CITY OF VANCOUVER

CITY CLERK'S DEPARTMENT
Access to Information & Privacy

File No.: 04-1000-20-2020-282

July 28, 2020

s.22(1)

Dear s.22(1)

Re: **Request for Access to Records under the Freedom of Information and Protection of Privacy Act (the "Act")**

I am responding to your request of May 21, 2020 for:

> **Most recent City of Vancouver record (i.e. report) regarding the usage of garburators.**

All responsive records are attached.

In addition, please also refer to the following information from CBC/Radio-Canada, the Canadian Water and Wastewater Association, and Metro Vancouver, respectively:

- CBC News, "Garburators cost Metro Vancouver $2M a year in clogged up sewers", https://www.cbc.ca/news/canada/british-columbia/garburators-cost-metro-vancouver-2m-a-year-in-clogged-up-sewers-1.3128519
- Canadian Water and Wastewater Association, "Residential Food Waste Grinders: Issues Analysis Paper", https://cwwa.ca/wp-content/uploads/2019/10/Food-Waste-Grinder_WhitePaper.pdf
- Kerr Wood Leidal Consulting Engineers for Metro Vancouver, "Liquid Waste Demand Side Management Strategy for Vancouver Sewerage Area – Cost-Benefit Analysis of Potential DSM Strategies for Iona Wastewater Treatment Plant", Final Report, Revision 1, May 10, 2019.*

*Please contact Metro Vancouver if you would like to request a copy of this report.

Under section 52 of the Act, and within 30 business days of receipt of this letter, you may ask the Information & Privacy Commissioner to review any matter related to the City's response to your FOI request by writing to: Office of the Information & Privacy Commissioner, info@oipc.bc.ca or by phoning 250-387-5629.

If you request a review, please provide the Commissioner's office with: 1) the request number (#04-1000-20-2020-282); 2) a copy of this letter; 3) a copy of your original request; and 4) detailed reasons why you are seeking the review.

Yours truly,

[Signature on file]

Barbara J. Van Fraassen, BA
Director, Access to Information & Privacy

Barbara.vanfraassen@vancouver.ca
453 W. 12th Avenue Vancouver BC V5Y 1V4

*If you have any questions, please email us at foi@vancouver.ca and we will respond to you as soon as possible. Or you can call the FOI Case Manager at 604.871.6584.

Encl.

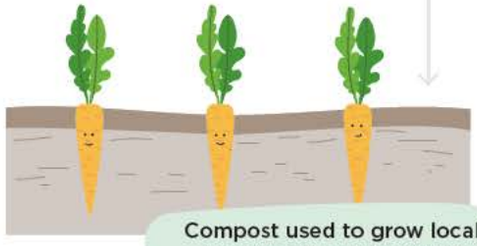
:dp

IF YOU PUT FOOD SCRAPS IN YOUR GREEN BIN

Food scrap collection services are widely available in the City of Vancouver.

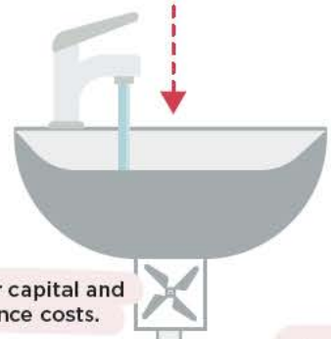
Organics recycling provides local green jobs.

Local green industry recycles food scraps into biofuels and compost.



Compost used to grow local food keeps our footprint small and contributes to our local food goals!

IF YOU PUT FOOD SCRAPS DOWN THE DRAIN



Homeowner capital and maintenance costs.

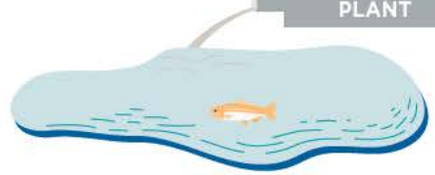
Annual maintenance to clean oil, starch and grease from the sewer system to prevent blockages.

COMBINED SEWER

Combined sewers overflow into our waterways during heavy rainfall carrying dilute sewage.

Chemicals must be added to handle high organic loads.

IONA TREATMENT PLANT

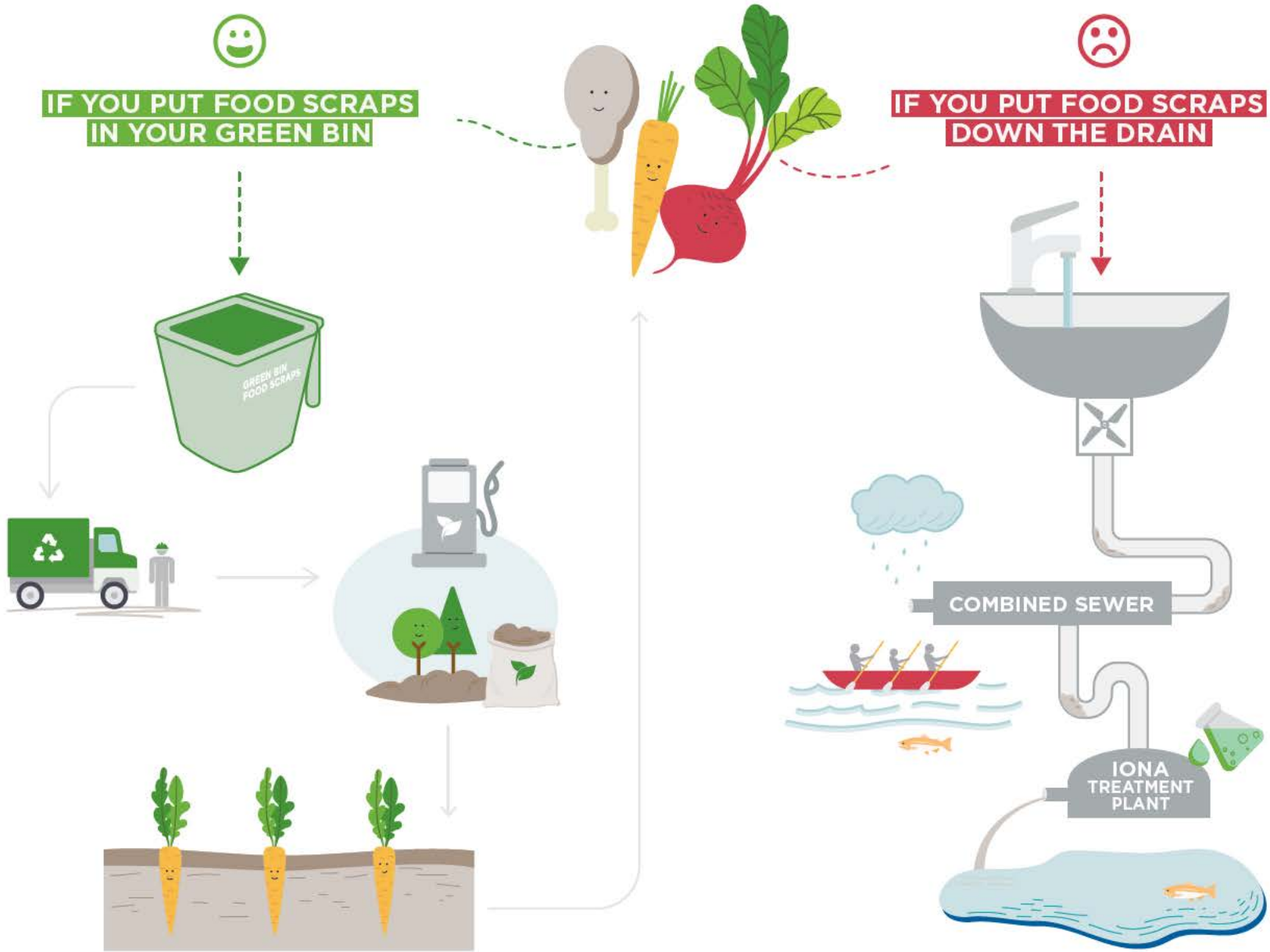


The Iona Plant has limited capacity to treat soluble organics from food waste disposers.

FOOD IS NOT GARBAGE, SINKS ARE NOT GARBAGE CANS, AND THE OCEAN IS NOT A LANDFILL.

OUR SEWER SYSTEM WILL BE SEPARATED BY 2050 | IONA PLANT IS TO BE UPGRADED BY 2030

VANCOUVER | GREENEST CITY



FOOD IS NOT GARBAGE, SINKS ARE NOT GARBAGE CANS, AND THE OCEAN IS NOT A LANDFILL.

OUR SEWER SYSTEM WILL BE SEPARATED BY 2050 | IONA PLANT IS TO BE UPGRADED BY 2030

From: "Radziminski, Chris"
To: linda.parkinson@metrovancouver.org
Date: 2/20/2019 3:41:52 PM
Subject: Food waste disposer follow-up -- for reference
Attachments: COM - ENG - Issue - Proposed prohibition on garburators.docx
Extracted Council Report text.pdf
Garburator infographic - 2017-02-17 revision.pdf

Hi Linda,

Following up on our discussion yesterday regarding food waste disposers, please find attached for your reference:

- The infographic we had developed (with and without labels). I distribute this to mechanical engineers to discourage food waste disposer installation.

- The extracted sections from the Council Report (i.e., this material was not presented to Council).

- The issues note generated by Communications (not for further distribution).

Sincerely, Chris

Christopher Radziminski, M.A.Sc., P.Eng., R.P.Bio.
City of Vancouver | Water Design Branch
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Key Messages
Proposed Prohibition on Food Waste Disposers / Grinders / Garburators

Issue: Proposed Prohibition on Food Waste Disposers (Food Waste Grinders, Garburators)
Department: Engineering: Solid Waste, Water & Sewers
Date: January 20, 2017
Responsible: Chris Radziminski, Donny Wong

Key Messages

- Increasingly, the City is taking measures to ensure our treated drinking water is used where it should be: for drinking, cooking, and cleaning.

- To help achieve this, we are proposing a set of water conservation measures that will go to Council for consideration on February 8, 2017.

- Measures will include:
    - Expansion of prohibitions on non-recirculating uses of drinking water, such as once-through cooling systems.
    - Updates to VBBL to enhance water efficiency requirements pertaining to plumbing fixtures and appliances in new construction.
        - Updates to align with the 2015 National Plumbing Code
        - Requirement for Energy Star (or acceptable performance equivalent) for major water-using appliances such as clothes washers and dishwashers
        - A prohibition on food waste disposers

- By January 1, 2019, these amendments will allow us to save annually:
    - 4.7 billion litres of drinking water
    - 4% of Vancouver's total water use
    - ~3,500 tonnes CO2e

Key Messages: Food grinders / garburators

- Our local infrastructure means discouraging food waste disposers is our best option.
    - The City has a strong Green Bin program (+ organics recycling)
    - But a combined sewer system and aging Iona Primary Wastewater Treatment Facility (- water quality)

- This action contributes to Greenest City and Healthy City goals:
    - Reduce sewer system and private property costs
    - Divert food waste to compost facilities for renewal rather than disposal
    - Protect natural waterways and reduce drinking water use
    - Support local green jobs

- We are following the leadership of other Canadian cities like Toronto and Ottawa, who have already restricted use of garburators.

- Food is not garbage, sinks are not garbage cans, and the ocean is not a landfill.

Background:

As part of the Vancouver Building By-Law updates, the City of Vancouver is proposing a prohibition on garburators and Food Waste Disposers (Food Waste Grinders, Garburators).

FAQ:

Other cities – like Philadelphia – encourage use of food waste disposers as a means of disposing of food scraps. If they are in those places, then why are you saying that they're bad?

The context of a city's solid and liquid waste infrastructure is one key to understanding why jurisdictions across North America treat these devices differently.

Philadelphia does not have curb-side collection of food scraps, does not have sufficient organics processing capacity in the region and recently upgraded its wastewater treatment plants with anaerobic digesters. Vancouver's context is opposite to Philadelphia on each of these points.

New York City lifted their prohibition on residential food waste disposers in 1997 with the impending closure of their landfill and no curb-side food organics collection program, but are now closely monitoring the proliferation of these devices: "[h]igh rates of penetration for food waste disposers could have negative environmental consequences, though, especially given the increasingly demanding regulatory context for nitrogen discharges and combined sewer overflows." The long-standing prohibition in New York City on commercial devices was reaffirmed in 2008.

Squamish passed a prohibition on food waste disposers in December 2016. The Town of Cochrane, Alberta passed a prohibition on residential food waste disposers in early 2016, to take effect upon implementation of their curb-side food organics collection program.

Vancouver has a robust Green Bin organics program where food scraps can be turned into a new, usable resource, but also has a combined storm and sanitary sewer system potentially spilling into recreational waterways and an aging sewer treatment plant that was not designed to treat the waste generated by food waste disposers. Because of this, it makes sense for us regionally to embrace our Green Bin program and discourage people from putting food scraps down the drain.

There are numerous other benefits to diverting food scraps from the sewer, including support of local green jobs and a reduction in drinking water use.**Why is the City pushing people to use their Green Bin or composting instead?**

As part of our Greenest City goals, we have increasingly been working towards treating excess food as a resource to be used rather than as waste to be disposed. This is also an initiative by Metro Vancouver through their "Food is not garbage" and "Love food hate waste" campaigns.

Our Green Bin programs are more versatile than food grinders – they can take shells, bones, food-soiled paper, and so on. There is also the added benefit of food waste being used as a renewable resource in a way that supports local green jobs. Rather than food waste being a 'negative' cost to deal with (by adding to sewer maintenance costs and environmental degradation), they can be recycled into something useful – landscaping soil, biofuels, and so on.

Additionally, many food items (such as shells, grease, and starchy foods like rice) clog pipes as they dry, leading to increased maintenance costs for the sewer system.

How does this program tie in to Vancouver's Greenest City goals?

Water Quality: Food waste that goes into our sewer system runs the risk of ending up in our natural waterways. When food ends up in our waterways, its organic material requires oxygen to break it down, meaning there is less oxygen for plants and animals. By reducing the amount of organic material ending up in our waterways, we can create a better, cleaner environment for our own recreation, as well as for enhancing biodiversity and rewilding.

Water Conservation: Fresh, potable water is a valuable and limited resource. Food grinders lead to an increase of water use that is unnecessary when we have a great Green Bin program already in place. Certain commercial food waste disposers have the potential to contaminate the drinking water system. Each week in the region, 2.0 million L of drinking water is used to flush food waste through food waste disposers.
Zero Waste: They City is working toward a Zero Waste future. Currently 6% of food waste goes to the garburator in the region, or 170 metric tonnes / week. Rather than disposing of these materials in the sewer, these materials can be recycled.

Green Economy: By ensuring our organic materials get to composting facilities, we help create a circular economy where we grow food locally, eat food locally, and reuse those scraps to grow more food. This also aligns with the internationally recognized Vancouver Food Strategy.

Lighter Footprint: Currently 6% of food waste goes to the garburator in the region, or 170 metric tonnes / week. By ensuring our organic materials get to composting facilities, we help create a circular economy where we grow food locally, eat food locally, and reuse those scraps to grow more food.

Isn't it cheaper to dispose of food scraps in the sewer than to recycle them?

No. Also, there is the added benefit of a marketable product (such as compost and biofuels) from the recycling of food scraps.

If I have an existing garburator, can I keep it?

Yes, but when it breaks down, it cannot be replaced with a new unit. The City encourages you to remove your garburator and recycle it. Place a strainer in your kitchen sink to catch food scraps and other solids, and empty them into your backyard composter or Green Bin for recycling.

What are the savings municipalities and taxpayers?

Each year Metro Vancouver and its member municipalities such as the City of Vancouver spend over $2,000,000 removing grease build up in sewers. This would increase with the expanded use of food waste disposers, which currently send at least 1 ton of oil and fat each week into the sewer.

What are the cost savings for individuals and businesses?

Residential food grinders typically retail for between $200-$500 (not including installation) and this cost is eliminated. Larger savings accrue to commercial establishments. Maintenance costs are reduced, as starch (like rice), grease and other materials placed in food waste grinders can clog household or building plumbing by binding.

How is this program related to the Iona Island wastewater treatment plant and Metro Vancouver's policies?

Metro Vancouver is a growing region and will need to accommodate an additional million people in the next 25 years. The expansion of wastewater infrastructure over this period will be costly and Metro Vancouver will need to evaluate and implement targeted source control initiatives to ensure a cost-effective sewer utility.

The increased use of food waste disposers in the residential and commercial sectors could incrementally increase the costs of expanding and enhancing the treatment works at Iona Island.

Why can't the Iona Sewer Treatment Plan deal with the waste generated by garburators?

- Iona is a primary waste water treatment plant and was not designed to treat the liquid waste generated by food waste disposers.
- Iona is capable of only a 44% reduction in BOD (biochemical oxygen demand, a surrogate measure for water pollution). For comparison, the region's secondary treatment facilities all achieve at least a 95% reduction in BOD.
- Iona is compelled to add chemicals when wastewater strength is high to remain in compliance with its operating permit. There has been an upward trend of increased chemical use at the plant, both in the dosage of chemicals and the duration that chemical use is required.
- Iona conducts monthly effluent acute toxicity tests to ensure that treated wastewater is protective of aquatic life. Food scraps disposed in the sewer present risks to aquatic life.

How have other cities approached food grinders?

A. **City of Ottawa** – complete prohibition since 2003 (and earlier in some pre-amalgamation entities)
   - Sewer Use By-law 2003-514, sec 17:
     "No person shall install or operate within the City any garbage grinding devices, the effluent from which will discharge directly or indirectly into the sewage works."
   - Report to Planning and Environment Committee and Council, March 21, 2005:
     "Staff have reviewed the information provided by In-Sink-Erator, and do not concur that many of the purported benefits of food waste disposal units would be realized in the City of Ottawa."

B. **City of Toronto** – prohibited for domestic purposes in areas served by combined sewers since 2002
   - Municipal Code, Chapter 681-10, Section E (1) "No person shall install or operate within the City any garbage grinding devices for domestic purposes, the effluent from which will discharge directly or indirectly into a storm or combined sewer."
   - … "the City has studied the use of garburator and found them to be an expensive way to treat organic waste, both for owners and the City. More solids in the pipes lead to clogging and an increase in service calls, and more solids in the sewage system mean more blockages."

C. **City of Kingston** – complete prohibition + prohibition on replacing existing devices in place before the by-law (since at least 2008).

D. **City of Barrie** – complete prohibition (since at least 2012)

E. **Capital Regional District (Victoria) -** commercial food waste disposers prohibited (since 2002).

F. **District of Squamish** – food waste disposers prohibited in December 2016.

G. **City of Sudbury** – prohibition on residential food waste disposers (since 2011).

H. **Town of Cochrane, Alberta** – residential prohibition enacted in 2016
   - "Despite a presentation of InSinkErator Canada, the majority of Cochrane's councillors decided to go ahead with a ban … of garburators in newly-constructed homes." (Cochrane Times, March 31, 2016)

I. **New York City** – prohibition on all but residential
   - 2014 NYC Plumbing Code, Chapter 4 – Fixtures, Faucets and Fixture Fittings, section 413.1 – food waste grinders – "Food waste grinders shall be permitted only within dwelling units."
   - Commercial: 2008 report: "Allowing commercial FWDs could jeopardize water quality standards and state mandates and runs counter to PlaNYC sustainability initiatives."
   - Residential: before 1997, NYC prohibited food waste disposers in all parts of the City served by combined sewers. With no curb-side organics collection program and the impending closure of their landfill, the City lifted the residential ban after a pilot study, but have since noted that "high rates of penetration for FWDs could have negative environmental consequences, though, especially given the increasingly demanding regulatory context for nitrogen discharges and combined sewer overflows."
     [Metro Vancouver study: 45% households had food grinders]

J. **City of Philadelphia** – requires food grinders in new residential construction (2016)
   - Rationale: divert household food scraps from trash.
     - "In our current practice insofar as managing organics at least on the food waste side, we don't really have an outlet at this -- at the Streets Department level, so those materials unfortunately go in the garbage" (Testimony by Phil Bresee, City of Philadelphia, Streets Department, Recycling Director)

   - Current state in Philadelphia – unlike Vancouver in every aspect:
     - no curbside collection of organic waste
     - very limited organics processing capacity in the region
     - sewage treatment plant has "brand new" anaerobic digestion facilities
     - not yet developed an "overall policy and approach to organics management"
   - "Philadelphia's path is unique … Philadelphia recently invested $50 million in its North Treatment Plant to upgrade anaerobic digesters that produce and use biogas from organic wastes …" (Press release by Kendall Christiansen (Gaia Strategies))
   - "Philadelphia's wastewater treatment system was designed for a city of more than 2 million people and heavier industry. The wastewater infrastructure piping in new residential construction is more than adequately sized and engineered to handle the increased loads." (Testimony by Kendall Christiansen to City of Philadelphia)

K. **City of Peterborough** – ICI and multi-family prohibition

L. **City of South Pasadena** – commercial prohibition, as part of FOG (Fat – Oil – Grease) control program

M. **City of Manhattan Beach, CA** – prohibition in food service establishments (FSE) + removal of existing units required upon construction activity / major operational change

N. **City of Edmonton** – industrial prohibition

O. **City of Richmond** – discourages garburator use

   "Garburators and other in-sink disposal systems are not an environmentally friendly option to get rid of your food scraps. It requires a considerable amount of water to run, can cause grease build up and blockages, increases cost for our sewer system and sewage treatment facilities and negatively impacts aquatic life. Instead, please recycle food scraps with the Green Cart where it will be turned into nutrient-rich compost."

Solid Waste Q&A —food scraps diversion

What is the City's role with respect to green bin collections from MF properties?
The City offers a citywide food scraps recycling program for 100,000 single family homes (this is all single family homes). There are approximately 5,600 multi-unit residential buildings (MURB) with 175,000 individual units in the City of Vancouver. Of those, the City provides green bin service to 1,800 multi-unit residential buildings – these buildings represent about 30% of the total number of MURBs in the City. The remaining buildings are serviced by private sector waste haulers.

What is the City doing to promote and enforce food scraps diversion in the MF and ICI sectors?
City staff are continuing to reaching out to multi-unit buildings and businesses that generate high volumes of organic waste to assist these buildings and businesses in setting up their food waste diversion plan and providing further education on food waste prevention. We've let businesses know about the ban through a multitude of channels, and also worked with stakeholder organizations as well to reach out to their members.

It would be best to contact Metro Vancouver's media office for details about enforcement. The City's focus in 2017 is to provide information on how buildings and businesses can get a food scraps collection program in place.

What are the barriers to increased diversion through the City's strategy of curbside collection?
Metro Vancouver recently completed a survey on organics disposal ban readiness of businesses and multi-family buildings. Based on the 2016 survey report, about 80%-90% of businesses and multi-family buildings within the region have access to food scraps recycling.

Barriers for residents in adopting program include:

- Awareness of food scraps recycling program and ban
- Co-operation of employees, customers, tenants
- Storage space
- Odour and pests
- Cost (10-15% in each sector)

Is there residual capacity available in current collection and processing systems to accommodate more diversion?

Collection:

Yes. The City is able to provide organics collection to properties that meet the operational requirements (once a week collection, on an existing collection route, etc). City staff work with property managers to either arrange for them to join the Green Bin program or provide them with information on how to get an organics diversion program.

Processing:

The Surrey Biofuel facility, which will turn food scraps into biofuel, is scheduled to begin operations in early 2017. With the opening of this facility, the capacity to accommodate more organics diversion will increase for the entire region.

What are the impacts of placing additional food scrap collection containers in laneways to support increased food scrap collection from MF and ICI properties?
Based on our estimate, the amount of food scraps that can be diverted away from garburators does not warrant an increase in additional carts required. Most buildings are now designed to have adequate storage space for waste within the property and shouldn't have to store their containers in the lane. Any commercial container that is stored in the lane is required to obtain a permit that is reviewed by City staff.

If there is no space to add another cart, there are options to mitigate such as increase collection frequency or replace with a larger cart. To be eligible for food scrap collection, a residence must:

- already be on an existing route
- fit into once a week pickup (operationally)

Potential objections — including spurious and false claims — raised by industry:
(collected from the experience of other municipalities)

Delay tactics

1) Industry was not consulted
    - False. The industry has had meetings with City and Metro Vancouver staff since 2012. "… our initial discussions with City staff – with those responsible for solid waste management - began in 2012, at the same time as our outreach to Metro Vancouver's leadership and staff … Over the past several years, we engaged effectively with Metro to exchange information … including participating in their stakeholder consultation efforts related to diverting organics from it solid waste management system." (InSinkErator letter to City of Vancouver, October 21, 2016).
    - During the City's engagement in planning this measure, the only opposition we received was from appliance manufacturers. Other stakeholders such as Metro Vancouver, water stewardship groups, and building owners support the proposal, as it helps to reduce maintenance costs and ensure healthy natural waterways.
    - A public engagement letter was sent on August 31, 2016 to about 150 professional associations, industry groups and other stakeholders, and was further distributed by these organisations to their membership. The letter was also supplied to Corporate Communications and 311 Operations, should anyone from the public have called in to request more information. This happened at least in one known instance.
        - Emerson / InSinkErator first contacted the Water Design Branch (CR) on September 8, 2016 (Kendall Christiansen, Gaia Strategies, consultant to Emerson / InSinkErator). Telephone calls and e-mail correspondence were subsequently exchanged between Kendall and CR, and the City of Vancouver received three letters (the most recent is dated October 21, 2016) signed by David Coffey (Emerson / InSinkErator).
        - The Association of Home Appliance Manufacturers Canada (AHAM) first contacted CR on September 9, 2016 (Lisa Sattler, Manager, Regulatory Affairs). Telephone calls and e-mail correspondence were subsequently exchanged between Bruce Rebel (AHAM), Lisa and CR, and the City of Vancouver received a letter (dated September 28, 2016) signed by Bruce.
        - The Canadian Institute of Plumbing & Heating (CIPH) sent a letter dated September 15, 2016 (co-signed by Ralph Suppa). Telephone calls and correspondence by e-mail and even fax have since been exchanged between Ralph, other CIPH staff and CR.

2) Additional consultation / research is required and/or industry will fund a pilot study to examine this further for "scientific" and "evidence-based" decision making.
    - Additional consultation / research is not required to confirm that 170 metric tonnes / week of food waste would be better diverted at the source through a Green Bin program for recycling rather than sewer disposal, that Iona was not designed to handle the waste generated by food waste disposers, and that the potential for overflow to False Creek, the Fraser River and English Bay makes increasing the organic strength of the sewage in these areas environmentally irresponsible.
    - The very first strategy listed in Metro Vancouver's *Integrated Liquid Waste and Resource Management Plan* is to reduce liquid wastes at their source.
    - Vancouver is not unique in this proposal – large Canadian cities like Toronto and Ottawa have long-standing prohibitions on these devices. The City of Ottawa published a comprehensive report evaluating the claims of InSinkErator and upheld its prohibition. Earlier this year, the Town of Cochrane, AB prohibited these devices, based on the rationale that source diversion through a Green Bin program is better than sewer disposal.
    - Metro Vancouver has studied this issue and generated its own reports, which the City of Vancouver reviewed.
    - **Opening this door has the potential to waste a lot of City resources.** This is a subversive tactic used by the industry and appears to have been successful in York Region. Staff span their wheels for 2-3 years with pilot studies, consultants, and meetings, and it appears they got drained by the whole exercise and gave up.
        - UDI in an October 2012 letter to New Westminster and Metro Vancouver offered to conduct a pilot study with InSinkErator to see if encouraging garburator use would decrease the space required for food scraps recycling.

Greenwashing

3) The North American trend is for wastewater treatment plants to treat sewage as a resource; Metro Vancouver through its *Integrated Liquid Waste and Resource Management Plan* (ILWRMP) talks about making better use of this resource.
    - Strategy 1.1 of the ILWRMP is to reduce liquid wastes at their source.
    - Yes, and Iona does capture some methane. But Iona is a primary treatment plant and only reduces BOD (biochemical oxygen demand, a surrogate measure of water pollution) by 44%. The remaining waste ends up in Georgia Strait, with a potential risk to aquatic life. There has been an upward trend in chemical dosing at Iona to maintain compliance with its discharge permit. The plant generates Class B biosolids. There's a better quality end-product from Green Bin recycling, and source diversion alleviates additional strain on Iona.
    - Currently, food grinders contribute 9% of BOD loading to Metro's plants, and by 2030 this is projected to increase to 14% of the BOD.

4) Food waste disposers can help the City achieve its green objectives by diverting from landfill
    - Not in the context of Vancouver, with its infrastructure, environmental context and internationally recognized Green Brand.
    - In the Greenest City in the world, sinks are not garbage cans and natural waterways are not alternative landfills.
    - Food waste in the combined sewer system has the potential to negatively impact recreational waterways and aquatic life. False Creek already has an intransigent *E. coli* problem.
    - Organic waste diversion plans have been required in Vancouver since January 1, 2015 for all residential and non-residential properties, and all new construction accounts for this requirement. In defining "organic waste diversion plan," Council **did not endorse** food waste disposers as a means to divert food waste from landfills (Solid Waste By law 8417).[1]

Minimization of the Issue / Creation of uncertainty

5) Food waste disposer contribution insignificant to BOD / TSS / nitrogen-load / influent flow at Iona and CSOs
    - False, and this argument does not address the fact that there is a better end use for food scraps through recycling than disposal, which is the City's key message.
    - 170 metric tonnes of food / week are sent to the region's sewers by food waste disposers. This is about 6% of overall food waste and is **not** insignificant.
    - Currently food grinders contribute approx. 9% of the BOD (biochemical oxygen demand, a surrogate measure for water pollution) and 13% of the TSS (total suspended solids) loading to Metro Vancouver treatment plants, and by 2030 this is projected to increase to 14% of the BOD and 19% of the TSS loading.
        - Iona achieved on average a 44% reduction in BOD and a 60% reduction in TSS in 2015. The remainder goes into Georgia Strait.
    - For CSO's: yes, the sewage is diluted by the storm flows. But: "the solution to pollution is not dilution." The Law of Conservation of Mass still applies – i.e., "garbage in, garbage out," and this means garbage out into False Creek, the Fraser River and English Bay.
    - City of Ottawa report responses:
        - "Whatever goes down the drain through one of these devices creates an additional burden on the wastewater treatment plant that could be avoided through composting."

[1] City of Vancouver Solid Waste By-law 8417:

"organic waste diversion plan" means a plan describing the methods to be used to divert food waste, yard waste and clean wood waste from disposal at a landfill or incinerator site, and includes:

(a) producing no food waste, yard waste or clean wood waste;
(b) use of the City's green cart service;
(c) use of a licensed hauler who lawfully brings the material to a Material Recovery Facility or otherwise disposes of the food waste, yard waste or clean wood waste in accordance with this By-law;
(d) composting or anaerobic digestion; and
(e) dropping off material directly at an approved private facility or at a regional disposal facility in accordance with this By-law; or
(f) any combination of the above.

    - "A University of Lund study showed a 50% increase in the loading of organic matter, resulting in an increase of sludge. Several other studies corroborate increased loadings and sludge production."
    - "Potential for overflow to [natural waterways] makes increasing the organic strength of the sewage in these areas environmentally irresponsible."
- Industry may quote Metro Vancouver's internal July 2015 report: "The projected food grinder contribution to plant influent flow by 2046 will be 0.3%."
    - This is more than 270 million L of drinking water per year.
    - Food grinders contribute approx. 9% of the BOD and 13% of the TSS.

6) Metro Vancouver reports suggest that the current and prospective impact of food waste disposers is entirely manageable and do not suggest any areas of significant concern.
    - False, and this argument does not address the fact that there is a better end use for food scraps through recycling than disposal, which is the City's key message.
    - There are two key Metro Vancouver reports, and industry has copies of both:
        - The public report "Regional Position on the Use of Food Grinders and Similar Technologies" (dated June 18, 2015, and presented to the Utilities Committee). The report carries more weight than the internal report, listed below, as it was reviewed and **endorsed** by the Utilities Committee.
        - The internal report "Impact of Residential Food Grinders on Liquid Waste Services" (July 2015, Orbit number 11567410, and which was **not** presented to the Utilities Committee).
        - Background: Metro's internal report focused only on **residential** food waste disposers and **did not** evaluate potential effects on receiving environment criteria.
    - Important background when evaluating this industry claim: The bar for Iona's (and Lions Gate's) performance is lower than for Metro's other treatment plants. Iona's operational certificate (under the transitional authorization) has the following effluent requirements: BOD 105 mg/L and TSS 71 mg/L. In comparison, the requirement is 45 mg/L for each of these parameters at Metro's secondary treatment plants.
    - The trend for Iona is that during the summer it is in a "critical operational condition" for meeting its discharge permit. Increased use of food waste disposers are expected by Metro Vancouver to impact Iona's ability to meet its discharge permit when BOD and TSS spikes occur (internal report, p. 1). Iona "faces significant operational concerns due to any increase in influent BOD and TSS concentrations … It should be noted that primary treatment plant operation has higher sensitivity to influent quality variations … As a result, food grinder use is of more concern for the primary treatment plants …" (internal report, p. 7-8)

7) Metro Vancouver didn't propose a prohibition on food waste disposers.
    - Metro Vancouver doesn't have the legislative authority to prohibit residential food waste disposers. This is up to member municipalities.
    - Within the commercial sector, the Metro Vancouver Board endorsed the staff recommendation to develop "regulatory options to regulate the use of food grinders and similar technologies." (Metro June 2015 report).

8) Minimal amount of water used
    - False. 2.0 million L per week currently used in the region for sending food scraps through garburators.
    - Industry may quote Metro Vancouver's internal July 2015 report: "The projected food grinder contribution to plant influent flow by 2046 will be 0.3%."
        - This is more than 270 million L of drinking water per year.
        - Metro Vancouver's internal report includes a 2016 figure which is more than double the conservative estimate (2.0 million L/week) published by the City of Vancouver in its Council Report.

9) Food scraps 70% water and mostly organic, sewage treatment plant is the natural processing facility for food waste
    - The most natural processing for food waste is composting.
    - Food waste that is not 70% water (e.g. bones, eggshells) can produce up to triple their weight in biosolids.
    - There is additional nitrogen content of food waste. Iona, a primary treatment plant, does not have a dedicated unit processes for nitrogen removal.
    - (Above responses based on the City of Ottawa report)

10) FOG is not an issue with food waste disposers
    - False. 1 ton per week of fat, oil and grease is sent each week by garburators to the sewer. This amount would increase through increased use of garburators. Metro Vancouver and its member municipalities spend $2 million annually on cleaning FOG. Increased use of food grinders would likely lead to increase FOG loading.
    - Industry may quote the internal Metro report (July 2015): "Contribution of food grinders to FOG loadings was evaluated by using twenty years of MV Quality Control data; negligible impacts of food grinders was observed."
        - This report only focused on FOG from food grinders from the perspective of overall FOG received by the wastewater plant. The report also states: "… there is insufficient data available to assess the food grinder impacts on FOG deposition in collections systems." (p. 11)

11) GHG emissions from transporting compost (road traffic); industry may quote a study like Wainberg et al. (2000)
    - This argument again does not address the fact that there is a better end use for food scraps through recycling.
    - "Metro Vancouver previously reported … that since food grinders are not a complete solution for organic waste recycling in Metro Vancouver, trucks would operate to transport the remaining compostable material for centralized composting. As such, the incremental GHG potential contributed by the extra load of food waste transported by the trucks is likely to be smaller than these studies have suggested." (Metro Vancouver internal report (July 2015), p. 12)
    - It should also be noted that increased use of chemicals at Iona to maintain permit compliance necessitates truck delivery, and Iona also operates a flare.

12) Doing something unique – jurisdiction X permits them
    - First question to ask: what is the context of jurisdiction X's WWTP, solid waste programs, infrastructure and local environment?
    - Toronto and Ottawa have banned them for over a decade.

13) Cost

- It is NOT cheaper to send food scraps through the sewer than to compost them. Additionally, there is a marketable end product after recycling food scraps.
- See notes about increased sewer and private building maintenance costs.
- City of Ottawa report, discussing a New York City study: "Sewer maintenance cost estimated to increase by 7.6% at penetration rate of 38%." [Of note, Metro estimates 45% of residences have garburators in the region].

14) Convenience / hygienic method of disposal

- Littering is also convenient, but as a society we've decided to prohibit what is privately convenient but which fouls the commons. Instead of dropping your pop can on the boulevard, you're asked to deposit it into a recycling bin.
- City of Ottawa report response: "Agree, however, this may make composting (the most environmentally beneficial method of disposal) unattractive."

15) Harvest Power has odour problems

- Currently the City of Vancouver does not send any of its organics to Harvest Power.
- The City of Vancouver and private haulers sign contacts with processing facilities licensed by Metro Vancouver.
- Harvest Power is one of several Metro Vancouver facilities with organics processing capacity. Additionally, a new biofuel facility in Surrey will be coming on-line in 2017.

16) Nanny state / consumer choice / convenience: people don't want to walk their organics to the Green Bins

- This argument again does not address the fact that there is a better end use for food scraps through recycling.

MURBs

17) MURBs will need more carts, more space and therefore it will be more costly

- No additional carts required than what City already recommends for new building design (Patrick Chauo, CoV Solid Waste calculations)
- (UDI in a 2012 letter to New Westminster and Metro Vancouver offered to conduct a pilot study with InSinkErator to see if encouraging garburator use would decrease the space required for recycling.)

18) MURBs don't have the same uptake as SF homes

- These are the early days of organics recycling. Just like newspaper and blue box recycling, the City expects diversion to increase over the coming years.
- Anecdotally: At one meeting, Polygon shared with us that the organics diversion rate at some of their MURBs is approaching that of SF homes.

Reference Documents

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- City of Ottawa, Report to Planning and Environment Committee and Council, March 21, 2005, "In-Sink-Erator Response."
- City of Peterborough By-law 15-075.
- City of Philadelphia Committee on Licenses and Inspections, November 17, 2015, hearing transcript (obtained from the City of Philadelphia website)
- City of Philadelphia "Municipal Waste Management Plan 2016-2025," draft August 2016. (Plan, Appendix)
- City of Richmond brochure "Richmond's Green Cart Program," issued February 2016.
- City of South Pasadena City Code.
- City of Toronto Municipal Code, Chapter 681-10, Section E (1).
- City of Toronto website, "Multiresidential FAQ". Last accessed October 7, 2016.
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- City of Vancouver website "Home, Property, and Development / Waste disposal and recycling / Food scraps and yard waste / Food isn't garbage: 2015 Organics Ban". Last accessed October 6, 2016.
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- Metro Vancouver report, prepared by Environmental Management & Quality Control Liquid Waste Services, July 2015, "Impact of Residential Food Grinders on Liquid Waste Services," Orbit Number 11567410.
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- New York City, Department of Environmental Protection report, "The Impact of Food Waste Disposers in Combined Sewer Areas of New York City," 1997.
- New York City, Department of Environmental Protection report, "Commercial Food Waste Disposal Study," December 31, 2008.
- New York City, Environmental Protection website, "Food waste disposers". Last accessed October 7, 2016.
- New York City Plumbing Code 2014, section PC 413.
- Rona website catalogue, "Waste disposers". Last accessed October 11, 2016.

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Food Waste Disposers

In the Greenest City in the world, "food is not garbage," sinks are not garbage cans, and natural waterways are not alternative landfills. This update proposes to halt the expansion of food waste disposers (also known as garburators, food grinders or garbage grinders) by prohibiting their installation in all new developments and renovations.

Food waste disposers convert a solid waste into a liquid waste — a perceived disposal problem is simply transferred from one waste stream to another. Each week in the region, 170 tonnes of food scraps are sent to the sewer by food waste disposers. To transport this slurry to the sewer, food waste disposers in the region use 2.0 million litres (L) of drinking water per week.

Sewage is processed by the Iona Island primary wastewater treatment plant — not scheduled to be upgraded until 2030 — which was not designed to treat the organic liquid waste generated by food waste disposers. Additionally, Vancouver has a combined storm and sanitary sewer system and at times during heavy rainfall can have combined sewer overflows into receiving bodies like the Fraser River and False Creek.[4]

In Vancouver, a "closed-loop," recycling alternative is available, treating food scraps as a resource rather than as a disposal problem for the landfill or sewer. Food scraps collection services are widely available for all properties and are supported by regional organics processing capacity at several facilities.[5] Through the City's Green Bin collection program and services provided by private sector waste management companies, food scraps are turned into compost and biofuels, reducing the need for commercial fertilizers and fossil fuels. This aligns with the Vancouver Food Strategy and supports local green jobs.

By prohibiting the expansion of food waste disposers, the City can:

- Use a renewable resource
- Reduce maintenance costs
- Protect natural waterways
- Reduce drinking water wastage

Below is a summary of the regulatory status of these devices in other jurisdictions:

- City of Guelph: Since the mid-1980's, has prohibited food waste disposers.

- City of Toronto: Since 2002, has prohibited food waste disposers for domestic purposes in areas served by combined sewers.

- City of Ottawa: Since 2003 (and even longer in some of its pre-amalgamation entities), has prohibited food waste disposers. Council later reaffirmed the prohibition.

- City of Kingston: Since 2008, has prohibited food waste disposers. The City also prohibits replacement of units in existence before the by-law.

[4] Also of note, each year Metro Vancouver and its member municipalities such as the City of Vancouver spend over $2,000,000 removing grease build up in sewers. This would increase with the expanded use of food waste disposers, which currently send at least 1 tonne of oil and fat each week into the sewer.

[5] Organic waste diversion plans have been required in Vancouver since January 1, 2015 for all residential and non-residential properties, and all new construction accounts for this requirement. In defining "organic waste diversion plan," Council did not endorse food waste disposers as a means to divert food waste from landfills (Solid Waste By-law 8417).

- City of Kelowna: Since 1987, has prohibited food waste disposers.

- Capital Regional District (Victoria): Since 2002, has prohibited commercial food waste disposers.

- District of Squamish: In December 2016, passed a prohibition on food waste disposers.

- Town of Cochrane, Alberta: In spring 2016, passed a prohibition on residential food waste disposers, to take effect once a curb-side organics collection service is implemented.

- New York City: Prohibits food waste disposers outside of dwelling units. The long-standing prohibition on commercial devices was reaffirmed in 2008. The prohibition on residential devices was lifted in 1997 with the impending closure of their landfill and no curb-side organics collection program, but is now being closely monitored by New York: "[h]igh rates of penetration for food waste disposers could have negative environmental consequences, though, especially given the increasingly demanding regulatory context for nitrogen discharges and combined sewer overflows."

- City of Philadelphia: Uniquely, requires food waste disposer installation in new residential construction as of 2016. Philadelphia does not have curb-side collection of food scraps, does not have sufficient organics processing capacity in the region, and recently upgraded its wastewater treatment plants with anaerobic digesters. Vancouver's context is opposite to Philadelphia on each of these points.

The context of a city's solid and liquid waste infrastructure is one key to understanding why jurisdictions across North America treat these devices differently.

Prohibiting food waste disposers in new construction will eliminate capital and maintenance costs for owners (residential units retail for $200 - $500, not including plumbing and electrical installation costs; larger savings accrue to commercial establishments). Additionally, certain commercial food waste disposers are classified in the Water Works By-law (4848) as a potential drinking water contamination hazard, requiring the installation of a backflow preventer. The prohibition eliminates this potential risk to drinking water and for some commercial establishments, reduces the backflow prevention testing and maintenance related costs. Finally, by diverting food scraps from sewer disposal to green bin recycling, a potential waterway pollution source is eliminated at no additional cost to taxpayers.

Through the public engagement process, a small number of household appliance manufacturers objected to the prohibition, citing the absence of a reference to "an existing research, peer-reviewed, industry-adopted guideline (e.g., WaterSense, Energy Star)." The proposed prohibition is supported by Metro Vancouver (Appendix E).

Implementation Plan

The proposed amendments will be effective as of July 1, 2017. Information sessions will be held with building inspections and development services to inform front-line City staff of the by-law amendments. Outreach regarding the new amendments will be conducted with professional associations, building owners, facility managers, mechanical consultants and contractors, suppliers, the hospitality industry, and the general public.

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NOV 0 8 2016

File: SE-12-01-010

Mr. Sadhu Johnston, City Manager
City of Vancouver
453 W 12th Ave
Vancouver, BC V5Y 1V4
VIA EMAIL: Sadhu.Johnston@vancouver.ca

Sadhu.

Dear Mr. Johnston:

Re: Proposed Vancouver Building Bylaw Amendments – Food Waste Disposers

We understand that the City of Vancouver, as part of your water conservation program, is proposing to halt the expansion of food waste disposers (also known as garburators, food grinders or garbage grinders) by prohibiting their installation in new buildings and major renovations as part of the Vancouver Building Bylaw amendments. You have asked Metro Vancouver to comment on your water conservation program and specifically, to comment on why it is important to divert organics from the waste stream.

We are pleased to see the initiatives being considered by the City of Vancouver. Metro Vancouver supports the City's demand side initiative as the diversion of organics from the liquid waste stream provides a number of significant benefits. These include:

- Reducing drinking water consumption associated with the use of food waste disposers is in line with Metro Vancouver's water conservation efforts;
- In 2015, Metro Vancouver implemented an Organics Disposal Ban to target organics for recycling and energy recovery to reduce the disposal of organic material. The *Integrated Solid Waste and Resource Management Plan* is intended to encourage source separation and the highest and best use of organic materials. While some limited recovery of energy or materials occurs at landfills and wastewater treatment plants, the disposal of organics to landfill or to sewers is not the highest or best use of organic materials;
- The City of Vancouver's wastewater is treated at the Iona Island Wastewater Treatment Plant, which is a primary plant that will need to be upgraded to secondary treatment. Enhanced chemical treatment processes have been installed to ensure compliance with the provincial Operational Certificate limits for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS). However, it is not possible to treat soluble BOD at the Iona Island primary treatment plant and this may lead to increased risk of permit exceedance. Restricting further food grinding will assist in mitigating this risk; and

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- Metro Vancouver and its member municipalities currently spend over $2 Million per year to remove grease build-up in the sewers to prevent sanitary sewer overflows – this would be mitigated by prohibiting food disposers in new developments.

Demand side management and source control initiatives have proven to be the most effective way to avoid costs for additional treatment capacity and to reduce operational expenditures. Metro Vancouver is pleased to support the City of Vancouver in its proposed water efficiency amendments to reduce the waste of drinking water and promote water efficiency.

Yours truly,

Carol Mason
Commissioner/Chief Administrative Officer

CM/SS/lp

cc: Jerry Dobrovolny, General Manager, Engineering Services, City of Vancouver
Daniel Roberge, Director, Water & Sewer Green Infrastructure, City of Vancouver

19805550

COUNCIL AUTHORITY/PREVIOUS DECISIONS *

In May 2015, Council adopted a motion to protect Vancouver's recreational waters, reaffirming a commitment to reduce sewage runoff.

In October 2014, Council enacted amendments to the Solid Waste By-law (8417), requiring all holders of business licenses and owners and occupiers of all residential and non-residential properties in Vancouver to have a food waste diversion plan as of January 1, 2015.

In January 2013, Council adopted the Vancouver Food Strategy, a systems approach to food policy and planning which aims to foster local food production and distribution, minimize food waste and maximize beneficial uses of organics.

Through the public engagement process, a small number of household appliance manufacturers objected to the prohibition, citing the absence of a reference to "an existing research, peer-reviewed, industry-adopted guideline (e.g., WaterSense, Energy Star)." The proposed prohibition is supported by Metro Vancouver (Appendix E).

Public Consultation Process & Summary

Also since 2012, food waste disposers have been investigated by Metro Vancouver as required by Metro Vancouver's *Integrated Liquid Waste and Resource Management Plan*. Stakeholders including appliance manufacturers have participated in Metro's consultations, and have engaged with City of Vancouver staff.

BY-LAW NO. _____

A By-law to amend Building By-law No. 10908
Regarding sustainability and water conservation

THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts as follows:

Food waste disposer includes a food grinder, garbage grinder, waste disposal unit, garburator and any other device intended to grind waste into small particles for the purpose of disposing of such waste directly or indirectly into the ***drainage system*** but does not include a mechanism integrated into a residential or commercial dishwasher.

10.3.1.3. Plumbing Fixture Efficiency

3) The installation of a ***food waste disposer*** is prohibited.