June 2012

Partners for Climate Protection

Greenhouse-Gas Reduction Initiative of the Month

District of Mission's "Rot Pot" Curbside Food-Waste Program

Municipal Profile

Population: 36,426

PCP Member since 2003

Having joined Partners for Climate Protection in 2003, the District of Mission, British Columbia has now completed both its corporate and community energy and GHG inventories. In 2011, the Municipal Council approved Mission's Community Energy and Emissions Plan (CEEP), an initiative that was developed over the course of eight months and involved staff, stakeholders and the community. Research conducted for the CEEP found that the emissions associated with solid waste make up about 10% of community emissions.

Background

Food waste had been collected separately in Mission for more than ten years. Residents had been encouraged to use at-home composters, or to place food scraps in with yard waste. The municipality found, however, that this approach was largely underutilized, and waste audits showed that approximately 50% of curbside garbage could be composted.

To find out what was preventing residents from separating food waste from other garbage, and whether the provision of designated bins would increase participation, a ten-week pilot project involving 80 households was conducted between June and August 2010. The project involved two mail-out surveys, collection of baseline data, distribution of green bins and kitchen catchers with educational material, analysis of all curbside compost materials, and tracking of data. Over the course of this pilot project, 62 of the 80 households used the organic bins at least once.

Implementation and Approach

Building on the success of the pilot project, Mission adopted a community-wide curbside organics program, and the municipality began distributing the green bins (dubbed "Rot Pots") to 9,100 households in June 2011. The organics program includes all food wastes, contaminated paper, and yard waste.

"Despite the fact that we had been collecting food waste with yard waste for years, the idea wasn't really catching on," says Jennifer Meier, Mission's Environmental Coordinator. "We knew that handing residents another brochure wouldn't make a significant difference, so we opted for the bins."

Mission began by developing a project charter and a communications plan for the program, then put out a Request for Proposal for the containers. Mission chose a 46-litre Norseman-brand bin for its strength and ease of handling. The collected organics are sent to Transform Compost Systems (TCS) at Mission's landfill for composting, rather than the private processor in Abbotsford that they had previously used. The finished compost is marketed by TCS.

At TCS, the collected organics are heated to 80ºC to destroy bacteria and viruses and, as TCS staff discovered, the temperature of the compost pile is high enough to cook a chicken dinner!

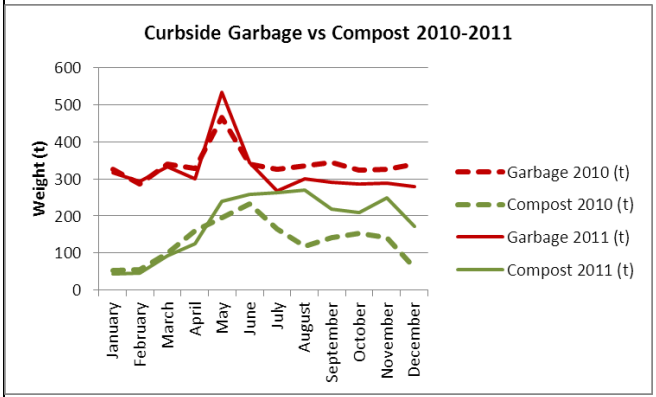
Top: "We had the food in a microwaveable bag inside two additional bags for four hours," said Dr. John Paul, President of TCS.

Bottom: Two TCS employees enjoy the resulting meal. "The chicken was perfect, but the potatoes and carrots could have used another half hour," said one. Photos courtesy of the District of Mission.

Total project costs came to $325,000, the majority of which ($300,000) was spent on purchasing the containers.

Results

The Rot Pots have now been in use for slightly less than one year and, based on informal curbside drive-by audits, the average participation rate is 35%. As shown in the graph at left (*courtesy of the District of Mission*), organics collection rose significantly once the Rot Pots were distributed. Mission is currently diverting about 1,200 tonnes of food waste per year and, within five years, hopes to increase that to 2,000 tonnes.



For Earth Day 2012, Mission held a compost giveaway event that allowed residents to pick up free compost from the landfill. "Quantities were limited to one cubic yard per household, and we had 166 vehicles come through," reports Meier. "The level of enthusiasm was enormous! The event was advertised from 10:00 a.m. to 2:00 p.m., but we had people lining up at 8:30. I think the program has really closed the loop for people who already separate their food waste, and I'm hoping that it may sway those who haven't yet given it a try."

Average annual GHG reductions are estimated to be 1,300 tonnes per year for the next ten years. Additional emission reductions were achieved by sending the organic material to the local landfill, rather than to an independent processor in Abbotsford. Although Mission hasn't yet been able to quantify the emission reductions related to transportation, Mike Younie, Mission's Manager of Environmental Services, has pegged the cost savings at $7,500 per year, based on a gas price of $1.20/litre, and a savings of about 6,250 litres of diesel fuel each year.

The municipality has also estimated that the organics collection program should extend the life of its landfill by about ten years.

Lessons Learned

Meier says that conducting a pilot project helped them to tweak any issues. For example, since organics programs inevitably must deal with the "yuck" factor from residents, about halfway through the pilot project, Mission began giving out kitchen catchers: smaller bins that people can keep in their kitchens. "For some people, that made a real difference, and we got a higher participation rate," says Meier. Although the municipality itself does not distribute bin liners, they do encourage people to line the bins with newsprint to reduce the number of times they need to be cleaned. Meier also noted that "the program and the name really caught on. Now, if you go to a local building supply store, they sell bin liners and market them under the Rot Pot name."

There were few challenges associated with program implementation, although there were some timing issues with the delivery of the bins, which came from Ontario. "We were trying to get all the bins out to residents before July, to avoid having them sit outside the homes of people who were on holiday," says Meier. "The Rot Pots were generally well received by the public; there were a few refusals and returns, but we got mostly positive feedback."

Many B.C. municipalities also have to deal with the issue of bears getting into the bins, and Mission was no different. "The bins are not bear-proof by any means, but we make sure that people know to store the bins inside a secure building or enclosure until the morning of the collection," she says. A Frequently Asked Questions brochure was also distributed to all residents with their bins, so that this information was readily available.

Younie says that the most important part of their process was conducting the pilot project first. "We prepared a very solid project plan with a focus on communication—to residents, Council and the media," he says. "You need to prepare people for change, and involve community leaders to help promote the project."

Future Direction

Younie says that Mission is now considering going to bi-weekly garbage collection or a user-pay system. "Having the Rot Pots will make it easier to do that," he says. "The popularity of the Rot Pots has also resulted in an interest in composting on the business side, so we hope to start some sort of pilot waste-diversion project with the business community."

Further Information

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For more information about Mission's Rot Pots, please visit: http://www.mission.ca/municipal-hall/departments/engineering/waste-management/rot-pots/. The full results of the pilot project can be found at: http://www.mission.ca/wp-content/uploads/08-rca100419-linked.pdf (beginning on p. 18).

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The Partners for Climate Protection (PCP) program is a network of Canadian municipal governments that have committed to reducing greenhouse gases and acting on climate change. PCP is the Canadian component of ICLEI's Cities for Climate Protection (CCP) network, which involves more than 1200 communities worldwide. PCP is a partnership between the Federation of Canadian Municipalities (FCM) and ICLEI—Local Governments for Sustainability. PCP receives financial support from FCM's Green Municipal Fund.

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