Best Practices for Multi-Family Food Scraps Collection
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1.0 Introduction and Background

Programs to divert food scraps from the waste stream and landfill are becoming increasingly common across North America. Cities as diverse as Burnaby, British Columbia and Boulder, Colorado have rolled out targeted programs to collect source separated food scraps from their residents. The vast majority of these initiatives, however, are targeted to those living in single-family residences (detached homes or townhouses with 5 or fewer units). Collection programs in multi-family residences are comparatively rare, despite the large number of residents living in this sector in major urban centers.

The multi-family sector is generally considered to encompass all residential buildings comprised of six or more units. In Metro Vancouver, about 38% of the population lives in multi-family buildings. In 2008, this represented 864,055 individuals out of a population of 2,273,095. Building types include low rise apartments, high rise apartments, condominiums and some townhouses.

Overall recycling rates are typically significantly lower in the multi-family sector than the single-family sector. Metro Vancouver’s 2008 data, for example, suggests that the single-family sector diverts about 44% of their waste stream from the landfill, while the multi-family sector only diverts 15%. This leaves about 400,000 tonnes to be disposed from the single-family sector and about 200,000 tonnes from the multi-family sector. This discrepancy in diversion rates can be explained by the factors discussed in section 2 below.

The single-family sector diverts about 44% of their waste stream from the landfill, while the multi-family sector only diverts 15%.

Despite these challenges, multi-family food scrap collection programs have been initiated in a limited number of urban centers in North America. The Halifax Regional Municipality in Nova Scotia, Hamilton, Ontario and San Francisco, California all have well developed programs that involve the majority of multi-family buildings. Toronto, Ontario and Seattle, Washington have comprehensive pilot programs and are currently expanding collection programs to all multi-family buildings. Even in their early stages, many lessons can be learned from these rapidly evolving programs.

In British Columbia, an increasing number of municipalities have expressed interest in expanding food scrap collection to the multi-family sector. Port Coquitlam and Richmond have commenced pilot programs while other cities such as Burnaby and Port Moody are in the planning stages of development. Given increased interest in this topic in British Columbia and a lack of aggregated data from other jurisdictions, the intent of this report is to provide municipalities, regional governments and other interested parties with multi-family food scrap collection best practices to date.

The research for this report was completed with the assistance and collaboration of the Recycling Council of BC’s Organics Working Group. The relevant jurisdictions were studied by reviewing available literature, reports and program materials. Individuals with direct experience in each of the programs were also interviewed by phone. Given the small number of jurisdictions with active multi-family food scrap programs, successful multi-family recycling programs were also studied to gain a better understanding of how source separation of waste materials can be supported in multi-residence settings.

Food scraps and food-soiled paper make up approximately 40% of the remaining waste stream of household garbage. When it is not source separated and composted, it remains a significant source of landfill-generated methane. Multi-family food scraps collection programs, therefore, will play an important role in moving the Province towards Zero Waste. Successful programs will also significantly decrease the greenhouse gas (GHG) emissions associated with BC’s waste management. The Recycling Council of BC’s intent is to provide information that will support the adoption of widespread food scraps collection programs in British Columbia’s multi-family sector.
2.0 Barriers in the Multi-Family Sector

The multi-family sector is significantly different than the single family sector in a variety of respects. Many of these differences present challenges to the design of successful waste diversion programs and, in part, explain the discrepancies in diversion rates between the sectors. There are also a variety of unique barriers in the multi-family sector that complicate the adoption of successful food scraps diversion programs.

Examples include:

- Multi-family buildings are generally not serviced by municipal curbside programs.
- Greater individual mobility and tenant turnover in the multi-family sector.
- Waste is often collected by private haulers instead of municipalities and aggregated with commercial waste.
- Private haulers are not often franchised or otherwise centralized by government control.
- Multi-family buildings are generally not built with source separation in mind, resulting in limited space for recycling and food scraps diversion.
- Diversion areas can be poorly lit, malodorous or inconvenient to access.
- Garbage areas are often the most prominent and easiest to access, especially in high rise towers with garbage chutes.
- It is difficult to determine who individual violators are in multi-family buildings, given the communal nature of garbage, recycling and food scrap containers.
- The communal nature of multi-family waste systems make financial tools, such as fines and user fees, difficult to implement and target towards individual violators.
- Significant differences exist between individual buildings and building types, making program standardization impossible.
- Building managers/owners are often hesitant about diversion programs given perceptions about cost, tenant participation, odor and bugs.
- Building managers/owners are often extremely busy with other priorities that receive greater attention.
- Communication channels are often underdeveloped between stakeholders, including policy makers, haulers, residents and building managers/owners.

As a result of these barriers, diversion levels in the multi-family sector lag significantly behind all others, including the single-family, institutional, commercial and industrial (ICI), and Construction and Demolition (C&D) sectors. Diversion programs are generally more underdeveloped than other sectors and participation rates are typically low even when diversion opportunities are present. Contamination levels in recycling and food scraps bins are also often more problematic in multi-family buildings, which presents challenges for downstream processors.

While these barriers are not insurmountable, it is important to fully understand and appreciate their influence so that successful strategies can be applied to overcome them.

3.0 Materials Collected

The types of materials collected in the jurisdictions studied for this report are almost identical. Each of the five jurisdictions accept a full range of food scraps in their programs, including fruits, vegetables, meat, shellfish, fish products, pasta/rice, bread/grains, shells and bones. Food-soiled paper is also accepted in each of the programs, including items such as pizza boxes, paper bags and boxboard. Yard and plant waste is permitted and is mixed with food scraps and food soiled paper. For the purposes of this report, this entire array of materials is referred to as “food scraps” for simplicity and to provide consistency with emerging programs in British Columbia.

Where the types of materials accepted in multi-family food scraps collection programs differ is in the type of liner bags that are permitted. This issue is discussed in Section 5.3 below. In addition, the City of Toronto accepts diapers and pet waste, while the other programs do not. Given Toronto’s difficulties surrounding odor issues and the large percentage of diapers that are simply removed from the waste stream along with food scraps but then landfilled as “residual”, these materials are not recommended in residential level food scraps collection programs. Targeted programs to address these waste streams may be appropriate in the future, as specific technologies are developed.
The capabilities and requirements of the processing facility available to manage the food scraps collected in the program will largely dictate what types of materials can be accepted. Processing capacity should be confirmed before the program is launched to prevent changes in communications materials related to accepted materials as the programs are rolled out. Finally, there are jurisdictions with a mixed service provision model. Buildings are typically permitted to receive collection services from the municipality or from private haulers, depending on their own priorities and wishes. In Hamilton, about 85% of multi-family buildings have elected to receive collection from the municipality while the rest receive the service from private haulers. When municipalities control collection services, there is greater flexibility to design the collection program according to their priorities and encourage participation. In jurisdictions where the collection services are provided by private haulers, however, it is still possible for municipalities to encourage separate food scraps collection. Section 7 outlines some of these potential policies. The examples provided by the five jurisdictions studied for this report prove that food scraps collection programs can be tailored to any service provision model.

4.0 Collection Details

Garbage, recycling and food scraps collection systems differ extensively amongst jurisdictions and even between buildings within individual municipalities.

4.1 Service Provider

The actual provider of collection services varies between jurisdictions. In many cities, the multi-family sector is considered part of the commercial sector and serviced by private haulers who negotiate their own contracts between individual buildings for garbage and possibly recycling and food scraps collection. In Halifax, for example, most multi-family buildings are serviced by private haulers who are required by local bylaws to offer separate food scraps collection services along with garbage pickup. The details of collections services, however, are up to the hauler and building to negotiate.

In other jurisdictions, the municipality itself provides collection services to multi-family buildings. In the City of Toronto, garbage, recycling and food scraps collection services are the responsibility of the municipality. Garbage is collected according to a volume-based rate structure while recycling and food scraps collections are provided free of charge. Even in these jurisdictions, however, the actual hauling of waste is typically done by private contractors, who collect waste according to the specifics of their contracts with the municipality.

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4.2 Collection Frequency

To reduce odors and prevent overfilling of containers, food scraps collection frequency is critical. For buildings with private haulers, collection frequency is typically negotiated directly between the hauler and the buildings and is based on the needs of each particular building. Halifax has a local bylaw that requires haulers to service buildings for food scraps collection at a minimum of once per week, though local experience indicates that most buildings are serviced on a more frequent basis.

Programs with municipal service providers typically provide collection services on a more regular schedule. In Toronto and Seattle, food scraps containers are collected once a week. The City of Hamilton collects food scraps once a week in buildings with less than 200 units and twice a week in buildings with more than 200 units.

4.3 Fee Structure

The fee structure of buildings' collection services can be utilized to encourage participation in food scraps collection programs. If buildings are charged more, by volume, for garbage collection than recycling and food scraps, building managers and owners will have a direct financial incentive to facilitate participation in their building. This fee differentiation is most
is most stark in Toronto, where garbage is charged by volume while food scraps and recycling are collected for free by the municipality. Under Seattle’s public program, the collection of food scrap carts cost buildings one third less than equivalent-sized garbage containers. Other jurisdictions do not take advantage of their fee systems to encourage participation in their programs. This represents a lost opportunity. In Hamilton, for example, garbage, recycling and food scraps collection is all provided to buildings serviced by the municipality free of charge.

In jurisdictions and buildings that are serviced by private haulers, municipalities are generally not able to influence the rates that haulers charge buildings for different collection services directly. Municipalities can, however, indirectly influence the rates buildings pay through the tipping fees charged at public facilities. Municipalities can raise tipping fees for garbage, subsidize food scraps tipping fees and/or place a punitive levy on garbage. The tipping fee for garbage, as an example, is 40 per cent higher in Halifax than the food scraps tipping fee. To the extent that tipping-fee costs are reflected in the collection fees haulers charge buildings, this cost differentiation will be passed on from haulers to buildings and will work towards making garbage collection more expensive than food scraps collection. The greater the difference between tipping fees, the greater the costs and/or savings that will be passed on by haulers to the buildings they service.

5.0 Containers and Liners

5.1 Building Containers and Carts

Every multi-family building serviced by a food scrap collection program needs communal containers and/or carts where residents deposit, and the hauler picks up, source separated materials. As every building is different, centralized containers need to match the space considerations and volume considerations of each building. Unlike single-family collection programs, there is generally not one container or cart that will work for all buildings within a jurisdiction.

In Halifax and Toronto, building managers have an assortment of containers to choose from, offered for sale and/or rent by an array of retailers and haulers. The City of Seattle offers multi-family buildings the choice of four different sized carts (96G, 32G or 13G), each associated with a different monthly charge. In Hamilton, buildings are provided with one free 120L cart for every 15 units.

Given the significant differences between individual building types, most programs have dedicated municipal staff who make on-site visits and meet with building managers/owners to determine what type of containers or carts are appropriate, where they should be stored and where they should be left for collection. These technical support visits are considered critical by the jurisdictions that employ them, and effectively provide building-specific solutions for appropriate collection systems. They engage building managers/owners to ensure a thorough understanding of the program and increase buy-in.

5.2 Kitchen Containers

Many programs provide residents with in-unit containers. Accepted materials are stored in the containers in individuals’ kitchens before being transported and deposited into their building’s communal bins. These jurisdictions report that the distribution of kitchen containers is a highly popular and visible way to introduce the program to building residents and serves as an ongoing prompt to foster participation.

In Hamilton, Toronto and San Francisco, building managers and owners are provided with free kitchen containers to distribute to their residents. Buildings serviced by private haulers in
Halifax are encouraged, but not required, to purchase their own containers for their residents. Seattle has generally not had the budget to provide kitchen containers to the multi-family sector, although it has recently received a grant to distribute a limited number of containers to residents.

In the early stages of Halifax's program, building managers had a difficult time retaining kitchen catchers during tenant turnover. In response to this problem, managers have begun including the kitchen container in tenants’ lease document and adding it to their damage deposit. This is a program detail that has now been emulated by other jurisdictions with general success.

5.3 Container Liners

In the food scrap collection world, there is an ongoing debate about the use of various container liners to aid collection. On one hand, the use of compostable plastics has the potential to reduce the “yuck factor” and increase participation. The cost, overall carbon footprint, and the fact that materials are often inadvertently diverted as “residual” at composting facilities, can be a deterrent to use however. Alternately, newspaper or other paper-based products can be used effectively as liners. The type of liner bags permitted by municipalities differs extensively in the jurisdictions studied for this report. Ultimately, the capabilities of the processing facilities where collected materials are managed dictate liner choice by various programs.

In all five of the programs, residents are permitted and encouraged to use newspapers, boxboard or other forms of food soiled paper to wrap their materials before placing them in their building’s central container. Halifax is the only jurisdiction studied that does not permit residents to use any type of non-paper liner bag, as their facilities are incapable of dealing with those materials. In Hamilton, San Francisco and Seattle, bags certified as compostable by the Biodegradable Products Institute (BPI) are accepted. According to those interviewed, the large scale facilities used to process collected material have not had any major problems processing the liners or materials contained within them.

The City of Toronto is the only program that permits residents to line their containers with plastic, non-compostable bags. These bags are separated from the food scraps at the processing facility and eventually landfilled. Given the number of negative reports and media attention surrounding plastic contamination in Toronto’s food scraps program, it is unlikely that other jurisdictions will adopt this aspect of Toronto’s program.

In those jurisdictions that permit their residents to use compostable bags, interviewees provided anecdotal evidence that the use of bags was a critical factor in getting property managers/owners and residents to actively participate in the program. The “yuck factor” of source separated food scraps can be a critical barrier to participation and liner bags help to overcome this problem to some extent. Liner bags can also extend the life of containers and totes and require them to be cleaned less frequently. For this reason, many haulers also prefer using liners in centralized containers where possible.

The use of bags was a critical factor in getting property managers and residents to actively participate in the program.

On the other hand, the use of liner bags makes it harder for building managers, haulers and processing facilities to notice and track contamination. When food scraps are contained within bags, it is difficult to know when non-accepted materials (plastic, metal etc.) are mixed in with the food scraps. At the same time, when compostable bags are permitted, some residents invariably use plastic bags. Given the subtle differences between bags, it can be difficult for a processing facility to differentiate between compostable and regular plastic, so it all gets removed as garbage. Considerable controversy also exists about the life cycle impacts of using compostable bags in food scraps collection programs, and the fact that they are fossil fuel-based and require considerable energy to manufacture and transport. As a final consideration, the use of liner bags will inevitably increase the cost of the program, either to the municipality if they provide bags free of charge or to residents if they need to buy liners themselves.

As programs become more established, a more conclusive outcome on the merits of various bag liners will likely be determined as it relates to environmental, social and processing factors.
6.0 Education and Outreach

Educational materials and outreach programs are important aspects of any diversion programs. Effective materials and programs provide an opportunity to educate relevant stakeholders on the details and benefits of the program.

6.1 Educational Materials

In all five jurisdictions studied, the municipality provides a variety of educational materials to multi-family buildings to explain the program to building residents. Brochures with detailed information, posters for communal areas (lobbies, elevators etc.), clear pictorial signage for the building’s containers and letters to individual tenants are all common to these programs. Each also has a detailed website where residents can learn about every aspect of the program and receive answers to frequently asked questions. Given the multicultural nature of most urban centers, these materials are typically provided in a number of languages, based on the demographics of particular buildings and neighborhoods.

For those jurisdictions that distribute kitchen containers to their residents, educational materials are generally distributed within the containers, which provides a complete toolkit to encourage tenant participation. As many multi-family buildings have high turnover rates, educational campaigns need to be continuous and intensive to bring new tenants up to speed on the program. Many jurisdictions have found that the point of contact between tenants and building managers when new leases are being signed is a critical opportunity for the tenant to receive information on relevant diversion programs in their new building.

Press releases and highly visible photo opportunities can also be utilized to amass local media attention, which can be exploited to spread the word about new programs. New social media tools like Facebook and Twitter are also powerful instruments to garner attention. The City and County of San Francisco has found that their advertisements on their fleet of garbage, recycling and food scraps trucks are an effective way to raise awareness of their programs.

6.2 Outreach Programs

Outreach programs that permit municipal staff to speak directly with building managers, owners and/or residents are an important aspect of each of the programs reviewed. Site visits by municipal staff, or contractors hired for outreach purposes, provide an opportunity for face-to-face communication between all important stakeholders as part of broader community-based social marketing initiatives. The amount of human resources targeted towards the programs in each of the jurisdictions studied has been significant, and was considered essential by those interviewed.
The most successful outreach programs have focused on building managers and owners. Site visits allow municipal staff to explain the program and how it will benefit the building (financial savings etc), determine what types of containers are appropriate and come up with innovative ways to overcome space constraints. These meetings can also involve maintenance staff and representatives from hauling companies, as appropriate, so that the vast majority of potential barriers to collection are handled before program launch. Handbooks and operation manuals are also an effective tool to provide to buildings managers and owners, which explain all aspects of the program in greater detail than is required for residents.

Outreach programs targeted to the residents of individual buildings have been met with varying levels of success. Many jurisdictions reported that it was difficult to convince residents to attend open-house type events, though free food generally boosts attendance levels. A lesson learned from many targeted pilot programs indicates that meetings that residents already attend, such as tenant meetings, are an effective forum to speak directly with residents. The City of Seattle uses a hired consultant to go door-to-door within buildings to speak with individual residents about the program. San Francisco staff work directly with building managers to create an outreach program for residents based on the specifics of that building and also go door-to-door to distribute kitchen catchers and outreach information for buildings about to begin food scrap collection programs.

6.3 Volunteer Programs

To overcome the staff requirements necessitated by outreach programs, some jurisdictions have initiated volunteer programs in the multi-family sector. The cities of Mountain View, California and Portland, Oregon, for example, have developed volunteer programs to facilitate participation in their buildings’ recycling program. The City of Seattle is the only multi-family food scraps program reviewed with a comprehensive volunteer program, entitled Friends of Recycling and Composting (FORC). If building managers sign up to volunteer in the city’s FORC program, they receive a $100 credit towards their utility bills. FORC volunteers have four main responsibilities: educating their fellow residents about the program; monitoring containers for contamination; requesting educational materials from the city as required; providing feedback to the city on program success. The ultimate goal of the program is to have teams of volunteers in every building, thereby facilitating active participation in the program, while reducing the staff costs associated with outreach and feedback.

7.0 Policies and Incentives

A variety of policies and incentives have been employed by relevant jurisdictions to encourage buildings and residents in the multi-family sector to actively participate in food scraps collection programs. Both incentives and enforcement (‘carrots’ and ‘sticks’) can be used to motivate buildings to adopt food scraps collection and to persuade residents to actively source separate their compostable organic materials.

7.1 Mandatory Participation

The most common type of policy utilized by the jurisdictions studied is some form of active mechanism to require buildings to participate in a food scraps collection program. In Halifax, for example, the municipality simply requires that all multi-family buildings have a collection system in place, as defined by local bylaws. The cities of Hamilton and Toronto employ an “all-or-nothing” type approach. Buildings receiving garbage collection services from the city must also participate in the city’s recycling and food scraps collection programs, or their garbage collection service is pulled. In San Francisco, local bylaws require each building to have three color coded containers – green for food scraps, blue for recycling and black for garbage.

7.2 Space Concerns

Another common policy tool relates to space requirements for building containers. A bylaw in Halifax, for example, requires all buildings to provide space for containers, with “easy access” for all residents. As some buildings face difficulties finding adequate space for containers, cities like Seattle permit buildings with space constraints to opt out of their local collection program.
Creative solutions will be required if space constrained buildings are to participate in programs, especially since it’s vital to group all collection containers to maximize diversion and minimize contamination. One proposal would force buildings without any other options to convert parking spaces to space for diversion related containers, though this policy has not yet been implemented in any of the studied jurisdictions. To overcome some of these challenges, Metro Vancouver and the City of Toronto are both drafting related permit amendments that would require new buildings to include space for diversion related infrastructure.

7.3 Landfill Bans

A ban at the landfill of food scraps and other compostable organics can be a critical driver of collection programs. In 1998, the province of Nova Scotia instituted a food scraps ban at the landfill following groundwater contamination issues due to landfill leachate, which was the impetus behind the creation of Halifax’s comprehensive multi-family food scraps collection program. Landfill bans can also be implemented after collection programs have been unveiled, as planned in Metro Vancouver, to reinforce participation.

Landfill bans without active enforcement mechanisms, however, are merely symbolic. If enough collection vehicles are turned away from the landfill with non-source separated waste, haulers will carefully track the habits of individual buildings and refuse service to repeat offenders. In Halifax, strong enforcement mechanisms ensure contamination problems are minimized. Loads can be rejected at the region’s facilities, which serves to improve compliance from local haulers. As such, haulers typically deal with contamination problems directly with buildings. Local municipal staff also visit problem buildings themselves to work towards a building based solution.

7.4 Garbage Limits and Levies

As discussed in Section 4.3, the fee structure of collection programs can be used to encourage buildings to participate in source separation of food scraps. Increasing the tipping fee for garbage and/or decreasing the tipping fee for food scraps is another market based financial tool that can facilitate participation. The City of Hamilton is actively considering a garbage limit for buildings in the multi-family sector, which can be used to strengthen these financial tools. Garbage limits are common in the single-family sector, but have not been widely applied in the multi-family sector. Hamilton’s proposal would involve translating current one container limits in the single-family sector to a volume based limit for multi-family buildings, based on the number of units in that building. A similar policy would involve significant levies placed on garbage after a certain predetermined volume was reached. This would serve to increase the cost of disposal and encourage diversion.

7.5 Policy Gaps

While most of the jurisdictions studied have policies to ensure buildings have some sort of collection in place, policies to ensure actual residential participation are rare. San Francisco is the only jurisdiction that actually requires residents to source separate their food scraps. Interviewees at many of the other jurisdictions studies expressed frustration at the fact that...
buildings are only required to have a container and a collection system in place, to meet the minimum compliance level with local bylaws, but are not compelled to implement more comprehensive – and effective – programs. If source separation of food scraps is not taking place effectively, there is no policy mechanism backup for cities like Seattle, Hamilton and Toronto (as of yet).

Although there is not a specific bylaw to enforce source separation, standard leases used by landlords in Halifax include a section to ensure the diversion of food scraps and recyclable items. Tenants are required to agree to separate their refuse materials into three streams; recycling, food scraps and garbage.

**High rise buildings with garbage chutes had significantly lower levels of participation and higher levels of contamination than buildings without chutes.**

One of the most significant barriers to participation in food scraps collection programs relates to the issue of convenience. If placing food scraps in the garbage is more convenient than placing it in food scraps containers, participation levels will be low. As it stands, diversion infrastructure is typically sidelined in multi-family buildings and garbage containers are easier to access. The City of Toronto found that high rise buildings with garbage chutes had significantly lower levels of participation and higher levels of contamination than buildings without chutes during their initial pilot program. Placing garbage in a chute is obviously more convenient than taking food scraps down to communal containers, which explains this discrepancy.

A local bylaw requiring buildings with collection programs to ensure that food scraps containers are as convenient and easy to access as garbage containers would be an effective measure towards overcoming this factor. This would require follow up visits by city staff to enforce the regulation. Since each building has a different set of circumstances, such a bylaw would need to remain flexible to permit local staff to match the requirements for each building with the specifics of its layout. For some buildings, such a policy might necessitate the closing of garbage chutes, a politically-challenging yet effective motivator to improve diversion.
8.0 References

*Note: Phone interviews were conducted with individuals familiar with the relevant programs in Halifax, Hamilton, San Francisco, Seattle and Hamilton. For privacy reasons, their names are not published. Please contact the Recycling Council of BC if you require additional information.


9.0 Review of Multi-Family Food Scraps Collection Programs

<table>
<thead>
<tr>
<th>Program Information</th>
<th>Halifax</th>
<th>Hamilton</th>
<th>San Francisco</th>
<th>Seattle</th>
<th>Toronto</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status of Program</td>
<td>Program rollout in 1999, now includes all apartment buildings.</td>
<td>Rollout since 2007. 90% of buildings that are serviced by city are currently receiving service.</td>
<td>Incorporates the whole multi-family sector. Program rollout since 1998.</td>
<td>Currently collecting food waste/yard waste in 327 buildings, yard waste only in 2,170 buildings.</td>
<td>324 buildings currently receiving collection. Target of Dec. 2011 to get all buildings online.</td>
</tr>
<tr>
<td>Diversion Target</td>
<td>n/a</td>
<td>65%</td>
<td>70% by 2010, &quot;zero waste&quot; by 2020.</td>
<td>60% by 2012, 70% by 2025.</td>
<td>70%</td>
</tr>
<tr>
<td>Diversion Data</td>
<td>Current city-wide diversion rate of ~60%</td>
<td>Estimated building participation rate of 90%, capture rate of 20-30%.</td>
<td>Capture rate is not estimated.</td>
<td>Estimated capture rate of 28% in buildings serviced by program.</td>
<td>Estimated capture rate of 25% during pilot program.</td>
</tr>
<tr>
<td>Relation to SF Program</td>
<td>Similar rollout timelines.</td>
<td>SF pilot in 2004, rollout in 2006.</td>
<td>Similar rollout timelines.</td>
<td>Single-family programs were developed first.</td>
<td>Single-family programs were developed first.</td>
</tr>
</tbody>
</table>

| Materials Collected | |
|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Permitted Materials | All food waste (including meats, bones, seafood, bread, grains etc.), boxboard, food soiled paper, plant waste. | All food waste (including meats, bones, seafood, bread, grains etc.), boxboard, food soiled paper, plant waste. | All food waste (including meats, bones, seafood, bread, grains etc.), boxboard, food soiled paper, plant waste. | All food waste (including meats, bones, seafood, bread, grains etc.), boxboard, food soiled paper, plant waste. | All food waste (including meats, bones, seafood, bread, grains etc.), boxboard, food soiled paper, plant waste, diapers, pet waste and plastic bags. |
| Notes               | No compostable bags permitted due to limitations at processing facilities. Haulers do not collect bins if contain bags. | Compostable bags have not been problematic at the composting facility. | As diversion rates have increases substantially, contamination has become more of a problem. | Compostable bags have not been problematic at the composting facility. | Most diapers end up being landfilled. Plastic bags have been difficult to manage. |

| Collection Details | |
|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Service Provider  | Some condos serviced by the municipality - collection is contracted out. Remaining buildings negotiate own service with private haulers. | 85% of buildings serviced by municipally - collection split 50/50 between municipal staff and contractors. Remaining 15% of buildings negotiate own service with private haulers. | Buildings are serviced by two private companies, which are owned by a parent company. | Majority of buildings serviced by the city - collection is contracted out. Remaining buildings negotiate own service with private haulers. | Collection managed by the municipality, but contracted out. |
| Collection Frequency | Negotiated between hauler and building, though local bylaw requires it to be at least once per week. | Weekly if less than 200 units. Twice a week if more than 200 units. | Negotiated between hauler and building. | Once per week (if serviced by municipality). | Once per week. |
| Fee Structure      | Negotiated between hauler and building, though higher garbage tipping fee can lead to theoretical savings if diversion is high. | Garbage, recycling and food scraps collection are all free to buildings. | Cost of recycling and food scraps incorporated into garbage collection rate. | Food scraps containers cost 1/3 less than equivalent sized garbage containers. | Recycling and food scraps collection free, volume based fees for garbage. |
### 9.0 Review of Multi-Family Food Scraps Collection Programs

<table>
<thead>
<tr>
<th>Containers and Liners</th>
<th>Halifax</th>
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<th>Seattle</th>
<th>Toronto</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building Containers/Carts</strong></td>
<td>Various bins available from haulers and retailers. Bylaw stipulates what types of containers are &quot;adequate.&quot;</td>
<td>120L carts provided free to buildings. One cart per 15 units.</td>
<td>Carts provided by hauler to buildings.</td>
<td>96G $7.85/month, 32G $6.10/month, 13G $4.10/month.</td>
<td>Buildings must buy own containers - size and quantity determined during visit by staff.</td>
</tr>
<tr>
<td><strong>Space Considerations</strong></td>
<td>Bylaw stipulates that there must be adequate storage space for containers.</td>
<td>Bylaw stipulates that buildings are permitted to opt out of collection if they have major space constraints.</td>
<td></td>
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</tr>
<tr>
<td><strong>Container Liners</strong></td>
<td>Paper or boxboard only, no compostable bags.</td>
<td>Compostable bags certified by the Biodegradable Products Institute are permitted.</td>
<td>Compostable bags certified by the Biodegradable Products Institute are permitted.</td>
<td>Compostable bags by approved retailers are permitted. Building containers come with liners.</td>
<td>Plastic bags are permitted, compostable bags are not.</td>
</tr>
<tr>
<td><strong>Kitchen Containers</strong></td>
<td>Free container for each unit serviced by municipality, building managers encouraged to buy for privately serviced buildings. Containers included in lease with damage deposit.</td>
<td>Free container for each unit serviced by the municipality.</td>
<td>Free container is provided for each resident. Need to be ordered from service provider.</td>
<td>Kitchen containers generally not provided, but recent grant has permitted limited distribution.</td>
<td>Free kitchen container provided for all units. Property management is responsible for all replacements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education and Outreach</th>
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<tbody>
<tr>
<td><strong>Materials Provided</strong></td>
<td>Variety of signs, brochures and pamphlets available.</td>
<td>Handbooks, magnet, compostable bag samples and translation brochures distributed with kitchen containers. Posters for buildings provided.</td>
<td>Variety of signs, posters, stickers, brochures and pamphlets available.</td>
<td>Variety of signs, posters, stickers, brochures and pamphlets available.</td>
<td>Variety of signs, posters, stickers, brochures and pamphlets available, as well as a launch newsletter.</td>
</tr>
<tr>
<td><strong>Outreach Programs</strong></td>
<td>HRM provides waste audits, education sessions/workshops and site visits.</td>
<td>Detailed handbook provided to building managers. Open houses for buildings with more than 50 units - try to coordinate with tenant meetings.</td>
<td>City staff can provide tailored outreach programs to each building. Currently focusing on buildings considered more problematic.</td>
<td>Consultants that go door to door to speak with building managers and residents to explain program.</td>
<td>Presentations available for residents if requested by building management. Handbook for property managers being drafted.</td>
</tr>
<tr>
<td><strong>Volunteer Programs</strong></td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>Friends of Recycling and Composting - buildings receive $100 credit if sign up for volunteer program.</td>
<td>n/a</td>
</tr>
</tbody>
</table>
### 9.0 Review of Multi-Family Food Scraps Collection Programs

<table>
<thead>
<tr>
<th>Policies and Incentives</th>
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</thead>
<tbody>
<tr>
<td><strong>Relevant Policies</strong></td>
</tr>
<tr>
<td>Halifax</td>
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<tr>
<td>Organics ban at the landfill, local bylaw requiring storage for containers and &quot;easy access,&quot; bylaw requiring source separation at the building level.</td>
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<tr>
<th>Facility and End Market</th>
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<tr>
<td><strong>Tipping Fee</strong></td>
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<tr>
<td>Halifax</td>
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<tr>
<td><strong>Facility Details</strong></td>
</tr>
<tr>
<td>Halifax</td>
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<tr>
<td>Two facilities that take up to 25,000 tonnes/year. In-vessel systems.</td>
</tr>
<tr>
<td><strong>Quality of Compost</strong></td>
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<tr>
<td>Halifax</td>
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<tr>
<td>Class A.</td>
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<tr>
<td><strong>End Market</strong></td>
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<tr>
<td>Halifax</td>
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</tbody>
</table>
The Recycling Council of BC would like to thank its members who participated in the organics working group and assisted in the research and writing of this report.

Published February 2011
Researched and written by Jordan Best

Layout by Jennifer Ellis
Photos courtesy of Tamara Shulman and Kristian LaRose.