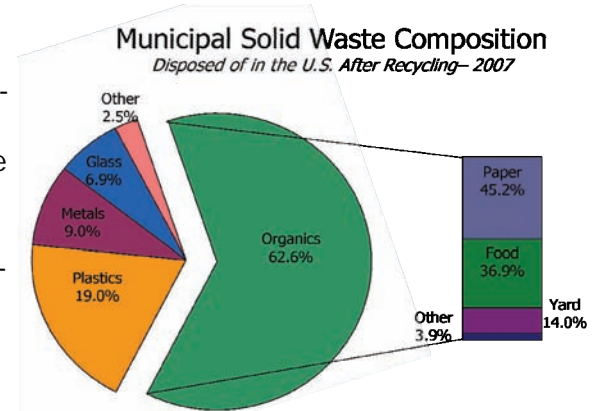
# Beyond Recycling: **Composting**

## *Food scraps and soiled paper*

*A Report by Peter Anderson from the Center for a Competitive Waste Industry with Gary Liss & Associates and Steven Sherman (formerly with ESA)*



Today's typical recycling program recovers bottles, cans, and paper, and sometimes yard trimmings. These programs on average divert 30% from the waste stream. In order to increase waste diversion above 50% and mitigate climate change, many communities are expanding their collection programs to include food scraps and soiled paper.



This figure characterizes the composition of the municipal solid waste stream reaching landfills.

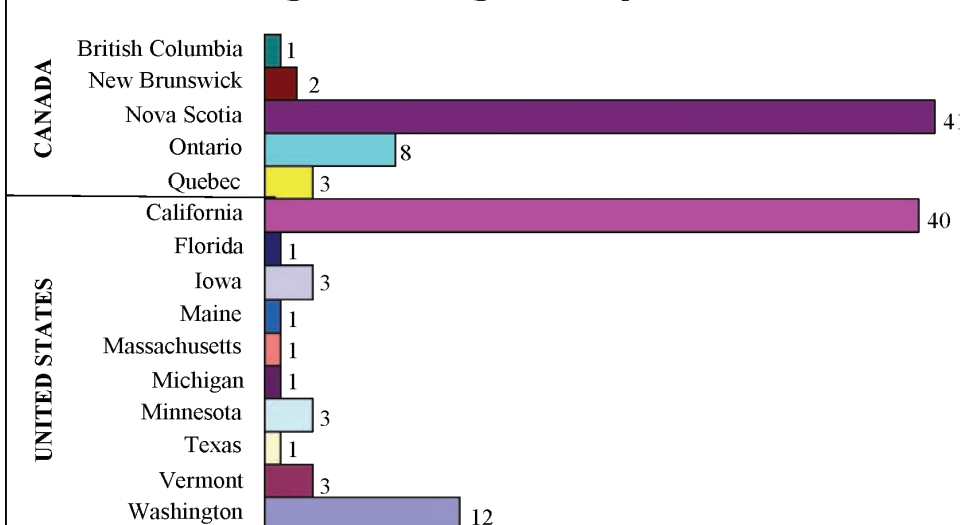
### Why Divert Food Scraps?

- ⇒ Organic waste accounts for over 60% of municipal solid waste disposed of in landfills
  - ⇒ Food scraps account for over 20% of municipal solid waste
- ⇒ Organic materials in landfills decompose to create methane, a potent greenhouse gas
- ⇒ Food scraps in landfills contribute to leachate production

### Benefits of Organic Waste Diversion & Compost

- ⇒ Helps achieve zero waste
- ⇒ Helps achieve climate change goals
- ⇒ Decreases need for synthetic fertilizers and pesticides
- ⇒ Sequesters carbon by increasing stored soil carbon
- ⇒ Increases water retention of soil thus decreasing demand for irrigation
- ⇒ Improves crop yields and quality
- ⇒ Improves soil tilth

### Number of Organics Programs By State or Province



### CASE STUDY: Alameda County, California

**Description:** Consists of 20 municipalities in the Bay Area of California with a population of 1.45 million.



#### Reason for Early Adoption:

- ⇒ 4 compost facilities within 100 miles with permits for food scraps
- ⇒ Measure D: provided local financing structure for sustained investment in waste reduction and recycling
- ⇒ Several communities within Alameda County adopted waste diversion goals that exceeded state goals
- ⇒ All communities already offered year-round collection of yard trimmings

#### Collection:

- ⇒ Weekly
- ⇒ Includes yard trimmings, food scraps, and soiled paper
- ⇒ Kitchen compost containers provided to residents

#### Processing:

- ⇒ Windrows

#### Performance:

- ⇒ 53,000 tons/year
- ⇒ Avg. Weekly Participation: 17-23%

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# SURVEY OF COMMUNITIES WITH RESIDENTIAL ORGANICS COLLECTION PROGRAMS

## *Motivations, Lessons Learned, and Other Major Takeaways*

<http://www.beyondrecycling.org>

As waste diversion and climate change issues increase in importance, many local governments are implementing residential collection of organics or expanding existing programs, either by volume or types of material collected. Existing yard waste collection programs are being expanded to collect food waste which accounts for over 20% of municipal solid waste disposed of in landfills.

Expanded recovery of organics can play a major role in mitigating climate change, as well as stabilizing landfills. In order to encourage and optimize future efforts, this survey was developed to understand what can be learned from the 121 early-adopters that collect organic materials from the residential sector.

**OBJECTIVE:** Identify motivations, lessons learned, and other major takeaways from early adopters of residential organics collection programs

**METHOD:** Survey the 121 early adopters in the United States and Canada, conduct several site visits, and analyze information



## RESULTS

5 Most Common Reasons Listed For Commencing Residential Organics Collection Programs	
1	To meet local or statewide recycling, waste diversion, and/or zero waste goals
2	Response to landfill crisis, to protect groundwater from landfill leachate, community resistance to locating landfill accepting raw organics, and/or high landfill costs
3	Franchisee offered as part of contract extension (several contractors added program at no cost to residents)
4	Citizens/customers demanded service
5	Funding and technical assistance provided by regional organization

### *Other Findings:*

- ⇒ About 1/3 of respondents collect food scraps separately and about 1/2 collect them with yard trimmings.
- ⇒ Some cities, including San Francisco, have banned organic materials from trash or landfills.
- ⇒ The largest number of respondents noted that organics are collected separately, on a weekly basis.
- ⇒ The total cost of trash, recyclables, and organics ranges from \$11 to \$33 per household per month.
- ⇒ The range of tipping fees for organics processing was \$15 to \$90 per ton, while the range for landfilling was \$16 to \$115 per ton.

## CONCLUSIONS

As a result of the surveys and site visits, the following major themes were determined to be most important for cities considering residential organics collection:

- ⇒ New efforts to increase diversion through residential organics collection have the potential to significantly reduce greenhouse gas emissions and negative environmental impacts of landfills.
- ⇒ Diverting organics is doable! The following should be considered during a program's development:
  - ⇒ Landfill/Trash Bans
  - ⇒ Less-than-weekly Trash Collection
  - ⇒ Incremental or full expansion?
  - ⇒ Education and Outreach
  - ⇒ Collection Infrastructure: Trucks and Carts
- ⇒ While the potential exists to rapidly grow organics collection, impediments remain to be addressed.
- ⇒ More composting facilities permitted to accept food waste are needed