Industrial, Commercial and Institutional (ICI) Organics Waste Diversion Strategy

Compost Council of Canada
March 5th, 2015
Council Direction

- Overarching ICI Waste Diversion Strategy approved May 2014
- Develop an ICI Organics Specific Strategy by Fall of 2015

Purpose

- As per The City of Calgary's goal to send 80 per cent less waste to our landfills per person in 2020 than we did in 2007
- Target most common materials and largest generators in the waste stream to maximize diversion
Stakeholder Engagement

- Broad spectrum of stakeholders engaged
  - Recycling providers, building owners, industries, commercial establishments, institutions, haulers, environmental non-government organizations (eNGOs) and representatives from the Alberta government

- Discussed varying program options including, voluntary, economic and regulatory approaches
What We Heard from Stakeholders

- Some sector diversion occurring (10-30%)
- High support for proposed tools
  - Voluntary – ICI Working Group, Waste Diversion Assistance
  - Economic – Differential Tipping Fees
  - Mandatory – Source Separation, Landfill Bans
- Continued involvement in implementation
- Urgency of program implementation expected / desired
Identification of Barriers

- Lack of convenience
- Lack of diversion options
- Infrastructure limitations
- Lack of markets for materials
- Limited public awareness and education
Why the ICI Sector?
Waste Disposed at City of Calgary Landfills (by weight)

- **Construction & Demolition Sector**: 20% or 125,000 tonnes
- **Single Family Sector**: 33% or 206,000 tonnes
- **Industrial, Commercial and Institutional Sector**: 34% or 214,000 tonnes
- **Multi-Family Sector**: 13% or 78,000 tonnes
Calgary’s ICI Sector

- 160,000 organizations in Calgary’s ICI sector, employing 780,000 employees
- Hospitals, schools, offices, malls, restaurants, hotels, manufacturers, warehouses and other businesses
Waste Disposed by Sub-Sector
Why Organics?
Modeled ICI Waste Composition Results

- Paper and Cardboard: 35%
- Food and Yard: 25%
- Plastic: 11%
- Metal: 8%
- Wood: 7%
- Glass: 3%
- Other: 11%
- Food: 22%
Organics Specific Strategy

hey! **food isn't garbage**
food scraps belong in your green bin

metrovancouver.org/foodscrap

hey! **food isn't garbage**

It's true! **food scraps belong in your green bin**

metrovancouver.org/foodscrap
Mandate

Direction from City Council is:

1. Develop an ICI Organics specific strategy that will consider:
   a. Industry organics processing capacity and potential as well as composting facility opportunities
   b. Mandate on-site organics source separation by Q4 2016
   c. Add organics to the DML by 2017
   d. Ban organics by Q4 2019
ICI TIMELINE
Industrial, Commercial and Institutional (ICI) Waste Diversion Actions

- **Recycling**
  - Paper & Cardboard
    - 2015: Q1 - Add Paper and Cardboard to the DML, Q4 - Grace Period
    - 2016: Q1 - DML Rate Enforced for Paper and Cardboard, Q2 - Paper and Cardboard Ban Detail Announcement, Q4 - Preparation Time
    - 2017: Q1 - Paper and Cardboard Ban Effective
    - 2018: Q1 - Enforcement
    - 2019: Q1 - Enforcement

- **Source Separation**
  - 2015: Q1 - ICI Recycling Bylaw Approval, Q4 - Enforcement
  - 2016: Q1 - ICI Recycling Bylaw Effective, Q4 - Enforcement

- **Organics**
  - 2015: Q1 - ICI Organics Bylaw Approval, Q4 - Grace Period
  - 2016: Q1 - ICI Organics Bylaw Effective, Q4 - Grace Period
  - 2017: Q1 - Add Organics to the DML, Q4 - Grace Period
  - 2018: Q1 - Organics Ban Detail Announcement, Q4 - Preparation Time
  - 2019: Q1 - Organics Ban Effective

*Note: DML = Designated Materials List*

How The City plans to support the ICI sector:
- ICI Working Group
- Zero Waste Events
- Monitoring and Reporting
- Waste Diversion Assistance
- Promotion and Certification
- Waste Prevention Strategy

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Onward! By 2020, per capita waste sent to City of Calgary landfills is reduced from 2007 levels by 80 per cent.
Why is it important?

Benefits:

- Environmental Benefits
  - GHG reduction, in particular methane
  - Reduces landfill burden
  - Creation of natural fertilizer/compost

- Social Benefits
  - Feeding people
  - Sharing food and composting builds community, i.e. Community kitchens and gardens

- Economic Benefits
  - Building a strong market for compost
  - Cost savings
Organics/Compostable Material Definition

- Typical definition includes:
  - Vegetables and fruit
  - Raw food, plate scrapings, leftovers,
  - Packaged food (remove packaging)
  - Meats, fish, bones and seafood shells
  - Pasta, bread and rice
  - Dairy, eggshells, sauces and dressings
  - Paper egg cartons
  - Paper towels, unlined paper cups/plates
  - Food-soiled napkins/pizza boxes/newspaper
  - Kraft/paper bags used to collect food scraps
  - Waxed cardboard boxes
  - Coffee grounds/filters and tea bags
  - Wooden utensils, chopsticks, stir sticks and toothpicks
  - Leaves, branches, grass and plants
  - Pet waste
Preventable vs. Non Preventable

Preventable food waste is:
Food that could have been eaten but was thrown away or composted instead.

Unpreventable food waste is:
Food waste that cannot be consumed, such as shells, bones and peelings.

$27 billion dollars

40%
Examples of Food Prevention

- Inglorious Fruits and Vegetables/Misfit Veggies
- Quest Supermarket – “Reducing Hunger with Dignity”
EAT FIVE A DAY
WEIRD FRUITS & VEGETABLES

A HIDEOUS ORANGE
MAKES BEAUTIFUL JUICE.

INGLORIOUS fruits & vegetables
by Intermarché
Steps in Dealing with Food Waste

Reduce the amount of food residuals being generated at the source

Direct extra food of high quality to feed hungry people by donating to food banks

Use lower quality food residuals for agricultural uses, such as food for animals

Direct food residuals for compost, anaerobic digestion, and land application

Process for energy recovery
Calgary’s Current Composting State

- Know that some generators have contracts to have organics processed
- Over 10,000 tonnes of organics being collected in Calgary area from:
  - Malls
  - Grocery Stores
  - Restaurants
  - Food Manufacturers
Calgary Example
Calgary Italian Bakery Ltd.

- Initiated from City ICI Waste Composition Study
- Calgary Italian Bakery Ltd (CIBL)
- 75 full time employees
- 24 hour bakery production and distribution system
- 44,000 square foot facility in southeast Calgary
Waste Composition Results

- Organics: 46.3%
- Wood: 31.6%
- Plastic: 9.8%
- Metal: 1.4%
- Paper: 8.2%
- Other: 1.1%
- Textiles: 1.2%
- Refundable Products: 0.3%
Steps Taken to Increase Diversion

- Colour coded bins
- Standard Operating Procedures
- Environmental initiatives discussed during weekly staff meeting
- Displaying data from waste audits
- All the programs have now been made into companywide “Key performance indicators”
Waste Reduction

- Organics
  - Reduction of material from 20,000kg / month to 11,000kg / month (through production related reduction programs)
  - All remaining organic waste sent to local pig farmer
- Additional waste diversion programs associated with reuse:
  - CHEP pallets are reused
  - Metal wickets from the packaging are being sent back to the bag supplier to be reused for new bags

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<th>November 2013</th>
<th>September 2014</th>
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<tbody>
<tr>
<td>Waste</td>
<td>5 full bins / week</td>
<td>1.5 bins / week</td>
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<tr>
<td>Recycling</td>
<td>½ bin / week</td>
<td>4-5 bins / week</td>
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Continued Strategy Development

- Continue to learn from other cities
- Continue stakeholder engagement
- Development of high-level implementation plans for the mandated actions
  - Organics source-separation bylaw
  - Adding organics to the DML
  - Banning organics from City landfills
## ICI Timeline

**Industrial, Commercial and Institutional (ICI) Waste Diversion Actions**

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<thead>
<tr>
<th>Year</th>
<th>Quarter</th>
<th>Recycling</th>
<th>Source Separation</th>
<th>Organics</th>
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<td>Q1</td>
<td>Add Paper &amp; Cardboard to the DML*</td>
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- Zero Waste Events
- Monitoring and Reporting
- Waste Diversion Assistance
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Questions?

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