



Thursday April 14 at 1:00pm - 2:30pm EST  
How Communities can Transform Waste Streams through Policies and Programs

Register [Here](#) for the FREE webinar or at Registration URL:  
<https://attendee.gotowebinar.com/register/5307184670312417537>

Join us to learn about a new EPA tool showcasing ways that local governments can move their communities towards higher levels of waste reduction, materials reuse, recycling, and composting across waste generation sectors. Also, hear from the City of Fort Collins, Colorado, a community that is charting a path towards zero waste, having successfully implemented several policies and programs featured in the tool.

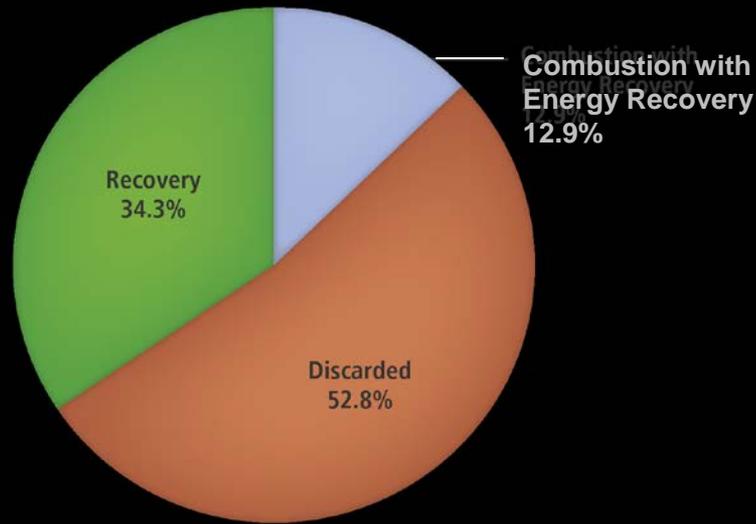
EPA's [Managing and Transforming Waste Streams: A Tool for Communities](#) enables users to explore 100 policy and program options, including 38 measures addressing organic waste. The tool illustrates different approaches to materials reuse and recovery objectives, whether in the form of enhancing curbside collection, adopting requirements, conducting community outreach, promoting infrastructure development, or engaging in product stewardship. It can lend support to local or regional solid waste plan updates or zero waste plans. The tool contains over 250 implementation examples from communities across the country, with links to city and county ordinances, contract language, and program websites.

Fort Collins' journey to zero waste began with setting a goal to achieve 50% diversion from landfill and has progressed over time through a series of adopted ordinances. Learn what motivated the City to action and how it has ratcheted down on waste sent to landfill in an open market served by private haulers. The City will share information on its current requirements and incentives, outreach activities, and future plans.

See [www.epa.gov/smm](http://www.epa.gov/smm)  
to click on a link to the  
webinar to register

# National Stats

**Total MSW Generated:  
254 million tons**



**Total C&D Debris Generated:  
530 million tons**

**Total C&D Debris Recovered?  
(No national figure)**

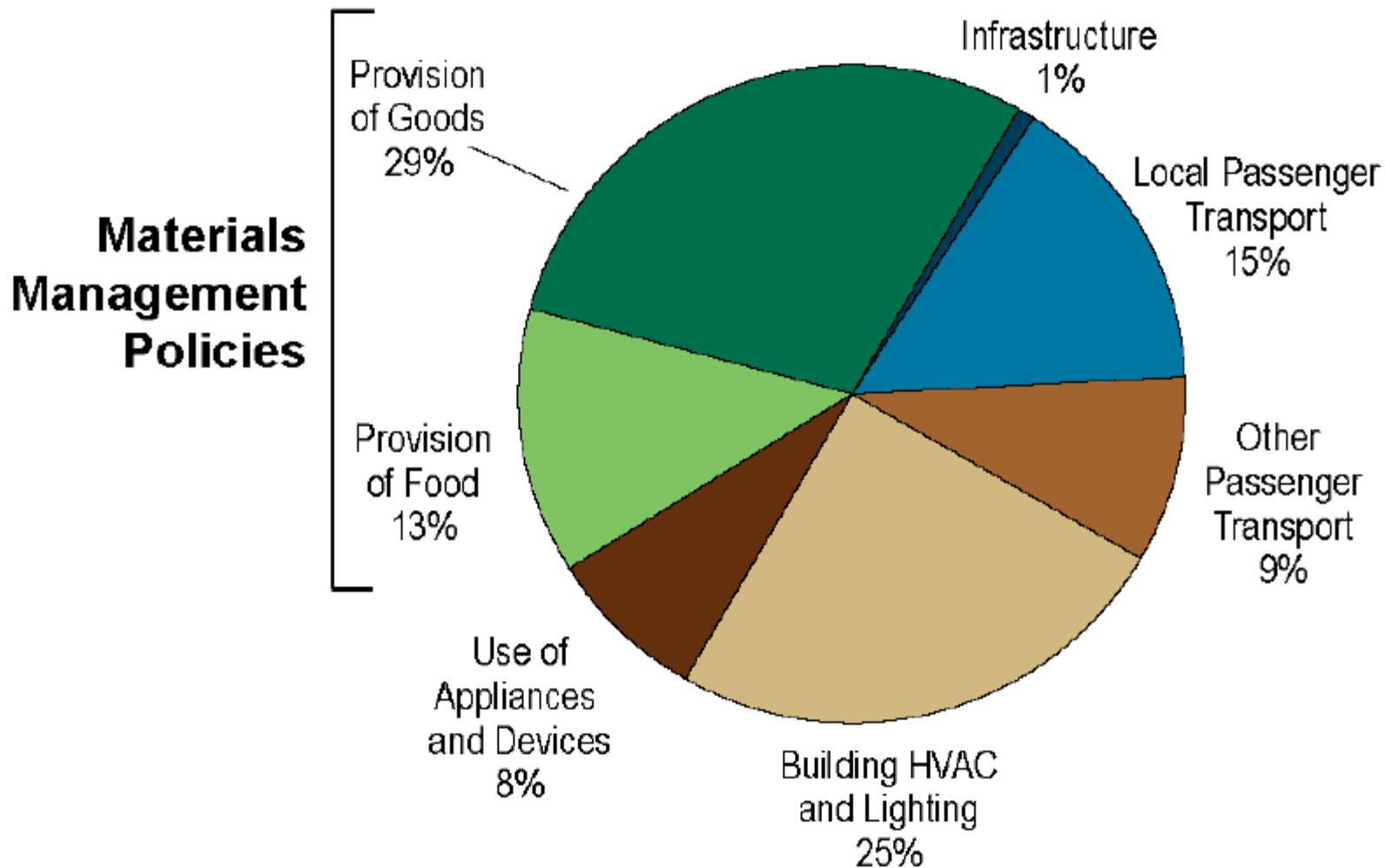
Source: Advancing Sustainable Materials Management: Facts & Figures 2013, US EPA

**National Average MSW Recycling Rate: 34%**

**High diversion rates in some cities show what's possible**

# Carbon Footprint

## Systems-Based View of U.S. GHG Emissions (2006): Highlighting Materials Management



# Recycling Stats



## THE IMPACT



RECYCLING HELPS TO CREATE **CLEANER LAND, AIR, AND WATER, AND BETTER HEALTH.**



ANNUALLY, THIS ELIMINATED MORE THAN **186 MILLION METRIC TONS** OF CO<sub>2</sub> EQUIVALENT EMISSIONS REDUCED WHICH IS,

COMPARABLE TO REMOVING THE **ANNUAL EMISSIONS**

FROM OVER **39 MILLION** PASSENGER VEHICLES.

# Food = #1 Wasted Material

## 21% of discards are food waste

- Food waste is 14.5% of total MSW generation
  - 37 million tons in 2013
- **Only 5% composted / recovered**
  - 1.84 million tons in 2013

## New National Goal to Reduce Food Waste by 50% by 2030



# EPA's Managing & Transforming Waste Streams Tool



## Explore a table of 100 measures spanning across waste generation sectors

- Learn about innovative [ordinances](#), [resolutions](#), [policies](#), [programs](#), [incentives](#), [facilities](#), and [outreach](#) efforts that communities have implemented
- Use interactive features to generate a priority list of measures tailored to your community's needs, interests, and capabilities
- Copy/print the list into a planning document

Community (general public)  
Government Operations  
Residential  
Institutional / Commercial  
/ Industrial  
Construction & Demolition



# Target Audience

- **City, county, tribal, and regional agencies**
- **States**
- **Non-profit organizations**
- **Other interested parties familiar with their community's waste management system**

# Snapshot

# ▲	Hide	High-light	Policy or Program	Policy or Program Description	Sector(s)	Material or Product Group ?	Diversion Potential	Upstream Impacts	Local Authority	Receptivity	Staff Knowledge	Community Led Initiatives
			<input type="text" value="Search..."/>	<input type="text" value="Search..."/>	<input type="text" value="Search..."/>	<input type="text" value="Search..."/>	All ▼	All ▼	All ▼	All ▼	All ▼	All ▼
1	<input type="checkbox"/>	<input type="checkbox"/>	<b>High Diversion Goal/Plan</b>	Adopt a goal and plan for reaching 50% or more diversion from landfilling and combustion by a specific year through reduce and reuse as well as recycling and composting. <a href="#">Examples and Resources</a>	Community	Various	Med	Med	Med	Med	Med	Easy
2	<input type="checkbox"/>	<input type="checkbox"/>	<b>Zero Waste Goal/Plan</b>	Adopt a goal and plan for reaching 90% or more diversion from landfilling and combustion by a specific year through reduce and reuse as well as recycling and composting. Consider renaming the Solid Waste Department to the Zero Waste Department. <a href="#">Examples and Resources</a>	Community	Various	High	High	Med	Diff	High	Easy
3	<input type="checkbox"/>	<input type="checkbox"/>	<b>Goal Integration Across Plans</b>	Make linkages between achieving high diversion and how this would serve objectives of other plans for the community, including Climate Action, Sustainability, General and Economic Development Plans. <a href="#">Examples and Resources</a>	Community	Various	Med	Med	Med	Easy	Med	Easy
4	<input type="checkbox"/>	<input type="checkbox"/>	<b>Zero Waste Goals for Organics</b>	Adopt a Zero Food Waste hierarchy; adopt a goal to phase out compostable organics from refuse collection and from entering local transfer stations landfills or incinerators. <a href="#">Examples and Resources</a>	Community	Organics	High	Med	High	Diff	Med	Med
5	<input type="checkbox"/>	<input type="checkbox"/>	<b>Landfill Ban – Organics</b>	Adopt an ordinance to limit, then ban organics from refuse collection and from entering local transfer stations, landfills and incinerators; support adoption regionally and statewide after expanding composting and digestion programs as needed. <a href="#">Examples and Resources</a>	Community	Organics	High	High	Med	Diff	High	Diff

# Display Options

## How can I customize the list to my community's priorities?

- Search for a particular Sector or Material
- Hide measures already implemented; Highlight those of interest
- Filter by qualitative rankings (e.g., High, Med, Low)

**Potential to divert material from landfill**

**Potential to reduce upstream climate impacts**

**Implementation factors**

- Level of control required over discard management
- Ease of receptivity/local buy-in
- Amount of staff knowledge needed
- Whether conducive to a community-led initiative

# Community Implementation Examples and Resources

## 10. Lead by Example – Road Construction

Sector: Government

Incorporate reusable and recycled materials into municipal road construction projects; support adoption regionally.

### Examples

- **Chicago, IL**

The City's [Green Alleys program](#) applies permeable pavements to content materials such as concrete aggregate, slag, and recycled (recycled construction materials); use of slag to substitute for a concrete reduces generation of greenhouse gases from Portland

- **Eugene, OR**

The City's Pavement Preservation Program incorporates warm-mix reclaimed binder, and in-place recycling into pavement projects placed approximately 361,000 tons of warm-mix asphalt concrete greenhouse gas reduction of 8,700 metric tons of carbon dioxide (see page 12 of the [2014 Annual Report](#))

- **Sacramento County, CA**

The County's Department of Public Works uses [Rubberized Asphalt](#) overlays and capitol improvement projects, and has placed over recycling more than 1.5 million waste tires

- **Boulder County, CO**

The County's [Roof To Roads Project](#) applies recycled asphalt sh

### Resources

- [Chicago Green Alley Handbook \(PDF\)](#) (25 pp, 3.65MB)
- [Texas Department of Transportation Guidelines](#)

## 53. Food Waste Collection Program with Private Haulers

Sector: ICI

Initiate a sign-up program for businesses and institutions that discard food waste to obtain compost bins and collection service.

### Examples

- **Eugene, OR**

The City developed a program for businesses to sign up for food waste collection service from private haulers at rates 20% below commercial garbage rates; the City also offers free on-site training to business employees

[Commercial Food Waste Collection](#)

- **Cambridge, MA**

The City partnered with a local hauler to establish a route to collect food waste from participating commercial and institutional customers

[Commercial Compost Collection](#)

### Resources

- [Eugene's outreach materials for commercial food waste](#)

# What's Included

## Quick Reference Guide

The 100 measures fall under one or more of the following local government actions:

Quick Reference Guide to content in *Managing and Transforming Waste Streams: A Tool for Communities*

This guide categorizes the policies and programs into types of actions that local governments can take, which may provide helpful context for the tool's content. Under each Action Statement, the relevant policies and programs are listed as numbered in the tool. Note: some are listed under more than one heading.

Topic	Action Statement	Topic	Action Statement
Community-Wide Goals/Plans	<p>Plan and set objectives to support new or expanded policies, programs, and facilities.</p> <ul style="list-style-type: none"> <li>#1 High-Division Goal/Plan</li> <li>#2 Zero Waste Goal/Plan</li> <li>#3 Zero Integration Annex Plans</li> <li>#4 Zero Waste Goal for Organics</li> <li>#5 Zero Waste Collection Infrastructure Planning</li> <li>#6 Market Development Opportunities Assessment</li> </ul>		<ul style="list-style-type: none"> <li>#1 Learning with Reporting</li> <li>#6 Source Separation Incentives</li> <li>#13 Municipal Recycling Collection Services</li> <li>#34 Expanded Municipal Collection - Recycling</li> <li>#75 Expanded Municipal Collection - Yard Debris</li> <li>#77 Expanded Municipal Collection - Food Scrap</li> <li>#78 Expanded Municipal Collection - Multi-Family</li> <li>#80 Curbside Collection Optimization</li> <li>#81 Expanded Authority for Service</li> <li>#82 Incentive Service</li> <li>#83 Every-Other-Week Trash Collection</li> <li>#85 Service Provider Rewards</li> <li>#86 Service Provider Incentives or Requirements</li> <li>#87 Zero Waste Collection Infrastructure Planning</li> </ul>
Local Government Operations	<p>Address the waste streams of public agencies and publicly managed parks &amp; facilities.</p> <ul style="list-style-type: none"> <li>#7 Lead-by-Example Green Procurement (purchasing)</li> <li>#8 Lead-by-Example Green Procurement (purchasing)</li> <li>#9 Lead-by-Example Zero Waste Procurement</li> <li>#10 Lead-by-Example Road Construction</li> <li>#11 Zero Waste Public Venues &amp; Events</li> <li>#14 Product &amp; Packaging Bans</li> <li>#15 Lead-by-Example Recycling and/or Composting</li> <li>#16 Best Practices Training</li> </ul>	<p>Assistance to Businesses &amp; Institutions</p> <p>Conduct outreach and offer assistance to businesses and institutions by reduce, reuse, recycle, and compost.</p> <ul style="list-style-type: none"> <li>#17 Recycled Content Buying Cooperative</li> <li>#22 Zero Waste Public Venues &amp; Events</li> <li>#38 Municipal Technical Assistance</li> <li>#42 Food Donation - Businesses</li> <li>#50 Food Service Policies for Composting</li> <li>#51 Food Waste Outreach &amp; Prevention (landfill)</li> <li>#53 Food Scrap Collection Program with Private Retailers</li> <li>#54 Paper Reduction at Offices</li> <li>#55 Best Practices Training</li> <li>#62 Materials Exchange</li> <li>#63 Registration &amp; Certification Programs (local)</li> <li>#65 Registration &amp; Certification Programs (national)</li> <li>#67 Recycling Market Development Zone</li> <li>#67 Recycle Heat</li> </ul>	
Curbside Collection (residents, businesses and institutions)	<p>Expand and incentivize curbside collection of recyclable and compostable materials (e.g., service provision, incentives, requirements)</p> <ul style="list-style-type: none"> <li>#12 Universal Service Goals</li> <li>#14 Mandatory Subscription - Recycling</li> <li>#15 Mandatory Subscription - Organics</li> <li>#18 Pay-As-You-Throw</li> <li>#19 Mandatory Recycling / Source Separation</li> <li>#20 Mandatory Recycling Percentage</li> <li>#21 Mandatory Composting</li> <li>#20 Single Stream Recycling</li> <li>#24 Recycling Responsibility / Provision</li> </ul>	<p>Community Outreach &amp; Education</p> <p>Promote waste reduction, materials reuse, recycling, and composting to local residents.</p> <ul style="list-style-type: none"> <li>#11 Zero Waste Public Venues &amp; Events</li> <li>#12 Zero Waste Public Venues &amp; Events</li> <li>#39 Reducers / Neighborhood Composting</li> <li>#41 Recycle or Compostable Quizzes</li> <li>#48 Food Donation - Farms and Gardens</li> <li>#62 Food Waste Outreach &amp; Prevention (restaurant)</li> <li>#63 Retail Business Promotions</li> <li>#73 Website Content - Recycling and Reuse Directory</li> <li>#74 Website Content - Green Products &amp; Service Directory</li> </ul>	

**Set Community-Wide Goals / Plans**

**Provide Assistance to Businesses & Institutions**

**Address Local Government Operations**

**Conduct Community Outreach & Education**

**Expand & Incentivize Curbside Collection**

**Establish Dis-Incentives or Restrictions on Disposal**

**Address Construction & Demolition Debris**

**Develop / Expand Infrastructure and Markets for Reuse & Recovery**

**Support Product Stewardship**

# Underlying Themes

- Local governments taking action to address all sectors generating waste in the community
- Beyond Disposal: calling attention to ways for local governments to support source reduction & reuse
- Addressing more types of materials in the waste stream
- Variety of approaches possible
- Setting requirements to reach higher levels of diversion
- Phasing in more expansive measures over time

# Breaking Down Curbside Collection Options

- #12 Universal Service/ Access
- #13 Private Hauler Collection Requirements
- #14 Mandatory Subscription - Recycling
- #15 Mandatory Subscription – Organics
- #16 Pay As You Throw
- #17 Mandatory Recycling / Source Separation
- #18 Mandatory Recycling Percentage
- #19 Mandatory Composting
- #20 Single Stream Recycling
- #26 Recycling Provisions
- #27 Licensing with Reporting
- #30 Source Separation Incentives
- #33 Municipal Recycling Collection Services
- #34 Expanded Municipal Collection – Recyclables
- #35 Expanded Municipal Collection – Yard Debris
- #37 Expanded Municipal Collection – Food Waste
- #38 Expanded Municipal Collection – Multi-Family
- #40 Curbside Collection Optimization
- #41 Expanded Authority for Service
- #42 Right-Size Service
- #43 Every-Other-Week Trash Collection
- #45 Service Provider Rewards
- #46 Service Provider Contract and Franchise Agreement  
Incentives or Requirements
- #47 Zero Waste Collection Infrastructure Planning

Managing Waste Streams  
Home

About the Planning Tool

The Planning Tool

How to Use the Tool

- Terms & Definitions

- Filter Descriptions

- Community  
Implementation Examples  
and Resources

- Contracts and Franchise  
Agreements for Waste  
Haulers

**You are here:** [EPA Home](#) » [Managing and Transforming Waste Streams – A Tool for Communities](#) » [Contracting Best Practices - Resources Used by the Managing Waste Streams Planning Tool](#)

# Contracting Best Practices – Resources Used by the Managing Waste Streams Planning Tool

A wide range of contracting strategies designed to advance towards zero waste are being used by local governments.

See also: [Procurement Process Best Practices](#)

Many contracting best practices align incentives between the local governments, contractors and generators to fund for diversion programs and facilities and encourage waste reduction, recycling, and composting.

## Detailed Contracting Best Practices

- [Incentives and Penalties](#)
- [Separate Compensation from Rates](#)
- [Align Costs to Rates](#)
- [Limit or Eliminate Disposal Payments](#)
- [Reward Workers for More Diversion](#)
- [Require Productive Market Use of Yard Debris and Other Organic Materials](#)
- [Direct Materials to Local Markets](#)
- [Education and Outreach](#)
- [Equal Capacity Commercial Bin Size and Frequency](#)
- [Equal Services for Multi-Family Customers](#)
- [Source Separation Requirement or Preference](#)
- [Purchasing Preferences \(Green Vehicles & Products\)](#)
- [Innovations Clause](#)

# Spreadsheet version

	Diversion Potential	Upstream Impacts	Local Authority	Receptivity	Staff Knowledge	Community Led Initiatives	Policy or Program	Policy or Program Description	Sector(s)	Material or Product Group	Goals/Plans	Requirements	Incentives	Fees	Outreach/Education	Training	Partnerships	Research/Information	Reduction/Prevention	Reuse	Recovery/Collection	Recovery/Drop-Off	Processing	Markets	Purchase/Consumption
48	Med	Med	Low	Easy	Med	Med	<b>Food Donation - Businesses</b>	Encourage pick-up and delivery of pre-consumer, edible food from food service vendors for donation to food banks or soup kitchens, e.g., by bicycle or electric cart.	ICI	Organics					X			X							
49	Low	Med	Low	Easy	Low	Med	<b>Food Donation - Farms and Gardens</b>	Encourage formation of "Gleaner" volunteer groups to harvest surplus crops from local farms or community gardens and distribute to food banks or soup kitchens.	Community	Organics				X				X							
50	Low	Low	Low	Easy	Low	Med	<b>Food Waste Pickup for Composting</b>	Encourage pick-up and delivery of food waste from food service vendors for composting by community gardens or small farms if allowed, e.g., by bicycle or electric cart.	ICI	Organics				X						X		X			
51	Low	Med	Low	Easy	Med	Easy	<b>Food Waste Outreach &amp; Prevention (vendors)</b>	Conduct outreach to grocery stores, restaurants, school cafeterias and other food service vendors on opportunities and practices to prevent food waste.	ICI	Organics				X	X	X		X		X					
52	Low	Med	Low	Easy	Med	Med	<b>Food Waste Outreach &amp; Prevention (consumers)</b>	Conduct outreach on reducing wasted food at home.	Residential	Organics				X				X							
53	Med	Low	Med	Easy	Med	Easy	<b>Food Waste Collection Program with Private Haulers</b>	Initiate a sign-up program for businesses and institutions that discard food waste to obtain compost bins and collection service.	ICI	Organics				X							X				

## Case Studies from 5 communities

- Lafayette, CO (suburban, pop. 28,000)
- Hamilton, MA (rural/suburban, pop. 7,700)
- Castro Valley, CA (suburban, pop. 61,000)
- Boulder, CO (pop. 107,000)
- Portland, OR (pop. 609,400)

# Lafayette, CO

## In 2015, the City expanded residential collection to include food and yard waste

- Historically low solid waste tipping fees in CO
- Leadership from an informed NPO to build resident support and conduct outreach/education
- Mayor interest & support
- Waste audit showing 40% of what's thrown away is compostable
- Builds upon an existing PAYT rate structure
- < 20% of residents had subscribed to the smallest trash bin
- Cost of new green bin service could be offset by downsizing trash bin

Cart Size	Monthly Rate
TRASH (32-gal)	\$8.33
RECYCLING (96-gal)	\$1.00
COMPOST (64-gal)	\$7.87
<b>TOTAL</b>	<b>\$17</b>

**vs.**

Cart Size	Monthly Rate
TRASH (96-gal)	\$25
RECYCLING (64-gal)	\$1.00
COMPOST (32-gal)	\$4.49
<b>TOTAL</b>	<b>\$30.5</b>

## In 2012, the Town began collecting food and yard waste weekly and switched to every-other-week trash collection



*Photo: Hamilton-Wenham Chronicle*

- Initiated in two pilot phases (74 households, then 600 households)
- Partnerships: Town successfully negotiated with a local farm to process the compostables and the local hauler to collect them
  - “Vital to the success of the program”
- Support and outreach from Town volunteers “Hamilton Recycling Committee”
- Program saves the Town money
  - Tipping fee for the organics less than tipping fee for trash
- Half of the residents are participating and receive free compost
- 32% decrease in solid waste

## In 2014, the City adopted a Zero Waste Strategic Plan

- Hired a consultant with zero waste expertise to lead a robust stakeholder and community engagement process
- Web-based video ads
- **Market Commodities Analysis: estimating the value of discarded materials (a lost local economic opportunity)**
- Economic analysis:
  - Many of the strategies could be implemented w/o new expenditure of City resources
  - Overall potential rate impact to customers estimated at \$1.17 per month

Market Categories	Tons per Year	Market Price \$/T (est.)	Total Value of Discards (\$)
1. Reuse	50	550	\$27,500
2. Paper	4,000	20	\$80,000
3. Plant Debris	400	7	\$2,800
4. Putrescibles	6,300	7	\$44,100
5. Wood	200	4	\$800
6. Ceramics	800	4	\$3,200
7. Soils	0	7	\$0
8. Metals	600	40	\$24,000
9. Glass	800	10	\$8,000
10. Polymers	1,900	100	\$190,000
11. Textiles	500	200	\$100,000
12. Chemicals	50	15	\$800
Total	15,600		\$481,200

## Food Donation Initiatives

- **Boulder Food Rescue**, a NPO that salvages leftover food from grocers & markets
  - Stemmed from a university research project (grew from 5 student founders)
  - Direct, just-in-time pickup of perishable food by volunteers on bicycles
- **Portland's "Fork It Over"** – an online website linking businesses with food rescue agencies
  - A regional government funded initiative that utilized community-based social marketing
    - Conducted food industry surveys to identify barriers
    - Helped equip food rescue agencies
    - Asked businesses to make a public commitment to regularly donate
    - Recruited industry spokespersons for testimonials and presentations
    - Placed ads in industry publications and local newspapers

## Helping communities plan for less waste

- [Learn About the Planning Tool](#)
- [Go to the Planning Tool](#)

*Waste is a valuable resource. Communities can recover the lost value of material discards by setting up systems for reuse, recycling, and composting.*



## Charting a Path Towards Zero Waste

# Questions?

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