

Small Group Meeting Summary: Digester & Grinders

Food Sector Grease Interceptor Bylaw Review

January 8, 2019

28155271

Contents

1. Background.....	1
2. Notification.....	1
3. Small Group Meeting.....	1
4. Presentations.....	3
5. Feedback.....	3
6. Next Steps.....	6

1. Background

Metro Vancouver, in an effort to reduce the amount of fats, oils and grease entering the sewer system, has engaged industry stakeholders to provide feedback on the Grease Interceptor Bylaw and its effectiveness.

Specific areas of interest and exploration included:

- Effectiveness of the current bylaw
- Challenges associated with meeting bylaw requirements
- Educational initiatives that might improve awareness, understanding and compliance with the bylaw

Metro Vancouver recognizes that changes to the Food Sector Grease Interceptor Bylaw could have an impact on stakeholders and is committed to delivering a responsive, transparent stakeholder engagement program. A variety of forums are being used to learn about stakeholder issues and interests related to the bylaw. Information collected during the engagement period will inform the bylaw review. Results and recommendations will be reported back to stakeholders and the Utilities Committee at the end of the process.

Small Group Meetings are being hosted to support a deeper discussion of compliance inhibiting factors and special considerations of stakeholder groups with unique interests or characteristics.

2. Notification

In August 2018, Metro Vancouver issued invitations to participate in the Grease Interceptor Bylaw Review engagement, by email and post, to more than 10,000 Food Sector Establishments and stakeholders within Metro Vancouver. Invited stakeholders responded to Metro Vancouver by email to confirm their interest. Those confirming their interest and availability were assigned to the appropriate stakeholder meeting.

3. Small Group Meeting

Date & Location

Tuesday, January 8, 1:00 p.m. – 3:00 p.m.

Metro Vancouver – 28th Floor Conference Centre

Metrotower Office Complex

4730 Kingsway

Burnaby

Meeting Agenda & Format

- Introductions
- Engagement process
- Background
- Manufacturer presentation
- Topic 1 – Discharge to Sewer
- Topic 2 – Understanding of Current Bylaws
- Topic 3 – Client Profile & Support
- Final thoughts & next steps

Participants

NAME	ORGANIZATION
Louis Anagnostakos	Orca
Rachel Wong	Oklin
Alfred Wong	Micron Waste Technologies Inc.
David Coffey	InSinkErator
Michael Keleman	InSinkErator

Presenters & Support

NAME	ORGANIZATION
Tom Sadleir	Program Manager, Public Involvement, Metro Vancouver
Linda Parkinson	Program Manager, Source Control Utility & Planning, Metro Vancouver
Grant McGillivray	Liquid waste Regulatory Program Lead, Environmental Regulation and Enforcement, Metro Vancouver
Kirsty Dick	Creative Services Manager, Lucent Quay (Facilitator)
Valder Belgrave	Marketing Consultant, Lucent Quay (Recorder)

4. Presentations

Metro Vancouver presented an overview of the engagement, source control and enforcement activity to begin the meeting, followed by manufacturers presentation of products and research into the impact of food waste on the sewerage system:

Engagement Process – Tom Sadleir

- Purpose of the bylaw review
- Objectives
- Timeline

Source Control – Linda Parkinson

- Scope of Metro Vancouver
- Definition of source control
- Description of current bylaw

Bylaw Enforcement – Grant McGillivray

- Work with municipalities and determining “hot spots”

InSinkErator Presentation – Michael Keleman

5. Feedback

Opening discussion: comments and questions

- Does the Bylaw require grab or continuous sampling for fats, oils and grease
- Do municipalities have Sewer Use Bylaws?
- What was the driver for the 2015 Board report about food grinders and other pre-treatment technologies? Who was the author?
- Do the same hot spots come up every year, in relation to enforcement?

A series of discussion topics were used to obtain feedback on the bylaw review. The following outlines the comments and questions that were raised by stakeholders at the meeting.

Topic 1: Discharge to Sewer

Does your technology discharge to the sewer (wastewater system)?

What technical information can you provide on the discharge from your technology to the wastewater system (i.e. quality of the wastewater, including over time)?

Digesters

- (Micron Waste) Initial challenge for clients was the high concentration of waste products being discharged into the sewer system. Focus transitioned into waste water recovery and less on discharge. Focused on bio processes to break down waste material (including FOG) and capture water, which is used for irrigation.
- (Micron Waste) Bio-process can be optimized to discharge to the sewer. BOD levels can be brought down from 10,000 to 400, or less. However, current clientele is looking for (water) recovery, so BOD levels are reduced to below 10 for purposes of irrigation.
- (Orca) Manufactures four models of digesters, flow rated at .21 litres per minute to .69 litres per minute. Interceptors are sized accordingly. Units are installed upstream of a grease interceptor and generally not installed in restaurants that produce “fatty” foods. Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) discharges are much higher, and over strength. However, these have been reduced by 45% and 25% respectively in recent years, using improved microorganisms. [Distributed copies of Life Cycle Assessment report].
- (Orca) Units discharge to the sewer but use a 4-micron screen. Takes advantage of municipal infrastructure to keep trucks off the road. The intent of these units is that they discharge to the sewer system.
(Orca) Initially underestimated the impact of FOG, as well as the need for customer support to ensure the efficacy of its units. In response to the latter, it changed its business model and rents units, rather than sells them. Contract includes on-going support and maintenance. Based on experience, most digesters will not work properly if sold to customers without this support.
- (Olkin) Current Composter does not discharge to sewer. New grinder system being developed that, subject to reducing BOD and TSS, would discharge to the sewer. It will be used to increase the capacity of existing composters.

Grinders

- (InSinkerator Canada) Has noted a focus in most jurisdictions on monitoring industry, but less so Food Sector Establishments (FSEs) that are a source of BOD & TSS. Municipalities often adopt TSS & BOD limits for industry, but the use of grab samples from a digester or grinder may reflect spikes, for a very short period of time. Time-rated or flow rated sampling, as applied to industry, would be fairer and more applicable to FSEs.

Topic 2: Understanding of Current Bylaws

What is your understanding of the requirements of Metro Vancouver’s Sewer Use Bylaw with respect to discharges to the sewer (wastewater system)?

What is your understanding of the Food Sector Grease Interceptor Bylaw requirements with respect to your technology?

- (InSinkErator Canada) Recommendations as outlined in [powerpoint](#). BOD and TSS discharges concentrated (during short periods of the day). Loading (over the entire day) should be taken into account.
- (Orca) Digesters not referenced in the current MV Food Sector Grease Interceptor bylaw. US EPA and New York state specifies required digester size based on flow and concentrations. Additional capacity is specified for grease interceptors, if a digester is installed. Focused almost entirely on FOG and less so on BOD & TSS. The same is true in California. Bylaw is “self-policing”, but there is the potential for checks (audits).
- (Orca) Australia and UK adopting a similar approach. Larger customers are aware of the impacts of greenhouse gasses and prefer to discharge to sewer, as it takes trucks off the road and reduces carbon emissions.
- (Olkin) Grinders currently in the Chinese market, but requirements are less stringent. Interested in introducing grinders to in North American, so need to develop an understanding of regulations in various markets.
- (Micron Waste) Locally based (Delta), so system developed to meet local regulatory requirements. Typical process brought BOD levels of 10,000 – 20,000 down to below 500 and TSS to below 100. Also needs to satisfy federal guidelines with respect to concentrations of narcotics (for use in cannabis facilities). Bio-process (development of specific microbe blends) is key to meet client’s needs. Works with large industrial clients. Units are the size of a 40ft. shipping container, so not practical for FSE applications.
- (InSinkErator Canada) Challenge of a 500 – 600 mg/l BOD or TSS limit is that it might promote dilution [prohibited by Sewer Use Bylaw] through water use as a solution. Loading limits recommended over concentration based.

Topic 3: Client Profile & Support

What types of companies use your technology?

What information and support do you provide to companies who install your technology (e.g. permit requirements, ongoing operation and maintenance needs)

Digesters

- (Micron Waste) Works primarily with industrial clients with high strength waste, processing .5 – 2.5 tons/day. Relies on clients to provide bylaw/permitting requirements. Cannabis cultivation is a key sector. Works with client & municipality to ensure regulations are satisfied. Managing waste is not an initial priority for clients but becomes an issue after harvest. The implications of having to discharge to the sewer system or truck pharmaceutical and cannabis waste to a facility drives interest in the product. Very little is discharged into the sewer as the focus is on water recovery.
- (Orca) Targets facilities (restaurants, corporate cafeterias, hotels, hospitals, airports) with 100+ seats. Very hands-on with installation and training and supporting permitting, compliance, monthly inspections and servicing on an on-going basis. Active in cities in North & South America, Europe, Australia and Asia.
- (Olkin) Active in commercial, industrial and residential markets in China. Quite a few small-scale industrial systems in operation. Evaluating the feasibility of large-scale or smaller

composting facilities in North America, where grinders would be introduced. Would support Clients in securing required permits.

Grinders

- (InSinkErator) Clients’ sizing requirements specified by kitchen designers. Services hospitals, prisons, mortuaries, fast casual restaurants. Some smaller restaurants may install residential rather than commercial units, which use continuous duty motors. If regulations were introduced for disposers, permits would be secured by purchaser/client

Other – Hauler Program

- InSinkErator provided [information on a co-op program](#) developed for haulers and to encourage proactive maintenance in Tempe, Arizona. Program is a model worth investigating.

6. Next Steps

Metro Vancouver will analyze all questions and comments from the small group meetings and identify key themes to inform the development of discussion topics for a Working Group and possible sub-groups, which will meet in 2019/20. Metro Vancouver will recruit Working Group members from the varied stakeholder groups that participated in the Small Group Meetings. The Working Group will be guided by a Terms of Reference.



The meeting concluded at 2:40 p.m.