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ADMINISTRATIVE REPORT

Report Date: July 15, 2014 Contact: Albert Shamess Contact No.: 604.873.7300

RTS No.: 10650 VanRIMS No.: 08-2000-20 Meeting Date: July 22, 2014

TO: Vancouver City Council

FROM: General Manager of Engineering Services

SUBJECT: Towards Zero Waste: Food Scraps Collection and Compostable Organics

Waste Ban for Multi-Unit Residential Building (MURB) and

Industrial/Commercial/Institutional (IC&I) Sectors

RECOMMENDATION

- A. THAT the Director of Legal Services be instructed to bring forward for enactment amendments to the Solid Waste By-law restricting food scraps and compostable organic materials from disposal at the Vancouver Landfill and Transfer Station, for implementation concurrent with a Metro Vancouver disposal ban on compostable organic materials planned for implementation starting in 2015.
- B. THAT the Director of Legal Services be instructed to bring forward for enactment amendments to City By-Laws, including the Solid Waste By-Law and the Licensing By-Law establishing mandatory recycling of food scraps and compostable organic materials from all sectors, including Multi-Unit Residential Buildings (MURBs), and the Industrial, Commercial, Institutional (IC&I) sectors, effective January 1, 2015.

REPORT SUMMARY

The Metro Vancouver Integrated Solid Waste and Resource Management Plan (ISWRMP) approved by the Minister of the Environment in 2010, commits Metro Vancouver to banning the disposal of compostable organic materials at Regional waste facilities by 2015. Recovering and beneficially using waste compostable organics and specifically food scraps is also a cornerstone Zero Waste action within the Greenest City Action Plan (GCAP).

This report provides Council with a progress update on work completed and underway to prepare for the regional ban and to meet our GCAP Zero Waste commitment.

Specifically, the report:

- provides an update on our single family and duplex Green Bin program;
- provides an update on organics recycling in Vancouver's Multi-Unit Residential Building (MURB) sector and work underway to engage and support IC&I (Industrial, Commercial, Institutional) property owners and occupants within the City as they institute organics recycling programs;
- recommends the enabling regulation to support the above work.

CITY MANAGER'S/GENERAL MANAGER'S COMMENTS

On October 17, 2012 Council approved the implementation of full city-wide food scrap recycling for single family and duplex properties (100,000 households) with a shift in collections to weekly Green Bin and bi-weekly garbage pick-up, effective in May 2013. Throughout the latter part of 2012 and the majority of 2013, staff in the Solid Waste Management Branch focused on the successful roll out of the single family/duplex Green Bin program and the complex negotiations and operational impacts associated with the implementation of the new Provincial Extended Producer Responsibility (EPR) regulation and the related responsibility of Multi-Material BC (MMBC) as they issued their requests for recycling services.

In the fall of 2013, staff were able to refocus on moving ahead with the implementation of organics recycling across the Multi-Unit Residential Building (MURB) and Industrial/Commercial/Institutional (IC&I) sectors, and this work is well underway. Effective January 2, 2014, residents in all MURBs that receive City Green Bin service for yard trimmings (1,350) were able to participate in the City's food scraps recovery program, and their collection frequency was changed to weekly Green Bin collection service. Current work is focused on sustaining these new programs and implementing new initiatives to focus on MURBs secured by private contracts to support the ICI sector with organics disposal ban preparations.

A key step in our overall food scraps program is to support diversion through Vancouver's regulatory system. Accordingly, this report recommends the preparation of amendments to City By-Laws including the Solid Waste By-Law to make food scraps collection and diversion programs mandatory across all sectors of the city, and in coordination with Metro Vancouver's upcoming compostable organics disposal ban. The City Manager and General Manager of Engineering Services support this approach and recommend approval of A and B.

REPORT

Background/Context

As part of the Regional Integrated Solid Waste and Resource Management Plan (ISWRMP) Metro Vancouver will be implementing a ban on the disposal of compostable organic waste, including food scraps, in landfill and incinerator effective January 1, 2015.

In addition to Metro's upcoming ban, achieving the City's GCAP Zero Waste goal of 50% diversion from disposal by 2020 will require a significant amount of recovery of compostable organics from the waste stream.

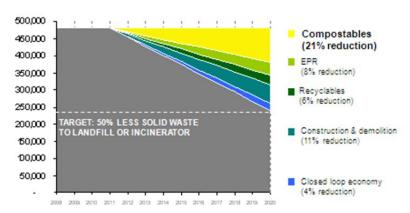
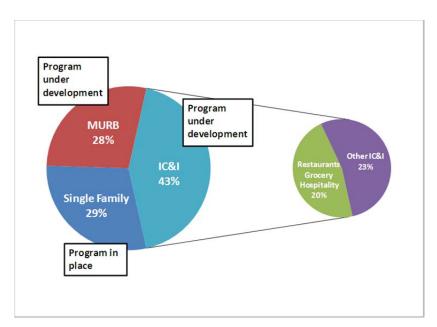


Figure 1 - GCAP Zero Waste Goals

To date municipal governments in the region have been focusing primarily on the development of programs for single family residents, which they service, and which contribute approximately 29% of the total compostable organic material in the waste stream. In Vancouver, MURB and IC&I properties which are mainly serviced by private waste collectors are also significant contributors of compostable organics. Development of programs for those sectors is in the early stages across the Region.

Figure 2: The relative contribution of each sector to the total amount of compostable organics in the waste stream



In general, compostable organics refers to food scraps (cooked and uncooked food products), food soiled paper (used napkins, pizza boxes), and yard trimmings.

Disposal bans for various other materials, such as paper, cardboard, metal and household hazardous wastes, have been in force for many years. Metro's intent is to start banning the disposal of food scraps with regular garbage beginning January of 2015, and phase-in

enforcement over three years targeting the largest potential generators of organics first. Enforcement of the Metro food scraps disposal ban would be based on a declining maximum allowable percentage of food scraps in garbage (Figure 3).

July - December January -2016 2017 June 2015 2015 Maximum 25% 10% 5% allowable % of (target medium (target large (target small Education food scraps in generators) generators) generators) period to garbage load all sectors about organics Penalty = 50% Penalty ban of tipping fee

Figure 3 Metro's proposed approach to enforcement

Enforcement for material disposal bans is primarily focused on by-law compliance at the points of disposal, including at the Vancouver Landfill (VLF) and Vancouver South Transfer Station (VSTS). Enforcement takes place when vehicle loads are tipped. Vehicles are randomly inspected at disposal facilities and loads exceeding a specified allowable threshold of the banned material (referred to as "restricted" material in the City's Solid Waste By-law) are subject to a penalty in the form of a surcharge on the tipping fee.

While ban compliance targeted at the point of disposal has shown to be reasonably effective with driving diversion across the region since disposal bans were first introduced, enforcement applied against the waste collectors at the disposal facility is a step removed from the source and should be accompanied by "upstream" incentives for separation to enable diversion. The waste collectors have limited control over the contents of their loads and individual vehicles typically contain materials from multiple properties. Determining the source of banned materials can be difficult and in some cases may not be possible for the drivers

Placing restrictions on what can go into waste bins on the source property and/or requiring organics recovery programs be put in place at the building or property level is a complementary step which is needed to maximize recycling and diversion.

In order to promote maximizing diversion in addition to the restrictions at the point of disposal, this report recommends a requirement for food scraps recovery programs be established at the building, business or property level.

Single Family Homes and Duplex Buildings

Full food scraps recycling was made available to residents in all single family and duplex households in the city in September 2012. This was followed in May 2013 by a city-wide switch in garbage and Green Bin collection frequency. There are about 100,000 households involved in this service change.

In the first full year since the change in collection frequency, the amount of garbage collected dropped by 40% and the recovery of organic material for composting increased by 64%. In addition, the amount of material collected for recycling increased by just under 10%. This change is illustrated in Figure 4.



Figure 4 - Positive trend in Garbage, Green Bin, and Recycling tonnages

With the completed roll out of the single family program in the fall of 2013 the focus then shifted to MURBs.

Multi-unit Residential Buildings (MURBs)

Currently, there are approximately 5,700 MURBs in Vancouver comprising a total of about 174,000 units. MURBs in Vancouver range from houses divided into multiple suites, townhouses, and low and high rise buildings.

While some MURBs receive City service for garbage and/or Green Bin, the majority of MURBs, particularly the high-rise buildings, receive private waste collection services through contracts between the property owner(s) and private waste haulers. (N.B - recycling services are provided to all buildings by the City either through City staff or the City's apartment recycling contractor).

The general breakdown of City serviced garbage and Green Bin MURBs versus privately served buildings is shown in Table 1:

	Number of MURB	Number of MURB		
	Properties	%	Units	%
City Serviced	1,800	31	22,000	13
Privately Serviced	3,900	69	152,000	87
Total	5,700		174,000	

City serviced MURBs are smaller buildings such as triplexes, townhomes, and small apartment buildings embedded within single family residential collection routes, and while it represents 31% of all MURBs it's only 13% of the overall number of units.

City Serviced MURBs

Effective January 2, 2014, residents in all MURBs that receive City Green Bin service for yard trimmings were eligible to participate in the City's food scraps recovery program and began receiving weekly Green Bin collection service. At the same time staff began contacting building owners/managers with City delivered garbage collection that did not have Green Bins to offer assistance and to enroll them in the program. This outreach process is still underway.

To support City serviced MURBs with food scraps recycling, staff have built on the materials and learnings from the roll out of the single family/duplex program and have been providing outreach and educational support to all buildings. These include: site assessments to help building owners determine appropriate Green Bin cart size; information packages, posters, and resident starter kits containing kitchen containers and information for each suite in the building; lobby presentations for residents to help residents gain a better understanding about the program.

The status of the Green Bin roll-out to all City serviced MURBs as of June 30, 2014 is provided in Table 2.

MURBs that have declined Green Bin service will be further advised of the proposed changes to the Solid Waste By-law described in this report and it is expected that they will develop programs either through the City or with a private waste collector.

Table 2: Green Bin Program Progress - City-Serviced MURBs up to June 30, 2014

Total City Serviced			
MURBs	With Green Bin Service	In Progress	Declined Green Bin Service
1,800	1,520	100	180
100%	84%	6%	10%

Privately-Serviced MURBs

As shown in Table 1, the majority (69% of the buildings and approximately 87% of the units) of MURBs within the city are buildings which contract for garbage collection from private waste collectors. The City does not have a direct link to services for these buildings and over the

past months, staff have undertaken a systematic outreach to property management companies, building owners/managers associations and the private waste collectors in order to assess progress in the development of food scraps collection programs.

The findings of this outreach indicate that accurate statistics are not available as to the exact level of participation in organics diversion in these buildings, however based on conversations and feedback received, the best estimate is that less than 5% of buildings have implemented a food scraps collection program.

Other information indicated that the city funded community-led Food Scraps Drop Spot program operating since 2011 is being well utilized by residents in some MURBs. The Food Scraps Drop Spots program has been supported by the City through a Greenest City Grant, and more recently by a grant from the Social Responsibility Fund. As of July 1st, 2014, the Food Scraps Drop Spot program has expanded to seven locations and has collected over 120 tonnes of food scraps from more than 38,000 drops since the inauguration of the program in 2011. While this is an excellent response to the program the food scraps drop spots operate seasonally and the material collected is a small share (less than 1%) of the total tonnes generated in the MURB sector.

Mandating food scraps collection programs for private sector serviced MURBs within Vancouver presents some significant challenges:

- There are 3,900 buildings and 152,000 units in this sector ownership structure ranges from Strata owners to purpose built rental owned by large investors to rental stock in family ownership. Property Management companies may or may not be involved:
- Engagement processes will vary depending on whether dealing with property management companies or strata owners;
- Many of the older buildings have space constraints making it challenging for them to locate additional containers for separate food scraps collection;
- There are also space constraints in streets and lanes, especially in the downtown core, and storing food scraps containers in laneways will create street cleaning, odour and nuisance issues if the containers are not maintained properly.

Capacity of the private waste collectors varies with some not prepared to undertake the development of programs with their customer properties. To help resolve these challenges, to raise awareness about the upcoming disposal ban, and to enable the establishment of separation programs at the level of each property the following steps have been undertaken:

- Discussions and presentations have been held with key stakeholder groups to solicit feedback on the types of support that would be beneficial. Stakeholders included Waste Management Association of BC (WMABC), Building Owners and Managers Association (BOMA), Landlord BC (formerly BC Apartment Owners & Managers Association-BCAOMA), Condominium Home Owners Association of BC (CHOA), Cooperative Housing Federation of BC (CHFBC);
- These organizations have been provided with information for their newsletters, including an official City letter that can be distributed to their members; the letter advises owners and residents that compostable organics will be banned from disposal in 2015 and that they are encouraged to establish diversion programs;

- Private waste collectors have been given access to the City's generic educational and outreach materials for their use in providing communication materials tailored to their clients;
- Web-based resources have been developed by the City for building owners and operators to help walk them through the program implementation process;
- Information has been provided to MURB residents via the web, 311, Pop-Up City Hall and through select City and community events, encouraging them to share information with building managers on how to set up a food scraps collection program including information on alternative program strategies such as community based food scraps drop spots, on-site composting technology, and worm composting for apartments.

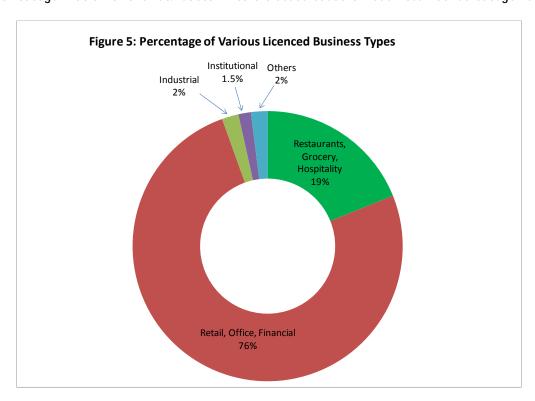
Metro Vancouver is providing similar programs and outreach to MURB owners, managers, and residents, and is ramping up efforts over the next several months in preparation for the 2015 disposal ban. While our focus is on Vancouver properties, we are collaborating with Metro Vancouver staff on their initiatives in order to minimize duplication of efforts.

Given the scale and complexity of the challenges associated with starting and sustaining food scraps recycling programs in all MURBs across the city, staff anticipate that ongoing support for MURB's working on the development of food scraps diversion programs for their buildings will need to be continued over the next two years.

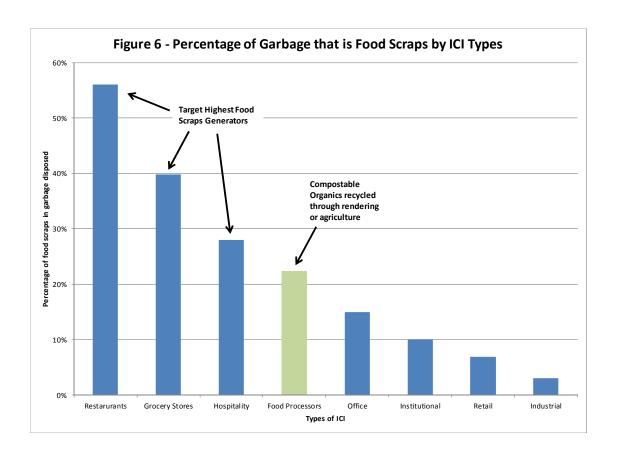
Industrial, Commercial, & Institutional (IC&I) Buildings

The IC&I sector is broad-based (Figure 5) and their contribution to generating organics to the waste stream varies significantly.

Figure 5: categorization of the IC&I sector into 5 classes based on business license categories.



Looking at the overall percentages of food scraps from various types of ICI businesses, we find that the 19% of ICI businesses in food related activities have the highest percentage of food waste in their garbage as shown in Figure 6.



In order to understand the readiness for diversion of organics from businesses with the greatest amount of food scraps in their waste streams, City and Metro staff have undertaken discussions with the following key stakeholder and representative groups:

- BC Restaurants and Food Services Association (BCRFSA)
- Tourism Vancouver (as a conduit to hotels and hospitality in the city)
- Various large industrial food processors
- Vancouver Business Improvement Associations
- BC Non-Profit Housing Association
- Various colleges and universities with Vancouver

The details gathered through these discussions are provided below:

Restaurants, Grocery, Hospitality and Food Processors

- Properties and businesses in this area of activity will be most impacted as food scraps are a large percentage of their waste stream.
- Of the roughly 5,000 businesses in this category, there are a number of restaurants with organics programs in place, mostly larger ones and chain restaurants; many of the

- smaller ones are largely unaware of the impending organics ban and the options available for organics diversion;
- Most of the larger grocery stores either have a program already in place or are aware
 of the ban and well positioned to respond; little information was available in regard to
 small grocers and specialty stores;
- Large food processors have programs in place that keep organics out of the waste stream and send them either for rendering or animal feed.
- Some of the larger hotels, the Vancouver Convention Centre, Rogers Arena, Pacific Centre and Granville Island have programs in place for recovery of food scraps.
- It appears that a large number of smaller restaurants do not have programs in place.

Retail, Offices and Financial Services

- Metro surveyed 78 buildings and shopping malls and found about 40% of occupants had access to an organics diversion program;
- City staff contacted several property management companies providing services in this sector of commercial space. Those who replied have said none of the buildings they manage have an organics program.

Institutional, including Healthcare and Education

- The larger educational institutions in the City (including UBC) have initiatives in place or underway.
- The Vancouver School Board has implemented programs in a number of schools and is planning on having full coverage by the end of 2014.
- Vancouver Civic offices and facilities have instituted full organics diversion as part of the City's Zero Waste Program.
- Vancouver Coastal Health Authority facilities have programs in place for their kitchens as well as for patient tray food waste.

Industrial facilities

 The status of large industry in the City, other than those involved in the food processing sector, is uncertain - fortunately this sector would have minimal contribution related to food scraps in their garbage.

Strategic Analysis

Other Municipalities

Staff have surveyed Metro municipalities as well as others similar municipalities nationally and in the US. To date within the Metro Region, Burnaby is the only municipality to pass a bylaw making compostable organics recovery programs mandatory across all sectors. Most other municipalities are in the pilot phase with MURBs and have not focussed on the IC&I sector. In the US, cities such as Seattle and San Francisco have more extensive programs in place for both MURBs and the IC&I sector. Information from the municipalities surveyed is provided in Appendix A.

Readiness of Private Waste Collectors

There are a number of private waste collectors already able to provide food scraps collection service to MURB and IC&I buildings, with equipment available and in place. They are generally well positioned to provide the required level of flexibility and customization required by individual buildings, including container size and type, collection frequency, and level and type of outreach support and service delivery. To start a food scraps collection program, building owners and operators have been encouraged to contact their current waste collectors.

Processing Capacity

Adequate processing capacity to handle the expected increased tonnage from additional organics diversion is either in place now or is under development. Current total organics processing capacity within Metro Vancouver consists of about 300,000 tonnes per year between Harvest Power (Richmond) and Enviro-Smart Organics (Delta), with each having capacity to absorb more material. Metro Vancouver has indicated that capacity to process an additional 250,000 tonnes per year is under development over next 2-3 years, including a project to convert 80,000 tonnes per year of organic material into biofuels being developed by the City of Surrey.

Program Communications

Metro Vancouver with support from the City will be continuing to develop communications materials and provide stakeholder outreach to raise awareness of the upcoming regional disposal ban, and to offer support. Overall, consultation to date has indicated strong individual support for the ban, but cost and readiness concerns have been significant feedback themes. Additionally, overall awareness of the ban still appears low amongst most generators of organic waste. Metro Vancouver is planning a fall 2014 awareness campaign, and is continuing to work with individual stakeholder groups/sectors, particularly the large generators like restaurants to develop support materials.

City staff have developed a complementary communications program to support and help raise awareness for MURB building managers and owners as well as the business community in Vancouver. The City will continue to support Metro Vancouver's efforts through messaging in various mediums, such as the web, social media, advertising (traditional and/or on-line), print, collaboration with stakeholder associations, and in-person opportunities such as MURB lobby talks.

In addition, our communications efforts will include:

- Communication via social media, website, on-line or traditional advertising, outreach via letters and attendance at community and city events;
- Leveraging cross-promotion opportunities with City solid waste communications programs to mention Metro Vancouver disposal ban and Green Bin program;
- Providing public information to promote awareness of benefits of food scraps/organics diversion.

Proposed Vancouver Compostable Organic Material Regulation

Metro Vancouver's Tipping Fee By-law includes a list of items such as paper, metal, yard trimmings and typical blue box materials, banned from disposal to landfill and incinerator. Since the Vancouver Landfill (VLF) and Vancouver South Transfer Station (VSTS) operate as

part of the overall regional disposal system, restriction of those items is also mirrored in Vancouver's Solid Waste By-law (*Schedule F: Materials Restricted From Garbage Containers and the Vancouver Landfill and Transfer Station*).

To ensure continued alignment between the City's Solid Waste By-law and Metro Vancouver's Tipping Fee By-law, this report recommends that Council instruct the Director of Legal Services to update the list of materials restricted from disposal at the Vancouver Landfill and Transfer Station in the Solid Waste By-law to include food scraps and other compostable organic materials reflecting Metro Vancouver's 2015 disposal ban, planned for approval by the Greater Vancouver Sewerage and Drainage District (GVS&DD) Board in September.

This report also recommends that Council instruct the Director of Legal Services to review and bring forward recommended bylaw and/or licensing requirements to require programs be put in place at the building level for recycling of food scraps and other compostable organic materials in all sectors, including Multi-Unit Residential Buildings (MURB), and Industrial, Commercial and Institutional, to coincide with the planned regional disposal ban.

The objective of this proposed regulation is to *maximize diversion* of food scraps and other compostable organics, but it is not to restrict how this occurs. Programs developed could include a separate collection of food scraps organics from the property, commonly referred to as 'source separation', or by separation from mixed loads of garbage at a Material Recovery Facility (MRF) to allow some flexibility depending on the unique situations in individual buildings.

It is important to note that after many years of operating source separation programs for collection of recyclable materials in MURB's across the City, a large percentage of recyclables are still placed in the garbage rather than the recycling bins. Material Recovery Facilities may therefore, play an important role in achieving zero waste.

Implications/Related Issues/Risk (if applicable)

Financial

City of Vancouver residential garbage and Green Bin collection programs operate within the Solid Waste Utility (SWU). Costs within the SWU are recovered through user fees rather than from property taxes. The complexity of our solid waste programs has increased significantly over the past few years and this pattern will continue as restrictions on how waste is managed increase over time. However, expenditures to support non-City serviced MURBs and the IC&I sector are outside of the Solid Waste Utility.

Staff are in the process of reviewing the level and type of support that will be needed to support non-City serviced MURBs and the IC&I sector through discussions with Metro and various stakeholders. We are also reviewing the ongoing operating and support requirements for all of the waste management programs as part of the development of the 2015 operating budget for the Solid Waste Utility. Details will be presented to Council as part of the 2015 operating budget process.

Environmental

In Vancouver and the rest of the region, compostable food scraps and food soiled paper makes up about 40% of solid waste disposed. Implementing organics diversion in all sectors as outlined in this report is expected to trigger significant additional diversion of compostable organics. Maximizing organics diversion is a key action to enable the City and private sector to comply with the upcoming 2015 ban on disposal of compostable organic material and to achieve the Greenest City 2020 Zero Waste target of reducing total waste to landfill or incinerator by 50% from 2008 levels (from roughly 480,000 to 240,000 tonnes by 2020). Organics diversion accounts for approximately 20% of the overall reduction in waste included in our Greenest City Targets when all sectors are considered.

Legal

The Vancouver Charter (Section 303) grants the City broad authority over City and private sector delivered solid waste services including collection, removal, transfer, disposal, and recycling. The Vancouver Charter also provides Council with authority to regulate the means of disposal used by property owners and occupants, to require specific programs to separate waste and to establish licenses or permits and place conditions on those licenses or permits.

Staff are currently reviewing the best practices and considering options for by-law amendments to City by-laws, including the Solid Waste By-law, to reflect Metro's by-law and enforcement approach, and to assess how best to require that programs be in place for the separation of organics.

Currently under the Solid Waste By-law, persons assumed to be responsible for an offence are first given a Notice of By-law Violation. This can eventually lead to having a by-law charge sworn before a Justice of the Peace. Every person who commits an offence against the Solid Waste By-law is punishable on conviction by a fine of not less than \$250.00 and not more than \$10,000.00 for each offence. The Solid Waste By-law isn't included in the MTI (Municipal Ticket Information) system, which is a simpler way of enforcing by-law offences and allows for fines of up to \$1,000 to be paid voluntarily or the offence can be disputed in court. An MTI is similar to a speeding ticket. Staff will be investigating opportunities to use MTI for offences under the Solid Waste By-law in order to streamline the Solid Waste By-law.

As part of the by-law process, staff will also be reviewing other appropriate enforcement tools. The business licensing process could be used to advise those in the IC&I sector that they need to have a program in place and eventually to require them to have a program in order to obtain a business license. There may also be an opportunity to leverage information from Metro's enforcement at the point of disposal by requiring waste haulers to identify the sources of material from a load that is non-compliant.

CONCLUSION

Food scraps recovery programs are now in place for single family homes and duplexes and City serviced MURBs. Efforts are underway jointly with Metro Vancouver to raise awareness and support program development in MURBs serviced by private waste collectors and in the IC&I sector.

This report recommends taking action to make establishing programs for the separation of food scraps and other compostable organic material from waste mandatory across all sectors of the city in coordination with Metro Vancouver's upcoming compostable organics disposal ban and the preparation of appropriate amendments to City By-Laws including the Solid Waste By-Law.

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Summary of Organics Collection Programs in Other Municipalities by Sectors

Municipality	Single-family	MURB	IC&I
City of Vancouver	Green Bin Program mandatory	Program available to 1,800 City serviced MURBs = 22,000 units. Which is about 30% of properties. Remaining 70% of properties are serviced by private collectors.	Available to the 6% properties which are existing City customers. Remaining 94% of properties need to contract private service.
City of Burnaby	Food scraps diversion mandatory	At least 110 MURB complexes have access to City program	In process of pilot at the Nester's market and looking at other pilots in 2014
City of Richmond	Food scraps diversion mandatory	Commenced a 15 months pilot program for MURB complexes from October 2013 to December 2014 consists of more than 5,000 units	2 restaurants are participating in the MURB pilot program
City of Surrey	Food scraps diversion mandatory	Initiated the MURB organics pilot program in May 2014 to about 27 buildings	Organics program not available to IC&I at this point
City of Seattle	Food scraps diversion mandatory to about 142,000 single-family households.	About 5,000 MURB have access to the food waste collection	Estimate about 2,500 of the 8,000 IC&I properties currently uses organics collection program. Out of the 2,500 properties, about 1,500 are food service businesses and about 1,000 are non-food service commercial
City of Portland	Food scraps diversion mandatory	Food Scrap Collection is an optional service that many MURB now offer to their residents	Private waste collectors service the IC&I sector
City of Toronto	Green Bin Program currently services 460,000 single-family households	About 2,600 MURBs are enrolled into the green bin program with another 300 currently being implemented	Optional program since 2002 for all retailers, commercial businesses. No stats