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Need help with starting an organics collection program at your business?

Contact Green Calgary's Commercial Environmental Services program. Contact information on page 4.

What is Organic Waste?

Unprocessed vs. Processed

There are two general categories—unprocessed and processed organics. The material included in your organics collection program depends on what composting method or facility is chosen. Some facilities only accept unprocessed material, while others can accept both categories. There may be some exceptions such as meat or bones.

Unprocessed Organics

- Fruit & veggie scraps
- Coffee & tea



Processed Organics

- Breads, pasta, grains
- Dairy products
- Meat & bones
- Dairy products
- Grease & fats
- Cooked food



Importance of Composting your Organics

There are significant environmental benefits to composting your organics and several negative environmental impacts if that material is sent to landfill. Most of all it is a wasted resource when it is not returned back to the nutrient cycle.

Wasted Resource

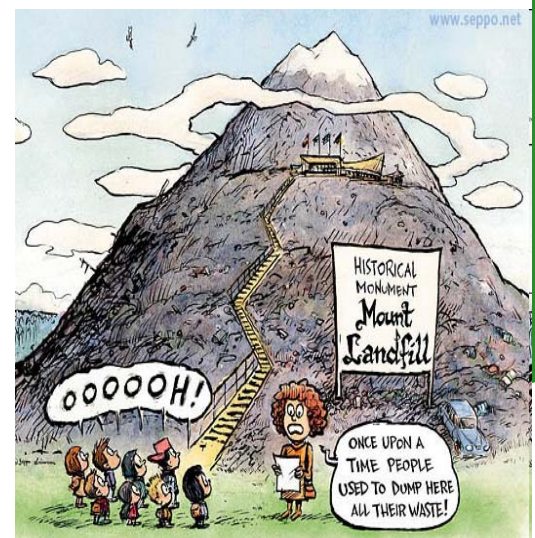
- Compost is a great soil amendment and fertilizer.
- Compost has been shown to improve water retention in soil and reduce the need for cosmetic pesticides.
- Organic material in landfills ends the life cycle of that material and depletes the world of important agriculture components such as phosphorous.

Limited Landfill Space

- Landfill space is limited in Calgary. Organics represents approximately 52% of the waste stream. If this material is composted the landfill will last much longer.

GHG Emissions

- In landfills organic material is broken down through an anaerobic process producing methane gas.
- Methane is 20 times more potent than carbon dioxide as a greenhouse gas.



Challenges, Barriers & Solutions



Compost from the City of Calgary's East Calgary compost pad



Compost collection at the University of Calgary



Earth Machine Available at Green Calgary's EcoStore



The Earth Tub

Why isn't organics collection the norm in Calgary when it exists in many other major North American cities? There are many factors that have delayed this service, but organics collection for the commercial sector is becoming more prevalent. Some challenges and barriers have included:

Cost

In the past disposal rates have been low compared to other Canadian municipalities, which made landfilling waste a more economical option. With the current increase in tipping fees it is becoming more feasible to collect and compost organics. The price to compost is decreasing as there are more businesses on board and more organics collection routes in place. The current tipping fee for the landfill is \$85/tonne whereas one of the compost facilities, Desviar Inc., in High River is \$55/tonne. This does not include hauling costs however.

Lack of Facilities

Compost facilities around Calgary are limiting in terms of material type, volume accepted, access or distance. The City of Calgary compost pads predominantly take leaf & yard waste. There are a number of facilities outside of Calgary (listed on page 4) that are 50 to 90 km away. As landfill tipping fees increase the cost of hauling material to these facilities is more viable.

Hauling

Until recently there were fewer haulers that could take organics to a compost facility. With an increased demand for this service, many haulers are either currently trialing organics pickup or have services available to the commercial sector.



Contamination

Contamination, such as plastic or other unwanted items thrown in with your organics, can affect your waste diversion goals. If a load is too contaminated it will likely end up in the landfill. Contamination will also affect the quality of the finished compost and can damage equipment. To avoid contamination have clear signage on the bins specifying what can and cannot be added. For signage on unprocessed organics collection contact Green Calgary.

Employee Buy-In/Participation

Employees and public may find it easier to throw their organic waste in the garbage, especially if some sorting is necessary. Include employees on the process, ask for input and feedback, find champions, give rewards. Try to express to them your diversion goal and the importance of the organics collection. This can be done through newsletters, memos, signage and in staff meetings.



Options for Organics Collection & Composting

On Site Options

Vermi-composting

- For small volumes (eg. Office lunchroom)
- Indoor composting with worms
- Only unprocessed organics

Backyard Composting

- For smaller volumes (eg. Office lunchroom, schools)
- Need outdoor area for composter
- Only unprocessed organics

On Site In-Vessel Composting

- For larger volumes (eg. University, office tower)

- Can handle both unprocessed and processed organics.
- There are a number of models to choose from. Some examples are:

○ The Earth Tub (used at the University of Calgary)

www.compostingtechnology.com/invesselsystems/earthtub/

○ eCorrect Waste Reducer

www.somatcompany.com/ecorrectnews.htm

Off Site Options

Have a hauler pick up your organic waste and take it to a compost facility. There are a number of haulers that have been or are beginning to offer this service. Ask your current waste hauler if they can haul your organic waste to a compost facility. Haulers that currently have an organics collection service:

PEL Recycling (contact information on page 4)

- Generally take unprocessed organics but can take processed organics for one time events.
- Organic waste is taken to East Calgary's compost pad.
- Use totes and/or small kitchen containers for collection.
- Other services include recycling pickup (mixed plastic, paper, glass, tin)

Waste Management (contact information on page 4)

- Can accept processed and unprocessed organics (collection/processing program includes meat and bones).
- Organic waste is taken to Desviar – a compost facility near High River.
- Primarily use totes for collection, but may use other containers where appropriate depending on customer needs.
- Other services include waste collection, co-mingled recycling (cardboard, paper, mixed plastic, and tin), e-cycling, solar compactors, and construction & demolition recycling (wood, metal, drywall, etc.).



Case Study 1: University of Calgary



In September 2008 the University of Calgary started a campus compost pilot project. They began by collecting unprocessed food from vendors and adding it to 5 earth machines. These composters filled up in 3 weeks and the program evolved into a two tier system with unprocessed vendor organics picked up by PEL Recycling and post-consumer organics collected in the student food court area and composted in an in-vessel machine (the EarthTub).

Pre-consumer organics (food vendor area)

- Unprocessed organics are collected. Separated from the other waste by the vendors.
- Full bins are picked up twice a week by PEL Recycling and taken to East Calgary's compost pad.
- The collection has been extremely successful to date with minimal contamination.



Post-consumer organics (student food court area)

- Processed and unprocessed organics are collected. Plates are scraped into bin by students.
- Material is added to an on-site in-vessel composter (the Earth Machine).
- High contamination at the beginning of the program. Changes were implemented to reduce this occurrence, such as better signage and bin placement (placing bins together with recycling and waste containers).

Case Study 2: Calgary Co-op

The Calgary Co-op currently has a pilot organics collection program in place at their Creekside store. Employees dispose of expired produce, flowers, baked goods and hard cheese into totes that are collected by a waste hauler and transported to Desviar Inc., a compost facility near High River.



Challenges & Barriers

- Needed space to store up to 10 totes a week. They used their garage room.
- Took employees more time and effort to unwrap the produce and other items that were wrapped in plastic. This requires corporate, management and employee buy-in to be successful.
- The compost can become odorous, so Co-op placed it in their garage room.

Results

- Reduced wet waste from 13 tonnes to 8 tonnes.
- Costs were higher than wet waste disposal. Many factors could reduce this cost including; the yearly increase of landfill tipping fees, choosing a store with higher organics and waste output, and popularization of the program among other businesses to reduce transportation costs.

Calgary Co-op reduced their waste 38 % by diverting organics.

Compost Facility: Desviar Inc.

Desviar Inc.

Desviar Inc. is one of the major compost facilities that consistently accepts organic waste from Calgary haulers. The facility is just outside of High River, and they take both unprocessed and processed waste, except for meat and bones (for now). They also accept paper (eg. paper napkins), compostable plastic, drywall, wood waste, municipal biosolids, slaughterhouse waste and animal manures.

This facility processes the organics using multiple stages to create nutrient rich

humus that is free of pathogens, insect larvae, weed seeds and virtually odorless. Most of the product is marketed to farms for crop production.

Desviar promotes a “return to sender” mentality, where they encourage clients to take back compost if they have sent organics to the facility. The backhauling helps reduce empty trucking miles.

See page 4 for Desviar’s contact information as well as a list of other Compost Facilities.



The lawn on the right used Desviar’s finished product.

Need help with starting an organics collection program? Contact the Commercial Environmental Services team.

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Empowering Calgarians to create healthy homes and communities by providing environmental education, products and services.

www.greencalgary.org

Green Calgary offers a variety of programs to help achieve mandates of waste reduction and water protection including:

PRODUCTS

EcoStore

The Green Calgary EcoStore sells products that reduce your ecological footprint and meet high eco standards, such as local sourcing where possible, reusability, little to no packaging, natural and non-toxic ingredients, high post-consumer recycled content and recyclability.
www.greencalgary.org/ecostore.

Open Tuesday & Wednesday 10-5:30, Thursday 10-7, Friday & Saturday 10-4.

EDUCATION

Our Education program offers a wide variety of presentations to businesses, schools and organizations to help answer tough questions about the environment, explain practical ways to become green and share Calgary-specific knowledge.

SERVICES

Commercial Environmental Services

An innovative, award-winning program that has assisted hundreds of Calgary companies in finding alternative disposal options for operational waste. Commercial Environmental Services provides businesses in the industrial, commercial, institutional, construction and demolition sectors with the knowledge and tools required to reduce, reuse and recycle.

Healthy Homes

Free home visits to Calgarians interested in creating a healthy living environment and reducing their ecological footprint. Topics covered include indoor air quality, energy & water conservation, waste reduction, sustainable food choices and more.

Contact Information for Organics Haulers & Compost Facilities

Haulers

PEL Recycling

Blaine Armstrong
(403) 369-3777, (403) 245-8181
info@calgaryrecycles.com
www.calgaryrecycles.com

Accepts unprocessed organics as well as paper, mixed plastic, tin and glass.

Waste Management

1-877-78GREEN
(1-877-784-7336)
www.wmcanada.com

Accepts processed and unprocessed organics as well as cardboard, paper, mixed plastic and tin. They also have waste hauling services.

Compost Facilities

Desviar Inc.

Neil Wiens
403-803-2549
neil@bio-cycle.ca
High River, Alberta

(see page 3 for a detailed description)

International Compost Ltd.

Doug Sten
(403) 236-8988
info@groundskeeperspride.com
Strathmore, Alberta

They accept processed organics (no meat) on a case-by-case basis. Do not currently accept compostable plastic.

Olds College Composting Facility

Shirley Lupino
(403) 556-4650
slupino@oldscollge.ca
Olds, Alberta

They accept processed and unprocessed organics (including meat) as well as compostable plastic (must be certified under Canadian standards) on a case-by-case basis.

City of Calgary

3-1-1

They are currently accepting yard waste (grass and other yard waste) at the East Calgary landfill at a reduced rate of \$30/tonne for residential and commercial customers.