AGENDA

WASTE MANAGEMENT COMMITTEE REGULAR MEETING

Wednesday, May 5, 2010
1:00 p.m.
2nd Floor Boardroom
4330 Kingsway, Burnaby, BC

Committee Members:
Chair, Director Greg Moore, Port Coquitlam
Vice Chair, Director Heather Deal, Vancouver
Councillor Mary-Wade Anderson, White Rock
Director Derek Corrigan, Burnaby
Director Ernie Daykin, Maple Ridge
Director Pamela Goldsmith-Jones, West Vancouver
Councillor Scott Hamilton, Delta
Director Linda Hepner, Surrey
Director Don MacLean, Pitt Meadows
Director Darrell Mussatto, North Vancouver City
Director Harold Steves, Richmond
Director Joe Trasolini, Port Moody
Director Wayne Wright, New Westminster

Please advise Michele Kingdon at (604) 451-6199 if you are unable to attend.

THIS PAGE LEFT BLANK INTENTIONALLY.

metrovancouver Greater Vancouver Regional District • Greater Vancouver Water District
Greater Vancouver Sewerage and Drainage District • Metro Vancouver Housing Corporation
4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

NOTICE TO THE GVRD
WASTE MANGEMENT COMMITTEE

1:00 PM
Wednesday, May 5, 2010
2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

A G E N D A

1. ADOPTION OF THE AGENDA

1.1 May 5, 2010 Regular Meeting Agenda

Staff Recommendation:
That the Waste Management Committee adopt the agenda for its regular meeting scheduled for May 5, 2010 as circulated.

2. ADOPTION OF THE MINUTES

2.1 April 7, 2010 Regular Meeting Minutes

Staff Recommendation:
That the Waste Management Committee adopt the minutes of its regular meeting held April 7, 2010 as circulated.

3. DELEGATIONS

No items presented.

4. INVITED PRESENTATIONS

No items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 GVS&DD Sewer Use Amending Bylaw No. 256, 2010

Designated Speakers: Ray Robb, Division Manager, Policy and Planning Department and Jeff Gogol, Environmental Regulatory Planner, Policy and Planning Department
Recommendation:
That the Board:

a) introduce and give first, second and third reading to "Greater Vancouver Sewerage and Drainage District Sewer Use Amending Bylaw No. 256, 2010";

b) reconsider, pass and finally adopt “Greater Vancouver Sewerage and Drainage District Sewer Use Amending Bylaw No. 256, 2010”.

5.2 Issue Paper – Revisions to the Food Sector Code of Practice

Designated Speakers: Ray Robb, Division Manager, Policy and Planning Department and Jeff Gogol, Environmental Regulatory Planner, Policy and Planning Department

Recommendation:

That the Waste Management Committee receives for information the report dated April 21, 2010, titled “Issue Paper – Revisions to the Food Sector Code of Practice”.

5.3 Amendment – Fraser Sewerage Area Boundary – 17032 and 17076 Fraser Highway and 7700 – 168 Street, City of Surrey

Designated Speaker: Mike Stringer, Senior Engineer, Policy and Planning Department

Recommendation:

That the Board approve the amendment of the Fraser Sewerage area boundary to include portions of the properties at 17076 Fraser Highway and 7700 – 168 Street, City of Surrey and to exclude a portion of the property at 17032 Fraser Highway as shown on Plan SA-2376, Sheet 52.

5.4 Amendment – Fraser Sewerage Area Boundary – 6890 - 176 Street, City of Surrey

Designated Speaker: Mike Stringer, Senior Engineer, Policy and Planning

Recommendation:

That the Board approve the amendment of the Fraser Sewerage area boundary to include portions of the property at 6890 - 176 Street as shown on Plan SA-2376, Sheet 62.

5.5 Material Disposal Bans Update – April 2010

Designated Speakers:

Chris Allan, Senior Engineer, Engineering and Construction Department
Ken Carrusca, Division Manager, Policy and Planning Department

Recommendation:

That the Waste Management Committee receive the report titled “Material Disposal Bans Update”, dated April 25, 2010 for information.

5.6 Manager’s Report

Designated Speaker: Toivo Allas, Manager, Policy and Planning Department

Recommendation:

That the Waste Management Committee receive for information the report dated April 23, 2010, titled “Manager’s Report”.

6. INFORMATION ITEMS

No items presented.

7. OTHER BUSINESS

No items presented.

8. RESOLUTION TO CLOSE MEETING

No items presented.

9. ADJOURNMENT

Staff Recommendation:

That the Waste Management Committee conclude its regular meeting of May 5, 2010.

THIS PAGE LEFT BLANK INTENTIONALLY

MINUTES

THIS PAGE LEFT BLANK INTENTIONALLY

GREATER VANCOUVER REGIONAL DISTRICT
WASTE MANAGEMENT COMMITTEE

Minutes of the Regular Meeting of the Greater Vancouver Regional District (GVRD) Waste Management Committee held at 1:06 p.m. on Wednesday, April 7, 2010 in the 2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

PRESENT:
Chair, Director Greg Moore, Port Coquitlam
Vice Chair, Director Heather Deal, Vancouver
Councillor Mary-Wade Anderson, White Rock
Director Derek Corrigan, Burnaby (arrived at 1:17 p.m.)
Director Ernie Daykin, Maple Ridge
Director Pamela Goldsmith-Jones, West Vancouver
Councillor Scott Hamilton, Delta
Director Linda Hepner, Surrey
Director Don MacLean, Pitt Meadows
Director Darrell Mussatto, North Vancouver City
Director Harold Steves, Richmond
Director Joe Trasolini, Port Moody
Director Wayne Wright, New Westminster

ABSENT:
None

STAFF:
Johnny Carline, Commissioner/Chief Administrative Officer, Chief Administrative Officer's Department
Toivo Allas, Manager, Policy and Planning Department
Tim Jervis, Manager, Engineering and Construction Department
Klara Kutakova, Assistant to Regional Committees, Corporate Secretary's Department

1. ADOPTION OF THE AGENDA

1.1 April 7, 2010 Regular Meeting Agenda

It was MOVED and SECONDED
That the Waste Management Committee:
a) amend the agenda for its regular meeting scheduled for April 7, 2010 by adding the following:
   i. item 3.1 Late Delegation Nexterra Systems Corp.;
   ii. item 4.1 Response to the Wilderness Committee Presentation;
   iii. item 6.1 Update on the Draft Integrated Solid Waste and Resource Management Plan; and
b) adopt the agenda as amended.

CARRIED

2. ADOPTION OF THE MINUTES

2.1 March 17, 2010 Regular Meeting Minutes

It was MOVED and SECONDED
That the Waste Management Committee adopt the minutes of its regular meeting held March 17, 2010 as circulated.

CARRIED

2.2 March 26, 2010 Special Meeting Minutes

It was MOVED and SECONDED
That the Waste Management Committee adopt the minutes of its special meeting held March 26, 2010 as circulated.

CARRIED

3. DELEGATIONS

3.1 Nexterra Systems Corp.

Jonathan Wilkinson, Senior Vice President, Business Development, Nexterra Systems Corp., introduced Nexterra Systems Corp., a Vancouver-based company that develops, manufactures and delivers biomass gasification systems for renewal heat and power applications. The Committee was provided an outline of the following:

- Emission profile of the system
- The system's conversion process of wood biomass or biosolids in syngas
- How gasification fits into Metro Vancouver's integrated waste resource management
- Potential projects for Metro Vancouver
- Nexterra's current and underway projects in British Columbia and the United States

Presentation material from Nexterra Systems Corp. is retained with the April 7, 2010 Waste Management Committee agenda.

Request of Staff
Staff was requested to circulate the presentation from Nexterra Systems Corp. to Committee members.

1:17 p.m.
Director Corrigan arrived at the meeting.

4. INVITED PRESENTATIONS

4.1 Response to the Wilderness Committee Presentation

Dennis Ranahan, Senior Project Engineer, Policy and Planning Department, was present to respond to the following concerns raised at the March 26, 2010 Special Waste Management Committee by Ben West, Wilderness Committee:

- In-region incinerators will produce a total of one million tonnes of carbon

dioxide per year
- Incinerators will become the biggest source of climate-changing pollution in the Lower Mainland
- An incinerator emits more carbon emissions than a coal-fired power plant
- High offset price

In response to the delegate's concerns, the Committee was informed about the following:
- The quote from the Intergovernmental Panel on Climate Change (IPCC) presented by the delegate was incomplete. The counting of both fossil and biogenic carbon dioxide emissions from incinerators is against the IPCC Guidelines; biogenic carbon dioxide should be included as information only.
- The U. S. Environmental Protection Agency's (EPA) Office stands behind the chart (outlining carbon dioxide emissions from various sources), presented in the report titled "It is Better to Burn Waste for Clean Electricity Generation?", published in Environmental Science and Technology, Vol. 43, No. 6, 2009.
- Offset costs estimated by the delegate at $30 million include biogenic carbon dioxide emissions, are based on the price at $30/tonne, and do not take into consideration offsets generated by incinerators, which avoid fossil fuel emissions from nearby users (such as by using district heating, which avoids/substitutes natural gas consumption).

Request of Staff
Staff was requested to provide Committee members with a copy of the presentation titled "Delegation to March 26th Special Waste Management Committee."

5. REPORTS FROM COMMITTEE OR STAFF

5.1 BC Ferries' Request to Pump Ship Wastewater to the GVS&DD Sewerage System

Report dated March 9, 2010 from Fred Nenninger, Regional Utility Planning Division Manager, Policy and Planning Department, reintroducing for the Board's consideration BC Ferries' request to pump wastewater to the GVS&DD sewerage system.

It was MOVED and SECONDED
That the Board approve BC Ferries' request to pump ship wastewater ashore at Tsawwassen from BC Ferries' vessels to the GVS&DD system via the Corporation of Delta's municipal collection system.

CARRIED

5.2 Second Regional Organics Processing Facility

Report dated March 22, 2010 from Ken Carrusca, Integrated Planning Division Manager, Policy and Planning Department, seeking authorization to establish a second regional organics processing facility in the City of Surrey.

It was MOVED and SECONDED
That the Board authorize staff to establish a second regional organics processing facility in the City of Surrey.

CARRIED

Concerns were expressed about the following:
- The process, through which the second regional organics processing facility was determined
- How equity will be achieved among municipalities in regard to where investments are placed across the region, and how the process for placing these investments will be undertaken
- The disconnect between municipal administrators and councils

Members provided the following comments:
- Establishment of the organics processing facilities is a high priority
- Metro Vancouver needs to start to look at other areas/sub-regions, Metro Vancouver needs to work with other municipalities to establish additional organics processing facilities. There need to be strategic directions on how Metro Vancouver will expand these facilities around the region
- A business plan (master plan) for reaching diversion of 280,000 tonnes of organics from the waste stream needs to be developed (holistic rather than opportunistic approach has to be taken)
- Municipalities prefer to manage organics on more local or sub-region basis
- Hybrid solutions within the system are acceptable, providing they would be equitable

It was MOVED and SECONDED
That the Waste Management Committee direct staff to develop a strategic plan to look at other areas or sub-regions in Metro Vancouver for possible organics processing facilities as a priority.

CARRIED

5.3 Proposed approach for the establishment of Eco-Centres in Metro Vancouver

Report dated March 15, 2010 from Ken Carrusca, Integrated Planning Division Manager, Policy and Planning Department, seeking Board approval to establish a number of Eco-Centres accepting recyclable materials, materials covered by Extended Producer Responsibility programs, and small loads of refuse and food scraps.

Concerns were expressed about the following:
- Duplication of efforts
- Inequities in the system; some municipalities paying for their existing facilities, while new facilities, established and funded by Metro, Vancouver, would be provided for some municipalities; two different systems cannot exist in one government structure
- What the implications of the eco centres on other diversion programs would be, whether eco centres would not undermine other investments in diversion goals

Members provided the following comments:

- Cost sharing needs to be determined
- A strategic plan is needed
- Clarify how equity will be achieved among members in regard where regional investments are placed
- Clarify where municipal obligations end and Metro Vancouver obligations begin
- Consider how eco centres can integrate with systems already in place
- Make this a higher priority
- Eco centre is only one approach, other alternatives exist

The Committee requested the following additional information:

- Clarification on how the private sector will be involved
- Outline of the existing facilities, what is collected in these facilities, who operates them, volume collected, costs, funding of these facilities, volume diversion goals for cost unit, and timelines implied
- Budget implications (capital and operational)
- Extended producers responsibility program
- The goal of the eco centres
- Potential upgrade of some existing recycling facilities
- Municipal role
- Clarification of the commitment to establish a recycling centre in the City of Surrey, arising from the 1995 Solid Waste Management Plan
- Other alternatives to eco centre

The Committee requested that the report be referred back to staff for further clarification.

It was MOVED and SECONDED
That the Waste Management Committee refer the report dated March 15, 2010, titled "Proposed approach for the establishment of Eco-Centres in Metro Vancouver" back to staff for further information.

CARRIED

5.4 Status of Utilities Capital Expenditures to December 31, 2009

Report dated March 29, 2010 from Frank Huber, Engineering Support and Technical Services Division Manager, and Phil Trotzuk, Financial Planning and Operations Manager, Finance and Administration Department, informing about the status of utilities capital expenditures.

It was MOVED and SECONDED
That the Board receive the report titled *Status of Utilities Capital Expenditures to December 31, 2009,* dated March 29, 2010 for information.

CARRIED

5.5 Manager's Report

Report dated March 31, 2010 from Toivo Allas, Manager, Policy and Planning Department, informing the Committee about an agreement being negotiated between Metro Vancouver and the City of Vancouver concerning residential food waste composting and providing an update on the 2010 priorities.

It was MOVED and SECONDED
That the Waste Management Committee receive for information the report dated March 31, 2010, titled "Manager's Report".

CARRIED

6. INFORMATION ITEMS

6.1 Update on the Draft Integrated Solid Waste and Resource Management Plan – April 2010

Fred Nenninger, Regional Utility Planning Division Manager, Policy and Planning Department, informed the Committee that the revised wording of the Financial Plan section of the Draft Integrated Solid Waste and Resource Management Plan and additional wording concerning Vancouver Landfill and per capita waste reduction will be presented to the Board on-table at its April 9, 2010 meeting, as requested by the Committee at its March 26, 2010 special meeting. Members were informed about the following:

- The Financial Plan section will be replaced and renamed to "Financial Implications"
- The section will provide an outline of the roles and responsibilities of all parties and will include a summary of costs of the total system on annual basis and over the 35-year period
- Staff is discussing with the City of Vancouver potential additional actions concerning the Vancouver Landfill, related to reduction of material and diversion of organics waste disposal in the Vancouver Landfill

It was MOVED and SECONDED
That the Waste Management Committee receive for information the verbal update from Fred Nenninger, Regional Utility Planning Division Manager, Policy and Planning Department, concerning on-table items pertaining to the Draft Integrated Solid Waste and Resource Management Plan, to be presented at the April 9, 2010 GVS&DD Board meeting.

CARRIED

7. OTHER BUSINESS

No items presented.

8. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED
That the regular meeting of the GVRD Waste Management Committee scheduled for April 7, 2010 be closed pursuant to the Community Charter provisions.
Sections 90(1)(e).

90(1) A part of a meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

(e) the acquisition, disposition or expropriation of land or improvements, if the Committee considers that disclosure could reasonably be expected to harm the interests of the regional district.

CARRIED

9. ADJOURNMENT

It was MOVED and SECONDED
That the Waste Management Committee conclude its regular meeting of April 7, 2010.

CARRIED
(Time: 2:58 p.m.)

Klara Kutakova,
Assistant to Regional Committees

Greg Moore, Chair

THIS PAGE LEFT BLANK INTENTIONALLY

REPORTS

THIS PAGE LEFT BLANK INTENTIONALLY

metrovancouver Greater Vancouver Regional District • Greater Vancouver Water District
Greater Vancouver Sewerage and Drainage District • Greater Vancouver Housing Corporation
4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

Finance Committee Meeting Date: April 15, 2010
Waste Management Committee Meeting Date: May 5, 2010

To: Waste Management Committee

From: Ray Robb, Division Manager, Policy and Planning Department
Jeff Gogol, Environmental Regulatory Planner, Policy and Planning Department

Date: April 7, 2010

Subject: **GVS&DD Sewer Use Amending Bylaw No. 256, 2010**

Recommendation:

That the Board:

a) introduce and give first, second and third reading to "Greater Vancouver Sewerage and Drainage District Sewer Use Amending Bylaw No. 256, 2010";

b) reconsider, pass and finally adopt "Greater Vancouver Sewerage and Drainage District Sewer Use Amending Bylaw No. 256, 2010".

1. PURPOSE

To authorize amendments to the "Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007". The amendments include revisions to Metro Vancouver's liquid waste regulatory and treatment fees.

2. CONTEXT

Metro Vancouver regulates the discharge of non-domestic liquid waste from industrial, commercial and institutional sources to sewer through Sewer Use Bylaw No. 299. The bylaw protects the environment, sewer workers and sewer infrastructure.

The bylaw requires many industrial sources to obtain permits and pay fees. The fees are intended to cover Metro Vancouver regulatory services. Industrial effluent treatment costs are recovered through municipal levies. The estimated cost for treating permitted discharges is provided to municipalities with the expectation that they will pass this cost on to the dischargers.

In 2007, Metro Vancouver undertook a review of how well the current cost recovery mechanisms met the following set of pricing principles:

Cost Recovery – taxpayers should not subsidize industrial dischargers

User Pay – users should pay in accordance with the level of service provided

Discharger Pay – fees should consider environmental impact .

Equity – one set of rules for all

Efficiency – keep rules simple to avoid excessive costs due to regulatory complexity

Incentive to Reduce - fees should encourage liquid waste discharge reductions

Fairness - fees should consider everyone's interests (including non-dischargers)

2.1 Permit Fees

The review indicated that the existing fees were not consistent with these pricing principles. At present, the regulatory fees only recover thirty percent (30%) of estimated industrial permitting costs. The remaining $750,000 per year is recovered from municipal taxpayers through the District sewer levy. Metro Vancouver is proposing to recover the full costs of the permitting program from the permit holders and to make changes to the fee structure to reflect the effort required by Metro Vancouver to manage the liquid waste permitting system.

The proposed fees would replace the current uniform fee of $1400 per permit holder with a fee that is based on the volume discharged as well as the type of discharge, i.e. two factors correlated with the level of effort required (user pay) to administer the permit. As this is a significant increase for the permit holders, Metro Vancouver is proposing to implement the changes over three years.

2.2 Treatment Fees

The review of the industrial treatment fees indicated three main issues that needed to be addressed:

- inconsistent billing practices of the treatment fees by the municipalities;
- no incentive to reduce peak flows and loads; and
- a lack of pricing structure that encourages reductions where most needed.

Inconsistency Across Region

Some municipalities charge industrial dischargers Metro Vancouver's estimated treatment costs, while others charge less and some do not charge at all. In addition to concerns about equity, some dischargers are not fully aware of the cost of dealing with their liquid wastes – and as a result may make unsustainable business decisions. Therefore, Metro Vancouver is proposing to invoice the permitted industry directly for their estimated treatment costs beginning January 1, 2011. The required amendments to the Sewer Use bylaw have been incorporated into the attached "*Greater Vancouver Sewerage and Drainage District Amending Bylaw No. 256, 2010*".

The financial impact of this proposed change will be minimal except in the municipalities that have not passed on some or all of the cost of wastewater treatment. In such instances, the permitted industry will pay more in treatment fees. However, as the municipal levy will be reduced by the industrial fees, other taxpayers in those municipalities will pay less.

Peak Flows and Loads

There are two components to the existing industrial treatment fees. One component is the usage charge (to recover operations and maintenance costs) which is based on the total annual loading of biochemical oxygen demand (BOD), total suspended solids (TSS) and flow. The usage charge is a reasonable and fair measure of operating and maintenance costs.

The other component of the treatment fees is the capacity charge (intended to recover capital costs) that is based on the average daily flow and loading. However, capital costs are more closely related to peak, not average, flows and loads. Domestic sewage loads from Metro Vancouver citizens do not vary substantially from day to day (while an individual may vary the amount of liquid waste discharged to sewer on a daily basis, collectively the population as a whole will not).

Industry on the other hand can have dramatic swings in the amount of waste discharged to sewer; the ratio of peak to average loads (peaking factor) for individual industries can be 10:1 or more. A company that can be twenty percent or more of a treatment plant's capacity on a given day does not have any incentive to moderate loads. As capital costs are tied to design capacity, which in turn is based on peak load, it is advisable to provide a pricing signal that discourages large fluctuations in flows and loads. Consequently, Metro Vancouver is proposing to use the near peak (90^{th} percentile) loads and flows to calculate permit holder's industrial treatment charges.

Fees to Assist Metro Vancouver Compliance with Laws
Each sewerage area has a different unit rate for usage and capacity. The rates are based upon the sewerage area's operating and debt servicing costs. Consequently, usage charges and capacity charges are far less at primary plants than they are at secondary plants. Unfortunately, Metro Vancouver's primary plants are operating very near capacity – in fact on occasion the primary plants exceed capacity and the discharge limits imposed by the province. While capacity at the primary plants is near its limits, the current fee system actually prices capacity at the primary plants at a sizable discount to the secondary plants which have much more available capacity. Such pricing is counter to Metro Vancouver's liquid waste management goals.

While no changes are proposed to usage charge unit rates, staff proposes tying capacity unit rates to the available capacity at treatment plants, i.e. if a treatment plants is operating near its peak, capacity unit rates will be higher than at plants with more available capacity.

Impacts
As the Lions Gate and Iona treatment plants operate very near capacity for BOD, industrial operations discharging large peak loads of BOD to these plants would see the largest increase in their treatment fees. Of course, industry can take measures to reduce their peak loads (for example one large discharger is considering holding effluent so that it may discharge over seven rather than five days) and also reduce their fees. Based upon recent data, proposed fees would increase nine percent or $670,000 compared to the existing fees, with most of the increases in Vancouver and the North Shore. However, the actual change in fee revenue is unknown as it is expected that the new fee schedule will encourage industry to undertake measures to reduce their peak fees and also reduce peak loads at the treatment plants (thereby also reducing capacity unit rates to get a compound fee reduction effect).

Phase in
Since the proposed treatment fees are significant increases for some industrial dischargers, Metro Vancouver is proposing to implement these changes by January 1, 2013 to allow industry time to incorporate the new charges in their operating budgets and/or implement loading reductions at their operations. The remaining changes to the treatment fees, the use of near peak loads and the unit rate adjustment, is proposed to be incorporated into a future amendment to the Sewer Use Bylaw in the Fall of 2012.

2.4 Consultation

Metro Vancouver has consulted on these proposed changes with both industrial dischargers and municipal stakeholders including the Regional Finance Advisory Committee, the Regional Engineers Advisory Committee and the Finance Committee. The culmination of this consultation is the proposed amendments to the GVS&DD Sewer Use Bylaw No. 299, 2007. For detailed information on the review and the proposed changes to the fees, please see the attached Discussion Paper.

All consultation material is available from the library at Metro Vancouver Head Office.

3. ALTERNATIVES

The Board could:

a) provide comments on the revised bylaw and request staff to incorporate these comments into a further revision; or

b) give three readings to and adopt the revised bylaw

Staff recommends alternative (b).

4. CONCLUSION

Staff has completed the next phase of a comprehensive review of the Sewer Use Bylaw in consultation with the business community, member municipalities and community groups. Staff and legal counsel have updated the Bylaw to reflect the results of this review and recommend its adoption by the Board.

ATTACHMENTS:

1. Greater Vancouver Sewerage and Drainage District Amending Bylaw No. 256, 2010 (Doc # 3866320)
2. Discussion Paper - Proposed Revisions to Metro Vancouver's Liquid Waste Fees (Doc # 3670468)

ATTACHMENT 1

Greater Vancouver Sewerage and Drainage District Sewer Use Amending Bylaw No. 256, 2010

A Bylaw to Amend "Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007."

WHEREAS:

A. The Board of Directors of the Greater Vancouver Sewerage and Drainage District has adopted "Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007", to manage the direct or indirect discharge of non-domestic waste to any sewers and drains connected to a sewage facility operated by the District;

B. “Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007” was amended by “Greater Vancouver Sewerage and Drainage District Amending Bylaw No. 244, 2008” and was further amended by “Greater Vancouver Sewerage and Drainage District Amending Bylaw No. 252, 2009”; and

C. The Board of Directors of the Greater Vancouver Sewerage and Drainage District wishes to further amend "Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007".

NOW THEREFORE the Board of Directors of the Greater Vancouver Sewerage and Drainage District, in open meeting assembled, ENACTS AS FOLLOWS:

1. "Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007" is hereby amended as follows:

    a) In section 10.1 by replacing section 10.1 with the following:

        “The Board may from time to time establish fees to be charged for the application for and the administration of a Waste Discharge Permit or a Trucked Waste Authorization.”

    b) In Schedule C by replacing Schedule “C” with Schedule “C” that is attached hereto.

    c) In Schedule F by replacing Schedule “F” with Schedule “F” that is attached hereto.

2. This bylaw shall be cited as "Greater Vancouver Sewerage and Drainage District Sewer Use Amending Bylaw No. 256, 2010".

READ A FIRST, SECOND AND THIRD TIME this _____ day of _____ 2010.

RECONSIDERED, PASSED AND FINALLY ADOPTED this ___ day of _____ 2010.

Lois E. Jackson, Chair

Paulette A. Vetleson, Corporate Secretary

SCHEDULE "C"

SCHEDULE OF WASTE DISCHARGE PERMIT FEES

1. **GENERAL**

1.1 All fees are payable to the District except for Waste Discharge Permits issued with respect to a facility located wholly within the geographical boundaries of the City of Vancouver, in which case the fees are payable to the City of Vancouver.

2. **FEES**

2.1 Permit Application Fee

2.1.1 Each person who applies for a Waste Discharge Permit must pay an application fee (the "Permit Application Fee").

2.1.2 The amount of the Permit Application Fee payable is specified in Table A below:

Table A – Permit Application Fees

Application Type	Application Fee
Industrial Site	$1000
Groundwater Remediation or Construction Excavation Site	$500 – if maximum instantaneous flow ≤ 6 L/s $1000 – if maximum instantaneous flow > 6 L/s

2.1.3 The Permit Application Fee must be paid at the time when an application for a Waste Discharge Permit is submitted.

2.1.4 The Permit Application Fee is not refundable.

2.2 Permit Amendment Application Fee

2.2.1 Each time a holder of a Waste Discharge Permit applies for an amendment to their Waste Discharge Permit the holder must pay an amendment application fee (the "Permit Amendment Application Fee"), in the amount specified in Table B below:

Table B – Permit Amendment Application Fees

Application Type	Permit Amendment Application Fee
Minor Amendment	$250
Major Amendment	$500

2.2.2 The following are minor amendments to a Waste Discharge Permit:

a) name and legal address changes;
b) monitoring program changes;

c) a decrease in the authorized quantity of contaminants or a decrease in the authorized flow rates;
d) a change to the authorized discharge such that, in the opinion of the Sewage Control Manager, there would be equal or less demand for regulatory and treatment services; or
e) a change in the authorized works or measures such that, in the opinion of the Sewage Control Manager, there would be equal or less demand for regulatory and treatment services.

2.2.3 A major amendment is any amendment that is not a minor amendment.

2.2.4 The Permit Amendment Application Fee is not refundable.

2.3 Permit Administration Fee

2.3.1 The holder of a Waste Discharge Permit must pay an annual administration fee (the "Permit Administration Fee") for each Waste Discharge Permit.

2.3.2 Until December 31, 2010, the Permit Administration is $1400.

2.3.3 Effective January 1, 2011, the Permit Administration Fee (Z) is calculated as follows:

$Z = \$1400 + (\$300 \times A^{0.3}) + B$

Where A = maximum daily flow, in cubic metres per day, for the facility, as specified in the Waste Discharge Permit, and

Where B = the dollar amount for the industry type, as specified in Table C below:

Table C – Industry Type Fee by North American Industrial Classification System (NAICS) Code

NAICS	Description	Industry Type Fee
3273	Cement and Concrete Product Manufacturing	$900
23	Construction	
311	Food Manufacturing	$1,800
3121	Beverage Manufacturing	
325	Chemical Manufacturing	
326	Plastics and Rubber Products Manufacturing	
327	Non-Metallic Mineral Product Manufacturing (excluding NAICS 3273)	
486	Pipeline Transportation	
56291	Remediation Services	
56292	Material Recovery Facilities	
722	Food Services and Drinking Places	
81232	Dry Cleaning and Laundry Services (except Coin-Operated)	
91391	Other Local, Municipal and Regional Public Administration	

NAICS	Description	Industry Type Fee
321	Wood Product Manufacturing	$2,700
322	Paper manufacturing	
418	Miscellaneous Wholesaler-Distributors	
485	Transit and Ground Passenger Transportation	
488	Support Activities for Transportation	
511	Publishing Industries (except Internet)	
541	Professional, Scientific and Technical Services	
812921	Photo Finishing Laboratories (except One-Hour)	
331	Primary Metal Manufacturing	$3,600
332	Fabricated Metal Product Manufacturing	
334	Computer and Electronic Product Manufacturing	
335	Electrical Equipment, Appliance and Component Manufacturing	
336	Transportation Equipment Manufacturing	
416	Building Material and Supplies Wholesaler-Distributors	
417	Machinery, Equipment and Supplies Wholesaler-Distributors	
56221	Waste Treatment and Disposal	
3241	Petroleum and Coal Products Manufacturing	$4,500
562990	All Other Waste Management Services	

2.3.4 In circumstances where it is not clear which industry type the holder of a Waste Discharge Permit falls within, the Sewage Control Manager may determine the appropriate classification for the purposes of calculating the Permit Administration Fee.

2.3.5 The Permit Administration Fee is payable on issuance of a Waste Discharge Permit and on each anniversary thereafter.

2.3.6 If the Permit Administration Fee is not paid within 90 days of its due date, the subject Waste Discharge Permit will be without effect.

2.3.7 Permit Administration Fees falling due in the period from January 1, 2011 until January 1, 2012 will be discounted so that a holder of a Waste Discharge Permit must pay the greater of $1400 or one-third (1/3) of the Permit Administration Fee calculated in accordance with section 2.3.3.

2.3.8 Permit Administration Fees falling due in the period from January 1, 2012 until January 1, 2013 will be discounted so that a holder of a Waste Discharge Permit must pay the greater of $1400 or two-thirds (2/3) of the calculated Permit Administration Fee calculated in accordance with section 2.3.3.

2.3.9 After January 1, 2013 100% of the Permit Administration Fee will be payable.

2.4 Waste Discharge Permits Issued for Periods of Less Than 365 Days

2.4.1 Where a Waste Discharge Permit is issued for a period of less than 365 days, the Permit Administration Fee (at the rate applicable of the date the Permit Administration Fee is payable) will be adjusted in accordance with Table D:

Table D – Adjustment to the Permit Administration Fee for Waste Discharge Permits issued less than 365 days

Period of Time	Permit Administration Fee will be discounted by:
less than 7 days	90%
7 days - 30 days	80%
31 days - 90 days	60%
91 days - 180 days	40%
181 days - 270 days	20%
271 days - 365 days	No discount

2.5 Remedies Not Limited

2.5.1 The remedies for non-payment of fees provided in this Bylaw are in addition to any other remedies available to the District at law.

SCHEDULE "F"

SCHEDULE OF LIQUID WASTE DISPOSAL FEES

1. GENERAL

1.1 All Liquid Waste Disposal Fees are payable to the District.

1.2 Interest at the rate of 1.25% per month (15% per annum) will be charged on past due balances.

2. SEPTIC TANK WASTE AND TRUCKED WASTE FEES

2.1 The Liquid Waste Fees for disposal of Septic Tank Waste or Trucked Waste are:

Septic Tank Waste	$7.62 per cubic metre
Trucked Waste	$86.40 per cubic metre

3. INDUSTRIAL TREATMENT FEES

3.1 The holder of a Waste Discharge Permit, excluding a Waste Discharge Permit issued for a groundwater remediation or construction excavation site, must pay an industrial treatment fee ("Industrial Treatment Fee").

3.2 The Industrial Treatment Fee will consist of two parts, a usage charge and a capacity charge.

3.3 The Industrial Treatment Fee will be calculated in accordance with the formulae outlined in sections 3.5 and 3.6.

3.4 The Industrial Treatment Fee will be invoiced quarterly and will be due on the date specified in the invoice.

3.5 Usage Charge

3.5.1 At the end of each three month period (a "quarter"), the usage charge will be calculated with reference to (i) the actual volume of non-domestic wastewater and (i) the actual amount of regulated substance discharged during that quarter.

3.5.2 For each quarter, the usage charge for volume will be calculated using the following formula:

$$D = F_q \times R$$

Where:

D = usage charge for volume, in dollars ($).

F_q = total volume of non-domestic wastewater discharged in the quarter, in cubic metres (m^3).

R = unit rate for volume for the sewerage area where the premises covered by the Waste Discharge Permit are located, as listed in Table A.

Table A – Unit rates for volume for each Sewerage Area – usage charge

Sewerage Area	Unit rate ($/m^3)
Fraser Sewerage Area (including NW Langley)	0.149
Lulu Island West Sewerage Area	0.170
North Shore Sewerage Area	0.225
Vancouver Sewerage Area	0.080

3.5.3 For each quarter, the total amount of each regulated substance listed in Table B will be calculated using the following formula:

$$L_a = \frac{C_a \times F}{1000}$$

Where:

L_a = total amount of regulated substance "a" for the quarter, in kg.

C_a = average concentration of regulated substance "a", in mg/L.

F = total volume of non-domestic wastewater discharged during the quarter, in cubic metres (m^3).

3.5.4 For each quarter, the usage charge for each regulated substance will be calculated using the following formula:

$$D_a = L_a \times R_a$$

Where:

D_a = usage charge for regulated substance "a", in dollars ($).

L_a = total amount of regulated substance "a", as calculated in accordance with 3.5.3.

R_a = unit rate for regulated substance "a" as listed in Table B, in $/kg for the sewerage area where the premises covered by the Waste Discharge Permit are located.

Table B – Unit rates for regulated substances for each Sewerage Area – usage charge

Sewerage Area	BOD ($/kg)	TSS ($/kg)
Fraser Sewerage Area (including NW Langley)	0.340	0.399
Lulu Island West Sewerage Area	0.547	0.547
North Shore Sewerage Area	0.148	0.983
Vancouver Sewerage Area	0.065	0.613

3.5.5 For each quarter, the total usage charge payable will be the sum of (i) the quarterly usage charge for volume and (ii) the quarterly usage charges for the regulated substances listed in Table B.

3.6 Capacity Charge

3.6.1 At the end of the first quarter of each calendar year the annual capacity charge will be calculated with reference to (i) the volume of non-domestic wastewater and (ii) the amount of regulated substance discharged during the previous calendar year.

3.6.2 The capacity charge will be divided into four equal installments and will be invoiced to a holder of a Waste Discharge Permit each quarter at the same time as the usage charge.

3.6.3 For each calendar year, the capacity charge for volume will be calculated using the following formula:

$$D = \frac{F_Y \times R}{OD}$$

Where:

- D = capacity charge for volume, in dollars ($).
- F_Y = total volume of non-domestic wastewater discharged in the previous calendar year, in cubic metres (m^3).
- R = unit rate for volume for the sewerage area where the premises covered by the Waste Discharge Permit are located, as listed in Table C.
- OD = the number of days in the previous calendar year that the permit holder discharged to sanitary sewer.

Table C – Unit rates for volume for each Sewerage Area – capacity charge

Sewerage Area	**Volume ($/m^3/d)**
Fraser Sewerage Area (including NW Langley)	11.664
Lulu Island West Sewerage Area	5.585
North Shore Sewerage Area	24.764
Vancouver Sewerage Area	32.792

3.6.4 For each calendar year, the average daily amount of each regulated substance listed in Table D will be calculated as follows:

$$L_a = \frac{C_a \times F}{1000 \times OD}$$

Where:

- L_a = average daily amount of regulated substance "a", in kg/day.
- C_a = average concentration of regulated substance "a", in mg/L.
- F = total volume of non-domestic wastewater discharged during the previous calendar year, in cubic metres (m^3).

OD = the number of days in the previous calendar year that the permit holder discharged to sanitary sewer.

3.6.5 For each calendar year, the capacity charge for each regulated substance will be calculated using the following formula:

$$D_a = L_a \times R_a$$

Where:

D_a = capacity charge for regulated substance "a", in dollars ($).

L_a = average daily amount of regulated substance "a" for a calendar year, in kg/day, as calculated in accordance with section 3.6.4.

R_a = unit rate for regulated substance "a", as listed in Table D, in $/kg/day for the sewerage area where the premises covered by the Waste Discharge Permit are located.

Table D – Unit rates for regulated substances for each Sewerage Area – capacity charge

Sewerage Area	BOD ($/kg/d)	TSS ($/kg/d)
Fraser Sewerage Area (including NW Langley)	35.055	28.942
Lulu Island West Sewerage Area	48.476	27.186
North Shore Sewerage Area	40.893	52.348
Vancouver Sewerage Area	46.383	69.812

3.6.6 For each calendar year the total capacity charge payable will be the sum of the (i) capacity charge for volume and (i) the capacity charges for the regulated substances listed in Table D.

3.7 Remedies Not Limited

3.7.1 The remedies for non-payment of fees provided in this Bylaw are in addition to any other remedies available to the District at law.

Sewer Use Bylaw – Liquid Waste Fee Review

Proposed Revisions to Metro Vancouver's Liquid Waste Fees

Metro Vancouver collects, treats and discharges domestic and non-domestic liquid wastes in accordance with a Liquid Waste Management Plan authorized by the Minister of Environment. The management of non-domestic waste is governed by Sewer Use Bylaw No. 299. The bylaw establishes a permitting framework to allow industrial non-domestic liquid waste to be discharged to the sewer.

Metro Vancouver is proposing revisions to its liquid waste fees to advance the goals of its Liquid Waste Management Plan. Fee revisions are necessary to fairly, effectively and efficiently promote source control, protect the environment and workers as well as control overall treatment costs. The proposed changes for permitted industry will better recover costs for the regulatory and treatment services that they receive from Metro Vancouver. The review of the liquid waste fees began in 2008 with consultation on an *Issue Paper for Revisions to Metro Vancouver's Liquid Waste Regulatory Fee Structure*. Subsequent consultation with industry and municipal stakeholders has led to the proposed **revisions to Metro Vancouver's liquid waste fees** within this paper.

Who Should Read This?
This Discussion Paper will be of interest to:

- Industrial, commercial and institutional facilities that operate under a Metro Vancouver or City of Vancouver Waste Discharge Permit (permit), or that may be required to operate under a permit; and
- Other interested parties that may be affected by the proposed fee revisions.

What Will the Revisions Do?
Metro Vancouver proposes to:

- Revise permit application and permit amendment application fees;
- Revise permit administration fees;
- Directly invoice permitted industry for industrial treatment fees; and
- Revise the capital cost component of permitted discharge treatment fees.

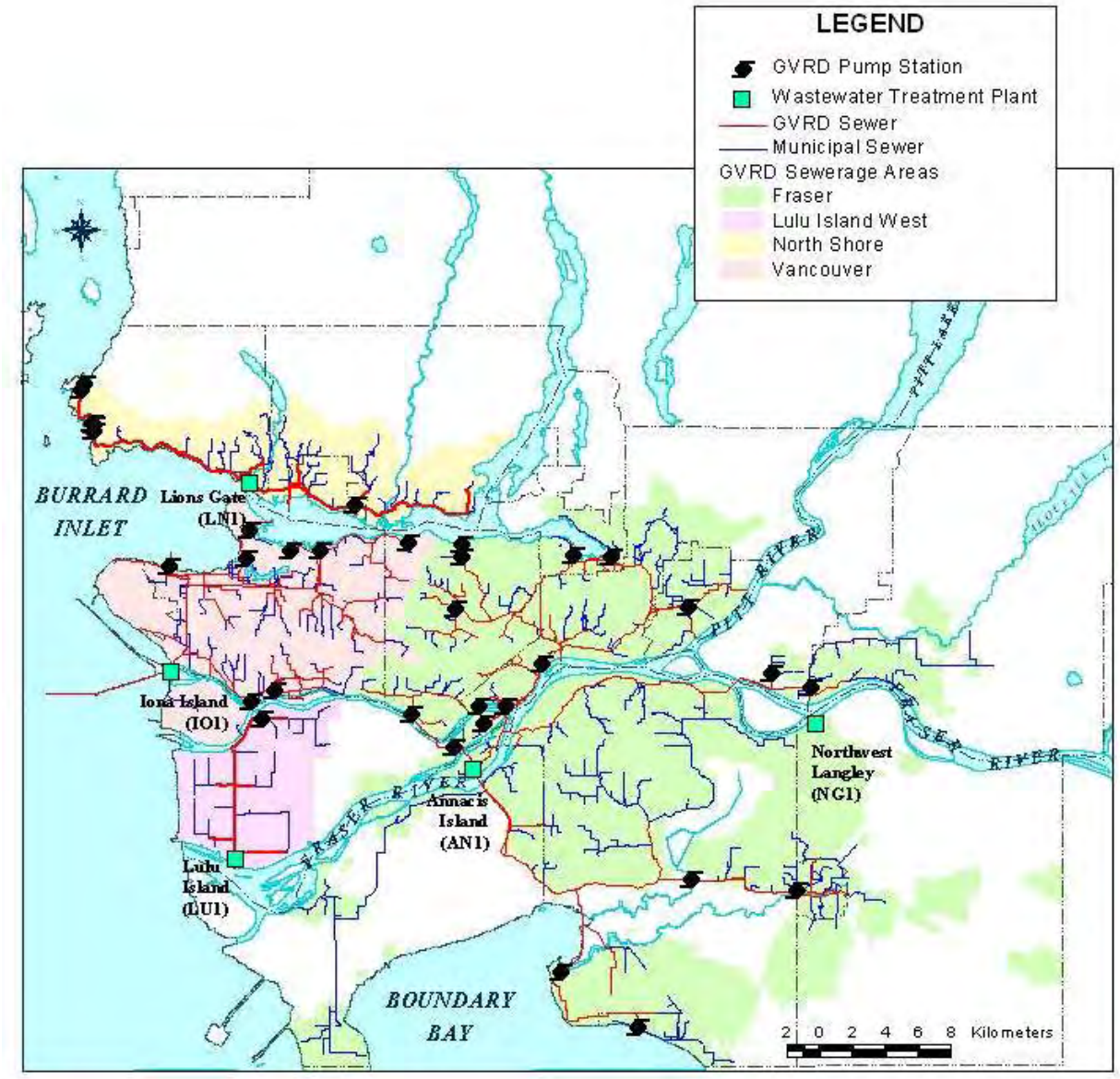
Metro Vancouver Would Like Your Feedback
Metro Vancouver staff is continuing to consult with industry and other interested parties to finalize the liquid waste fees for the consideration of the Metro Vancouver Board. It is expected that proposed revisions to Metro Vancouver's liquid waste fees will be presented to the Board in early 2010.

This document has been prepared for consultation purposes. Further information and background on this initiative is also available at **http://www.metrovancouver.org/boards/bylaws/Pages/bylawreview.aspx.** Feedback received during this consultation will be considered by Metro Vancouver staff in the development of the proposed bylaw amendments and will be made available to the Board for their information.

To ensure that your comments are considered, **please provide feedback by February 26, 2010**.

1. Background

Metro Vancouver collects, treats and discharges domestic and non-domestic liquid wastes in accordance with a Liquid Waste Management Plan authorized by the Minister of Environment. The Liquid Waste Management Plan authorizes the discharge to the environment from five wastewater treatment plants in four sewerage areas.



The sewerage areas and the wastewater treatment plants (WWTP) located within their boundaries are detailed below.

Sewerage Area	Wastewater Treatment Plant	Level of Treatment
Fraser Sewerage Area (FSA)	Annacis Island WWTP	Secondary
	Northwest Langley WWTP	Secondary
Lulu Island Sewerage Area (LIWSA)	Lulu Island WWTP	Secondary
North Shore Sewerage Area (NSSA)	Lions Gate WWTP	Primary
Vancouver Sewerage Area (VSA)	Iona Island WWTP	Primary

Metro Vancouver is proposing revisions to its liquid waste fees to advance the goals of its Liquid Waste Management Plan. Metro Vancouver began consultation with affected stakeholders in May 2008 with the issuance of an Issue Paper detailing proposed changes to the liquid waste fees. On November 7, 2008, the proposed changes were presented to stakeholders at a workshop attended by 40 stakeholders including permit holders, consultants and municipal staff. Feedback from the workshop indicated that the proposed changes required additional work and a small working group was formed to review the fees and come back to the larger group with an improved fee proposal.

The working group was made up of large and small permit holders, municipal staff and a consultant. The members of the working group were as follows:

• Lynn Belanger	City of Vancouver (Landfill Operations)	Permit Holder
• Larry Carlsen	Kruger Products Limited	Permit Holder
• Paul Faber	West Coast Reduction	Permit Holder
• Scott Gordon	Molsons	Permit Holder
• Amir Hussein	Reichhold Limited	Permit Holder
• Richard Jornitz	Can Test Ltd.	Permit Holder
• Ben Kertesz	Sunrise Poultry Processors	Permit Holder
• David Lumb	Kerr Wood Leidel	Consultant
• Gary Vlieg	City of Langley	Municipal Staff
• Jan With	Lantic Inc. (Rogers Sugar)	Permit Holder

The working group met with Metro Vancouver and City of Vancouver staff on seven occasions to assist staff in improving the liquid waste fees and to work towards a recommendation that Metro Vancouver could take forward to all the stakeholders. This paper is the culmination of these discussions as well as reviews with Metro Vancouver senior management and legal counsel.

2. Proposal for Revised Liquid Waste Fees

Metro Vancouver proposes to better and more fairly recover its cost for services by:

- Revising permit application and permit amendment application fees;
- Revising permit administration fees;
- Directly billing permitted dischargers for BOD/TSS treatment fees; and
- Revising the capital cost component of permitted discharge treatment fees.

The proposed changes to the liquid waste fees are based on the following Regulatory Fee Pricing Principles:

Cost Recovery	Fees will be collected to recover Metro Vancouver's costs to: • collect and treat liquid waste • administer permits
User Pay	Fees should reflect the level of effort required by Metro Vancouver to manage industrial, non-domestic, liquid waste discharged to the sewer system.
Discharger Pay	Fees should be related to the potential environmental impacts of contaminants discharged by industry.
Equity	Fees should be determined through the same principles and methods for all dischargers.
Efficiency	The fees should be kept simple to keep overall costs down.
Incentive to Reduce	Fees should be based on the amount of contaminant discharged into the sewer system to provide an incentive to reduce contaminant discharges.
Fairness	Fee levels should be determined through just and impartial consideration of the interests of all potentially affected parties.

2.1 Application Fees

Application fees are intended to recover the costs associated with the evaluation, negotiation and adjudication of applications for permits and permit amendments.

Proposal

Metro Vancouver proposes the following permit application and permit amendment application fees.

Application Type	Application Fee
New Permit - Industrial Site	$1000
New Permit - Groundwater Remediation or Dewatering	$500 – if maximum instantaneous flow ≤ 6 L/s $1000 – if maximum instantaneous flow > 6 L/s
Minor Amendment	$250
Major Amendment	$500

Note:

1. A minor amendment is an amendment that is limited to the following:
   - name and legal address changes;
   - monitoring program changes;
   - a decrease in the quantity of contaminants or flow authorized;
   - a change to the authorized discharge such that, in the opinion of the Sewage Control Manager, there would be equal or less demand for regulatory and treatment services; or
   - a change in the authorized works or measures such that, in the opinion of the Sewage Control Manager, there would be equal or less demand for regulatory and treatment services.
2. A major amendment is any amendment that is not a minor amendment.
3. The application fee is not refundable
4. If a permit is issued, the application fee will not be credited to the administration fee.
5. Any significant changes to an application prior to permit issuance require payment of a surcharge equal to fifty percent (50%) of the original application fee.

Implications

For existing permit holders, the increase will occur only when they choose to amend their permit. The largest increase is for new permits and the increases cover the true cost of issuing a new permit.

Rationale

The proposed application and amendment fee revisions better reflect the Metro Vancouver Cost Recovery and User Pay regulatory pricing principles.

Liquid waste permit application fees are currently $140 which represent only a small fraction of Metro Vancouver or City of Vancouver resources required to evaluate, negotiate and adjudicate applications for permits and permit amendments. General taxpayers currently pick up the balance of costs which is not consistent with User Pay or Cost Recovery principles. Application fees are proposed to increase significantly and to be differentiated based upon the level of effort required for different types of applications.

Implementation

Metro Vancouver proposes to implement the revised application fees immediately upon enactment of the amended Sewer Use Bylaw. Metro Vancouver will monitor permit and permit amendment costs to determine whether further revision to application fees is warranted.

2.2 Permit Administration (Compliance Promotion) Fee

Metro Vancouver and the City of Vancouver currently charge each permitted discharger $1400/year for permit administration. Permit administration services include:

- review and evaluation of required company reporting information, including effluent monitoring data for compliance assessment and the determination of Industrial treatment charges;
- inspection and review of company works and procedures;
- sampling and analysis of permitted discharges; and
- in the event of non-compliance, compliance promotion efforts ranging from correspondence and meetings through to collection of evidence and prosecution.

Proposal

Metro Vancouver proposes to implement an administration fee that incorporates the type of industry and the discharge volume that the permit holder may discharge. The new fee will be based on the following equation:

Annual Fee = [Base Fee] + [Flow Fee] + [Industry Type Fee]

= [$1400] + [(permitted flow)$^{0.3}$ x $300] + [(Industry Type Multiplier) x $900]

Where:

Permitted flow = maximum daily permitted flow in m^3/d

Industry Type Multiplier = ranking of industry type by North American Industry Classification System (NAICS) code

The industry type multiplier has been developed based on:

- site and business process complexity
- treatment works complexity
- sampling and analysis requirements

Examples of the industry type multipliers for specific NAICS codes are as follows:

Industry Type Multiplier	NAICS	Description
1	3273	Cement and Concrete Product Manufacturing
	23	Construction
2	311	Food Manufacturing
	3121	Beverage Manufacturing
	486	Pipeline Transportation
	325	Chemical Manufacturing
	326	Plastics and Rubber Products Manufacturing
	327	Non-Metallic Mineral Product Manufacturing
	56291	Remediation Services
	56292	Material Recovery Facilities
	722	Food Services and Drinking Places
	81232	Dry Cleaning and Laundry Services (except Coin-Operated)
	91391	Other Local, Municipal and Regional Public Administration
3	321	Wood Product Manufacturing
	322	Paper manufacturing
	418	Miscellaneous Wholesaler-Distributors
	485	Transit and Ground Passenger Transportation
	488	Support Activities for Transportation
	511	Publishing Industries (except Internet)
	541	Professional, Scientific and Technical Services
	812921	Photo Finishing Laboratories (except One-Hour)
4	331	Primary Metal Manufacturing
	332	Fabricated Metal Product Manufacturing
	334	Computer and Electronic Product Manufacturing
	335	Electrical Equipment, Appliance and Component Manufacturing

Industry Type Multiplier	NAICS	Description
	336	Transportation Equipment Manufacturing
	416	Building Material and Supplies Wholesaler-Distributors
	417	Machinery, Equipment and Supplies Wholesaler-Distributors
	56221	Waste Treatment and Disposal
5	3241	Petroleum and Coal Products Manufacturing
	562990	All Other Waste Management Services

For descriptions of the NAICS codes please visit:
http://www.statcan.gc.ca/subjects-sujets/standard-norme/naics-scian/2002/naics-scian02l-eng.htm

Implications

Using the proposed fee methodology, the range of annual administration fees for existing permits is as follows:

Minimum	$2,932
Maximum	$9,246
Median	$5,136

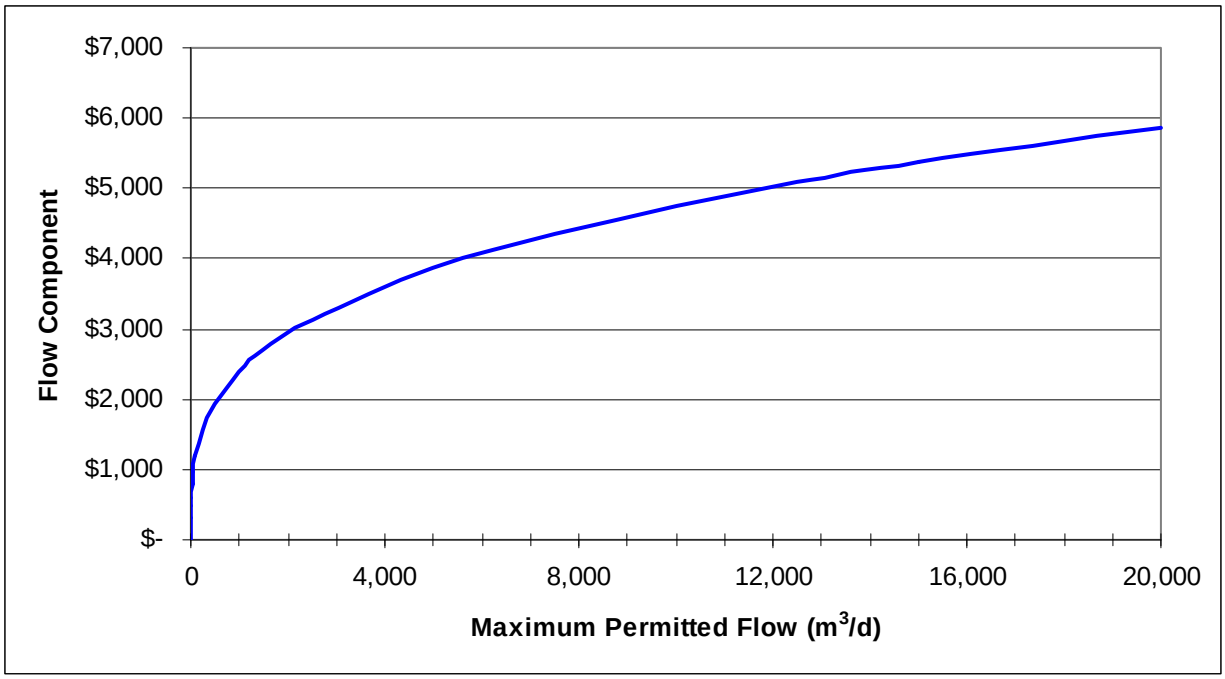
Rationale

The proposed fees better reflect Metro Vancouver's cost recovery and user pay regulatory pricing principles.

Metro Vancouver estimates that the current permit administration fee recovers about thirty percent of the total costs to administer permits. The remainder is recovered from the general taxpayer. To achieve full cost recovery of permit administration costs, permit administration fees need to increase to approximately $5000/year on average.

Since the amount of regulatory effort varies substantially with the type and size of the permitted industry, Metro Vancouver is proposing to vary permit administration fees so that they better reflect actual resource requirements. Metro Vancouver expends more administration and compliance promotion resources on dischargers that pose the greatest potential threat to Metro Vancouver's wastewater operations and the environment. The level of threat is dependent upon both the type of business (and therefore the type of contaminants that may be discharged) as well as the volume of their discharge.

Metro Vancouver proposes to establish permit administration fees based on the type of industry and the authorized flow. Industries have been separated into five separate groups based upon NAICS codes that represent different levels of Metro Vancouver resource demands. Metro Vancouver recognizes that the level of administration/compliance promotion effort does not increase linearly with flow for the same type of operation and therefore has diminished the effect of flow by the use of an exponent. The following graph illustrates the impact of the use of this exponent.



Implementation

Metro Vancouver proposes to implement the Administration Fees over three years as follows:

Effective Date	Administration Fee
January 1, 2011	1/3 x Annual Fee or $1,400 (whichever is greater)
January 1, 2012	2/3 x Annual Fee or $1,400 (whichever is greater)
January 1, 2013	Annual Administration Fee (Full Implementation)

2.3 Industrial Treatment Fees

Industrial treatment fees have been designed to achieve two key objectives:

- to have industry pay the full capital and operating costs for conveying and treating industrial wastewater; and
- to provide a financial incentive for investments by industry in more cost-effective reductions of BOD, TSS and flow at source.

2.3.1. Cost Recovery

Metro Vancouver currently recovers the operating and debt servicing costs of liquid waste management from the municipalities it serves. In addition, Metro Vancouver advises each municipality of the estimated costs to provide liquid waste conveyance and treatment services to permitted dischargers within the municipality. Metro Vancouver's intention in providing this information was that municipalities would then pass these costs on directly to permitted dischargers in their municipality so that the permitted dischargers would be able to make capital and operating decisions taking liquid waste conveyance and treatment costs into consideration.

Proposal
Metro Vancouver proposes to directly invoice all permitted dischargers so that they may better factor in wastewater treatment costs into their business decisions.

Implications
Dischargers operating in municipalities that do not pass on some or all of the cost of wastewater treatment will pay more in fees. Other taxpayers in those municipalities will pay less.

Rationale
Billing practices vary by municipality. In some cases industrial treatment costs were either not charged or were charged at a lower rate than recommended by Metro Vancouver. Consequently, permitted dischargers were not receiving the appropriate financial incentive to consider cost-effective source control measures in their operating and capital decisions. Metro Vancouver's plan to reduce the quantity of contaminants discharged from its waste water treatment plants requires improved source control. Failure to charge for the true cost of wastewater treatment conflicts with these intentions.

The proposed changes are consistent with Metro Vancouver's cost recovery, discharger pay and incentive to reduce regulatory pricing principles.

Implementation
Metro Vancouver is proposing to invoice all permit holders directly beginning January 1, 2011.

2.3.2 Capacity Charges

There are two components to the industrial treatment charges that are currently provided to municipalities. One component is the usage charge (to recover operations and maintenance costs) which is based on the total annual loading of BOD, TSS and flow. The other component is a capacity charge (to recover capital costs) that is based on the average daily flow and loading. While the usage charge is a reasonable measure of operating and maintenance costs, the capacity charge does not adequately recover capital costs from permitted industrial dischargers.

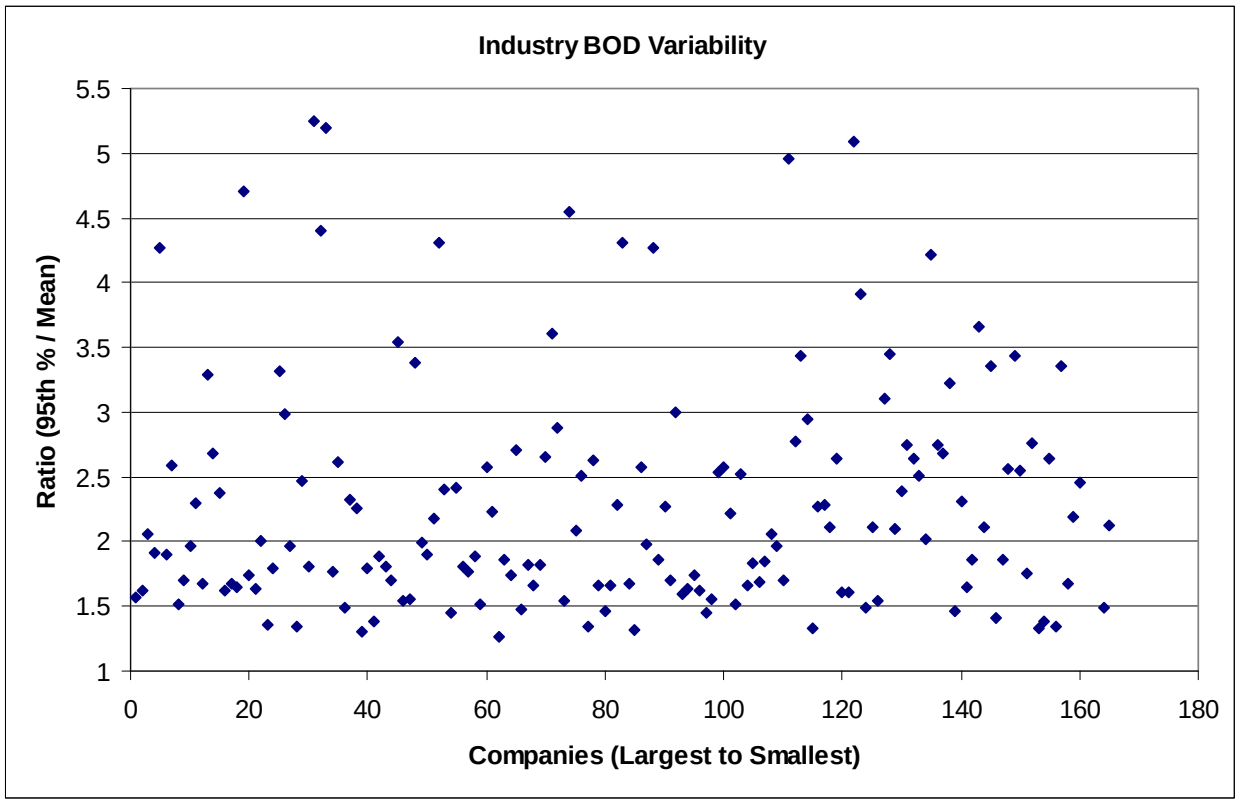
Proposal
To reduce peak loads and more fairly recover capital costs, it is proposed to revise the capacity charge so that it is based on a permitted discharger's 90th percentile load[1] for BOD and TSS and not the average daily load. For flow, it is proposed to use the average of the maximum daily flows reported since Metro Vancouver only collects the average and maximum daily flows from permit holders.

Implications
Dischargers with relatively high ratios of peak to average loads will pay more than those with smaller ratios. This financial incentive should allow permitted dischargers an opportunity to examine their practices to determine whether it is cost-effective to reduce their peaks.

Rationale
The current industrial treatment fees are based on the permit holders' average daily loads. However, capital costs are related to near peak flows and loads as the collection and treatment infrastructure has to

[1] The 90th percentile value for a set of loads states that at least ninety percent (90%) of the loads in the set are less than or equal to this value

be designed to handle peak loads. Industrial contaminant loads are believed to have a much wider variability than loads from residential, commercial and institutional sources. For example, the chart below illustrates how much greater the near peak loads for BOD (95th percentile) are compared to the average load for various individual permitted companies. The individual ratios of ($BOD_{95th\%}/BOD_{mean}$) range from about 1.3 to over 5.



It is expected that individual industries will likely peak on different days which will reduce the total industry variability. However, industrial sources as a whole are believed to be more variable than other sources and therefore influence the ability of the wastewater treatment plants to remain in compliance with Provincial limits.

For example, the four largest sources of BOD to the Iona Wastewater Treatment Plant represent less than 13 percent of the average BOD load to the treatment plant. However, the difference between their near peak and average loads accounted for over 30 percent of the difference between the near peak and the mean of the entire plant. Given that the Iona plant and the Lions Gate plant on the North Shore are operating near capacity, and exceeding capacity may result in violation of federal and provincial laws, it is important that peaks from industry are minimized.

Consequently, to more fairly assess capacity charges and to encourage dischargers to reduce the peak loads and thereby assist compliance efforts at Metro Vancouver's plants operating near their peak capacity, it is proposed to use near peak flows and loads discharged from permitted industries to calculate the capacity charge portion of the industrial treatment fees.

The changes support Metro Vancouver's user pay, discharger pay and incentive to reduce regulatory pricing principles. It is also expected that the likelihood of violations of provincial law will decrease as industry reduces peak loads to the treatment plants.

Implementation

Metro Vancouver is proposing to use the 90th percentile loads for BOD and TSS and the average of reported maximum daily flows beginning January 1, 2013. This will allow permit holders time to incorporate the new charges in their operating budgets and/or implement loading reductions at their operations.

2.3.3 Sewerage Area Capacity Charge Unit Rates

The current capacity charge unit rates are calculated using the amount for debt servicing of current infrastructure capital investments and the design or calculated capacity for each of the wastewater treatment plants. However, the use of the current unit rates create a situation where the capital and operating costs for treating BOD at the secondary plants are much greater than the costs at the primary plants. This is a concern as the available capacity at the primary treatment plants, Iona and Lions Gate, is far less than the available capacity at the secondary plants. In fact, the Iona and Lions Gate plant are operating so close to capacity that they occasionally exceed the maximum BOD concentration limits specified by the province.

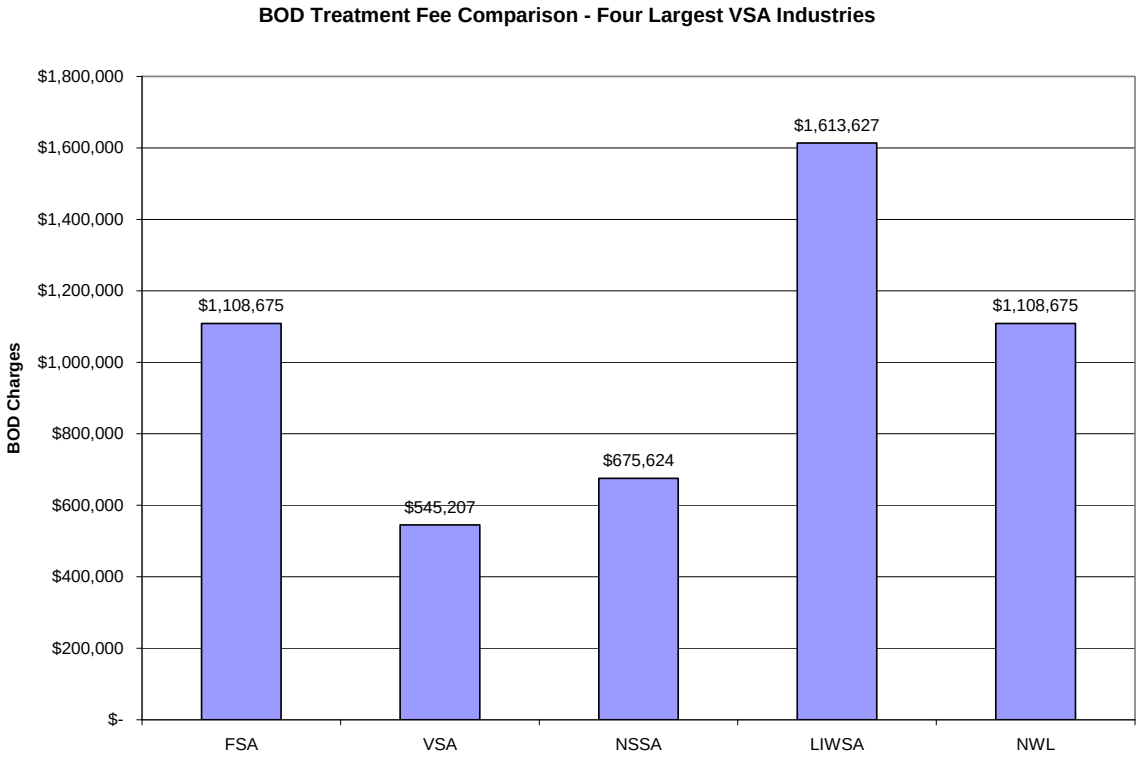
Proposal

Metro Vancouver proposes to adjust the Current Capacity Unit Rate based on the capacity used at each of the wastewater treatment plants.

Rationale

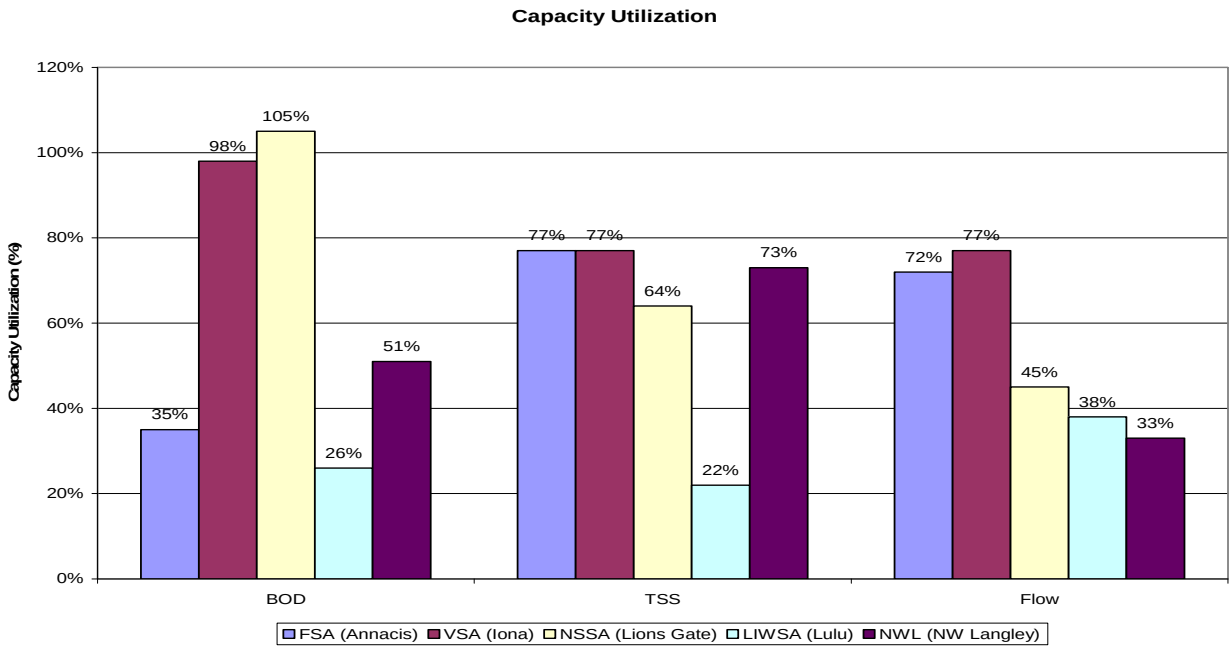
The proposed fees better reflect Metro Vancouver's cost recovery, discharger pay, user pay and incentive to reduce regulatory pricing principles.

The current treatment fees do not support source control at permitted facilities discharging to the primary plants, i.e. it is far less expensive to discharge BOD at the primary plants than the secondary plants even though Metro Vancouver is less able to accommodate the BOD at the primary plants. There are some very large operations that discharge a significant amount of BOD to the sanitary sewer in the Vancouver Sewerage Area. However, the industrial charges for these operations are significantly lower than if they were located in another sewerage area. The following chart compares the existing BOD industrial charges for four large industrial dischargers located in the Vancouver Sewerage Area with the charges that would be levied if they operated in the other four sewerage areas.



As seen in the chart above, it is much cheaper to discharge BOD to the primary plants in Vancouver and the North Shore. Unfortunately, there is less capacity to manage BOD at these plants.

The chart below illustrates the capacity of each plant by showing the ratio of the 99th percentile of actual waste water treatment plant data for BOD, TSS and flow for 2008 as a percent of the maximum allowed by the province in the various plant Operational Certificates.



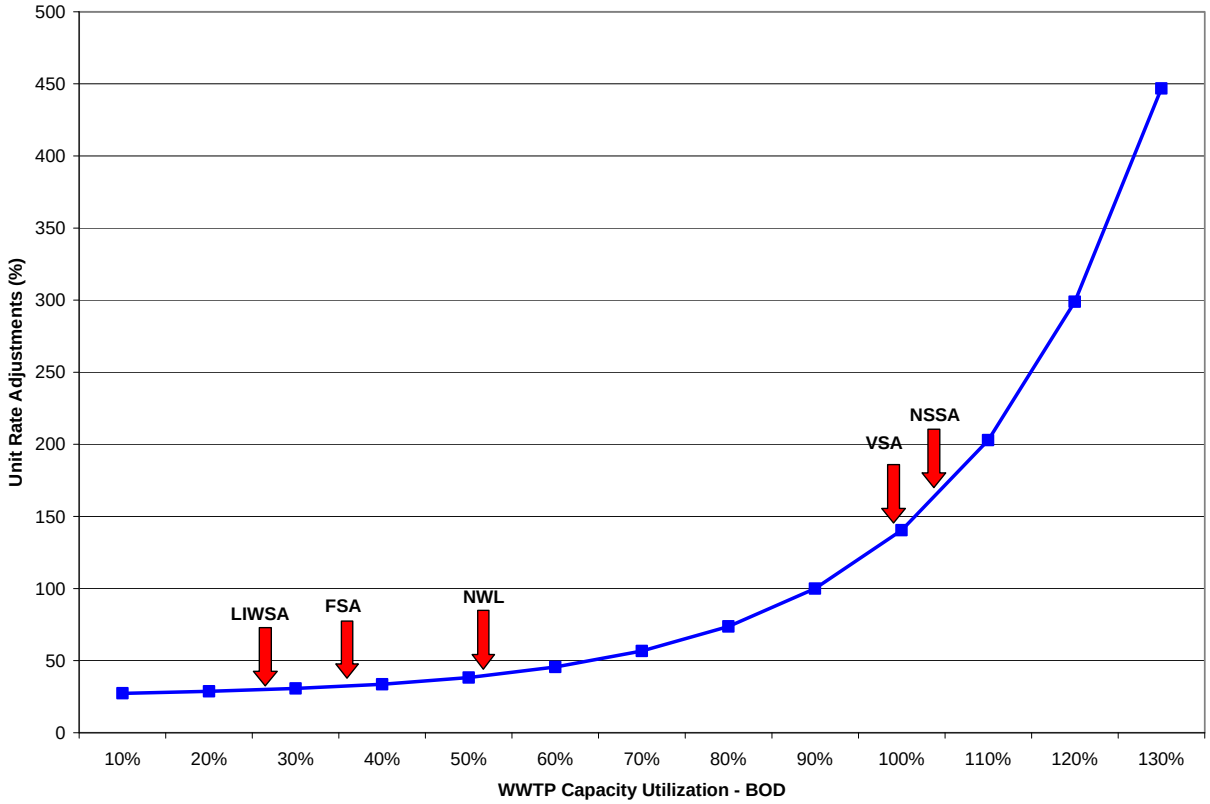
Metro Vancouver is proposing to adjust the capacity unit rates based upon the used capacity as outlined above. The method used to make these adjustments incorporates the capacity used at each of the wastewater treatment plants and sends a financial incentive for all permit holders within a sewerage area where the discharge to the environment is nearing or exceeding the Operational Certificate limits specified by the province. The equation used to calculate this adjustment is as follows:

$$UR_A = [0.25 \times UR_E] + [0.75 \times UR_E]^{(CU + 0.1)}$$

Where:

UR_A = Adjusted Capacity Unit Rate
UR_E = Existing Capacity Unit Rate (debt servicing cost/unit of BOD, TSS or flow)
CU = Capacity Utilization = 99th percentile/maximum capacity

The graphical representation of this adjustment including the BOD capacity levels for each of the treatment plants is as follows:



This proposal recognizes the difficulty some of the treatment plants face in maintaining compliance with certain Operational Certificate limits. The adjusted unit rates reflect this variation in remaining capacity among the treatment plants, generating a higher unit rate as the available capacity decreases. In addition, this proposal signals that Metro Vancouver does not want to exceed its limits by the increased slope of the line above 100 percent capacity used. Metro Vancouver hopes that this type of economic instrument would influence industry to reduce the loads entering the wastewater treatment plants when it is most important to do so.

Implications

For reference purposes, the proposal would change the 2010 Industrial Charge unit rates as follows:

Usage Charge (no changes)	**FSA (Annacis)**	**VSA (Iona)**	**LIWSA (Lulu)**	**NSSA (Lions Gate)**	**NWL (NW Langley)**
BOD ($/kg)	$0.324	$0.066	$0.487	$0.135	$0.324
TSS ($/kg)	$0.432	$0.623	$0.460	$0.884	$0.213
Flow ($/$m^3$)	$0.152	$0.076	$0.185	$0.213	$$0.152
Capacity Charge (existing)	**FSA (Annacis)**	**VSA (Iona)**	**LIWSA (Lulu)**	**NSSA (Lions Gate)**	**NWL (NW Langley)**
BOD ($/kg/d)	$35.082	$46.233	$47.577	$40.803	$35.082
TSS ($/kg/d)	$26.865	$63.266	$24.131	$49.687	$26.865
Flow ($/$m^3$/d)	$10.844	$28.533	$5.057	$21.999	$10.844
Capacity Charge (proposed)	**FSA (Annacis)**	**VSA (Iona)**	**LIWSA (Lulu)**	**NSSA (Lions Gate)**	**NWL (NW Langley)**
BOD ($/kg/d)	$13.126	$57.607	$15.516	$61.324	$16.121
TSS ($/kg/d)	$20.353	$44.546	$8.559	$26.968	$18.809
Flow ($/$m^3$/d)	$8.288	$21.503	$3.161	$10.173	$5.174

This would increase the overall revenue by approximately $670,000, based on current loads and unit rates. However, industry has the opportunity to reduce these costs by reducing the peak loads to sanitary sewer. An additional benefit of this proposal is that significant reductions by industry would result in greater available capacity at the treatment plants resulting in reduced charges for all industrial users in the sewerage area the following year. The summary of the financial impacts to industrial dischargers based on the data used for the 2010 industrial treatment fees are as follows:

	Impact – Industrial Charge
Largest Decrease	-$33,123
Largest Increase	$183,865
Average	$2,601
Median	$31

Implementation

Metro Vancouver is proposing to implement the new capacity charges beginning January 1, 2013. The time is needed to allow permit holders time to incorporate the new charges in their operating budgets and/or implement loading reductions at their operations.

Summary of Proposed Changes to the Treatment Fees

The following table summarizes the proposed changes to the industrial treatment fees:

Fee Component	Current	Proposed
Billing Method	Charges are calculated for each permitted industry and are included in the District Levy to the municipalities. The municipalities have the final decision on how they will recover these charges.	Charges are to be calculated for each permitted industry and will be billed directly to the industry by Metro Vancouver. The municipalities will be informed of the industries that have already paid for Metro Vancouver services so that they only need to bill them for municipal services.
Usage Charge		
BOD	Annual Load[1]	Annual Load
TSS	Annual Load	Annual Load
Flow	Annual Reported Flow	Annual Reported Flow
Capacity Charge		
BOD	Average Daily Load[2]	90th Percentile[3] Load
TSS	Average Daily Load	90th Percentile Load
Flow	Average Daily Flow	Average of Reported Maximum Daily Flows
Capacity Unit Rate	Capacity Unit Rate = Debt Servicing / Plant Capacity	Current Capacity Unit Rate to be adjusted based on the capacity used at the treatment plant

(1) Annual Load/Flow is calculated using the reported annual flow and the average reported concentration

(2) Average Daily Load/Flow is calculated using the annual load and the number of days of discharge to sewer, i.e. Ave. Daily Load = Annual Load/number days discharge in year

(3) The 90th percentile value for a set of values states that at least ninety percent (90%) of the values in the set are less than or equal to this value.

2.4 Contaminated Groundwater Discharge (Conveyance & Treatment) Fee

The contaminated groundwater discharge fees were developed in 1996 to ensure that the dischargers to sanitary from remediation or excavation projects paid for the costs of conveyance and treatment of their discharge to sewer (water supply meters are often used to determine both supply and discharge volumes but groundwater permits are not associated with a water supply).

Since groundwater permits are generally short term, it is policy for all fees to be submitted prior to issuance of a permit. The application fee is a fixed fee that is required by Metro Vancouver before any consideration of the application occurs. The permit administration (compliance promotion) fee is payable

to Metro Vancouver before the permit is issued. The Discharge Fee (for conveyance and treatment of the effluent) is payable to the municipality before the permit is issued.

Some municipalities request that Metro Vancouver collect the discharge fee on their behalf and others collect the discharge fee themselves. Different municipalities use different formula for determining discharge fees. Frequently, permits are delayed as Metro Vancouver waits for instructions from municipalities about the amount of the discharge fee. Since groundwater remediation is often required before construction activities can begin the client is often urgently seeking a permit. The current process is cumbersome and often does not allow expedient decision making.

For the above reasons Metro Vancouver had proposed that municipalities directly collect fees owed to the municipality. However after discussions with municipal staff, Metro Vancouver staff is of the view that any savings in regional staff workload would be less than the increased workload that would be experienced by the municipalities. In the interest of efficiency, Metro Vancouver proposes to continue to collect contaminated groundwater discharge fees from permitted industrial dischargers on behalf of the municipalities. Metro Vancouver will be working with the municipalities to further streamline this process.

3. Next Steps

Metro Vancouver welcomes your comments and will consider them in the development of the finalized liquid waste fees. Please submit your comments on the feedback form provided or by email by February 26, 2010 to jeff.gogol@metrovancouver.org

Following receipt of comments on the proposed liquid waste fees in this Discussion Paper, Metro Vancouver staff will prepare a draft Bylaw. It is expected that the draft Bylaw will be presented the Board in the spring of 2010, together with a report summarizing the input received during consultation.

metrovancouver Greater Vancouver Regional District • Greater Vancouver Water District
Greater Vancouver Sewerage and Drainage District • Greater Vancouver Housing Corporation
4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

Waste Management Committee Meeting Date: May 5, 2010

To: Waste Management Committee

From: Ray Robb, Division Manager, Policy and Planning Department
Jeff Gogol, Environmental Regulatory Planner, Policy and Planning Department

Date: April 21, 2010

Subject: **Issue Paper – Revisions to the Food Sector Code of Practice**

Recommendation:

That the Waste Management Committee receives for information the report dated April 21, 2010, titled "Issue Paper – Revisions to the Food Sector Code of Practice".

1. PURPOSE

To advise the Waste Management Committee of on-going efforts to reduce the discharge of fats, oil and grease to sanitary sewer from restaurants and other food service establishments through proposed revisions to the existing Food Sector Code of Practice.

2. CONTEXT

The *GVS&DD Sewer Use Bylaw No. 299* (Bylaw) is enabled by the *Environmental Management Act* to regulate the discharge of non-domestic waste to sewer. The Bylaw provides the regulatory framework to control, at source, non-domestic effluent from industrial, commercial and institutional sources.

The discharge of non-domestic waste from restaurant kitchens is authorized under the Food Sector Code of Practice (the Code). The Code includes mandatory requirements to install and maintain a grease interceptor to minimize oil and grease discharges to sewer. Grease discharged to sewer may accumulate in sewer lines resulting in blockages, sewer backups, and public health concerns. It is estimated that the annual cost to Metro Vancouver and its member municipalities to deal with grease accumulations in the sewer system is over $2 million. The proposed revisions to the Code will better recover grease for other uses such as energy production while reducing sewer maintenance costs.

In addition, Metro Vancouver's Board has requested that the province grant the Greater Vancouver Sewerage and Drainage District with ticketing powers to encourage compliance, particularly at smaller dischargers such as restaurants that individually may not pose a significant threat but collectively can cause havoc to sewer lines and require costly clean-outs. The province is planning to make the necessary changes to enable the GVS&DD to ticket in 2011. In advance of receiving ticketing powers, staff is proposing to make improvements to the existing Food Sector Code of Practice.

To improve the discharge to sanitary sewers, Metro Vancouver is proposing changes to the existing Food Sector Code including:

- the requirement for all grease interceptors to be pumped out on a minimum frequency of once per month;
- the authorization of additional types of grease interceptors and grease recovery devices;
- harmonization with the BC Building Code with respect to the sizing of the grease interceptors; and
- the requirement that all new operations install CSA approved Grease Interceptors capable of meeting an effluent grease concentration of 150 mg/L.

2.2 Consultation

Staff has produced an issue paper to elicit comment from interested parties on potential Bylaw changes. This issue paper has been prepared for use in consultation and is attached for information. Consultation with affected stakeholders is proposed to begin June 2010 and conclude in the Fall of 2010. The issue paper will be posted on the corporate web-site and stakeholders will be contacted referring them to the web-site where they will be able to download this paper and other related information as well as forward any comments regarding the proposed regulatory changes.

Metro Vancouver is proposing an extensive consultation process with affected stakeholders through the British Columbia Restaurant and Foodservices Association, the BC Chefs Association, food suppliers, local business associations as well as planning workshops to enable individual restaurant owners and operators to be informed and provide comment on proposed changes. Staff plans include translation of consultation material to increase the understanding of the issues and enable feedback from all affected stakeholders.

3. ALTERNATIVES

None presented.

4. CONCLUSION

Metro Vancouver staff is planning to improve its liquid waste management through consultation regarding proposed changes to the Food Sector Code of Practice. This is the first step in a broader initiative to reduce the discharge of fats, oil and grease to the sanitary sewer from all sources.

ATTACHMENT:

Issue Paper for Revisions to Metro Vancouver's Food Sector Code of Practice
(Doc # 3888865)

3889835

Liquid Waste Regulatory Program Review

Issue Paper for Revisions to Metro Vancouver's Food Sector Code of Practice

Metro Vancouver is considering changes to the law governing liquid waste discharges to Metro Vancouver's sanitary sewer system. To elicit informed comment on potential changes to *Greater Vancouver Sewerage & Drainage District (GVS&DD) Sewer Use Bylaw No. 299, 2007* (the Bylaw), Metro Vancouver is producing a series of Issue Papers.

This Issue Paper proposes **revisions to Metro Vancouver's Food Sector Code of Practice** to support Metro Vancouver's Liquid Waste Management Plan goals consistent with sustainability.

Who Should Read This?
This Issue Paper will be of interest to:

- commercial and institutional facilities that operate Food Sector Establishments, including restaurants, delicatessens, fast-food outlets, cafeterias, hospitals, pubs or other similar establishments, under the existing Code of Practice, or that may be required to operate under a Code of Practice; and
- other interested parties that may be affected by the proposed revisions.

What Will the Revisions Do?
The revisions propose to:

- require a minimum clean-out frequency of once per month.
- expand the use of other technologies that are designed to separate fats, oils and grease (FOG) from wastewater;
- harmonize the sizing requirements of the interceptors with the requirements in the BC Building Code; and
- require new operations to install Canadian Standards Association approved devices capable of meeting an effluent oil & grease concentration of 150 mg/L.

Metro Vancouver Would Like Your Feedback
A response form for providing comments to Metro Vancouver, as well as further information on updates to the Bylaw and links to related legislation, will be posted on the Metro Vancouver website at **www.metrovancouver.org/sewerage/bylaw.htm.** Based on feedback received during this consultation, staff will prepare draft amendments to the pertinent sections of the Bylaw for consideration by the GVS&DD Board. To ensure that your comments are taken into consideration during this first phase, **please provide your response by September 30, 2010**.

Please note that in addition to this Issue Paper, work on updating the Sewer Use Bylaw is occurring in several areas. Other areas include development of Codes of Practices for discharges from additional commercial and institutional sectors including hospitals, laboratories and heating/cooling systems.

1. Background

Metro Vancouver collects, treats and discharges domestic and non-domestic liquid wastes in accordance with a Liquid Waste Management Plan authorized by the Minister of Environment. The management of non-domestic liquid waste is governed by Sewer Use Bylaw No. 299. The bylaw establishes a regulatory framework to allow non-domestic liquid waste from industrial, commercial and institutional sources to be discharged to the sewer.

The Liquid Waste Regulatory Program is responsible for the control of discharges to sewer from industrial, commercial and institutional sources. The main objectives of the program are to:

- protect the public, sewer workers, municipal and District infrastructure, and wastewater treatment processes and
- protect the environment by improving the quality of biosolids and wastewater treatment plant effluents.

The policy and regulatory tools employed by Metro Vancouver have been developed to be fair, effective and efficient. One of the regulatory tools developed was the *Code of Practice for Wastewater Management at Food Sector Establishments*, referred to as the Food Sector Code of Practice (CoP).

In 2000, Metro Vancouver staff developed the Food Sector CoP in cooperation with stakeholders and member municipalities. The primary objective of the code of practice is to reduce the inappropriate discharge of grease to sewer from restaurants and cafeterias, grocery facilities, and food processors not currently operating under Waste Discharge Permit. The Code sets minimum requirements for installation, sizing, operation, and maintenance of grease interceptors, and contains provisions for inspection and enforcement.

Grease discharged to sewer may accumulate in sewer lines, resulting in blockages, sewer backups, and public health concerns. The annual cost to Metro Vancouver and its member municipalities to deal with grease accumulations in the sewer system is over $2 million.

In 2005, a video survey of Metro Vancouver's Gilbert Trunk Main in Richmond indicated significant grease build-up in the sewer main. Figure 1 illustrates the extent of grease within this section of line. Figure 2 shows a clean sewer line.

Figure 1 - Photo of the Grease Build-up in the Gilbert Trunk Line

Figure 2 - Representative Picture of a Clean Sewer Line

It has been estimated it will cost Metro Vancouver $ 1 million per kilometre to rehabilitate this sewer interceptor, and it will take 10 – 12 years to the complete the work. In addition, every municipality has sewer lines that require annual cleaning to remove grease build-up with costs ranging from $2,500 to $387,000 per year. The range of costs is based on the size of the municipality and the concentration of restaurants within a sewer catchment area. Historically, restaurants have not paid their share of the maintenance costs as they are recovered from all users, residential and commercial, through general tax levies.

2. Proposed Revisions to the Food Sector Code of Practice

2.1 Maintenance

Issue

The existing code of practice specifies that the "maximum depth of Oil and Grease which an operator of a Food Sector Establishment may allow to accumulate in a Grease Interceptor prior to servicing must not exceed the lesser of 15.2 cm (six inches) or 25% of the wetted height of the Grease Interceptor". Evaluating the level of grease in the interceptor assists the discharger in determining the frequency of maintenance required for their establishment. However, determining this level by restaurant personnel or enforcement staff is problematic due to the nature of the waste and access to the interceptor.

A review of the loads received at Metro Vancouver's trucked liquid waste facilities indicates that the majority of restaurants, 63.5 percent, did not pump out their interceptors in 2008 (Figure 3). Canadian Standards Association (CSA) Standard *B481.4-07: Maintenance of Grease Interceptors* notes that a grease interceptor should never be serviced less than once every four weeks. Presently, less than one percent of all facilities meet this standard. Therefore, the existing maintenance frequency for the majority of restaurants and other food services establishments do not meet this standard.

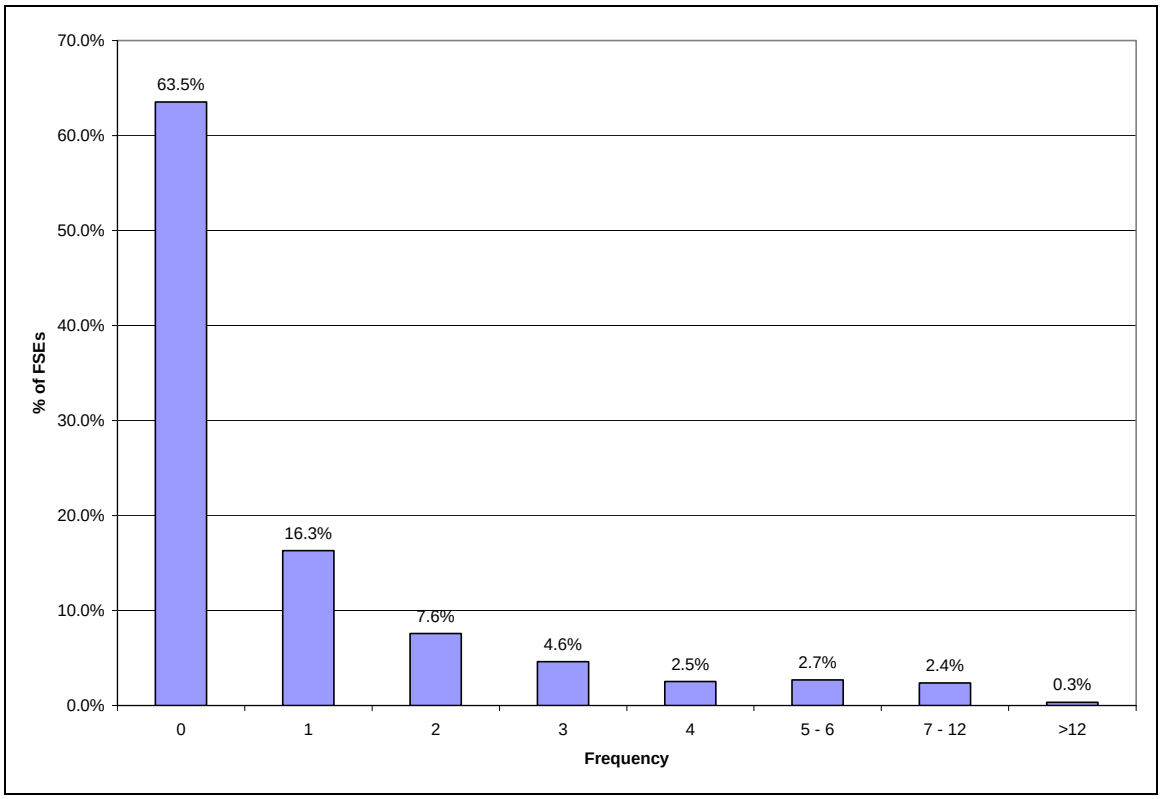


Figure 3 - Frequency of Clean-Out at Food Service Establishments (FSE) - 2008

Proposal

To minimize the amount of fats, oils and grease entering the sewer system, Metro Vancouver is proposing that all Grease Interceptors be serviced on a minimum frequency of once per month. For those establishments that can prove that they consistently meet the 150 mg/L grease limit with less frequent maintenance, they may request a relaxation of the maintenance frequency up to once every three months.

2.2 Grease Interceptor Standards

Issue

Grease interceptors have been used since the Victorian era. They are used to reduce the amount of fats, oils and grease (FOG) that enter the main sewers. They can be made from a number of different materials; e.g. stainless steel, plastics, concrete, cast iron and can hold anywhere between 40 litres to 45000 litres and above. They can be located above ground, below ground, inside the kitchen or outside the building.

There are three primary types of grease interceptors. The most common are small 190 litre hydromechanical interceptors that restrict the flow and remove 85-90% of the incoming fat, oil, and grease. The second most common type of interceptor is the large, 1.8 cubic metres, in-ground tank. These units are constructed of concrete, fiberglass, or steel. They have much larger grease and solid storage capacities for high flow applications such as a restaurant or grocery store. These units can be designed to remove up to 99% of the incoming FOG.

The third type, known as Grease Recovery Devices, removes the surface grease automatically when trapped. They are smaller because they can empty the grease/oil out automatically as often as needed to keep up with the grease retention in the device.

In 2007, the Canadian Standards Association published CSA Standards for Grease Interceptors. The Standard, B481 Series-07, contains standards for:

- material, design, and construction requirements;
- testing and rating;
- sizing, selection, location & installation; and
- maintenance of grease interceptors

These new standards ensure that the manufacturing, testing, installation and maintenance of grease interceptors are consistent across the country. The existing code of practice does not have this level of consistency.

Metro Vancouver's existing Code of Practice specifies the installation of a "Grease Interceptor" with a minimum flow capacity of 3.2 L/s (50 US gpm). However, the Code does not allow for the smaller hydromechanical interceptors or the use of Grease Recovery Devices. In addition, the flow rating specified in the Code is inconsistent with the *BC Building Code* and the CSA standard with respect to the sizing. The *BC Building Code* only refers the reader to the ASPE Data Book, Volume 4, Chapter 8, Grease Interceptors for information on the design and sizing of grease interceptors.

Proposal

Metro Vancouver is proposing the following changes to the requirements for grease interceptors:

- authorization of the following grease interceptors and equipment:

  Gravity Grease Interceptor - a device that is installed to separate and retain Oil and Grease from a wastewater discharge and is identified by volume, 30-minute retention time, baffle(s), a minimum of two compartments, a minimum total volume of 300 gallons, and gravity separation.

  Hydromechanical Grease Interceptor - a device that is installed to separate and retain Oil and Grease from a wastewater discharge and is identified by flow rate, separation and retention efficiency. The design incorporates air entrapment, hydromechanical separation, interior baffling, and/or barriers in combination or separately, and an external flow control, with air intake.

  Grease Recovery Device - any hydromechanical grease interceptor that automatically, mechanically removes Oil and Grease from the interceptor, the control of which are either automatic or manually initiated.

- specifying that the grease interceptor be installed in compliance with the BC Building Code.

- requiring that all new operations install CSA approved Grease Interceptors capable of meeting an effluent grease concentration of 150 mg/L.

3. Financial Impact

The greatest financial impact of the proposed revisions to the Food Sector Code of Practice will be due to the implementation of the proposed maintenance requirements. If we assume that it costs the food sector establishment approximately $200 per maintenance visit, then the annual cost would be $2400. This is a significant increase since the majority of the establishments do not maintain their interceptors even on an annual basis.

In addition, the existing costs of sewer maintenance by the municipality are usually shared by all the residents, even those that are not in the area where the maintenance has occurred. Also, utility costs for these establishments are based on water use and do not factor in the quality of the discharge. Ideally an operation discharging high levels of contaminants should be paying more for sewer services as those that discharge clean water. Both of these issues indicate that this sector is financially subsidized by residential users of the sanitary sewer system even though they are the main driver of significant maintenance costs.

4. Next Steps

Comments regarding the proposed intentions of Metro Vancouver are being solicited and will be carefully considered in development of the revised Food Sector Code of Practice. Metro Vancouver welcomes suggestions with respect to any or all of the proposed changes.

Following receipt of comments on this issue paper, Metro Vancouver staff will prepare a draft Bylaw and provide an opportunity for further input. It is anticipated that the draft Bylaw will be before the GVS&DD Board in the Spring of 2011, together with the input from consultation.

Response forms for providing comments to Metro Vancouver, as well as further information on updates to the Bylaw, are posted on the Metro Vancouver website. This information can be accessed at **www.metrovancouver.org/sewerage/bylaw.htm**.

All submissions will be reviewed for inclusion in a consultation summary report. Comments received are subject to provisions of the *Freedom of Information and Protection of Privacy Act*. If you have any questions or comments regarding the consultation process, please review the information posted on the Metro Vancouver website or contact Metro Vancouver at **LWBylawReview@metrovancouver.org** or **604-432-6200**.

Comments on this Issue Paper should be submitted to Metro Vancouver on or before September 30, 2010.

Thank you for your time and comments.

THIS PAGE LEFT BLANK INTENTIONALLY

metrovancouver Greater Vancouver Regional District • Greater Vancouver Water District
Greater Vancouver Sewerage and Drainage District • Metro Vancouver Housing Corporation
4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

Waste Management Committee Meeting Date: May 5, 2010

To: Waste Management Committee

From: Mike Stringer, Senior Engineer, Policy and Planning

Date: April 26, 2010

Subject: **Amendment – Fraser Sewerage Area Boundary – 17032 and 17076 Fraser Highway and 7700 – 168 Street, City of Surrey**

Recommendation:

That the Board approve the amendment of the Fraser Sewerage area boundary to include portions of the properties at 17076 Fraser Highway and 7700 – 168 Street, City of Surrey and to exclude a portion of the property at 17032 Fraser Highway as shown on Plan SA-2376, Sheet 52.

1. PURPOSE

This report responds to a request from the City of Surrey for Board approval to amend the Fraser Sewerage Area boundary.

2. CONTEXT

Sewerage and Drainage area boundaries are occasionally amended at the request of a member municipality in accordance with Sections 31 and 32 of the GVS&DD Act. District procedure regarding amendments to sewerage area boundaries requires the examination of financial, technical and operational impacts; land use compliance; effect on service levels; local and community interests and regional interests.

The GVS&DD has received a request from the City of Surrey to amend the Fraser Sewerage Area (FSA) boundary to align with the developable area boundary in City's Official Community Plan (OCP) in relation to two properties and to amend the boundary of the FSA to align with the revised Agricultural Land Reserve (ALR) boundary as illustrated on Drawing No. SA-2376, Sheet 52 (Attachment 1).

The following summarizes the considerations for these boundary expansions:

- The applications were approved by City of Surrey Council on February 1, 2010.
- There will be no financial impact on the GVS&DD.
- The properties in question are outside the Agricultural Land Reserve.
- Onsite treatment was considered but both septic fields and sand mound disposal systems were not considered practical because of the very high water table in the area.
- A small portion of the parcel at 7700–168 Street is located within the area designated as Green Zone (Agricultural Land Reserve) in the Livable Region Strategic Plan. However, this portion was recently excluded from the Agricultural Land Reserve. Although exclusion from the ALR does not automatically exclude

land from the LRSP Green Zone, it is recognized that this is a minor boundary rationalization relating to site contours and the abutting golf course, and therefore, is not a significant LRSP Green Zone concern. Metro Vancouver and the City of Surrey will consider this minor land use change for the current Green Zone and Urban designations within the current review of Metro Vancouver's Regional Growth Strategy.

- The proposed boundary re-alignment is in response to a change in the Agricultural Land Reserve boundary for a portion of the parcel at 17032 Fraser Highway. The subject area is currently designated for urban development by Metro Vancouver's Livable Region Strategic Plan, and is proposed for amendment to the Agricultural designation in the City of Surrey's Official Community Plan. Metro Vancouver and the City of Surrey will consider this minor land use change for the currently designated Green Zone and Urban properties within the current review of Metro Vancouver's Regional Growth Strategy.
- The proposed amendments are consistent with Metro Vancouver's Livable Region Strategic Plan.
- There will be no significant impact to the service levels provided by the GVS&DD system.

3. ALTERNATIVES

The GVS&DD Board may:

a) approve the amendment of the Fraser Sewerage area boundary to include portions of the properties at 17076 Fraser Highway and 7700 – 168 Street, City of Surrey and to exclude a portion of the property at 17032 Fraser Highway as shown on Plan SA-2376, Sheet 52.

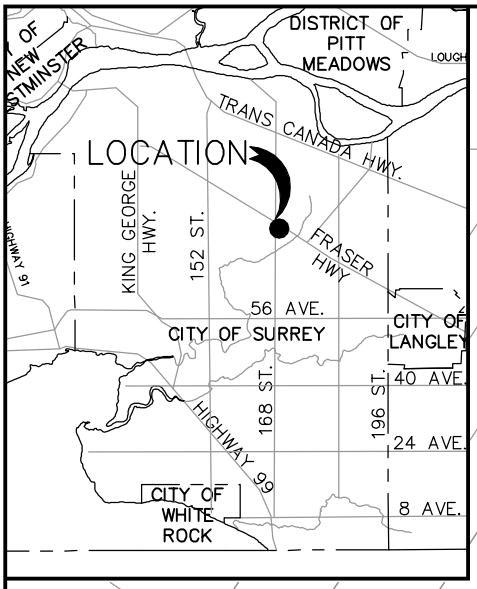
b) Reject the proposed boundary expansion.

4. CONCLUSION

Staff recommends that the application be approved.

ATTACHMENT
Drawing No. SA-2376, Sheet 52

ATTACHMENT 1



LOCATION PLAN
N.T.S.

N

80 AVE

EXISTING FRASER SEWERAGE AREA BOUNDARY

FRASER HWY

17032

17076

7700

A

B

C

D

ADDED TO FSA

REMOVED FROM FSA

A	APR 22 10	MS	JM	ISSUED FOR REVIEW
Issue	Date	Des'n	App'd	Description

0 20 Bar Is 20mm On Original Drawing. If Not On This Sheet, Adjust Scales Accordingly

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT

Design: MS
Drawn: JM
Checked:
Approved
Manager

AMENDMENT TO
FRASER SEWERAGE AREA BOUNDARY

17032 AND 17076 FRASER HIGHWAY
AND 7700 – 168 STREET
CITY OF SURREY

SCALE: N.T.S.
DISTRICT FILE SA-2376
SHEET 52
DOCUMENT CODE

SUPERSEDES PRINTS OF THIS DOCUMENT CODE WITH LETTERS PREVIOUS TO → A

THIS PAGE LEFT BLANK INTENTIONALLY

metrovancouver Greater Vancouver Regional District • Greater Vancouver Water District
Greater Vancouver Sewerage and Drainage District • Metro Vancouver Housing Corporation
4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

Waste Management Committee Meeting Date: May 5, 2010

To: Waste Management Committee

From: Mike Stringer, Senior Engineer, Policy and Planning

Date: April 22, 2010

Subject: **Amendment – Fraser Sewerage Area Boundary – 6890 - 176 Street, City of Surrey**

Recommendation:

That the Board approve the amendment of the Fraser Sewerage area boundary to include portions of the property at 6890 - 176 Street as shown on Plan SA-2376, Sheet 62.

1. PURPOSE

This report responds to a request from the City of Surrey for Board approval to amend the Fraser Sewerage Area boundary.

2. CONTEXT

Sewerage and drainage area boundaries are occasionally amended at the request of a member municipality in accordance with Sections 31 and 32 of the *GVS&DD Act*. District procedure regarding amendments to sewerage area boundaries requires the examination of financial, technical and operational impacts; land use compliance; effect on service levels; local and community interests and regional interests.

The GVS&DD has received a request from the City of Surrey to amend the Fraser Sewerage Area (FSA) boundary to align with the developable area boundary in the City's Official Community Plan (OCP) in relation to the property as illustrated on Drawing No. SA-2376, Sheet 62 (Attachment 1).

The following summarizes the considerations for these boundary expansions:

- The application was approved by City of Surrey Council on April 12, 2010.
- There will be no financial impact on the GVS&DD.
- The property in question is outside the Agricultural Land Reserve and outside the area designated as Green Zone in the Livable Region Strategic Plan.
- Connection to the City of Surrey's sewer system is proposed.
- Three portions of the property (A, B, and C Attachment 1) are allocated to creek, creek setbacks and parkland and are to be excluded from the FSA expansion.
- The proposed amendments are consistent with Metro Vancouver's Livable Region Strategic Plan.
- There will be no significant impact to the service levels provided by the GVS&DD system.

3. ALTERNATIVES

The GVS&DD Board may:

a) Approve the amendment of the Fraser Sewerage area boundary to include portions of the property at 6890 - 176 Street, City of Surrey as shown on Plan SA-2376, Sheet 62.

b) Reject the proposed boundary expansion.

4. CONCLUSION

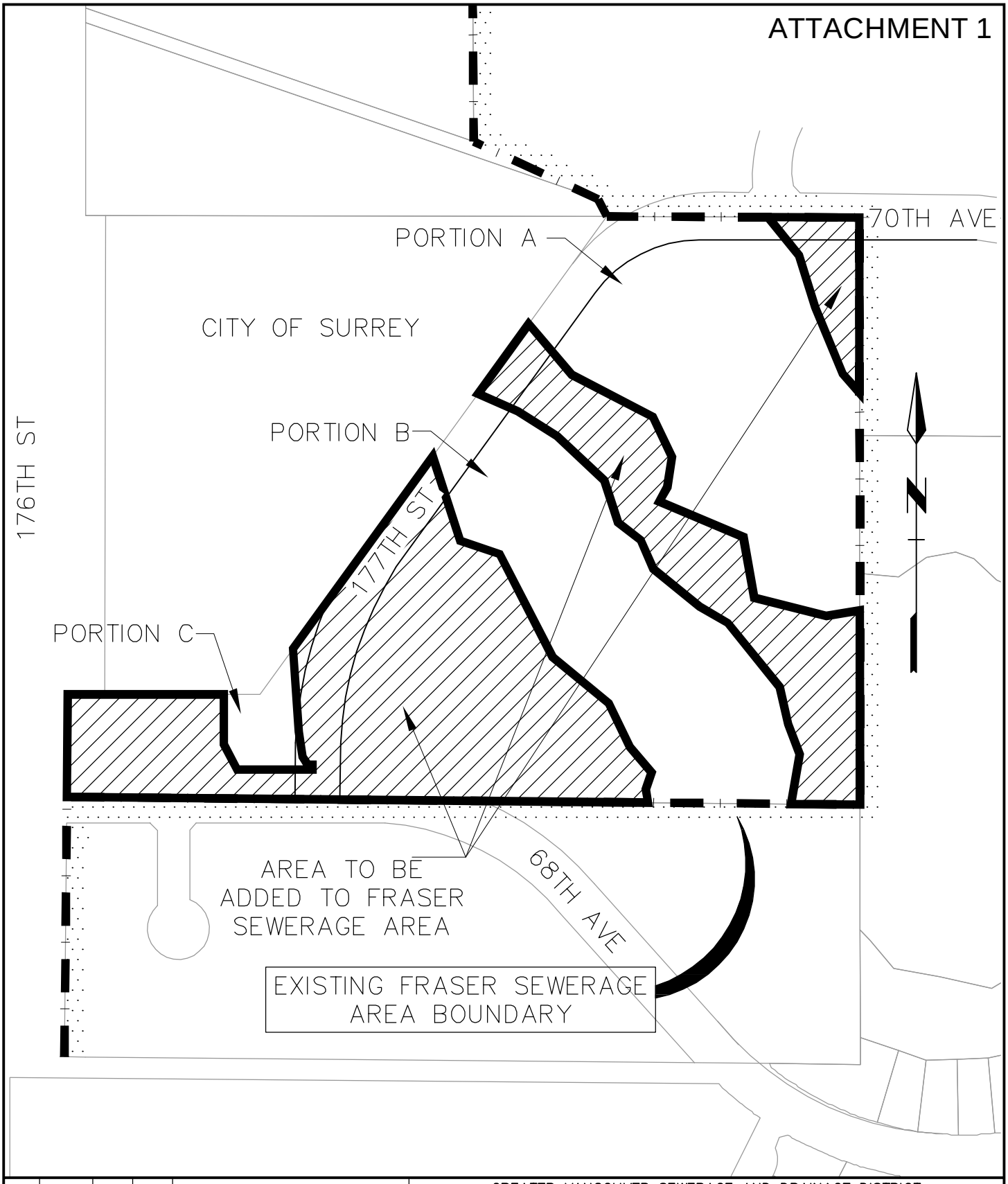
Staff recommends that the application be approved.

ATTACHMENT

1. Drawing No. SA-2376, Sheet 62

4001033

ATTACHMENT 1



Issue	Date	Desn	App'd	Description
A	APR 10	RH	RH	ISSUED FOR REVIEW

0 20 Bar Is 20mm On Original Drawing. If Not On This Sheet, Adjust Scales Accordingly

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT

Design: RH
Drawn: BAV
Checked:
Approved
Manager

AMENDMENT TO
FRASER SEWERAGE AREA BOUNDARY

6890 176 STREET

CITY OF SURREY

SCALE: N.T.S.
DISTRICT FILE SA-2376
SHEET 62
DOCUMENT CODE

SUPERSEDES PRINTS OF THIS DOCUMENT CODE WITH LETTERS PREVIOUS TO → A

THIS PAGE LEFT BLANK INTENTIONALLY

metrovancouver Greater Vancouver Regional District • Greater Vancouver Water District
Greater Vancouver Sewerage and Drainage District • Metro Vancouver Housing Corporation
4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

Waste Management Committee Meeting: May 5, 2010

To: Waste Management Committee

From: Chris Allan, Senior Engineer, Engineering and Construction Department
Ken Carrusca, Division Manager, Policy and Planning Department

Date: April 25, 2010

Subject: **Material Disposal Bans Update**

Recommendation:
That the Waste Management Committee receive the report titled "Material Disposal Bans Update", dated April 25, 2010 for information.

1. PURPOSE

To provide an update on the material disposal bans in Metro Vancouver.

2. CONTEXT

In order to meet requirements set out in the 1995 Regional Solid Waste Management Plan (SWMP), a disposal ban program was implemented in January 1997 to discourage the disposal of materials such as old corrugated cardboard, old newspaper, and office paper which had well-developed recycling alternatives to disposal already in place. In June 2007, the GVS&DD Board approved enhanced material disposal bans and increased enforcement as part of the Zero Waste Challenge. Enhanced disposal bans came into effect January 1, 2008 and included gypsum, yard & greenwaste, beverage containers, blue-box recyclables, lead-acid batteries, pharmaceuticals, paint, solvents, gasoline, pesticides, tires, oil, oil filters, oil containers, and electronic waste. Tolerance levels for banned materials in waste were also reduced from 10% to 5%, with zero tolerance for products with an existing stewardship program.

On April 24, 2009 Metro Vancouver passed the tipping fee bylaw which came into effect on July 1, 2009. The bylaw formalized existing disposal rates and restrictions on various materials delivered to Metro Vancouver transfer stations and the Waste-to-Energy Facility (WTEF).

Material disposal bans are one of the waste reduction strategies set out in the draft Integrated Solid Waste and Resource Management Plan. Strategy 1.2 on page 16 of the Plan calls for Metro Vancouver to work with disposal facility operators, local municipalities and the recycling industry in order to further reduce or eliminate materials from disposal. This is occurring now and Metro Vancouver has had discussions with waste haulers in order to receive their input on options to reach out to waste generators. Metro Vancouver also continues to work with municipal staff in order to further improve compliance within the residential waste sector.

Disposal ban inspections are conducted by an independent contractor, Southern Cross Holdings Ltd., who historically employed two inspectors to rotate amongst six transfer and disposal facilities and allocated a combined total of 70 hours per week for disposal ban inspections. Effective April 2009 two additional inspectors were phased into the program which more than doubled the existing inspection level to 150 hours per week at Metro Vancouver facilities.

Effective January 1, 2010 a fifth disposal ban inspector was phased into the program, this fifth inspector is dedicated to disposal ban inspections at the City of Vancouver facilities. At the WTEF, a small area was prepared in April, 2009 to implement disposal ban inspections. These inspections also serve to help identify other problem wastes entering the facility such as large bulky items.

During the first three months of the year, approximately 13.4% of incoming loads to Metro Vancouver and City of Vancouver facilities have been inspected and a total of 1,202 violation notices have been issued.

Table 1 illustrates the total number of load inspections, the total number of violations and the corresponding violation rate.

Table 1. Summary of Overall Inspection Statistics

Year	Total # of Load Inspections	Total # of Violations	Violation Rate
2008	68,824	1,581	2.3 %
2009	107,703	3,295	3.1 %
2010 (Jan-March)	30,385	1,202	4.0 %

Note: The above figures include Metro Vancouver facilities, the Vancouver South Transfer Station, and the Vancouver Landfill.

Table 2 illustrates the categories of banned materials identified in the violation notices.

Table 2. Summary of Materials Responsible for Violations

Material	2009	2010 (Jan - March)
Cardboard	38%	30%
Large Objects	7%	17%
Electronic Waste	14%	16%
Gypsum	7%	10%
Tires	4%	6%
Greenwaste	12%	6%
Blue-box Recyclables	7%	6%
Metal Appliances	1%	2%
Other Prohibited Material	1%	3%
Oil (Includes containers and filters)	2%	2%
Agricultural Waste	1%	1%
Inert Fill	1%	1%
Paint	1%	1%
Newsprint	1%	0%
Paper	2%	0%

Table 3 sets out information on violation notices by customer type, for January-March 2010.

Table 3. Summary of Violations by Customer Type – 2010 (Jan-March)

Customer Type	Inspections	Violation Notices	Violation Rate	Percentage of Total Violations
Commercial Haulers	12,858	1,023	8.0%	85%
Municipal	3,614	81	2.2%	7%
Residential Drop-off	13,913	98	0.7%	8%
Totals	30,385	1,202	4.0%	100%

Whenever requested by drivers, the disposal ban inspectors and transfer station staff provide the opportunity to recover banned/prohibited material provided there are no safety or operational concerns. The inspectors or transfer station staff may prohibit recovery of any materials if it is deemed unsafe or delaying traffic at the facility. Typically 10% of violation assessments are avoided via the retrieval of the material banned from disposal.

3. ALTERNATIVES

None presented.

4. CONCLUSION

Enhanced material disposal bans have been successfully implemented at all Metro Vancouver transfer stations, the WTEF, and the City of Vancouver facilities. Staff and the material disposal ban inspectors continue to work closely with facility users and other stakeholders to further improve the success of the current program. As haulers are not the original generators of the waste, improvement in the violation rate will require additional effort to reach out to the waste generators. Further work in this area is supported by provisions in the draft Integrated Solid Waste and Resource Management Plan.

4006167

THIS PAGE LEFT BLANK INTENTIONALLY

metrovancouver Greater Vancouver Regional District • Greater Vancouver Water District
Greater Vancouver Sewerage and Drainage District • Metro Vancouver Housing Corporation
4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

Waste Management Committee Meeting date: May 5, 2010

To: Waste Management Committee

From: Toivo Allas, Manager, Policy and Planning Department

Date: April 23, 2010

Subject: **Manager's Report**

Recommendation:

That the Waste Management Committee receive for information the report dated April 23, 2010, titled "Manager's Report".

a) Table of 2010 Priorities

Attached is the updated Waste Management Committee 2010 Work Plan (table of priorities) indicating the quarter that the priority will be considered by the Waste Management Committee. Completed items are shown in bold.

b) Zero Waste Challenge "Watch Your Waste" Campaign

Metro Vancouver will launch a Watch Your Waste communications campaign before the May long weekend to gain public awareness in support of the Zero Waste Challenge goal of a minimum 70% diversion. Messages will focus on the volume of waste generated in the region, and what individuals can do to reduce. The campaign will have four streams of activity: sharing materials with municipalities, gaining earned media, purchasing advertising and carrying out an on-line/social media engagement strategy. Working with municipalities will be an important means of broadening the reach of the campaign.

c) MicroSludge/Biogas Proposal

The Board has decided not to proceed with the MicroSludge/Cogeneration project for budgetary reasons. Paradigm, the company promoting MicroSludge, has proposed a new project, with similar grant support as the previous project, combining MicroSludge with gas scrubbing to produce a marketable gas. Staff currently has a full work load and does not have the necessary qualified staff available to properly evaluate this project. A proper evaluation would cost between $200,000 and $300,000. The project will be brought forward for consideration in the 2011 budgetary process.

Attachment
Waste Management Committee 2010 Work Plan

ATTACHMENT

Waste Management Committee 2010 Work Plan

1st Quarter

Key priorities

- **Draft Solid Waste Management Plan**
- **Federal Fisheries Act Regulation – Metro Vancouver Comments**
- **2010 Committee Priorities**
- **Integrated Solid Waste and Resource Management Plan: Proposed Consultation Program**
- **2010 GVS&DD Capital Projects**

2nd Quarter

Key priorities

- **Second Regional Organics Processing Facility**
- Zero Waste Challenge Reporting
- Integrated Resource Recovery Study for North Shore Sewerage Area
- Solid Waste Management Plan (Final Plan)
- Development of Additional Food/Organic Waste Facilities
- Establishment of Regional Eco-Centres
- Amendment to Sewer Use Bylaw to promote Source Control through fees
- Status of Capital Expenditures
- Waste to Energy Facility – NOx Reduction
- Waste to Energy Facility – 2009 Financial Update

3rd Quarter

Key priorities

- Zero Waste Challenge Reporting
- Material Disposal Bans Update
- Status of Municipal Food/Organic Waste Diversion Programs
- LWMP Biennial Progress Report

4th Quarter

Key priorities

- Zero Waste Challenge Reporting
- GVS&DD/Wastech Comprehensive Agreement – 2009 Financial Results
- Status of Capital Expenditures
- Amendment of Sewer Use Bylaw to enhance control of restaurant oil & grease
- 2011 Solid Waste Tipping Fee Bylaw
- 2011 Program and Priorities