

Regional District of Nanaimo Commercial Food Waste Ban

Regional District of Nanaimo, BC



Population: 151,508
Land Area: 2,038.1 km²
Density: 71.9 persons/km²
Median Age: 49.3
Housing Mix: SF/MF 86:14
**2012 Regional District disposal rate:
350 kg/capita/year**

Program Highlights / Summary

A waste composition study completed in 2004 confirmed that 35% of total waste sent to landfill was compostable organic material. Consequently, in June 2005, in accordance with the RDN's Zero Waste Plan (2004) and the Organics Diversion Strategy (2005), the RDN introduced a landfill ban on the disposal of food waste from all commercial premises.

This ban was developed and implemented in collaboration with waste haulers, commercial food waste generators and composting companies. This collaborative approach ensured that all stakeholders had advance notice of this important zero waste initiative. In particular, waste haulers and their customers were encouraged to devise cost effective systems to comply with the ban that met their individual situation. The RDN's role was to facilitate communication, innovation, competition and compliance, but not get involved in direct program delivery. Enforcement consists of load inspections and surcharges at disposal facilities by staff as well as on-site education and compliance checks by the RDN's Zero Waste compliance officer.

Program results have been positive and economical. As a regulator the RDN does not pay for collection or processing costs, consequently, at an in-house cost of \$15 per tonne per year, the commercial organics ban has been an extremely cost-effective local government waste diversion initiative. In 2006 (the first year of the disposal ban on commercial food waste), over 4,200 tonnes of commercial food waste was diverted from disposal representing a recovery rate of 48% of the organic material in the waste stream and a reduction of 30 kg per capita. Diverting this waste from disposal also contributed to reducing the RDN disposal rate from 553 kg per capita in 2005 to 517 kg per capita in 2006. However, since then this amount has levelled off to an average of 3,400 tonnes annually, which represents a recovery rate of 33% and a reduction of 21 kg per capita per year. Nevertheless, the commercial



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food waste ban and the organics diversion strategy are recognized as the most significant contributors to the RDN's per capita disposal rate of 350 kg in 2012.

Program Details

Organics Diversion Strategy

A waste composition study completed in 2004 confirmed that 35% of total waste sent to the RDN landfill was compostable organic material. That is why the RDN Zero Waste Plan, approved in 2004, identified organics diversion as the primary means to reach the goal of 75% diversion by 2010.

The Organics Diversion Strategy (ODS) was approved by the RDN Board in February 2005 to provide the general public and the business community with information on how commercial and residential organic waste would be diverted from disposal. The strategy described what was meant by organic waste (food waste, compostable paper products and yard waste), who would be required to divert organics (commercial, institutional and residential generators); how organic waste would be diverted (food waste collection, yard waste drop-off); first steps (commercial food waste); next steps (residential food waste); and the timeline for implementation.

Regulation

In accordance with the timeline in the ODS, in April 2005 the RDN Board approved a ban on commercial food waste to take effect June 1, 2005. In May 2005, the Board amended the RDN Solid Waste Management Regulation Bylaw 1531 to include a prohibition on the disposal of commercial organic waste. The prohibition, effective June 1st, was phased-in over six months to ensure that affected organizations took the necessary steps to comply with the prohibition with the six-month window.

Under Bylaw 1531, "Commercial Organic Waste" means compostable material including raw and cooked food waste from a commercial premise and includes but is not limited to: fruits and vegetables; meat, fish, shellfish, poultry and bones thereof; dairy products; bread, pasta and baked goods; tea bags, coffee grounds and filters; soiled paper plated and cups; soiled paper towels and napkins; soiled wax paper, food soiled cardboard and paper; and egg shells.

The Bylaw defines "commercial premise" to mean businesses and institutional facilities that generate commercial organic waste including food wholesalers / distributors; food and beverage stores; community food services; food services and drinking places; as well as educational and health care facilities generating compostable organic material.

Under the Bylaw, any person who delivers municipal solid waste (MSW) containing organic waste pays a fine of double the current tipping fee for MSW. In 2012 the tipping fee for MSW was \$115 per

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Acceptable
COMPOSTABLE MATERIALS

- Fruits and Vegetables
- Meat, Fish, Poultry and Bones
- Dairy Products
- Bread, Pasta, Baked Goods
- Tea Bags, Coffee Grounds, and Filters
- Paper Plates and Cups
- Paper Towels and Napkins
- Waxed Cardboard
- Waxed Paper Cups
- Food Soiled Cardboard and Paper
- Egg Shells
- Wooden Stir Sticks
- Wooden Chop Sticks

Non-acceptable
MATERIALS (GARBAGE)

- ALL PLASTICS
 - Creamers
 - Straws
 - Lids
 - Plastic Wrap
 - Bags
 - Utensils
 - Wrappers
 - Styrofoam
 - Condiment Packaging
- ALL METALS
 - Lids
 - Tin
 - Foil
 - Cutlery
- Aluminum

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tonne, consequently the fee for MSW containing organics was \$230 per tonne.

Collaboration

The RDN developed and implemented the Commercial Food Waste Ban in collaboration with waste haulers, commercial food waste generators and composting companies. In particular, waste haulers and their customers were encouraged to devise cost effective systems to comply with the ban that met their individual situation. The RDN role was to facilitate communication, innovation, competition and compliance, but not get involved in direct program delivery.

The RDN role was also to be responsive to stakeholder concerns resulting in a realistic and practical focus on large and medium generators (more bang of for the buck) as well as deferring the application of the ban to “front-of-kitchen” operations at fast food restaurants and cafeterias until residential food waste collection programs were in place as this would ensure that their customers were already fully educated regarding food waste diversion.

Promotion / Education

RDN staff implemented an extensive communications and education program including direct contact with food waste generators and waste collection companies by mail, telephone, stakeholder meetings and site visits. A comprehensive database that included approximately 650 commercial food waste generators subject to the ban was developed. The database permitted staff to recover and report on the number and type of contacts made (phone calls, site visits, letters sent, etc.), the type of organization, relative diversion potential of the organization (i.e., large, medium, or small generator) and compliance status. Over time the database has allowed staff to efficiently monitor compliance and direct well-focused education and enforcement activities with particular focus on large generators and medium food waste generators.

Education packages were produced and distributed, using mailing lists generated from the database, to assist affected organizations in complying with the disposal prohibition. Materials produced included posters, information booklets, and web site enhancements. During the six-month implementation phase of the ban, two temporary co-operative education students conducted over 200 site visits to educate, check progress and acquire feedback which was then incorporated into later site visits.

The primary message communicated to stakeholders was that composting food waste is sustainable waste management and it is the right thing to do. The secondary message was that the ban was a non-prescriptive program. The RDN, as the regulator, established the rules and performance objectives and then allowed



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businesses to comply using the most cost-effective and efficient methods for their operations.

Enforcement

Prior to the implementation of the commercial food waste ban in 2005, the RDN had already banned gypsum, land clearing waste, corrugated cardboard, recyclable paper, scrap metal and tires from landfill disposal. RDN operations staff at the RDN landfill and transfer station visually inspected loads for prohibited materials and issued a surcharge to the hauler of double the tipping for non-compliance.

However, given that food waste in commercial loads was more difficult to detect, the program relied on information from haulers and generators to ensure that all affected businesses were in compliance. Due to the emphasis on collaboration and education, enforcement was not a major issue and fines were minor and were not even considered as a potential source of revenue. In 2007, with the addition of commercial food waste, yard waste, wood waste and stewardship materials to the list of prohibited wastes, the RDN created a new position of Zero Waste Compliance Officer to enforce landfill bans and respond to illegal dumping incidents. When prohibited materials such as food waste are identified at the landfill, this position is responsible for contacting haulers and generators to work with them to ensure that food waste is collected for composting.



Supporting Policies and Regulations

The need to divert organics from disposal in the RDN had been recognized in the solid waste management planning process (SWMP) since 1996 when the original 1988 SWMP was amended to include a 3Rs Plan. This Plan, developed under the backdrop of a controversial landfill siting process, established an aggressive waste diversion target of 77%. This target was to be met through the implementation of programs in three phases: (1) residential and ICI recycling programs including disposal bans; (2) construction / demolition waste bans; and (3), a regional compost facility with residential and ICI collection programs.

Following approval of the 3Rs Plan, the RDN issued an RFP for a privately owned and operated centralized composting facility to process residential and ICI organic wastes. However by 1999, the RDN abandoned the RFP process and instead chose to encourage private sector investment through the establishment of a licensing system for composting facilities as well as a ban on commercial food waste once a facility was established by the private sector. Based on this policy, a privately owned and operated in-vessel composting facility opened in Nanaimo in April 2004.

In July 2004 the RDN amended the SWMP to evolve the 3Rs Plan into a Zero Waste Plan (with the same 77% diversion target) and to resolve the landfill siting process by choosing not to site a new landfill and instead continue to maximize waste diversion and optimize capacity at the existing landfill. The 2004 SWMP amendment also confirmed the proposed disposal ban on organic waste from ICI generators (i.e., grocery stores, institutions and restaurants).

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Program Results

Financial Data

The RDN Commercial Food Waste Ban provides cost-effective diversion of food waste. As a regulator, the RDN was not required to provide any capital investment for collection or processing, as these costs were borne by the private sector. In 2005, total in-house start-up operating costs related to collaboration, education and enforcement were roughly \$130,000, consisting of \$25,000 for education and communication materials, \$37,000 for two temporary staff to create the database, and \$75,000 for existing staff manage the program. In subsequent years operating costs are roughly at \$50,000 annually including staff time. These costs are recovered primarily through tipping fees. The RDN Commercial Food Waste Ban is cost-effective in that the total in-house cost to the RDN is \$15 per tonne based on average diversion of 3,440 tonnes annually.

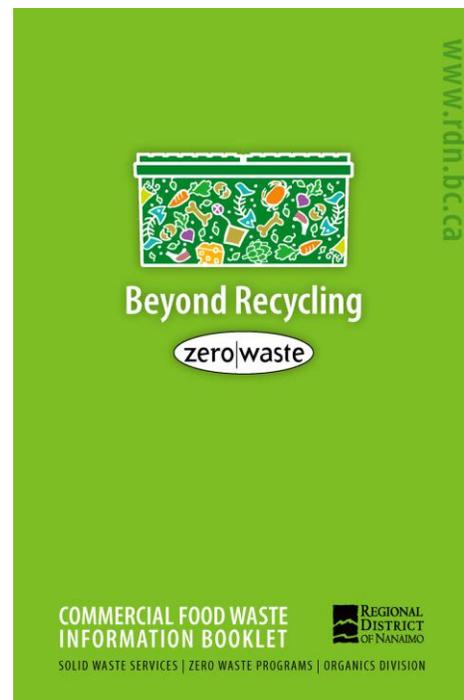
Environmental

In 2006 over 4,200 tonnes of commercial food waste was diverted from disposal which represents a recovery rate of 48% of the organic material in the waste stream and a reduction of 30 kg per capita. Diverting this waste from disposal contributed to reducing the RDN disposal rate from 553 kg per capita in 2005 to 517 kg per capita in 2006. However, since then this amount has levelled off to an average of 3,400 tonnes annually, which represents a recovery rate of 33% and a reduction of 21 kg per capita per year.

To increase the recovery rate, the RDN will be considering including “front-of-kitchen” operations in fast food restaurants and cafeterias now that the residential green bin program has been fully implemented and residents are educated on food waste diversion. Nevertheless, the commercial food waste ban and the organics diversion strategy are recognized as the most significant contributors to the RDN’s per capita disposal rate of 350 kg in 2012. The program is also responsible for reducing 3,000 tonnes of CO₂e emissions annually.

Social

The long-standing landfill disposal crisis served to build community and stakeholder support for aggressive landfill diversion programs. Combined with an open and transparent program planning and implementation process (2004 Zero Waste Plan, Organics 2005 Diversion Strategy, 2006 Disposal Ban), the RDN Commercial Food Waste Ban was embraced by stakeholders who felt it was “the right thing to do”. The ban also contributed to community economic development with respect to employment and innovation associated with collection and processing.



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Lessons Learned

- Developing a plan and policy in advance of implementation provided stakeholders with an opportunity to provide input and “buy-in” to the program.
- Prohibiting the disposal of food waste through bylaw and providing a six-month phase-in created for a ‘carrot and stick’ approach that not only motivated early adopters but established a deadline for laggards.
- Although disposal bans are cost-effective, they do need on-going education and enforcement to maintain high diversion levels. The RDN will be re-launching the program in 2014 to increase the recovery of food waste.

Communities with Similar Programs

The Cowichan Valley Regional District (CVRD), the southern neighbour to the RDN, also prohibited commercial food waste from disposal in 2005.

In 2011 Metro Vancouver announced that in 2015 organic materials, including food waste would no longer be accepted for disposal. Metro Vancouver will be holding consultations on the details of the disposal ban such as phasing in, exclusions and enforcement in 2014.

In 2012 the Capital Regional District (CRD) approved the regional kitchen scraps strategy, which implements the diversion of kitchen scraps in a phased approach, with a full ban on landfill disposal in 2015

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