

# Organics Collection In Minneapolis



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Director

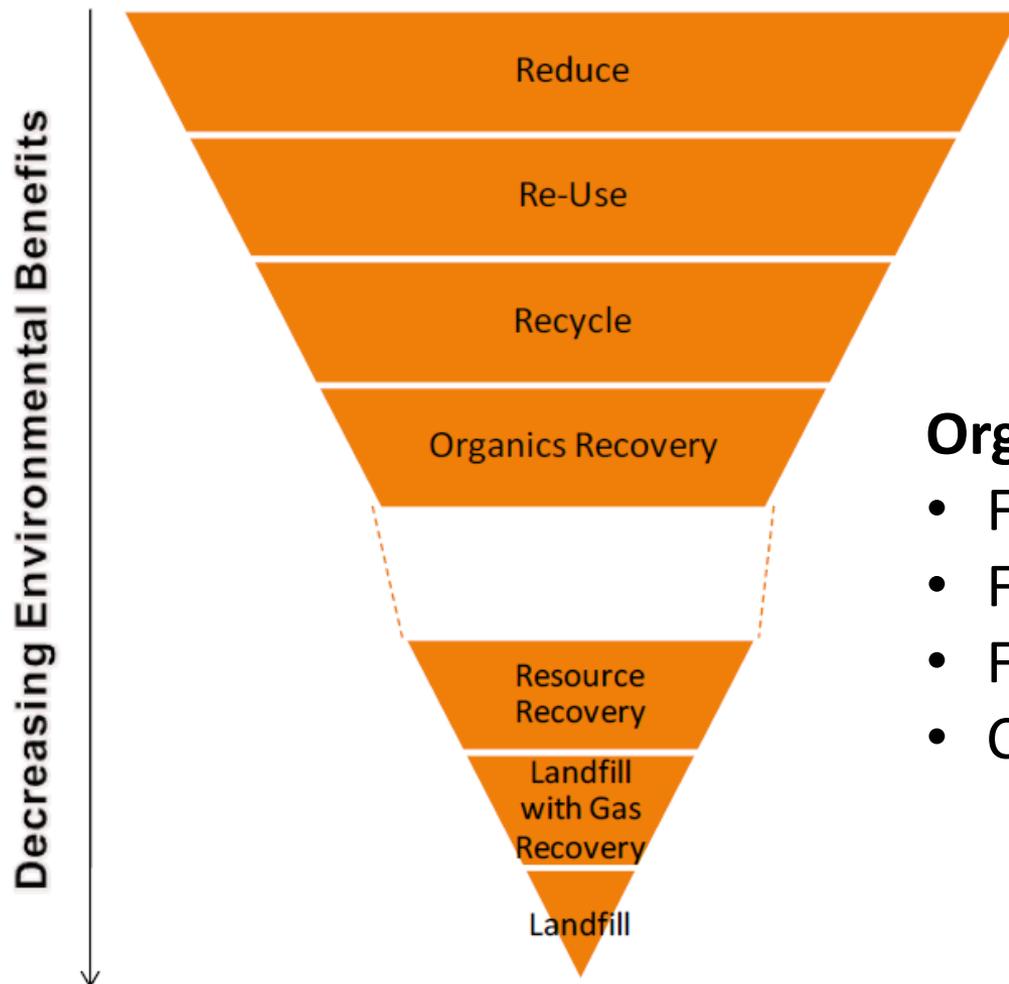
Solid Waste and Recycling Division

Department of Public Works

# Outline

1. Why collect organics?
2. State of the Industry
3. What are source-separated organics (SSO)?
4. Pilot Project Summary
5. Organics Collection Study Summary
6. Implementation Options Overview
7. Recommendation
8. Future Considerations
9. Comments and Questions

# Minnesota Waste Management Hierarchy



## **Organics Recovery:**

- Food to People
- Food to Livestock
- Food to Animal Feed
- Composting/Digestion

# Why Collect Organics?

## **Pilot Projects:**

- Pilot projects were started in 2008 with the intention of gathering data for a city-wide organics collection program.

## **City Sustainability Plan Goal:**

- 7% Organics Recovery by 2015.

## **Hennepin County Resolution, 14-0058R1, requires:**

- Cities of the first class to provide organic waste collection services to all residents living in 1-to-8 unit buildings no later than January 1, 2015.
- Not implementing SSO program could result in loss of some or all SCORE funding from the County.

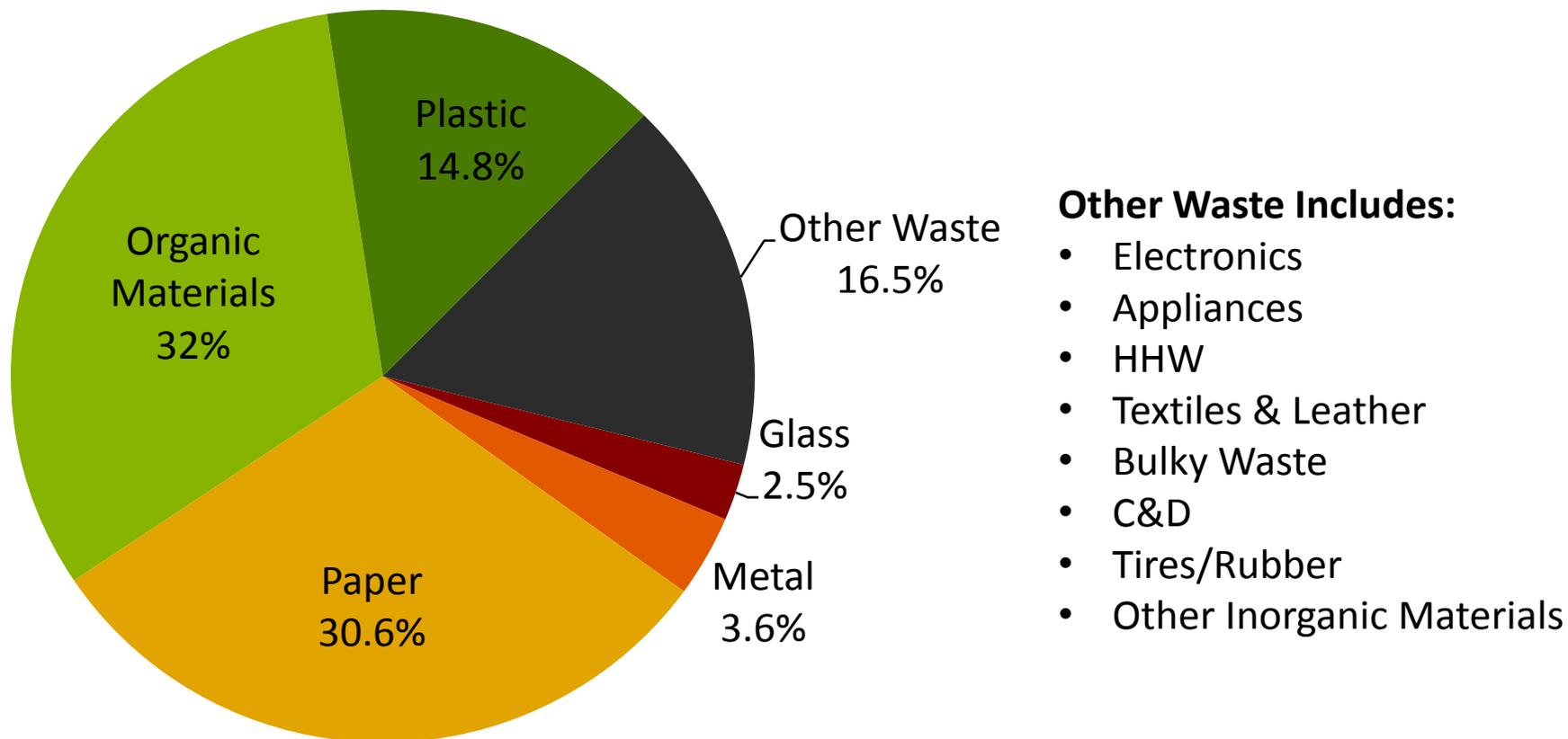
# Hennepin County Goals – SW Master Plan

Management Method	2015	2020	2025	2030
Source Reduction and Reuse	1-2%	2-4%	3-5%	4-6%
Recycling	45-48%	47-51%	49-54%	54-60%
Organics Recovery	3-6%	4-8%	6-12%	9-15%
Resource Recovery	32-34%	32-33%	30-31%	24-28%
Maximum Landfill	20%	17%	15%	9%

In 2012, Hennepin County achieved 4% organics recovery.

In 2013, Hennepin County achieved 3.3% organics recovery.

# HERC Composition



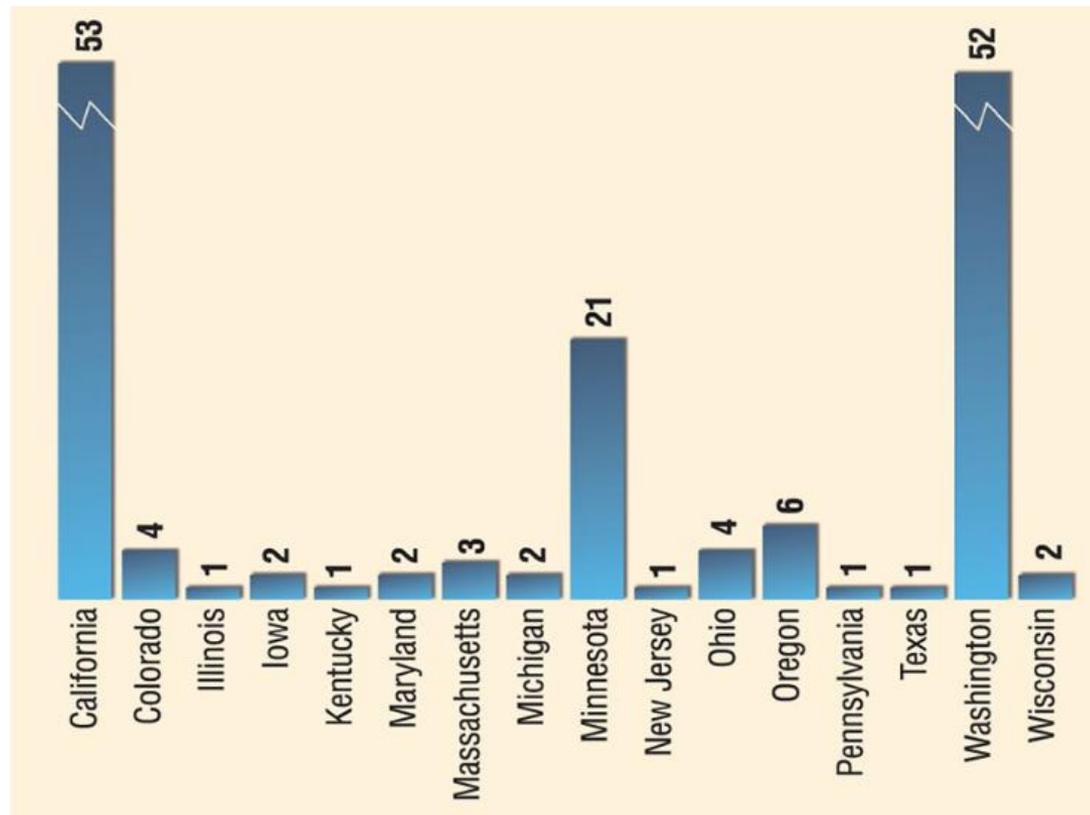
# State of the Composting Industry

Residential organics collection programs are found in 15 states providing access to over 150 communities in the U.S.

Minnesota ranks 3<sup>rd</sup> in number of organics collection programs with 21 programs, behind California (53) and Washington (52).

**Source:** Biocycle Magazine.

“Residential Food Waste Collection in the U.S.” January 2012, Vol. 53, No. 1, p.23.



# State of Composting in Minnesota

## Facilities who can process SSO in Minnesota:

- 4 in Twin Cities Metro-Region
  - City of Hutchinson
  - Full Circle Organics - Becker
  - Shakopee Mdewakanton Sioux Community (SMSC) – Shakopee
  - Specialized Environmental Technologies (SET) – Rosemount
- 2 in Greater MN
  - Full Circle Organics - Good Thunder
  - Western Lake Superior Sanitary District (WLSSD) - Duluth

**MPCA Compost Rule changes should be finalized in 2014, likely resulting in additional facilities opening.**

# What are source-separated organics (SSO)?

- Food waste  
(including meat, bones & dairy)
- Most non-recyclable paper
- Certified compostable plastics
- Plant Debris
- Other items  
(cotton swabs, q-tips, wax paper, dryer lint, vacuum bags, etc.)



# Pilot Project Design

- Opt-in to participate
- SSO Alone
- Weekly collection
- 64 gallon vented cart
- No additional cost to participate in pilot
- Neighborhood based routes 2008 & 2009
- Garbage collection based routes added in 2010



# Summary of Pilot Projects (2008 – Present)

- **5%** of SW&R customers are eligible to participate in existing pilots.
- Pilots include all of Linden Hills and ECCO and parts of: Cooper, Hiawatha, Howe, Longfellow, Philips, and Seward neighborhoods.
  - 30% - 53% of eligible households opted-in to participate.
- 388 lbs of organics per household/year diversion = 7.5 lbs/DU/week.
- Low contamination – County verification
- Committed participants

# Pilot Area Comparison (2009)

<b>Participation Data</b>	<b>Linden Hills</b>	<b>ECCO</b>	<b>2010 Expansion</b>
<b>Outreach Methods</b>	Mailings, Events, & “Block Captains”	Mailings Only	Mailings Only
<b>Option to Participate (# of Dwelling Units)</b>	2,524	566	2,280
<b>Neighborhood Opt-In Rate</b>	53.5%	46.8%	36.7%
<b>Average Weekly Cart Set Out Rates of Subscribers</b>	60%	54%	n/a
<b>Average pounds of SSO per dwelling unit per week from interim report</b>	7.71—11.01	9.07—12.95	n/a

# Organics Collection Study

November 2012

Report

**Assessment of Residential Source  
Separated Organics Collection  
Options**

A Study for the City of Minneapolis  
Project I.D.: 13M030

Minneapolis, Minnesota

October 2013



Council directed staff to study City collection of SSO. Foth, LLC was hired to prepare report details different options and impacts of organics collection methods.

- Identify most feasible collection options for SSO
- Cost for collection
- Participation rates
- Greenhouse gas emissions
- Obstacles and barriers to going city-wide

October 2013

Report presented to Minneapolis  
Transportation & Public Works Committee

# Foth Collection Methods Studied

<b>Collection Method:</b>	<b>Study Cost per Dwelling Unit:</b>
1. No SSO Collection (SSO to HERC)	No Added Cost
2. Collect SSO Alone	\$2.54
3. SSO Commingled with Yard Waste	\$2.52
4. SSO Co-collected with Yard Waste (Blue Bag)	\$5.12
5. SSO Co-collected with Garbage (Blue Bag)	\$7.76

## **Definitions:**

**Commingled:** SSO and yard waste placed together in one cart.

**Co-collected:** SSO in Blue Bag placed in same cart as yard waste or garbage with the intention of separating the two materials.

# # 1 - No SSO Collection (SSO to HERC)



## **Yard Waste**

(Own containers & compostable bags)



## **Recycling Cart**

(96 gallon or 64 gallon)



## **Garbage Cart**

(22 gallon or 94 gallon)

**Estimated Increased Cost: No added cost.**

# # 2 - SSO Alone



## Yard Waste

(Own containers & compostable bags)



## Organics Cart

(32 gallon or 64 gallon)



## Recycling Cart

(96 gallon or 64 gallon)



## Garbage Cart

(22 gallon or 94 gallon)

**Estimated Increased Cost: \$2.54 per DU per month**

# # 3 - SSO Commingled with Yard Waste



**Organics &  
Yard Waste Cart**

(64 gallon or  
90 gallon)



**Recycling Cart**

(96 gallon or  
64 gallon)



**Garbage Cart**

(22 gallon or  
94 gallon)

**Estimated Increased Cost: \$2.52 per DU per month**

# # 4 - SSO Co-Collected with Yard Waste



**Organics &  
Yard Waste Cart**

(64 gallon or  
90 gallon)



**Recycling Cart**

(96 gallon or  
64 gallon)



**Garbage Cart**

(22 gallon or  
94 gallon)

**Estimated Increased Cost: \$5.12 per DU per month**

# # 5 – SSO Co-Collected with Garbage



**Yard Waste**  
(Own containers & compostable bags)



**Recycling Cart**  
(96 gallon or 64 gallon)



**Garbage Cart**  
(22 gallon or 94 gallon)

**Estimated Increased Cost: \$7.76 per DU per month**

# Summary of T&PW 3.18.14 Meeting

- At March 18, 2014 T&PW cost detail collecting SSO Alone and SSO Commingled with Yard Waste were presented.
- The SSO Commingled with Yard Waste option is not a viable option due to Emerald Ash Borer grinding requirements and compost operator's ability to verify the SSO percentage of commingled material.
- T&PW directed Public Works to schedule a Council study session to include cost information of an All-In SSO Alone program and a robust educational program.

# SSO Alone Collection

Item	Opt-In	All-In
City Trucks	11	15
City Staff	21	26
\$ per DU per Month	\$3.20 - \$3.75	\$3.76 - \$5.75
City One-Time Costs	\$5.5 million	\$10.2 million
City Annual Costs	\$4.4 million	\$6 million

# Program Costs Per Ton\*

Material	Tonnage Projections	Total Cost per Ton
Garbage	87,716	\$201.17
Recycling**	27,371	\$185.74
Yard Waste	18,635	\$204.29
Opt-In SSO	7913	\$555.91

\*Total costs per ton includes costs for collection (staff and vehicles), disposal and program administration.

\*\*Recycling cost per ton includes costs for One-Sort and all problem material (mattress, electronics, bulky item) collection, disposal and program administration. Revenue from SCORE funding and sale of recyclables is included in the cost per ton calculation.

# Recommended Collection Method

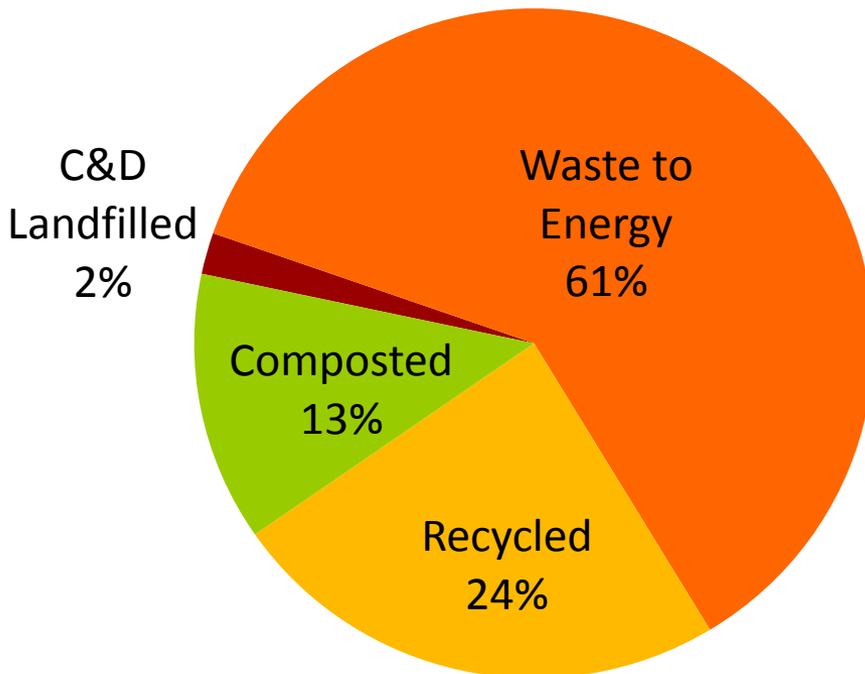
If we move forward with curbside organics collection now, Public Works recommends:

**Opt-In SSO Alone Collection**



# 2015 Projections

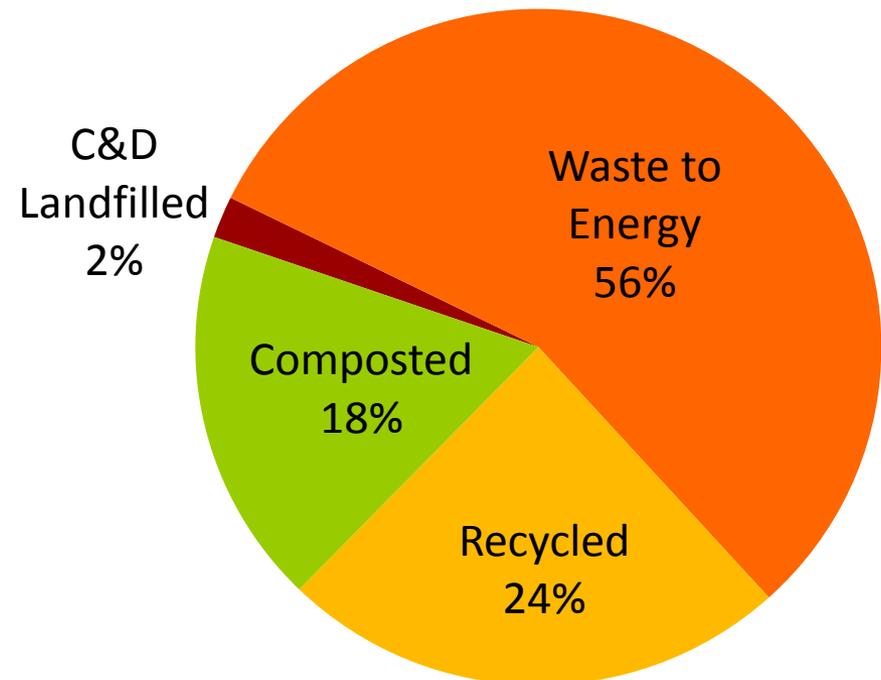
## Without SSO Program



13% Composted:

- 97% yard waste
- 3% organics

## With SSO Program



18% Composted:

- 68% yard waste
- 32% organics

# Summary

- **Opt-In SSO Alone collection is preferred collection method**
  - Roll-out costs of \$5.5 million
  - Annual cost of \$4.4 million
  - Estimated 5% diversion from HERC

# Future Considerations to Increase Diversion

As we learn more about zero-waste initiatives, we want to ensure that an opt-in SSO program would complement or not be redundant with future potential waste reduction efforts.

- Targeted outreach and education
- Increased opportunities for other recycling
- Ordinance modification and creation
- Revisit variable rate billing fees
- Resource recovery of garbage (sorting garbage)

# Next Steps for SSO Implementation

- Council Direction (need by August 2014 for 2015 roll-out)
  - Appropriation increase required to purchase trucks and carts
- Program Implementation Plan (including educational outreach)
- Explore temporary and long-term options for storage and maintenance of trucks and carts
  - New SW&R facility needed with or without SSO collection
- Negotiate with MRI for SSO collection
- Acquisition of:
  - New truck purchases (8 months)
  - Carts for collection of SSO (5 months)
- Hire staff (3 months)

# Comments or Questions



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