

City of Ann Arbor Comprehensive Organics Management Plan



City of Ann Arbor Comprehensive Organics Management Plan

Plan Presentation to the Environmental Commission

April 27, 2017



CB&I Environmental & Infrastructure, Inc.

In association with:

**PROJECT
INNOVATIONS**
INCORPORATED



City of Ann Arbor Comprehensive Organics Management Plan

Organics Quantities

- Food waste represents significant fraction of disposed waste stream
 - Residential - 20-25%
 - Commercial - 15-25%
- Residential diversion performance
 - 2-5 pounds/household/week
 - 104-260 pounds/household/year
 - Highest residential diversion per household (Seattle) = 7 pounds/hh/week
- Commercial diversion performance highly variable, limited performance data
 - ½ ton/business/year in San Francisco
 - +1 ton/business/year in Seattle



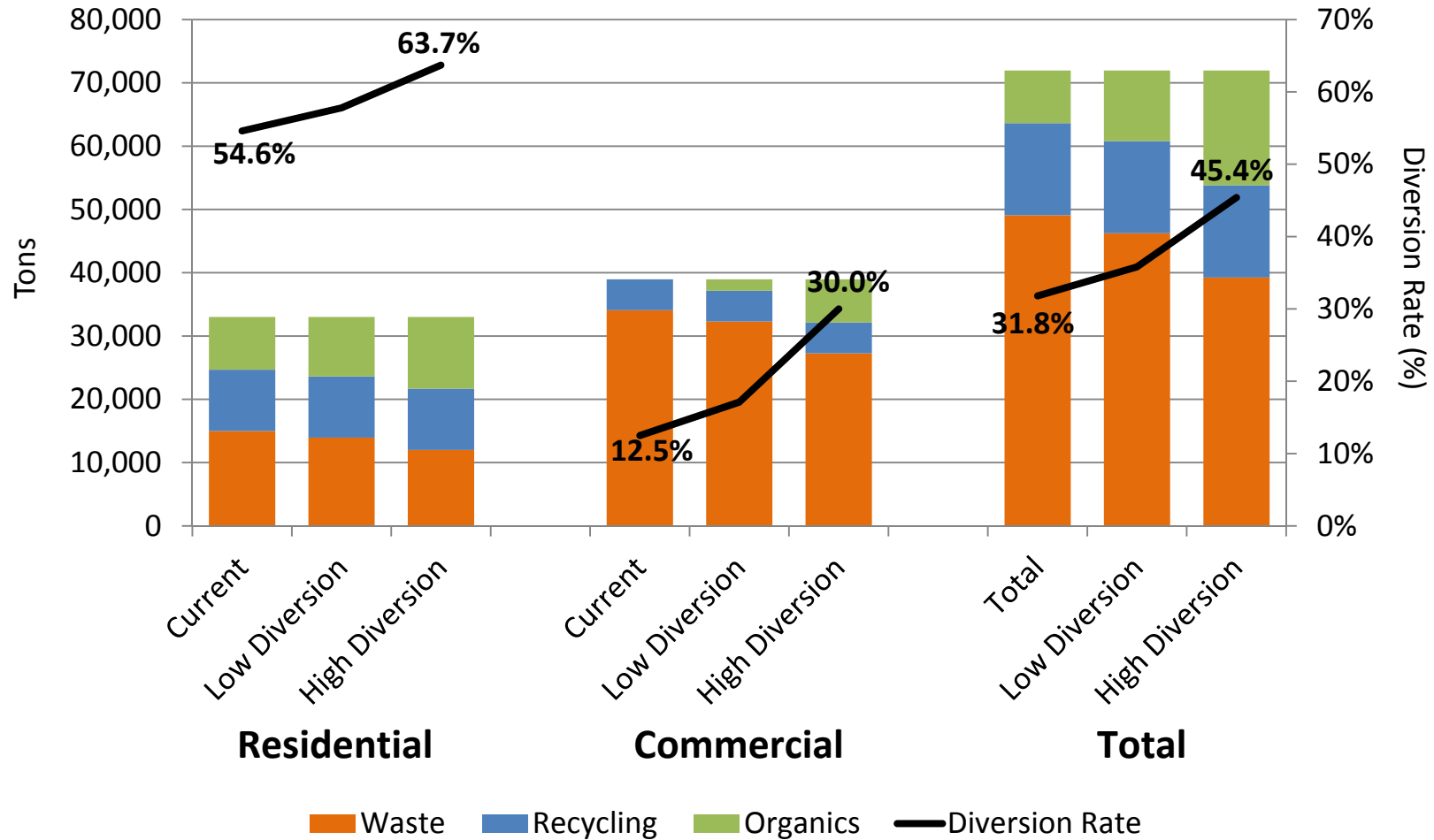
City of Ann Arbor Comprehensive Organics Management Plan

Ann Arbor Organics Quantities

	Total Available Organics	Projected Recovery - Voluntary Program	Projected Recovery - Mandatory Program
Residential			
20% of waste stream	2,997	1,049	2,398
25% of waste stream	3,747	1,311	2,998
Equiv. lbs/hh/week	5.1 - 6.4	1.8 - 2.2	4.1 - 5.1
Commercial			
15% of waste stream	5,113	1,790	4,090
25% of waste stream	8,521	2,982	6,817

City of Ann Arbor Comprehensive Organics Management Plan

Potential Long-Term Diversion Impact



City of Ann Arbor Comprehensive Organics Management Plan

Residential Program - Current Conditions

- Service to 22,500 homes
- Trash collection
 - Carts - 32-gallon or 64-gallon, can upgrade to 96-gallon for annual fee
 - 6 collection routes per day, 5 days per week
 - Annual cost = \$1,872,900
- Organics collection
 - Kraft paper bags and bundles
 - Compost cart can be purchased from City - estimate 5,000 homes have carts
 - Food waste can only be added to compost carts (not bags)
 - Seasonal collection (April - November), 3-4 collection routes per day, 5 days per week
 - Added routes/trucks for fall leaf collection season
 - Annual cost = \$1,345,587



City of Ann Arbor Comprehensive Organics Management Plan

Residential Option - Year-Round Collection

- Weekly or monthly collection
 - Low quantity makes weekly not likely to be necessary
 - Residential Advisory Committee suggested biweekly or monthly
- Use existing collection fleet
 - Not feasible for weekly collection
- Maintain existing collection routes
 - Carts are distributed throughout City
- Compost facility operating contract would need to address year-round acceptance of organics delivery from City
- Net annual cost increase = \$60,100 - \$176,800



City of Ann Arbor Comprehensive Organics Management Plan

Residential Option - Carts to All Households (Pilot)

- Select 3 or 5 existing organics routes and split each in half
 - “Test” area - all households get carts
 - “Control” area - continue current operations
- Perform outreach to “test” area households to encourage cart use for yard waste and for food waste
- Monitoring and evaluation:
 - Monitor set-out rates and tonnage in both “test” and “control” areas
 - Survey homes in the “test” area for qualitative and behavioral feedback
- Operate for one full seasonal collection period (possibly 2018)
- Net cost = \$361,800 - \$466,400
 - About 50% of cost is carts and pilot monitoring/evaluation

City of Ann Arbor Comprehensive Organics Management Plan

Comparison of Residential Options

Program Option	Projected Diversion	Diversion Rate Impact	Annual Cost	Cost/Ton Diverted
Current Ops	8,323 tons	NA	\$1,345,600	\$162
Year-Round Collection				
Weekly	85-213 tons	0.2% - 0.6%	\$176,800	\$596 - \$1,036
Monthly			\$60,100	\$204 - \$349
Cart Pilot				
3 Areas	79-197 tons	0.2% - 0.6%	\$361,800	\$1,834 - \$4,586
5 Areas	131-328 tons	0.4% - 1.0%	\$466,400	\$1,419 - \$3,577

City of Ann Arbor Comprehensive Organics Management Plan

Commercial Option - Downtown Restaurants and Public Schools (Pilot)

- Secure participation from 10 downtown restaurants and 9 public schools
 - Must have space to accommodate 4 organics carts
 - Provide site evaluation and key personnel training
- Provide 64-gallon carts to each participant
 - Restaurants - 3 times weekly collection
 - Schools - 1 time weekly collection
- Monitoring and evaluation:
 - Collection driver to visually inspect each cart
 - Monthly follow-up monitoring with each participant
 - Evaluation of performance post-pilot
- Operate 3 months or 6 months (6 months preferred)
- Net cost = \$106,700 - \$184,500



City of Ann Arbor Comprehensive Organics Management Plan

Commercial Option - Commercial Franchise

- Organics collection provided as part of commercial waste franchise
 - All commercial accounts (estimated 807)
 - Food-oriented accounts (estimated 180)
- Collection costs per container and collection frequency projected to be the same as waste collection costs through the franchise
 - Additional truck(s) and driver(s), containers
 - Similar route density, if all accounts are participating (mandatory collection was not recommended by the Commercial Advisory Committee; voluntary collection was a preferred first approach)
- All equipment and staff provided by commercial franchise hauler
 - Current contract terminates June 2019; likely start with next franchise agreement July 2019
- Net cost = \$378,100 - \$1,165,800
 - Average annual cost/account = \$1,445 - \$2,101

City of Ann Arbor Comprehensive Organics Management Plan

Comparison of Commercial Options

Program Option	Projected Diversion	Diversion Rate Impact	Cost	Cost/Ton Diverted
Downtown Restaurants and Public Schools Pilot				
3-Month	101 tons	0.3%	\$106,700	\$1,056
6-Month	296 tons	0.8%	\$184,500	\$623
Commercial Franchise				
All Accounts	1,768-5,051 tons	4.5% - 13.0%	\$1,165,800	\$292 - \$652
Food-Oriented	997-2,850 tons	2.6% - 7.3%	\$378,100	\$169 - \$372

City of Ann Arbor Comprehensive Organics Management Plan

Education and Outreach Program

- Objectives:
 - Existing residential program - increase awareness and cart use, optimize existing investment and service
 - Future enhancements / new programs - provide information, stimulate participation

- Program design
 - Branding and messaging campaign
 - Broad outreach through multiple methods
 - Targeted effort - support for material development and campaign deployment from marketing/advertising agency or outreach experts
 - Ongoing effort with periodic, active outreach
 - Incorporate reduction and donation awareness

- Net cost = \$67,500 - \$90,000 (\$3 - \$4 per household per year)

City of Ann Arbor Comprehensive Organics Management Plan

Near-Term Implementation Schedule

Recommendation	2017		2018				2019			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Citywide Recommendations										
Education and Outreach		(Ongoing)								
Residential Recommendations										
Compost Cart Pilot										
Year-Round Collection										
Commercial Recommendations										
Restaurant/Schools Pilot										
Commercial Franchise										
FOG Licensing										

City of Ann Arbor Comprehensive Organics Management Plan

Christina Seibert

Project Manager, CB&I Environmental & Infrastructure, Inc.

(630) 762-3306

christina.seibert@cbi.com

www.a2gov.org/organicsplan