



Scope and Regulations of Organic Waste in BC

In BC, Compostable Organics make up the largest component (up to 40%) of the waste stream.

The following materials can be diverted from the waste stream through composting: food waste, animal bedding, biosolids, brewery and winery wastes, domestic septic tank sludge, fish and hatchery wastes, manure, milk processing waste and whey, poultry carcasses, red-meat waste, untreated wood residuals and yard waste, according to BC Organic Matter Recycling Regulation (OMRR).

Composting facilities in BC are now required to have a permit or operate under an approved Waste Management Plan issued by local government if they process food waste or biosolids and produce over 5000 tonnes of compost per year. Smaller facilities will not require a permit but still must comply with OMRR. The permitting process is to increase transparency and put site-specific requirements in place to manage potential issues such as environmental impacts and odor issues.

There is no provincial ban for organic waste in BC; organic waste is managed at the regional district level. However, the Ministry of Environment has a target of 75% of the province's population being covered by organic waste disposal restrictions by 2020. Organics bans have been implemented in three regional districts (covering approximately 64% of BC's population); the primary focus is food scraps and yard trimmings. There is also a growing list of communities with curbside collection of food scraps.

Processing Organics in BC

Compost facilities in BC range from; simple open-windrow operations carried out at landfills, to covered fully aerated static piles, to enclosed forced aerated composting systems, to facilities that use anaerobic digestion technology to produce energy from organic feedstocks. The City of Surrey is expected to open a biofuel facility in 2017, which will be the largest of its kind in North America. This facility will provide renewable natural gas for its waste collection vehicles and for heating and cooling Surrey's City Centre as well as produce a high-end compost.

Onsite or locally based composting is an important part of organic waste diversion for yard trimmings and food scraps and provides additional benefits. Benefits include decreasing transport to regional facilities and easily accessible compost to enrich local landscapes and gardens. The University of British Columbia is an example of a closed-loop system where food scraps are collected at campus buildings and private residences, and are deposited at an in-vessel composting facility on campus. Controlled accelerated composting occurs in an enclosed system that eliminates the risk of odors and pests.

In many other communities, backyard compost bins are provided at reduced rates. Organizations such as the Compost Education Centre in Victoria and City Farmer in Vancouver provide educational programs and resources to get individuals and organizations started, engaged, and self-sufficient with composting.

Composting Challenges

Contaminants in organics can result in more materials going to garbage. Small contaminants that break down or are not screened out contaminate finished compost, which can eventually release materials into the environment. Plastic bags, disposable coffee cups, glass, pet waste, and fruit stickers are common contaminants. Common contamination rates of 2-3% may seem low, however rates are weight-based and organics are relatively heavy compared to contaminants, which are often plastics.

Plastics marked compostable or biodegradable such as bags, cups or cutlery can cause confusion. Most compost facilities cannot process these materials and consider them contaminants because they lower the value of compost.

Public complaints relating to odors can halt compost operations or prevent new facilities from opening. Another challenge, particularly in BC, is facilities in close proximity to residential land, particularly in mountainous areas where habitable land is limited.

Food Waste – A Big Opportunity

The Food and Agriculture Organization of the United Nations estimates that one-third of all food produced for human consumption in the world is wasted. Producing wasted food:

- Occupies almost 1.4 billion hectares of land; greater than the total land areas of Canada, India and Sudan combined
- Produces a carbon footprint of 3.3 Gtonnes of CO₂; third top emitter after USA and China
- Uses about 250 cubic kilometers of surface and groundwater; equivalent to over 10X the volume Okanagan Lake

In Canada, much of the food waste occurs from consumers buying too much and throwing away what they do not eat. According to the National Zero Waste Council, 47% of food waste comes from consumers, with the remaining bulk of the waste occurring in processing (20%), retail stores (10%), farms (10%), hotels and restaurants (9%).

Initiatives are developing to reduce food waste – organizations such as Food Stash Foundation and Quest Food Exchange accept food from grocers and restaurants that would otherwise be disposed, and instead distribute it to those in need.

Recent BC Ministry of Environment Waste Composition Studies found that approximately 25% of residential waste discarded is avoidable food waste. For residents with curbside food scraps collection programs, 50% of organics were avoidable food waste. This demonstrates significant opportunities to reduce household food waste which can save resources and improve sustainability.

Learn more about organics waste and diversion at the 43rd annual RCBC Zero Waste Conference held in Whistler, BC from June 21-23, 2017, as industry professionals from the government, non-profit, and business sectors discuss developing a provincial collaboration. Register today at www.rcbcconference.ca.