



City of Chicago Solid Waste Strategy: Peer City Profiles

November 2020

Contents

Introduction	3
Construction & Demolition Debris Diversion	4
Deconstruction Incentive Hennepin County, Minnesota	4
Deconstruction Policy Portland, Oregon	5
Deconstruction Pilot for Publicly Owned Vacant Structures St. Louis, Missouri	6
Education, Metrics, Advocacy	8
GreenSpot Columbus, Ohio	8
Minnesota GreenStep Cities State of Minnesota	8
Food Waste and Organics Diversion	10
412 Food Rescue/Food Rescue Hero Pittsburgh, Pennsylvania	10
Commercial Composting Program Evanston, Illinois	11
Food Waste Drop-Off Program Washington, D.C.	12
Land Use and Environmental Justice	14
Landfill Redevelopment Case Studies	14
Unregulated Municipal Landfill Restoration Karwick Nature Park - Michigan City, Indiana	14
Superfund Site Redevelopment Brick Township Landfill - Brick, New Jersey	15
Recycling and Municipal Solid Waste Diversion	17
Cart Downsizing San Antonio, Texas	17
Commercial Waste Zones New York City, New York	18
Container Deposit State of Michigan	19
Volume-Based Pricing Portland, Maine	20
Recycling Incentive Payments San Jose, California	21
Reuse and Repair	23
Building Materials Reuse Warehouse Houston, Texas	23
Materials Marketplace Austin, Texas	23
Urban Ore Materials Reuse Berkeley, California	24
Specialty Material Diversion	26
Appliance and Electronics Fee Stickers Madison, Wisconsin	26
Textile Recycling Lansing, Michigan	27
Appendices Relevant Municipal Law	28
Appendix A: Deconstruction Policy Portland, Oregon	28
Appendix B: Food Waste Drop Off Washington, D.C.	29
Appendix C: Commercial Waste Zones New York City, New York	29

Introduction

This document presents Peer City Profiles, each of which describes various solid waste management programs, practices, and policies utilized in metropolitan areas across the United States, herein referred to as peer cities. These profiles are intended to provide a better understanding of how peer cities have created and implemented innovative solid waste management strategies and help inform decisions about Chicago's materials management system.

The profiles have been grouped into categories to provide an ordered understanding of how peer cities address the unique conditions of different waste management systems. Each profile details the essential characteristics of the approaches utilized by peer cities, including the basic principles on which approaches are implemented; how they are administered and who to contact for more information; financial information; and finally, eligibility requirements. Some profiles include additional information such as success metrics and applicable legal mechanisms for program authorization and enforcement.

While this document does not provide an exhaustive analysis of the universe of successful waste management approaches utilized across the United States, it does indeed highlight some of the most innovative programs, practices, and policies that peer cities have demonstrated with promising and replicable outcomes. These profiles and lessons learned will support development of materials management strategies for the City of Chicago.

Construction & Demolition Debris Diversion

Deconstruction Incentive | Hennepin County, Minnesota

Program Basics:

Homeowners and developers in Hennepin County can receive \$2 per square foot (up to \$5,000) for projects that use deconstruction techniques, in order to offset the costs of additional time and labor associated with deconstruction.

Administration and Contact Information:

The program is administered by the Hennepin County Department of Environment and Energy.

Lead Contact: Olivia Cashman

Email: olivia.cashman@hennepin.us

Eligibility:

- Applicants must be a homeowner or developer in Bloomington, Brooklyn Center, Brooklyn Park, Crystal, Deephaven, Edina, Excelsior, Greenfield, Greenwood, Hopkins, Minneapolis, Minnetonka, Maple Grove, Mound, Orono, St. Louis Park, and Woodland (additional cities will be considered for participation as the program expands).
- Projects must be for residential properties, including houses and apartment buildings up to four units.
- Projects must meet the reuse and disposal criteria.
- The structure being demolished or renovated must have been built prior to 1970.
- The size of structure or area of renovation must be 250 square feet or larger.
- Deconstruction must take place after the agreement to issue grant funds is established. Grant funding cannot be used for deconstruction work that has already been completed.

Reuse + Disposal Requirements:

To qualify for funding, projects must meet the following criteria:

- A pre-demolition inspection must be conducted by Hennepin County staff.
- A minimum of five material types in category A and one material type from category B must be removed for reuse to qualify for funding (see the materials included in each category in the application below).
- At least 550 pounds of material from category B must be deconstructed for reuse.
- All non-reusable building material generated from the project is sent to a Hennepin County approved construction and demolition waste recycling processing facility.

Category A includes brick or stone blocks, cabinets, casing around doors and windows, light fixtures, mantels, molding, plumbing fixtures, solid wood doors, stair treads and railings, stone details, radiators, wood-framed windows, and shutter or siding.

Category B includes wood flooring, dimensional lumber, and ceiling and floor joists.

Cost:

\$100,000 budget for 2020 (max \$5,000 per grant)

References and Additional Resources:

- [Hennepin County Deconstruction Grants](#)
- [Minnesota Public Radio Coverage](#)

Deconstruction Policy | Portland, Oregon

Program Basics:

The [Deconstruction Policy in Portland, Oregon](#) requires that residential structures be removed through deconstruction instead of demolished. Only Certified Deconstruction Contractors can perform work under the deconstruction ordinance. Homeowners are allowed to request exemption if the structure is in poor condition - to the point that building materials would not have resale value - or unsafe condition - to the point that it would endanger deconstruction contractors to enter the building.^{0F}

The City maintains a list of Certified Deconstruction Contractors and issues certifications based on completion of a third-party deconstruction training, skills assessment, written exam, and demonstrated experience.

Consideration of a deconstruction ordinance in Portland began with convening a Deconstruction Advisory Group in early 2015, establishing a voluntary incentive program (\$3,000 per deconstruction project) in late 2015. The ordinance was passed by Portland City Council in 2016.

From 2016 to 2019, Portland's deconstruction ordinance resulted in more than two million pounds of building materials diverted from landfills and salvaged for reuse.

Administration and Contact Information:

The Deconstruction Policy is administered by the Bureau of Planning and Sustainability.

Lead Contact: Shawn Wood

Email: shawn.wood@portlandoregon.gov

Phone: (503) 823-5468

Eligibility Requirements:

All single-dwelling structures (houses and duplexes) in all areas of Portland that were constructed before or in 1940 and structures of any age which have been designated as historic.

In the first iteration of the ordinance, 33 percent of the 240 annual demolition permits fell under the required deconstruction requirements. Expanding the ordinance to include structures built between 1916 and 1940 is estimated to cover 66 percent of annual residential demolition permit requests.

Cost:

The permitting costs required for standard deconstruction or demolition are the same. However, demolition must be performed by a Certified Deconstruction Contractor, and deconstruction typically requires more project days and labor hours to complete.

In reviewing deconstruction pilot programs across the country, Delta Institute has found that typical demolition costs range between \$4.94 and \$11.64 per square foot and deconstruction costs range between \$7.93 and \$15.52 per square foot. Additionally, materials salvaged through deconstruction can offset project costs by reducing disposal fees and capturing value through material resale.

References and Additional Resources:

- [Portland, OR Deconstruction Ordinance](#)
- [Portland, OR Deconstruction Requirements](#)
- [EPA Webinar – Deconstruction Program: City of Portland, Oregon](#)
- [EPA Webinar – C&D Materials Markets: Identifying Opportunities Regionally and Locally](#)
- [City of Portland Deconstruction Press Release, 2019](#)

Deconstruction Pilot for Publicly Owned Vacant Structures | St. Louis, Missouri

Program Basics:

St. Louis, Missouri, like many Midwestern legacy cities, has experienced a sharp decline in population since the mid-20th century, resulting in vacant and abandoned properties across the city. The St. Louis Land Reutilization Authority (LRA), the oldest land bank in the country, owns thousands of vacant properties, and public funds are budgeted to remove vacant structures in unsafe condition.

The 2017-2018 city budget included \$1.5 million dedicated to public demolitions, and the 2018-2019 budget increased that amount to \$3.6 million.¹ Additionally, the Metropolitan St. Louis Sewer District (MSD) committed \$13.5 million over a five-year period for the removal of vacant and blighted structures.

Though not all vacant structures are appropriate candidates for deconstruction, using a condition scoring index (informed by variables including years vacant and cumulative maintenance costs) can help identify structures that can be expected to yield valuable materials.

- Using this index for the current dataset of vacant structures in St. Louis, an estimated 24.8 million bricks and 10.4 million board feet of lumber could be salvaged.

- Combined with additional salvaged materials in the best condition structures, a potential salvage value range of \$18.25 million to \$ 39.38 million is available to enter the local market.

Administration and Contact Information:

The program is administered by the St. Louis Development Corporation.

Lead Contact: Laura Ginn

Email: ginnl@stlouis-mo.gov

Phone: (314) 657-3778

Eligibility:

The program is open to all vacant structures that are publicly owned by the St. Louis Land Reutilization Authority (LRA).

Cost:

St. Louis will be conducting a pilot to demolish 30 structures and deconstruct 30 comparable structures to compare holistic costs including labor, equipment, disposal, and profit from material resale.

Through a combination of funders including US EPA, Missouri Environmental Improvement & Energy Resources Authority (EIERA), Missouri Department of Natural Resources, Metropolitan St. Louis Sewer District, and the St. Louis Regional Business Council, the pilot program (including stakeholder engagement, market research and analysis, structure selection, bid specification development, contractor training, demolition and deconstruction costs for pilot structures, project consulting, and post-pilot analysis) is estimated to cost between \$500,000 and \$600,000, plus local staff time, over several years (according to the St. Louis Development Corporation).

References and Additional Resources:

- [Green City Coalition - Deconstruction & Demolition Best Practices](#)
- [St. Louis Deconstruction Market Assessment](#)

Education, Metrics, Advocacy

GreenSpot | Columbus, Ohio

Program Basics:

GreenSpot is a membership-based program that provides a framework to think about sustainability and a way to log your successes. It provides educational and technical resources to assist households, neighborhoods, businesses, and community groups reach sustainability goals. As of August 2020, program participation reached 20,000 individuals. The program has built and relied upon support from an advisory board that is composed of a broad set of stakeholders including nonprofits and NGOs, academic institutions, local and state government agencies, and private enterprises.

Administration and Contact Information:

The program is administered by the City of Columbus' Office of Sustainability.

Lead Contact: Green Spot Coordinator David R. Celebrezze

Phone: (614) 645-6703

Eligibility:

All residents, businesses and community groups in Franklin County and surrounding counties.

Cost:

The program is free for all participants.

Estimated Impact of GreenSpot:

- \$13 million saved
- Reduced CO2 emissions by 41 million pounds
- Reduced water consumption by more than 145 million gallons
- Recycled 32 million pounds of material

References and Additional Resources:

- [GreenSpot Homepage](#)

Minnesota GreenStep Cities | State of Minnesota

Program Basics:

The Minnesota GreenStep Cities program is a voluntary challenge, assistance, and recognition program to help cities achieve their sustainability and quality-of-life goals. To further the program's goals, a set of best management practices (BMPs) were developed by the Minnesota Pollution Control Agency (MPCA) and Foth Consultants which cities could take to exceed minimum state requirements for solid waste management and recycling. The program features

29 BMPs that describe 175 specific actions that cities can take to support those practices. Nine organizations compose the program's steering committee, representing Minnesota state government agencies, nonprofits organizations, and NGOs. Staff from each of the organizations represented on the steering committee contribute valuable time and expertise to support the goals and activities conducted by the program.

Administration and Contact Information:

The GreenStep Cities program is administered by the MPCS.

Lead Contact: Commissioner Laura Bishop

Email: info.pca@state.mn.us

Phone: (651) 296-6300

Eligibility:

All cities in Minnesota are eligible.

Cost:

It is free for all cities to participate in the program.

Best Management Practice Options:

The program recommends BMPs across a variety of categories including:

- [Solid waste ordinance and licensing](#)
- [Recycling](#)
- [Solid waste collection](#)

References and Additional Resources:

- [Program Webpage](#)
- Legal background on solid waste management
 - [Waste Management Act and related laws](#)
 - [Memo on organized collection \(League of Minnesota Cities\)](#)
- [GreenStep Cities report](#)
- [MPCA Tools for Local Government](#)

Food Waste and Organics Diversion

412 Food Rescue/Food Rescue Hero | Pittsburgh, Pennsylvania

Program Basics:

The program prevents food from entering the waste stream and redirects suitable food items to individuals experiencing food insecurity. Pittsburgh was the pilot city for Food Rescue Hero. The program is now active in Cleveland, San Francisco, northern Virginia, Los Angeles and Vancouver. Driven by the United Nations Sustainable Development Goal to halve food waste by 2030, Food Rescue Hero is committed to serving 100 cities over the next 10 years. To ensure sustainable growth, they select 8-10 new partners each year - allowing Food Rescue Hero to focus fully on each organization they onboard.

Administration and Contact Information:

412 Food Rescue is a nonprofit organization.

Email: info@412foodrescue.org

Phone: (412)407-5287

Eligibility:

- Food Rescue Hero is actively seeking high-impact food rescue or hunger relief nonprofits to partner with to launch and scale food rescue in their communities.

Impact:

- Approximately 4,692,288 meals (5,630,746 pounds of food) were provided through the program between March 2015 and February 2019.
- 87 percent of the rescued food is fresh food.
- 508 food donors have participated.
- 542 nonprofit distribution partners have participated to date.

References and Additional Resources:

- [412 Food Rescue](#)
- [Food Rescue Hero Tech](#)
- [2018 Impact Report](#)

Commercial Composting Program | Evanston, Illinois

Program Basics:

The program provides two composting options to residents and one for commercial properties. Thirty-five percent of waste in Evanston is estimated to be compostable.

City Services (Residential)

- 95-gallon cart used
- Collection service April 1 through December 10
- Fees are assessed annually and appear on residents' water, sewer and sanitation bills

Collective Resource Compost (Residential)

- Food-waste only
- Collective Resource Compost; official composting partner of Evanston beginning in 2017
- Program expires October 2022
- 5-gallon bucket used

Collective Resource Compost (Commercial Composting Program)

- Food-waste only
- 32-gallon bucket used
- Program expires October 2022

Administration and Contact Information:

The program is administered by the City's Public Works Agency.

Lead Contact: Director Dave Stonebeck

Phone: (847) 448-8198

Eligibility:

All properties in Evanston are eligible to participate in the available service options. Collective Resource currently services over 750 residents, businesses, and schools in Evanston (according to Erlene Howard, Collective Resource).

Cost:

Collective Resource Compost services

- Weekly pickup, \$302.50 annually (5-gallon bucket for residents)
 - \$27 monthly
 - \$78 quarterly
- Bi-weekly pickup, \$227 annually (5-gallon bucket for residents)
 - \$20.50 monthly
 - \$58.50 quarterly
- Communal composting is available for up to 24 people sharing a single tote
 - Each swap of the 32-gallon tote is \$24

- Cost will vary for commercial and institutional properties based on the number of carts supplied (32-gallon carts offered to these properties) and the frequency of pickups.
 - [View complete price chart here.](#)

City of Evanston Food and Yard Waste Collection Services

- \$82.50 cart fee (one-time)
- \$25 annual fee
- Collective Resource also offers a “Winter Gap” program for Evanston residents who participate in the yard waste ride along food scrap collection program or compost in their backyards. Service is offered mid-December through end of March.
 - Weekly, 1 Bucket, \$106
 - Weekly, 2 Bucket, \$170
 - Weekly, 1 Tote, \$362
 - Biweekly, 1 Bucket, \$82
 - Biweekly, 2 Bucket, \$114
 - Biweekly, 1 Tote, \$186

References and Additional Resources:

- [City of Evanston Zero Waste Goals](#)
- [Collective Resource Compost FAQ](#)
 - [Winter Gap Service](#)
 - [Neighbor Totes](#)
- [Commercial Composting in Evanston & Skokie](#)

Food Waste Drop-Off Program | **Washington, D.C.**

Program Basics:

The program allows participants to drop off food waste in sealed containers at designated locations to be composted. The food waste is composted at D.C. community composting sites and at the Prince George’s County Organics Compost facility. Commercial food scraps are not accepted. Program officials have made the case for in-district composting, as the current transfer stations are not currently set up to separate three waste streams and would require a significant investment to allow for organics transfer; approximately \$2.3 million plus \$37 per ton of waste transferred.

Administration and Contact Information:

The program is administered by the DC Department of Public Works.

Lead Contact: Director Christopher Geldart

Email: dpw@dc.gov

Phone: (202) 673-6833

Eligibility:

The program is available to all Washington, D.C. residents.

Cost:

The program is free for participants.

Locations:

Currently, there are eight designated locations (farmers markets) to drop off food waste. Not all designated locations are open year round, so participants might need to travel further during certain times of the year. Only three locations are open year round as of October 2020.

Composting Partners:

Two composting partners support this program including:

[Community Compost Cooperative Network \(CCCN\)](#)

- CCCN is administered by D.C. Parks and Recreation (DPR). CCCN trains community members to compost food waste and garden waste from DPR sites.
- Currently, CCCN operates 50 compost sites with the capacity for 5,000 people to actively compost each month (50 tons per month equivalent).

[Prince George's County Organics Compost facility](#)

- Prince George's County piloted food scrap composting during 2013 utilizing the Gore Cover technology which is an in-vessel aerated pile system with oxygen and temperature monitoring devices.
- This system allows for the processing of a greater volume of yard trim and the inclusion of food scraps on a smaller footprint of area with little energy consumption and creates finished compost within 30 days.
- Food scraps are accepted from pre and post-consumer entities, including residential, commercial and institutional sectors.

Land Use and Environmental Justice

Landfill Redevelopment | Case Studies

When landfills reach capacity, or closure is otherwise required, that land (if properly managed) can be redeveloped or restored for other uses.

Closed landfill sites in Chicago:

- Paxton Landfill, 116th Street & Paxton Avenue, 10th Ward
- 122nd Street Landfill - Land and Lakes, 122nd Street and Stony Island Avenue, 10th Ward
- CID Landfill, 134th Street and S Calumet River Street, 10th Ward
- 138th Street - Land and Lakes, 138th Street and Cottage Grove Avenue, 9th Ward

Unregulated Municipal Landfill Restoration | Karwick Nature Park - Michigan City, Indiana

Project Basics:

The project involved transforming 23.5 acres, which were formerly an unregulated landfill, into a public access recreation area bordered by an undisturbed wildlife habitat and natural forest along the banks of Trail Creek. A leachate collection system spanning over 1,000 feet has been installed to capture and treat groundwater leaching from the landfill into Trail Creek. The sanitary district reports that nearly 25 gallons per minute of leachate is being collected and treated. More information on the streambank restoration component of the project (2007) is [available here](#).

Additional efforts adjacent to the nature park have restored natural wetlands and have added stormwater treatment enhancements throughout the forested and wetland areas. Together, these efforts provide significant value to the municipality in the form of recreational amenities and improved environmental function.

Administration and Contact Information:

The project was administered by the City of Michigan City and the Michigan City Sanitary District with maintenance assistance provided by the Michigan City Parks Department.

Lead Contact: Michael Kuss, General Manager

Email: mkuss@mcsan.org

Funding Source:

Lake Michigan Coastal Program

References and Additional Resources:

- [Karwick Nature Park webpage](#)
- [Contractor project webpage](#)

Project Basics: When Brick Township, New Jersey, became responsible for bankrolling an expensive landfill closure, the town's leaders started thinking creatively about how the site could help generate revenue to defray the cost to taxpayers. Ultimately, they decided on a solar power facility large enough to supply all of the electricity used by township government buildings and community parks. By assembling a public-private partnership, the Township was able to leverage the resources needed to create the 7-megawatt solar facility. This case study describes the journey of the Brick Township Landfill Superfund site from contamination, through cleanup, to redevelopment. This story demonstrates how property owners can work with the U.S. Environmental Protection Agency and private parties to return once-contaminated sites to productive use. The story also illustrates the benefits of planning for reuse before designing a site's cleanup. The case study provides useful information and lessons learned to companies, local governments, communities, utilities and regulators interested in exploring utility-scale solar projects at landfills or other cleaned-up sites across the United States.

Administering and Contact Information:

The project was administered by the U.S. Environmental Protection Agency.

Lead Contact: Keith Rella, Sustainable Brick Committee member

Phone: 732-262-1050

EPA Required Remedy:

- Install an impermeable landfill cap.
- Implement a groundwater monitoring program.
- Implement institutional controls to restrict the use of groundwater.
- Restrict uses on the landfill.

Financing the Solar Project:

- The solar developer is paying for the solar facility.
- The Township issued municipal bonds to raise the funds for the project. The solar developer is responsible for paying off these bonds.
- The 30 percent federal solar investment tax credit also played a major role in the project's feasibility, which equated to \$9 million for the project.
- The Township and the solar developer entered into a redevelopment agreement in 2011. The solar developer will operate the solar facility for 15 years, selling all the electricity produced to Brick Township at a set rate (currently 8.5 cents per kWh). In 2012, the solar developer made a \$2.5 million lease payment in advance to the Township for the 15-year lease of the site.
- The solar project provides all the electricity needed by the Township government (3.5 MW), as well as about a third of the electricity used by the Municipal Utilities Authority, the area's water and sewer provider.

- When the 15-year lease ends, the Township will assume ownership of the solar field. The solar field will provide free electricity to the Township, providing a cost savings of \$500,000 to \$600,000 per year.

References and Additional Resources:

- [EPA Case Study](#)

Recycling and Municipal Solid Waste Diversion

Cart Downsizing | San Antonio, Texas

Program Basics:

The program uses a variable-rate pricing/Pay-As-You-Throw (PAYT) approach, allowing residents to choose what size brown garbage cart they want based on the amount of garbage they throw away. Much like a utility bill, residents pay for what they use. Three brown carts are available to choose from. Residents reduce the amount of waste discarded as new programs, such as the curbside organics program, allow them to reallocate their waste.



Residents reduce the amount of waste discarded as new programs, such as the curbside organics program, allow them to reallocate their waste.

Administration and Contact Information:

The program is administered by the City's Solid Waste Department (SWMD).

Lead Contact: Director David Newman

Phone: (210) 207-6428

SWMD serves approximately 359,000 households, employs 730 individuals, and has a budget of over \$125.5 million for the 2019 Fiscal Year. SWMD operates four district centers located around the city, various closed landfills, and administrative offices.

In addition to providing customers with reliable solid waste collection, SWMD operates drop-off and processing sites for brush, bulky items, and household hazardous waste. SWMD also manages and maintains the city's closed landfills in compliance with the Texas Commission on Environmental Quality.

Eligibility:

All SWMD customers are eligible to participate in the program.

Cost:

PAYT	SMALL	MEDIUM	LARGE
Solid Waste Fee	\$14.76	\$18.76	\$26.76
Environmental Fee - Solid Waste	\$1.74	\$1.74	\$1.74
Environmental Fee - Parks	\$1.50	\$1.50	\$1.50
Total City Services (Taxable)	\$18.00	\$22.00	\$30.00

Other fees:

Blue Cart Contamination Fee	\$25.00
Extra Garbage Collection Fee	\$10.00

Residents can always downsize their cart at no cost. Residents can also request one cart upsize at no cost. Additional cart upsizes are \$25 per occurrence. Residents can also request additional collection pickup for \$10 by calling 311.

References and Additional Resources:

- [City of San Antonio Garbage Collection Overview](#)
- [Rates & Fees](#)
- [San Antonio Recycling and Resource Recovery Plan \(2013 Update\)](#)

Commercial Waste Zones | **New York City, New York**

Program Basics:

Ordinance change preceded by a [Private Carter Study](#) in 2016, which was first proposed in [“One New York: The Plan for a Strong and Just City.”](#)

The CWZ program will divide the city into 20 zones, each served by up to three carters selected through a competitive process. Five citywide contracts will also be awarded for the collection of containerized waste and compactors. This approach will reduce truck traffic associated with commercial waste collection by 50percent, eliminating millions of heavy-duty truck miles from NYC streets every year, while strengthening service standards and allowing for customer choice. In addition, commercial waste zones will create a new regulatory framework that allows the City to achieve several additional program goals:

- Zero Waste: Reduce commercial waste disposal and incentivize recycling
- Environmental Health: Reduce truck traffic throughout the city to reduce air pollution and improve quality of life
- Pricing: Provide fair, transparent pricing with low prices for businesses
- Customer Service: Strengthen customer service standards and establish accountability
- Health and Safety: Improve training and safety standards to make the industry safer for workers and the public
- Labor and Worker Rights: Improve industry labor standards and uphold worker rights
- Infrastructure and Waste Management: Prioritize investments in clean, modern fleets and facilities that make up a reliable, resilient, and sustainable waste management system
- Robust, Competitive Industry: Create a system that works for carters of all sizes and prevents overreliance on any single company

Moving toward implementation of the law, DSNY will conduct multiple rulemaking processes leading up to the release of an RFP in 2020. A multiyear customer transition process will begin in 2021.

Administration and Contact Information:

The program is administered by the NYC Department of Sanitation.

Lead Contact: Commissioner Kathryn Garcia

Eligibility:

All New York office buildings, retailers, restaurants, manufacturers, and other commercial establishments are subject to the program. The New York Sanitation Department (DSNY) collects residential waste.

Implementation Plan:

The City's plan to implement the CWZ program covered a five-year period (2018 - 2022), during which a variety of activities would be conducted to support a successful rollout of the program. The plan included:

- A period of environmental review from fall 2018 to summer 2019;
- A period of competitive solicitation from 2020 to 2021, during which interested carters could respond to the issued RFP; and,
- A customer transition from 2021 to 2023 with multiple phases within that final period.
- Stakeholder engagement has and will occur during every phase of the implementation plan.

References and Additional Resources:

- [New York City Department of Sanitation – Commercial Waste Zones](#)
- [Private Carter Study](#)

Container Deposit | State of Michigan

Program Basics:

The Michigan Beverage Container Deposit Law requires that every beverage container sold or offered for sale by a dealer within this state shall clearly indicate by embossing or by a stamp, a label, or other method securely affixed to the beverage container, the refund value of the container and the name of this state.

A dealer who regularly sells beverages for consumption off the dealer's premises shall provide on the premises, or within 100 yards of the premises on which the dealer sells or offers for sale a beverage in a returnable container, a convenient means whereby the containers of any kind, size, and brand sold or offered for sale by the dealer may be returned by, and the deposit refunded in cash to, a person whether or not the person is the original customer of that dealer, and whether or not the container was sold by that dealer. Regional centers for reclamation may also be established in addition to the standard retail locations. Retailers may, but are not required to, refund more than \$25 per day per person.

Michigan is one of 10 states with a beverage container deposit law. You can find information about other states' bottle bills at: Container-recycling.org.

Administration and Contact Information:

The program is administered by the Michigan Department of Treasury.

Lead Contact: Howard Heideman / Al Martin

Email: heidemanh@michigan.gov

Phone: (517) 335-7437

Eligibility:

The law applies to all:

- Soft drinks, soda water, carbonated natural or mineral water, or other nonalcoholic carbonated drinks; beer, ale, or other malt drinks of whatever alcoholic content; or a mixed wine drink or a mixed spirit drink. Kombucha was added in 2019.
- Any airtight metal, glass, paper, or plastic container, or a combination, under 1 gallon

Deposit Amount:

- \$0.10 per container
- \$338.1 million in refunds were issued in 2019, representing an 88.7 percent refund rate.

Unredeemed Deposits:

Twenty-five percent of unredeemed deposits in Michigan go to retailers, the other 75 percent is retained by the state in a Cleanup and Redevelopment Trust Fund (Trust Fund), and distributed as follows:

- 80 percent to the Cleanup and Redevelopment Fund, used to clean up specific sites of contamination in Michigan.
- 10 percent to the Community Pollution Prevention Fund, for educational programs on pollution prevention methods, technologies, and processes, with an emphasis on the direct reduction of toxic material releases or disposal, at the source.
- 10 percent remains in the Trust Fund. The Trust Fund continues to collect the 10 percent per year until a maximum of \$200 million is met.

References and Additional Resources:

- [Michigan Beverage Container Deposit Law](#)
- [Michigan Bottle Deposit Law FAQ](#)
- [Bottle Bill Resource Guide](#)

Volume-Based Pricing | Portland, Maine

Program Basics:

The program relies on the pay-as-you-throw (PAYT) collection model. Waste generators are required to purchase color coded or imprinted plastic bags or stickers for their waste at retail outlets. The predetermined price of each bag or sticker includes some or all of the cost of waste services. Collection crews only collect municipal solid waste (MSW) with purchased stickers or placed in official blue bags. From FY2012 and FY2014 the program processed an average of 7,900 tons of MSW each fiscal year.

Administration and Contact Information:

The program is administered by the City's Department of Public Works.

Lead Contact: Director Christopher Branch

Phone: (207) 874-8801

Eligibility:

All residential single family and a large number of multi-family buildings and municipal buildings are eligible to participate. An estimated 14,200 single family customers and 1,700 multi-family and municipal buildings are served under the program.

Cost and Revenue:

The program generated an average of \$1,576,827 in revenue from FY2012 to FY2014. Expenditures during that same period are shown in the table below.

Expense	3-year Average Amount (USD)
Personnel	\$1,048,835
Vehicle Fuel, Maintenance, and Repair	\$254,161
Disposal (Tip) Fees	\$772,481
Ecomaine Assessment	\$695,680
Riverside Facility Operations	\$1,169,349
Other	\$212,006
Total	\$4,152,511

References and Additional Resources:

- [Evaluation of Recycling and Solid Waste Collection Services](#)

Recycling Incentive Payments | San Jose, California**Program Basics:**

The program has restructured RFPs and resulting contract agreements with recycling contractors so that contractors are paid (per household serviced) an incentive for diversion rates above 40 percent. These incentive payments are made according to a tiered system, where the greater the diversion rate the greater the payment. These payments offset the costs to contractors incurred by marketing "hard-to-market" materials like textiles.

Contractors keep 100 percent of revenue derived from the sale of recyclables. Contract requirements also ensure contractors receive more compensation for recycling materials than sending them to landfills. Lastly, contractors with commercial recycling contracts are charged a flat franchise fee, mitigating the city's financial risk as diversion rates fluctuate.

Administration and Contact Information:

The program is administered by the City's Environmental Services Department.

Lead Contact: Director Kerrie Romanow

Phone: 408-277-3671

Eligibility:

All residents and commercial entities in San Jose are eligible to participate.

Cost:

The city is required to pay recycling contractors between \$5.40 to \$9.20 per household based on a tiered payment system for diversion rates above 40 percent. Contractors achieving a diversion rate of at least 46 percent will receive the highest rate of \$9.20 per household.

Annual Tonnage based on FY17/18 data:

- 369 tons per day on average collected from 214,000 single-family dwellings
- 83 tons per day on average collected from 3,373 multi-family dwellings
- The two materials recovery facilities that process recyclables can operate at peak tonnage of 2,530 each day.

Location:

- Recycling services for single-family dwellings are separated into three districts serviced by two contractors.
- Multi-family dwellings citywide are serviced by one contractor.

References and Additional Resources:

- [U.S. EPA Zero Waste Case Study](#)
- San Jose [Recycle Plus Material Flow and Facility Diagram](#)
- [Status Update to San Jose's Zero Waste Strategic Plan 2022](#)

Reuse and Repair

Building Materials Reuse Warehouse | Houston, Texas

Program Basics:

The warehouse provides infrastructure to store materials until they can be reused by the community. [A list of accepted items is linked here.](#) The Solid Waste Management Department provides guidance for unaccepted materials.

Administration and Contact Information:

The program is administered by the City's Solid Waste Management Department.

Lead Contact: Director Harry J. Hayes

Email: swdworks@houstontx.gov

Eligibility:

Individuals, supply companies, and builders in Houston are eligible to donate materials. Non-profit organizations in Houston are eligible to receive materials to reuse for free.

Cost and Funding:

Not-for-profit organizations can collect materials for reuse at no cost. The program is funded by a grant from Houston Galveston Area Council, a region-wide voluntary association of local governments in the 13-county Gulf Coast Planning region of Texas. Excerpt from *Guide to Developing Building Material Reuse Centers* - "The majority of the case studies presented in this report received some form of grant funding for one to two years for start up and then became self sustaining. Some of the non-profit operated centers conducted fundraising to help support the centers. The municipally operated centers are supported by city budgets after grant funding expires."

References and Additional Resources:

- [Guide to Developing Building Material Reuse Centers](#)

Materials Marketplace | Austin, Texas

Program Basics:

The Austin Materials Marketplace is an online platform allowing businesses and organizations to connect and find reuse and recycling solutions for waste and by-product materials.

Since 2014, the Austin Materials Marketplace has facilitated over 700 unique transactions characterized by:

- Value of over \$645,000
- Weight of over 945,000 pounds

- Volume of over 55,000 cubic feet
- Over 950 MTCO₂E avoided

Since 2014, the top categories of material types transacted through the marketplace by weight have been (in descending order):

- Inedible organics
- Business furniture, fixtures, and equipment
- Metals and metal sludge
- Paints and coatings
- C&D - concrete and aggregates
- Wood pallets
- Non functional electronics
- Functional electronics
- C&D - wood

Administration and Contact Information:

The program is administered by the U.S. Business Council for Sustainable Development.

Lead Contact: Daniel Kietzer

Email: kietzer@usbcsd.org

Phone: (512) 981-5417

Eligibility:

Participation is open to any company or organization that wants to explore new opportunities to transform waste materials into new products, or secure recycled material streams to reduce use of virgin feedstocks.

Cost:

Costs to use the online platform (a.k.a. software-as-a-service costs [SaaS]) were variable based on the number of users on the platform. For example, the State of Michigan has 300 users costing \$5 per user per month which equates to a total of \$1,500 per month.

Additional costs include labor hours for the U.S. BCSD advisory support services for initial recruitment and platform creation. The program in Austin included six-year support contract with U.S. BCSD, intended to become self-sustaining at that point.

References and Additional Resources:

- [Austin Materials Marketplace website](#)
- [US Business Council for Sustainable Development](#)

Urban Ore Materials Reuse | Berkeley, California

Program Basics:

The City of Berkeley has granted exclusive salvage rights to materials from the City's transfer station tip floor to Urban Ore. Urban Ore has allocated space on the Transfer Station property for a staff shed and the salvage vehicle which transports the salvaged materials to their retail Eco Park in South Berkeley. Through the exclusive contract, approximately 800 tons of materials are salvaged and reused each year on average.

Administration and Contact Information:

The contract is administered by the City's Department of Public Works.

Lead Contact: Director Liam Garland

Email: pwrecycle@CityofBerkeley.info

Phone: (510) 981-7270

Urban Ore's Economic Impact:

- 40 living wage staff jobs with income-sharing performance incentives, profit sharing, and benefits
- In 2014, Urban Ore supplied nearly \$2.6 million dollars' worth of construction materials and other goods to local artisans, contractors, property managers and residents

References and Additional Resources:

- [City Council Report \(June 2020\)](#)
- [Video Highlight](#)

Specialty Material Diversion

Appliance and Electronics Fee Stickers | Madison, Wisconsin

Program Basics:

The City of Madison charges a fee to recycle many appliances. This fee applies to appliances left at the curb for collection or brought to the two City drop-off sites. The City of Madison Streets Division contracts with Universal Recycling Technologies to recycle electronics and appliances locally in Wisconsin.

Administration and Contact Information:

The program is administered by the City's Streets and Sanitation department.

Email: streets@cityofmadison.com

Phone: 608-246-4532

Eligibility:

The program is available to all residents of Madison. [The sticker order site is linked here.](#)

Cost:

A \$35 fee will be charged for the following items.

- Air Compressors
- Boats
- Ovens
- Air Conditioners
- Ranges
- Copiers
- Refrigerators
- Dehumidifiers
- Stoves
- Large Commercial Appliances
- Wood Stoves
- Dishwashers
- Trash Compactors
- Dryers
- Washers
- Freezers
- Water Heaters
- Furnaces
- Water Softeners
- Large Medical Devices
- Ice Machines
- Water Coolers
- Hot Tubs
- Tanning Beds

A \$15 fee will be charged for the following items.

- Fluorescent light fixtures
- Microwave ovens
- Small "dorm" refrigerators weighing less than 50 pounds
- Gas Grills
- Lawn Mowers
- Snow Throwers
- Garden Tiller

Computers (\$10) and televisions (\$15) are available for drop off, but are not included in the curbside program

References and Additional Resources:

- [Madison Streets & Recycling](#)
- [Madison Television, Computer, and Electronics Recycling Program](#)

Textile Recycling | Lansing, Michigan

Program Basics:

The program uses uniquely colored Simple Recycling bags (orange for Lansing, MI) which are requested by residents. Simple Recycling handles all aspects of the program launch and education, collection, processing and management of the program. The program reduces textile contamination and downtime at single stream recycling facilities. Simple Recycling trucks follow the City's existing trash or recycling collection schedule, meaning no extra collection day for residents. All of the materials are graded and sorted locally and/or regionally based on quality and condition. The top quality materials will be resold to local thrift outlets, mid grade is exported to international markets and "unusable" items are processed for raw materials.



Administration and Contact Information:

The program is administered by Capital Area Recycling and Trash (CART).

Email: recycle@lansingmi.gov

Phone: (517) 483-4400

Eligibility: The program is available to all Lansing residents.

Cost:

The program is free for participants. All Simple Recycling programs are offered free of cost to cities, residents and participants. Additionally, the municipality will be compensated on a "per pound" basis for the material collected by Simple Recycling.

In East Lansing, the City receives \$0.01 for each pound of material collected by Simple Recycling. The average collection volume is 4,000 to 5,000 pounds per month, bringing in \$40 to \$50 per month to the City to be used for recycling education materials.

References and Additional Resources:

- [Simple Recycling website](#)
 - [Impact information from Simple Recycling](#)
 - [Information on other participating cities](#)
- [City of Lansing CART website](#)

Appendices | Relevant Municipal Law

Appendix A: Deconstruction Policy | Portland, Oregon

[Ordinance No. 187876](#)

Adopt requirements for deconstruction of the city' s oldest and most historic houses and duplexes (Ordinance; add Code Chapter 17.106). The City of Portland Ordains:

Section 1. The Council finds:

1. On February 12, 2015, City Council directed the Bureau of Planning and Sustainability to develop strategies for increasing deconstruction activity.
2. On April 15, 2015, the Bureau of Planning and Sustainability convened a Deconstruction Advisory Group comprised of deconstruction experts, builders, developers, neighborhood groups and historic preservationists; this group met 16 times to provide advice on strategies and incentives for advancing deconstruction activities.
3. On June 3, 2015, City Council adopted Resolution 37127, which directed the Bureau of Planning and Sustainability to establish a deconstruction grant program with funding from the Solid Waste Management Fund Reserves and to report back in January 2016 with recommendations for next steps.
4. On September 8, 2015, the Bureau of Planning and Sustainability launched the deconstruction grant program and has funded 11 projects to date, resulting in innovative approaches, new participants, and increased awareness of the benefits of deconstruction.
5. On February 17, 2016, City Council adopted Resolution 37190 which directed the Bureau of Planning and Sustainability to develop code language for Council consideration to require deconstruction for the city's oldest and most historic houses and duplexes.
6. Bureau of Planning and Sustainability applied (Ordinance 187474) and received notice of award from the Oregon Department of Environmental Quality (DEQ) for \$50,000 in funding to supplement the existing deconstruction grant program.
7. A review draft of the deconstruction code language was available for a four-week public comment period.
8. With the assistance of a local workforce development consultant, the Bureau of Planning and Sustainability convened a group of stakeholders to develop a training and certification plan for deconstruction workforce and contractor.

NOW, THEREFORE, the Council directs:

- a. City Code Title 17 is amended to add a new Chapter 17 .106, Deconstruction of Buildings Law attached as Exhibit A.
- b. The City Code amendment adding Chapter 17 .106 shall be effective on and after October 31, 2016 to allow adequate time for the development of administrative rules, procedures,

database programming, and training/certification of deconstruction workforce and contractors.

- c. The Bureau of Planning and Sustainability shall report back to City Council within the first six and twelve months of the deconstruction program's effective date, addressing program status and making recommendations on whether or not to modify, maintain, or expand the program with a goal of including houses and duplexes built before 1941 by the year 2019.
- d. Develop administrative rules, procedures and forms associated with adopted code language.

Appendix B: Food Waste Drop Off | Washington, D.C.

[Municipal Law: § 8-761. Compost drop-off program.](#)

- (a) The Department of Public Works ("Department") shall establish a program that allows residents to drop off food waste weekly for compost.
- (b) The Department shall establish one drop-off site in each ward to operate year-round.
- (c) The Department shall provide the public with instructional materials that describe:
 - (1) How to collect food waste for compost; and
 - (2) What food waste is appropriate for compost.
- (d) If the Department requires residents to purchase any materials or equipment to participate in the program, the Department shall sell the materials or equipment at cost; provided, that the Department shall provide any required materials or equipment for free to any resident who participates in a federal assistance program.

Appendix C: Commercial Waste Zones | New York City, New York

Local Law 199 of 2019 requires the establishment of Commercial Waste Zones throughout NYC

A LOCAL LAW

To amend the New York city charter and the administrative code of the city of New York, in relation to the establishment of commercial waste zones, and to repeal sections 16-523 and 16-524 of such code, relating to a pilot of special trade waste removal districts

Section 753 of the New York city charter is amended by adding a new subdivision e to read as follows:

e. Except as otherwise authorized by section 16-1020 of the administrative code, the commissioner shall have the powers and duties set forth in this subdivision.

1. The commissioner, in the performance of his or her powers and duties pursuant to paragraph 2 of this subdivision and title 16-B of the administrative code, shall be authorized to receive complaints, conduct investigations, hold public and private hearings, administer

oaths, take testimony, serve subpoenas, receive evidence, issue orders, and mediate disputes.

2. The commissioner shall have the power and duty to regulate the conduct of businesses authorized to collect commercial waste in commercial waste zones pursuant to title 16-B of the administrative code and any other applicable law, including but not limited to, the power and duty to establish and enforce:

- (a) environmental, safety and health standards;*
- (b) standards for service;*
- (c) requirements regarding contracts for commercial waste removal;*
- (d) requirements regarding billing forms and procedures;*
- (e) requirements regarding the maintenance and inspection of records;*
- (f) requirements regarding the maintenance of appropriate insurance; and*
- (g) requirements established in furtherance of the goals of reducing waste and promoting sustainability, safety and efficiency in the commercial waste zone system.*

3. The commissioner shall have the power and duty to establish programs for the education of the public and commercial establishments regarding the commercial waste zone system established pursuant to title 16-B of the administrative code.

Subdivision a of section 16-116 of the administrative code of the city of New York, as amended by local law number 42 for the year 1996, is amended to read as follows:

No later than the applicable final implementation date set forth in the rules of the department pursuant to subdivision e of section 16-1002, each owner, lessee or person in control of a commercial establishment [that is located in a special trade waste removal district designated by the New York city trade waste commission pursuant to section 16-523 of this code, except for an owner, lessee or person in control of a commercial establishment who has registered with the New York city trade waste commission as required by subdivision b of section 16-505 of this code and except as otherwise provided by subdivision g of section 16-523 of this code,] shall [provide] contract with an awardee selected by the department for the zone in which such establishment is located for the removal of commercial waste only by a [licensee with whom such commission has entered into an agreement pursuant to subdivision b of such section] designated carter pursuant to the agreement entered into between such awardee and the department pursuant to title 16-B, as such terms are defined in section 16-1000, in accordance with the provisions of such title and any rules promulgated pursuant thereto, except as otherwise provided by such title, provided however, that an owner, lessee or person in control of a commercial establishment may contract for the removal of containerized commercial waste, as such term is defined in section 16-1000, with either an awardee selected for such zone or with an awardee selected for the removal of containerized commercial waste citywide pursuant to title 16-B, in accordance with the provisions of such title and any rules promulgated pursuant thereto.