

EPA's Managing and Transforming Waste Streams

Sharing how local & tribal governments can shift their community's solid waste stream away from disposal and towards waste reduction, materials reuse, and recovery...

The screenshot shows the EPA website interface. At the top, the title is "Managing and Transforming Waste Streams - A Tool for Communities" with "Contact Us" and "Share" links. Below the title, there is a section titled "Helping communities plan for less waste" with two links: "Learn About the Planning Tool" and "Go to the Planning Tool". To the right of this text is a graphic of a green globe with leaves and a circular arrow. Below the globe is a quote: "Waste is a valuable resource. Communities can recover the lost value of material discards by setting up systems for reuse, recycling, and composting." To the right of the quote is a map titled "Featured Cities and Counties" showing various locations in the Pacific Northwest, including Washington, Oregon, Idaho, and Nevada. At the bottom of the screenshot, the text "Charting a Path Towards Zero Waste" is visible.

www.epa.gov/transforming-waste-tool

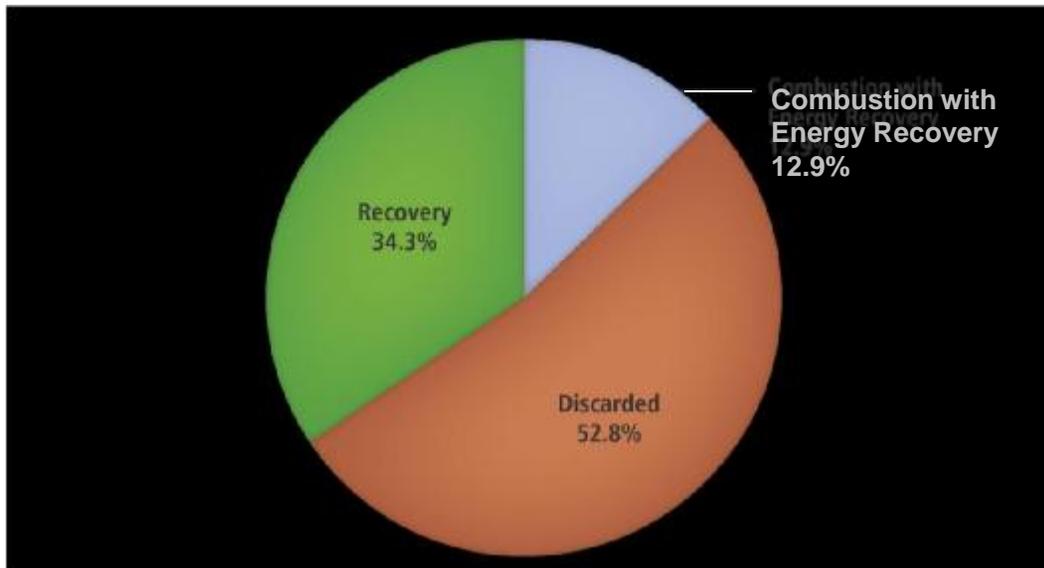
A planning tool for...

- Ø local or regional solid waste plan updates
- Ø zero waste plans
- Ø community-based initiatives

National Stats

**Total MSW Generated:
254 million tons**

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



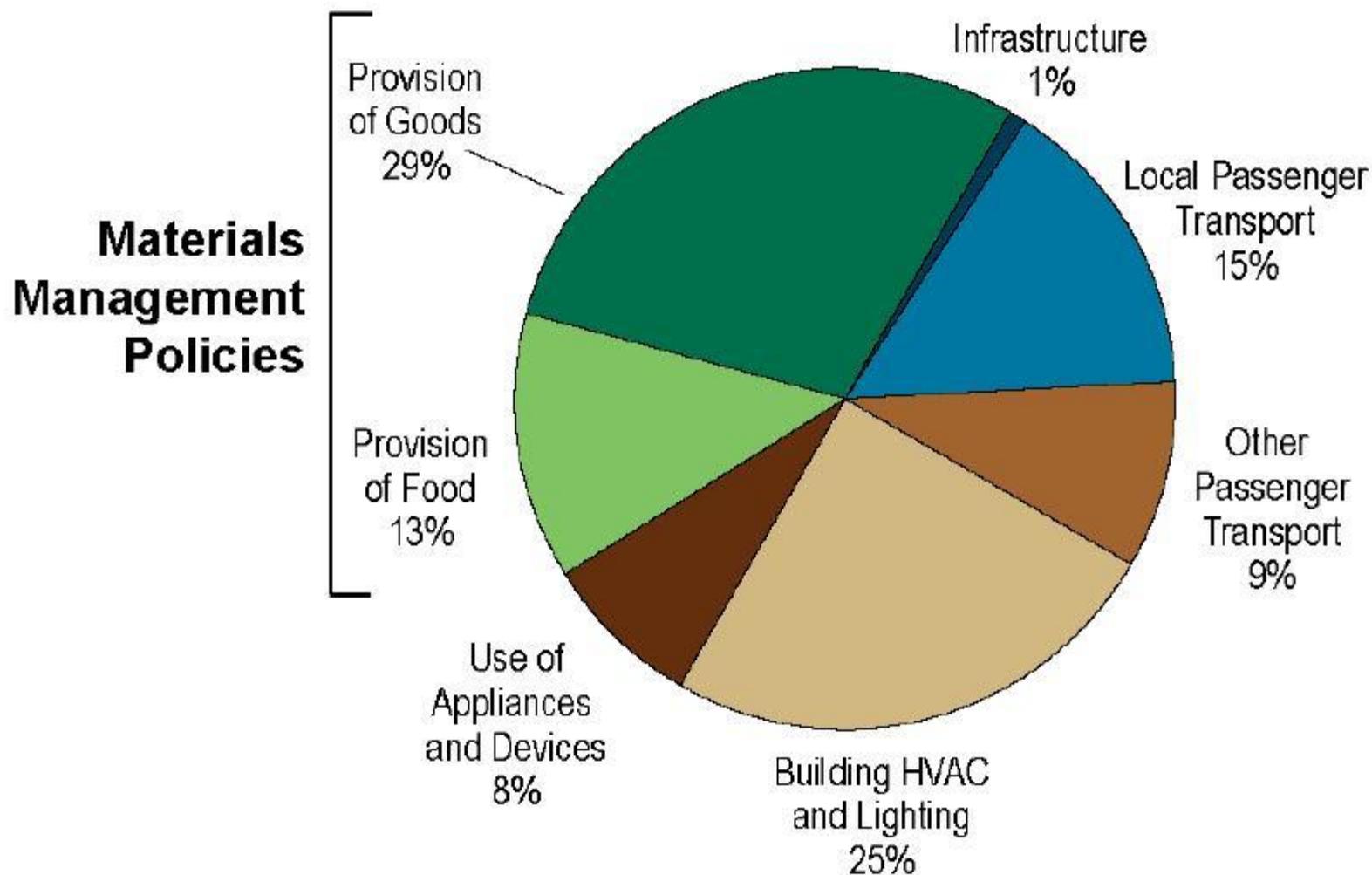
Source: Advancing Sustainable Materials Management: Facts & Figures 2013, US EPA

National Average MSW Recycling Rate: 34%

High diversion rates in some cities show what's possible

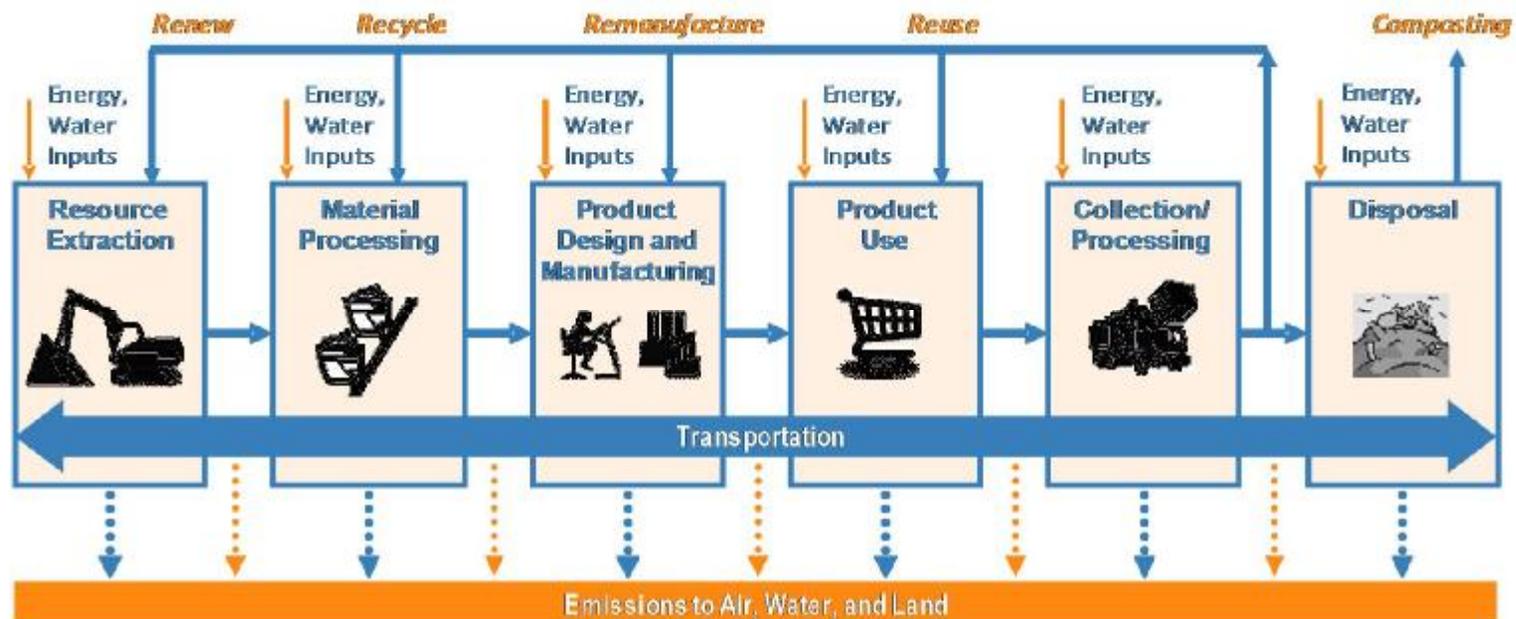
Carbon Footprint

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



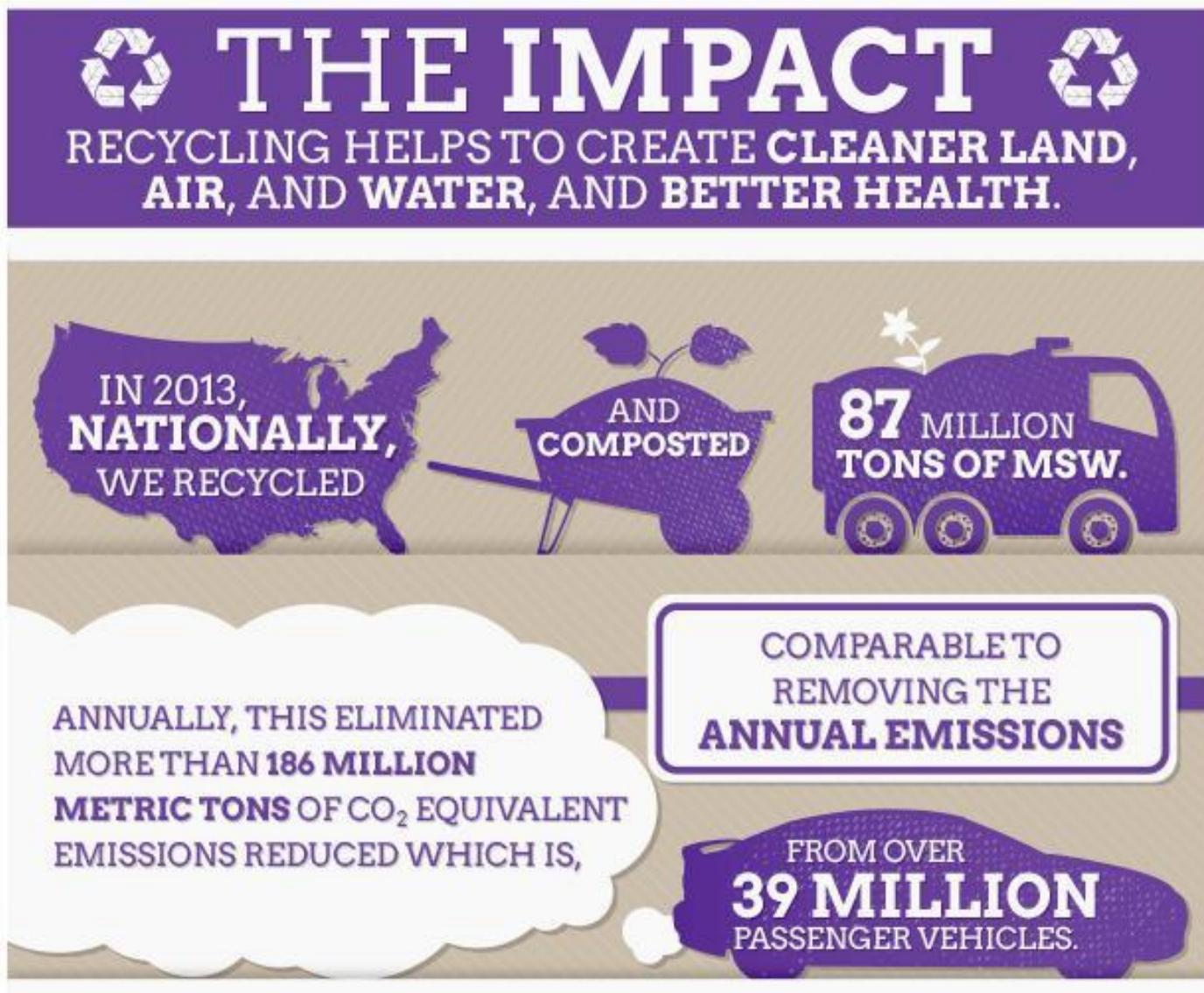
What is Sustainable Materials Management?

Purpose: *To reduce the environmental footprint of materials used to serve society's needs by reducing the overall inputs to, hazardousness of, and releases from the materials system.*



Source: EPA/State Vision 2020 Workgroup

Recycling Stats



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 and Transforming Waste Streams

Explore a table of 100 strategies 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 tailored to your community's needs, interests, and capabilities
- Copy/print list into a planning document

Community (general public)

Government Operations

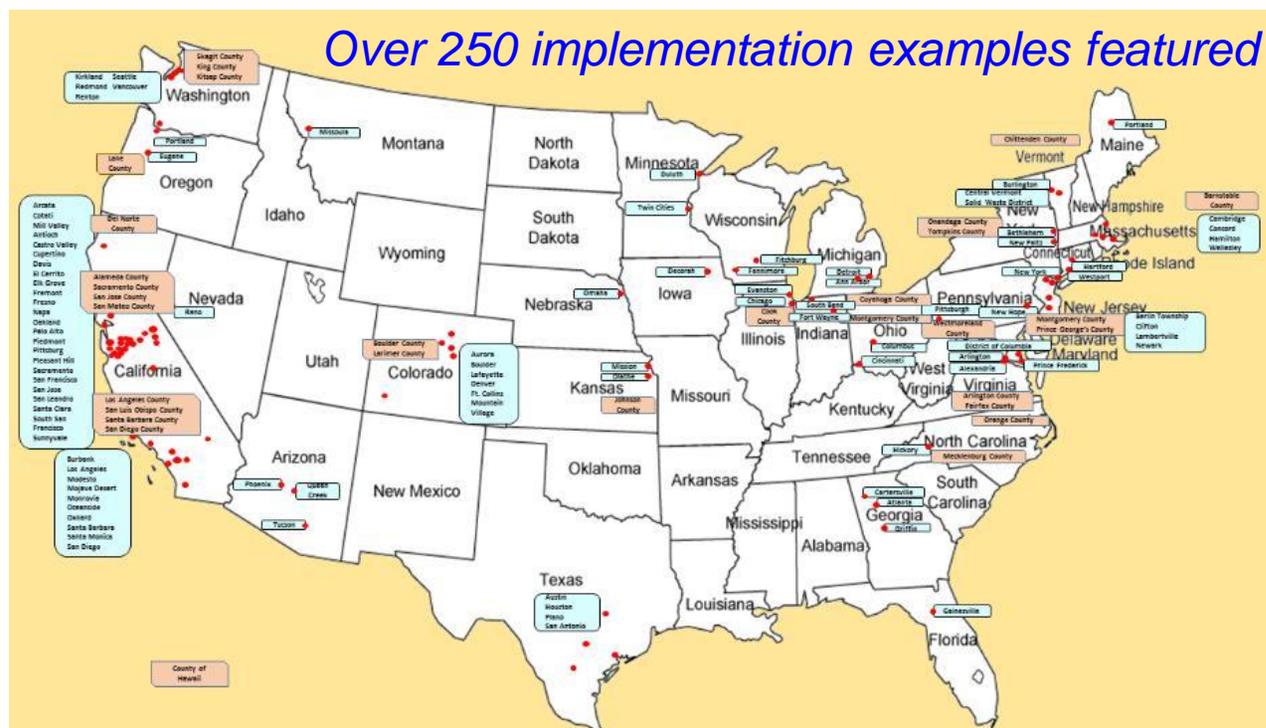
Residential

Institutional / Commercial /
Industrial

Construction & Demolition

EPA's Managing and Transforming Waste Streams

Access examples of successful programs



- Review ordinance language and program websites
- Read case studies for contracts & franchise agreements
- Find online resources for strategies you'd like to explore

Target Audience

- Ø City, County, Tribal, and Regional agencies
- Ø States
- Ø Non-Profit Organizations
- Ø Other 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"/>	High Diversion Goal/Plan	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. Examples and Resources	Community	Various	Med	Med	Med	Med	Med	Easy
2	<input type="checkbox"/>	<input type="checkbox"/>	Zero Waste Goal/Plan	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. Examples and Resources	Community	Various	High	High	Med	Diff	High	Easy
3	<input type="checkbox"/>	<input type="checkbox"/>	Goal Integration Across Plans	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. Examples and Resources	Community	Various	Med	Med	Med	Easy	Med	Easy
4	<input type="checkbox"/>	<input type="checkbox"/>	Zero Waste Goals for Organics	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. Examples and Resources	Community	Organics	High	Med	High	Diff	Med	Med
5	<input type="checkbox"/>	<input type="checkbox"/>	Landfill Ban – Organics	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. Examples and Resources	Community	Organics	High	High	Med	Diff	High	Diff

Display Options

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

- ∅ **Search by 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**

What's Included

Quick Reference Guide

The table is a detailed reference guide for 100 local government actions. It is organized into several columns: 'Action Statement', 'Type', 'Code', and 'Notes'. The 'Action Statement' column contains descriptions of various programs and services, such as 'Public and not obligated to assist law or expedite permits, programs, and facilities', 'Address the needs/demands of public agencies and public managed ports & facilities', and 'Organize and improve curbside collection of household and commercial materials'. The 'Type' column categorizes these actions, and the 'Code' column lists numerical identifiers for each. Some rows are highlighted in green, indicating specific actions of interest.

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

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

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 portland 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 resulting in a 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 a recycling more than 1.5 million waste tires

- **Boulder County, CO**

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

Resources

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

91. Reuse Depot / Goods Banks

Sector: Community

Develop or contract for Goods Banks of reusable items for donation to schools, teachers, artists and/or the public.

Examples

- **New York, NY**

The City's [re-fashionNYC](#) collects used clothing and other textiles from for donation to the homeless; the City's Department of Cultural Affairs reuses reusable materials and makes them available for free to nonprofit and [Materials for the Arts](#)

- **Montgomery County, OH**

The [Montgomery County Materials Reuse Facility](#) collects and warehouses materials from individuals and businesses and redistributes them to local

- **Los Angeles, CA**

[LA Shares](#), which began as a pilot program by the City, accepts donations from the business community for free redistribution to non-profit agencies and

- **Atlanta, GA**

[ToolBank](#) is a non-profit organization that lends tools to local service organizations for community improvement projects with volunteers

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

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	Food Pickup for Donation	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	Food Gleaning for Donation	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	Food Waste Pickup for Composting	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	Food Waste Outreach & Prevention (vendors)	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	Food Waste Outreach & Prevention (consumers)	Conduct outreach on reducing wasted food at home.	Residential	Organics					X				X						
53	Med	Low	Med	Easy	Med	Easy	Food Waste Collection Program with Private Haulers	Initiate a sign-up program for businesses and institutions that discard food waste to obtain compost bins and collection service.	ICI	Organics					X						X				

New EPA Lifecycle GHG Calculator for Communities (coming soon...)



A customizable spreadsheet that generates tonnage & lifecycle GHG reduction projections for a 10-year timeframe using EPA's WARMv14 emissions factors

*Results tailored to an individual community's base year tonnage and estimates for program implementation

Drivers of Change

Case Studies from 4 communities

- Lafayette, CO (suburban, pop. 28,000)
- Hamilton, MA (rural/suburban, pop. 7,700)
- 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
TOTAL	\$17

vs.

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

Hamilton, MA

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

Boulder, CO

Food Donation

- Boulder Food Rescue, a NPO that salvages leftover food from grocers & markets
 - Direct, just-in-time pickup of perishable food by volunteers on bicycles
 - Stemmed from a university research project (grew from 5 student founders)
 - Delivers to food insecure people at low income housing sites, elderly homes, preschools, and daycares
 - Grew into a non-profit organization with hundreds of volunteers



Food Donation

- 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.



Featured Cities and Counties



Charting a Path Towards Zero Waste

www.epa.gov/transforming-waste-tool

Questions?

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