



# Zero Waste Plan



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**BURNS**  **MCDONNELL**

# 1.0 EXECUTIVE SUMMARY

## 1.1 Overview

The City of Minneapolis (City) strongly supports public policies and programs that foster social, economic, and environmental benefits for all of its residents. As depicted below, the intersection of these objectives can be characterized as representing the principle of sustainability.

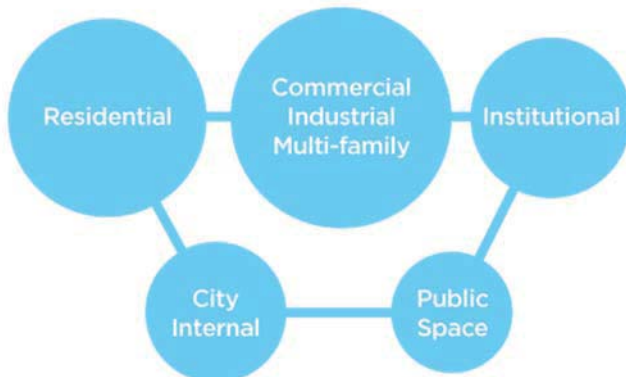
In June 2015, the City of Minneapolis (City) established a [zero waste goal](#) to recycle and compost 50 percent of its overall waste stream by 2020 and 80 percent by 2030. The adoption of the zero waste goal was driven by the City’s commitment to foster sustainability through an increase in waste diversion, decrease in vehicle miles traveled on the City’s roadways, reduced greenhouse gases, providing greater rate equity for customers, and other similar objectives. The Zero Waste Plan as described below will serve as a roadmap for the City to achieve its overall sustainability goals, including but not limited to its zero waste goal.



The City takes pride in its cultural diversity and understands that extensive engagement with all waste sectors is necessary to move towards zero waste. Therefore, the Zero Waste Plan addresses solid waste generated from all sectors within the City. For purposes of the Zero Waste plan, the sectors are characterized below.

The Zero Waste Plan identifies strategies to collaborate with the City’s residents, businesses, non-profits, commercial haulers, and other stakeholders to reduce waste across all sectors and ensure that all materials are managed for their highest and best use to minimize environmental impacts. The City’s Zero Waste Plan seeks to meet regulations and goals established by the United States Environmental Protection Agency (USEPA), Minnesota Pollution Control Agency (MPCA), and Hennepin County, while focusing on strategies that address the City’s unique systems and needs.

### Solid Waste Management Sectors



The Plan strategies were developed using the policy framework reflected below in the waste management hierarchy which characterizes industry best management practices.



Most of the City’s residual waste materials are transported to the Hennepin Energy Recovery Center (HERC), a waste to energy (WTE) facility that converts garbage into electricity for power and steam for heating and cooling. However, the City does not consider energy recovery of waste materials as an applicable method for achieving its zero waste goals. There is a strong community interest in reducing the quantities of materials transported to HERC for energy recovery and increasing the quantities of materials reduced, reused, recycled and recovered to create local jobs associated with these activities.

As part of the Zero Waste Plan, the City evaluated each strategy on a preliminary basis applying the following criteria:

- Increased diversion potential;
- Difficulty of implementation; and
- Ongoing cost to the City.

The results of the application of these criteria to the strategies are provided at the end of each section to assist in prioritizing the strategies within each of the sectors.



As discussed in Section 2.4, the City has conducted numerous stakeholder engagement meetings to obtain feedback from the community, businesses, commercial haulers, and other stakeholders on the Plan’s contents. However, strategies proposed in the Zero Waste Plan will not be enacted without a detailed implementation planning process that may include additional stakeholder engagement prior to an ordinance change, policy change, funding request, or program modification.

## 1.2 Overall Strategies

The U.S. Environmental Protection Agency's (EPA) [Sustainable Materials Management \(SMM\) Program Strategic Plan for Fiscal Years 2017-2022](#) promotes the implementation of zero waste and waste reduction initiatives at the state, county, and city-wide levels. The EPA describes [SMM](#) as a systematic approach to using and reusing materials more productively over their entire lifecycles. The SMM approach seeks to:

- Use materials in the most productive way with an emphasis on using less.
- Reduce toxic chemicals and environmental impacts throughout the material lifecycle.
- Assure we have sufficient resources to meet today's needs and those of the future.

Applying the SMM framework and the waste management hierarchy depicted above, the following four strategies were identified by the City as high priority because they are applicable to all waste management sectors:

1. Conduct regular waste sorts to measure progress
2. Allocate additional resources for education and outreach
3. Establish sustainable program funding to support implementation
4. Promote source reduction and reuse

## Pathway to Zero Waste



## 1.3 Residential Sector Strategies

As described in Section 3.0, Residential Sector, the City's Division of Solid Waste & Recycling (SW&R) offers a robust solid waste and recycling program to approximately 290,000 residents in 106,000 dwellings (single family and up to four units per dwelling), as well as to the City's residential parks, select City-owned buildings, and a small number of businesses with carted collection service. The City and the City's contractor collect residential solid waste and recycling items at the curb or alley and contract with vendors to process garbage, recycling, organics, and yard waste. The City's residential sector program is funded primarily through customer monthly service fees.

The current price differential of \$3.00 per month between small and large garbage carts offers minimal incentive for customers to reduce quantities disposed and increase recycling. The table below depicts the number of customers with the various cart options.



Table 1-1: Current Residential Solid Waste and Recycling Cart Enrollment

Service	Number of Households	Percentage of Households
Garbage Carts	106,000	100%
Small Garbage Cart (32-gal)	9,540	9%
Large Garbage Cart (94-gal)	96,460	91%
Recycling Cart	103,360	97%
Organics Cart	46,132	43%

Findings from industry conducted studies reflect the demand for larger garbage carts decreases relative to the extent of the price differential between the smallest and largest available cart sizes.

Therefore, the price differential between the City's rates (potential financial savings for customers) in its Pay-As-You-Throw (PAYT) program should be large enough to incentivize use of smaller garbage carts over larger carts and increase use of recycling and organics carts.

The City also should evaluate adjusting collection frequencies (e.g. every other week refuse collection and every week recycling) in parallel with restructuring its residential solid waste and recycling rates. A comprehensive cost of service and rate study is recommended prior to implementing these potential changes.

Another key strategy for the residential sector is for the City to build on the existing organics program. The City should work towards both increasing the participation rate in organics, as well as continued education to residents to minimize potential contamination within the organics. Additional options for residential organics are provided in Section 3.3.2.

**Key residential strategy –  
Restructure the residential garbage rates charged to customers to foster additional waste reduction and diversion.**

#### 1.4 Commercial, Industrial, Multifamily (CIM) Sector Strategies

The City has an open competitive collection system for servicing CIM generators where licensed haulers directly contract with CIM customers to provide an array of solid waste management services. The available data and related information on the current conditions of the CIM program are extremely limited. The CIM sector encompasses the approximately 311,400 business establishments and all residential buildings containing five or more dwelling units within the approximately 63,177 multifamily units located within the City. Therefore, the CIM sector represents the largest quantities of waste materials of any of the waste management sectors.

As specified in Section 4.0, CIM Sector, the City plans to further evaluate three key CIM strategies listed below:

##### *1) Targeted outreach and assistance to generators*

Hennepin County provides technical assistance through its business recycling program. The City should consider implementing a more targeted generator outreach and assistance program for the City's CIM generators.

## 2) *Mandatory generator recycling plans coupled with material disposal bans*

To supplement the existing ordinances, the City also should consider implementing mandatory generator recycling plans for CIM generators and ban select recyclable materials from disposal. The generator recycling plan program could be tied to the City’s existing commercial building registration and inspection program, business licensing, or independent of these programs. Phasing the program in over multiple years in conjunction with banning the disposal of targeted recyclable materials is a preferred implementation approach.

### 3) *Increased hauler accountability including one of the following:*

- a. *Expand hauler licensing and establish minimum service standards*
- b. *Transition to a non-exclusive franchise*
- c. *Establish organized commercial collection*

**Key CIM strategy – Increase generator and hauler accountability through new program requirements to achieve greater levels of waste reduction and diversion.**

The third strategy for consideration focuses on increased hauler accountability. The three options supporting this strategy are mutually exclusive and increase in difficulty in implementation from 3(a) to 3(c). The City should select one of the three options addressing increased hauler accountability and couple the selected option with strategies 1) and 2) listed above. Such an approach offers a higher likelihood of success to incrementally increase CIM waste diversion.

In addition to the strategies above, the implementation of organics collection programs in the CIM sector have the potential for sizeable increases in diversion. Section 4.3.2 within the CIM sector identifies a comprehensive set of strategies to increase the collection of organics. In addition, estimated processing capacity for organics within the region is limited and the City has identified the need to foster increased processing capacity as part of its recommended strategies. Additional detailed strategies for the CIM sector are included in Section 4.0.

## 1.5 Other Sector Strategies

The Zero Waste Plan includes a set of strategies for the other sectors and waste streams including the following:

- City Internal (Section 5.0)
- Institutional (Section 6.0)
- Public Space (Section 7.0)
- Construction and Demolition Waste (Section 8.0)

The City should implement the various strategies for each of these sectors and waste streams beginning with those strategies offering the largest increase in diversion potential for the least ongoing costs to the City.

## 1.6 Measuring Progress Towards Achieving Zero Waste

The progress associated with implementation of the prioritized strategies and programs should be closely monitored by the City. Measurement of progress could be depicted using a dashboard on the City’s website. The City also should provide written updates every three years to the City Council on the status of the Plan. The updates should address the implementation progress of the various strategies and the City’s progress towards achieving the [zero waste goal](#) to recycle and compost 50 percent of its overall waste stream by 2020 and 80 percent by 2030.