

# AGENDA

## *WASTE MANAGEMENT COMMITTEE REGULAR MEETING*

**Wednesday, July 13, 2011  
1:00 p.m.  
2<sup>nd</sup> 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 Alison Hilkewich at (604) 432-6368 if you are unable to attend.



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**NOTICE TO THE GVRD  
WASTE MANAGEMENT COMMITTEE**

**1:00 p.m.  
July 13, 2011  
2<sup>nd</sup> Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.**

**A G E N D A**

**1. ADOPTION OF THE AGENDA**

**1.1 July 13, 2011 Regular Meeting Agenda**

*Staff Recommendation:*

That the Waste Management Committee adopt the agenda for its regular meeting scheduled for July 13, 2011 as circulated.

**2. ADOPTION OF THE MINUTES**

**2.1 June 8, 2011 Regular Meeting Minutes**

*Staff Recommendation:*

That the Waste Management Committee adopt the minutes of its regular meeting held June 8, 2011 as circulated.

**3. DELEGATIONS**

No Items presented.

**4. INVITED PRESENTATIONS**

No Items presented.

**5. REPORTS FROM COMMITTEE OR STAFF**

**5.1 Single Family Residential Waste and Recycling - First Quarter 2011**

*Designated Speaker:* Andrew Marr, Senior Engineer  
Integrated Planning Division, Policy & Planning Department

*Recommendation:*

That the Waste Management Committee receive reports on municipal Single-Family Residential solid waste and recycling data on an annual basis.

**5.2 Future of the Region Sustainability Dialogue and Post-Dialogue Forum:  
Zero Waste Challenge - Accelerating Multi-Family Waste Diversion**

*Designated Speaker:* Heather Schoemaker, Department Manager,  
Corporate Relations  
Simon Cumming, Division Manager, External and Intergovernmental Relations,  
Corporate Relations

*Recommendation:*

That the Board:

- a) Request municipal recycling waste reduction coordinators to consider recommendations on solutions for multi-family space requirements as outlined in Attachment 1; and
- b) Direct staff to form a stakeholder group as identified in the dialogue and post-dialogue series, to consider actions to:
  - 1. Streamline the regulatory process and ensure policies and regulations at different levels are consistent; and
  - 2. Showcase model multi-family projects and work with stakeholders (e.g., strata associations and building managers, Condominium Homeowners Association, builders, and local governments) to develop customized education and outreach materials for this sector.

**5.3 Future of the Region Sustainability Dialogue and Post-Dialogue Forum:  
Zero Waste Challenge - Accelerating Construction and Demolition Waste Diversion**

*Designated Speaker:* Heather Schoemaker, Department Manager,  
Corporate Relations  
Simon Cumming, Division Manager, External and Intergovernmental Relations,  
Corporate Relations

*Recommendation:*

That the Board:

- a) Request municipal recycling waste reduction coordinators to consider recommendations on solutions for accelerating construction and demolition waste diversion outlined in Attachment 1; and
- b) Direct staff to form a stakeholder group as identified in the dialogue and post-dialogue series to consider actions to:
  - 1. Encourage Market Shifts through the creation of a one-stop online inventory of materials to help connect buyers to sellers.
  - 2. Develop strategies and actions to enhance and streamline bylaws, zoning and building codes to better allow for alternative building designs.
  - 3. Expand education and outreach to offer training at the site level and develop public information materials and focused communication strategies that target broad audiences and are consistent and integrated with collection systems.

**5.4 Amendment – Fraser Sewerage Area Boundary – 5900 Block 272 Street, Township of Langley**

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

*Recommendation:*

That the Board approve the expansion of the Fraser Sewerage Area to include the properties described as Sec 8, TWP 14, NWD Parcel 1 RP15620, Suburban Block A (RP5080), Part SW1/4, except Plan 85898 (Road) and Sec 8, TWP 14, NWD Parcel A (RP5080), Part SW1/4, except Plan PCL1-RP 15620, Part in LMP 51701 in the Township of Langley as shown on plan SA-2376, Sheet 66 and described in the report titled “Amendment – Fraser Sewerage Area Boundary – 5900 block 272 Street, Township of Langley”.

**5.5 2010 Quality Control Annual Report for GVS&DD**

*Designated Speakers:* Theresa Gregonia, Superintendent of WWTP Laboratories and  
Stan Bertold, Superintendent of Environmental Monitoring,  
Operations & Maintenance Department

*Recommendation:*

That the GVS&DD Board receive for information the report titled “2010 Quality Control Annual Report for GVS&DD”.

**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 June 24, 2011, titled “Manager’s Report”.

**6. INFORMATION ITEMS**

**6.1 City of Richmond – Report 2010: Towards Excellence in Recycling and Solid Waste Management – Staff Report**

**6.2 The Regional Municipalities of Durham and York: News Release 29 June 2011**

**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 July 13, 2011.

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# MINUTES

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**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, June 8, 2011 in the 2<sup>nd</sup> Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

**PRESENT:**

Chair, Director Greg Moore, Port Coquitlam  
 Vice Chair, Director Heather Deal, Vancouver (arrived at 1:23 p.m.)  
 Councillor Mary-Wade Anderson, White Rock  
 Director Ernie Daykin, Maple Ridge  
 Director Pamela Goldsmith-Jones, West Vancouver  
 Councillor Scott Hamilton, Delta  
 Director Darrell Mussatto, North Vancouver City  
 Director Harold Steves, Richmond (arrived at 1:23 p.m.)  
 Director Wayne Wright, New Westminster

**ABSENT:**

Director Derek Corrigan, Burnaby  
 Director Linda Hepner, Surrey  
 Director Don MacLean, Pitt Meadows  
 Director Joe Trasolini, Port Moody

**STAFF:**

Johnny Carline, Commissioner/Chief Administrative Officer, Chief Administrative Officer's Department  
 Toivo Allas, Manager, Policy and Planning Department  
 Doug Humphris, Manager, Operations and Maintenance Department  
 Tim Jervis, Manager, Engineering and Construction Department  
 Klara Kutakova, Assistant to Regional Committees, Board Secretariat and Corporate Information Department

**1. ADOPTION OF THE AGENDA****1.1 June 8, 2011 Regular Meeting Agenda****It was MOVED and SECONDED**

That the Waste Management Committee:

- a) amend the agenda for its regular meeting scheduled for June 8, 2011 by adding the following:
  - i. item 5.5 Minister's Approval of the Integrated Liquid Waste and Resource Management Plan;
  - ii. item 5.6 Smarter Waste Management; and
- b) adopt the agenda as amended.

**CARRIED**

## 2. ADOPTION OF THE MINUTES

### 2.1 May 18, 2011 Regular Meeting Minutes

#### **It was MOVED and SECONDED**

That the Waste Management Committee adopt the minutes of its regular meeting held May 18, 2011 as circulated.

**CARRIED**

## 3. DELEGATIONS

### 3.1 Scott Gramm, Fortis BC

Scott Gramm, Business Development Manager, Fortis BC (Fortis), informed the Committee about the following:

- the BC-Utilities-Commission-approved Renewable Gas Program enables Fortis to connect customers directly with natural gas suppliers
- Fortis is actively pursuing sustainable projects such as the Lulu Island MicroSludge and Green Biomethane project
- Fortis will own, operate and maintain a natural gas line and interconnection facilities at the Lulu Island WWTP
- compared to other contracts, the gas purchase arrangement for the project is the highest purchase price to date
- the benefits of the project:
  - a stable, long term gas contract
  - immediate residential enrolment
  - Metro Vancouver and Fortis BC will be seen as working together for the sustainable region
  - the regulated program gives transparency to Metro Vancouver operations

### 3.2 Scott Stanners, Director of Research, BC Bioenergy Network

Scott Stanners, Director of Research, on behalf of Michael Weedon, Executive Director, BC Bioenergy Network, introduced the company, a non-profit funding agency established in April 2008 with a \$25 million grant from the BC government. It is an industry-led initiative for deploying near-term bioenergy technologies and supporting research to build a bioenergy capability in BC. To date, the BC Bioenergy Network has invested in 21 capital and technology development and/or targeted capacity building projects. The delegate presented 13 reasons in support of the Lulu Island MicroSludge and Green Biomethane Project, which are outlined in item 3.2 of the June 8, 2011 Waste Management Committee agenda).

### 3.3 Gordon Skene, Paradigm Environmental Technologies, Inc

Gordon Skene, President and CEO, Paradigm Environmental Technologies Inc., provided an overview of the MicroSludge conversion process to biomethane. Members were also informed that since their last presentation to the Committee in 2010, re-design work was completed by Ausenco-Sandwell and the price of biomethane, has been increased by Fortis BC, resulting in

\$2.3 million net present value. The following funding is currently available for the project:

- The Innovative Clean Energy Fund in the amount of \$3.0 million
- UBCM fund in the amount of \$1.4 million
- Paradigm maintains \$0.6 million in-kind contribution and will cover \$1.1 million of contingencies

Members were also provided net present value and return on investment analysis and an outline of potential future regional capital cost savings resulting from MicroSludge installation.

**4. INVITED PRESENTATIONS**

No items presented.

**5. REPORTS FROM COMMITTEE OR STAFF**

**5.1 MicroSludge and Green Biomethane Project**

Report dated May 30, 2011 from Mark Ferguson, Water and Wastewater Treatment Engineering Division Manager, Engineering and Construction Department, and Jeff Carmichael, Senior Economist, Policy and Planning Department, providing the results of the pre-design and economic analysis associated with the February 2010 proposal from Paradigm Environmental Technologies Inc. (Paradigm) to upgrade biogas at Lulu Island Wastewater Treatment Plant for sale to an external party, utilizing MicroSludge technology to enhance biogas production.

1:23 p.m.

Directors Deal and Steves arrived at the meeting.

Staff was requested to investigate potential partnerships and/or revenue sharing on future sales of MicroSludge by Paradigm, given that Metro Vancouver is the biggest investor in the project.

**It was MOVED and SECONDED**

That the Board authorize the expenditure of up to \$13.1 million of capital funds for the MicroSludge and Green Biomethane Project subject to:

- a) grant funding of \$4.4 million from external agencies;
- b) in-kind contribution of \$0.6 million from Paradigm Environmental Technologies;
- c) negotiation of an appropriate "Funding Security Agreement" with Paradigm to secure their additional funding commitment;
- d) negotiation of an appropriate agreement with FortisBC for their purchase of biomethane gas, with a target price of \$13.40 per gigajoule (GJ);
- e) and that Metro Vancouver staff explore revenue sharing on future sales of MicroSludge by Paradigm.

**CARRIED**

**5.2 Status of Utilities Capital Expenditures to April 30, 2011**

Report dated May 19, 2011 from Tim Jervis, Manager, Engineering and Construction Department and Phil Trozduk, Financial Planning and Operations Division Manager, Finance and Administration Department, reporting on the status of utilities capital expenditures.

**It was MOVED and SECONDED**

That the Waste Management Committee receive the report titled *Status of Utilities Capital Expenditures to April 30, 2011*, dated May 19, 2011 for information.

**CARRIED**

**5.3 Waste-to-Energy Facility - 2010 Financial Update**

Report dated May 30, 2011 from Chris Allan, Senior Engineer, Engineering and Construction Department, providing a 2010 financial update for the Metro Vancouver Waste-to-Energy in Burnaby.

The Committee was informed that the recommendation requires Board approval.

**It was MOVED and SECONDED**

That the Board authorize the Committee Chair to forward the report dated May 30, 2011, titled "Waste-to-Energy Facility - 2010 Financial Update" to the Provincial Minister of Environment with an appropriate covering letter outlining the comparable landfilling costs in the Metro Vancouver system.

**CARRIED**

**5.4 Manager's Report**

Report dated May 19, 2011 from Toivo Allas, Manager, Policy and Planning Department, informing about addition of packaging and printed material to the Recycling Regulations, and providing an update on the Committee's 2011 priorities.

**Request of Staff**

Staff was requested to provide Committee members with the Ministry of Environment Extended Producer Responsibility schedule.

**It was MOVED and SECONDED**

That the Waste Management Committee receive for information the report dated May 19, 2011, titled "Manager's Report".

**CARRIED**

**5.5 Minister's Approval of the Integrated Liquid Waste and Resource Management Plan**

Report dated June 6, 2011 from Fred Nenninger, Project Manager, Wastewater Secondary Treatment Upgrades, and Albert van Roodselaar, Utility Planning and Environmental Management Division Manager, Policy and Planning Department, updating the Board on the Minister's letter of approval of the Integrated Liquid Waste and Resource Management Plan, informing the Board of the implications of the conditions imposed by the Minister, and

recommending distributing the letter of approval to the Councils of the Greater Vancouver Sewerage and Drainage District member municipalities.

The Commissioner briefed the Committee on the strategy concerning securing of capital infrastructure funding from senior governments.

**It was MOVED and SECONDED**

That the Board:

- 1) Receive the Staff Summary of Implications of the BC Minister of Environment's conditional approval of the Integrated Liquid Waste and Resource Management Plan.
- 2) Direct staff to forward the Staff Summary of Implications and the Minister's letter of approval dated May 30, 2011 for the Integrated Liquid Waste and Resource Management Plan to the Councils of GVS&DD member municipalities for their information and action as appropriate.

**CARRIED**

**5.6 Smarter Waste Management**

Federation of Canadian Municipalities resolution dated June 2, 2011, submitted by the City of Surrey, Metro Vancouver and FCM Big City Mayors' Caucus, concerning solid waste reduction.

**It was MOVED and SECONDED**

That the Waste Management Committee receive for information the FCM resolution dated June 2, 2011, titled "Smarter Waste Management".

**CARRIED**

**6. INFORMATION ITEMS**

No items presented.

**7. OTHER BUSINESS**

No items presented.

**8. RESOLUTION TO CLOSE MEETING**

**It was MOVED and SECONDED**

That the Waste Management Committee close its regular meeting scheduled for June 8, 2011 pursuant to the *Community Charter* provisions, Sections 90(1) (k) as follows:

- "(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:
- (k) negotiations and related discussions respecting the proposed provision of a regional district service that are at their preliminary stages and that, in the view of the board or committee, could reasonably be expected to harm the interests of the regional district if they were held in public."

**CARRIED**

**9. ADJOURNMENT**

The Waste Management Committee concluded its regular meeting of June 8, 2011 at 1:55 p.m.

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Klara Kutakova,  
Assistant to Regional Committees

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Greg Moore, Chair

# REPORTS

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Waste Management Committee Meeting Date: July 13, 2011

To: Waste Management Committee

From: Andrew Marr, Senior Engineer  
Integrated Planning Division, Policy & Planning Department

Date: June 21, 2011

Subject: **Single Family Residential Waste and Recycling - First Quarter 2011**

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*Recommendation:*

That the Waste Management Committee receive reports on municipal Single-Family Residential solid waste and recycling data on an annual basis.

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## 1. PURPOSE

To report estimated single-family residential garbage, recycling, and yard waste/food waste data for the first quarter of 2011, in response to a request by the Waste Management Committee.

## 2. CONTEXT

Solid waste originates from three sectors: Single Family Residential, Institutional, Commercial & Industrial (ICI) which includes many multi-family residences, and Demolition, Land-clearing & Construction (DLC). Each year, Metro Vancouver issues an annual summary of the prior year's total garbage and recycling data for all sectors and municipalities. That summary is issued annually because waste and recycling data is only available to Metro Vancouver on an annual basis from the ICI and DLC sectors.

Some member municipalities obtain single-family residential data on a quarterly basis, and Metro Vancouver reported on single family residential diversion (material recycled divided by the waste generated, as a percentage) by municipality in April 2011. That report was for calendar 2010, and was based solely on curbside collection. The Committee asked for further details about these diversion programs, including the incorporation of waste diversion from depots.

This report presents the estimated single family residential waste diversion for the first quarter of 2011, from each municipality, including single family recyclables dropped off at the municipal depots and at the Metro Vancouver transfer stations.

However, it is important to convey that most municipal staff (through the REAC Solid Waste Subcommittee) recommend replacing quarterly reporting of single family residential diversion with annual reporting because of the following operational challenges:

- It is not operationally possible to separately report the respective tonnages of recyclables received at depots and transfer stations that come from single-family,

multi-family, and small business users, or from different municipalities. As such, this information can only be crudely estimated.

- **Seasonal Variation:** Seasonal peaks of materials, such as yard trimmings and holiday seasons, cause each municipality's diversion rate to fluctuate significantly throughout the year.
- **Unavailable Municipal Data:** Most municipalities had not reported their first quarter 2011 data by the report preparation deadline for the July Committee meeting.

The attached table shows municipal single family diversion for Q1 2011 estimated to the degree possible, given the limited amount of reported municipal data, and the inability to isolate tonnages received from different sectors and different municipalities at recycling depots.

### **3. ALTERNATIVES**

The Committee may:

- (a) Continue quarterly reporting on municipal Single-Family Residential solid waste and recycling data;
- (b) Receive reports on municipal Single-Family Residential solid waste and recycling data on an annual basis.

Staff recommend alternative (b), which is the practice that is recommended by the solid waste staff from our member municipalities.

### **4. CONCLUSION**

This report presents the single family waste diversion by municipality to the extent possible for the first quarter of 2011. In reviewing this data, staff felt that the efficacy of the data was questionable due to: 1) incompleteness resulting from limited municipal reporting; and 2) uncertainty because the tonnages of recyclables received at depots that originated from residents vs. small business cannot be determined and most depots cannot resolve how much material may have originated from other municipalities.

The REAC Solid Waste subcommittee has asked REAC to recommend reporting this data on an annual basis – a recommendation that is supported by Metro Vancouver staff for the above stated data efficacy concerns.

### **ATTACHMENT:**

Single Family Residential Waste Diversion – First Quarter 2011

**ATTACHMENT**

**Single Family Residential Waste Diversion – First Quarter 2011**

<b>Municipalities</b>	<b>YTD Diversion / Q1 2011 (%)</b>	<b>Garbage Collection (weekly/ biweekly)</b>	<b>Organics Collection Frequency (weekly/ biweekly)</b>	<b>Food Scraps Collection</b>	<b>Recycling Collection (Single or multi-stream)</b>	<b>Municipal Recycling Depot</b>
Anmore	Not Reported	W	N/A		M	
Belcarra	Not Reported	W	N/A		M	
Bowen Island, Electoral Areas B & C	Not Reported	W	N/A		N/A	Y
Burnaby	39%	W	W	Y	M	Y
Coquitlam	51%	W	W	Y	M	Y
Delta	Not Reported	W	B		M	Y
Langley City	Not Reported	W	W		M	
Langley Township	Not Reported	W	W		M	
Lions Bay	Not Reported	W	N/A		M	
Maple Ridge	59%	N/A	N/A		N/A	Y
New Westminister	66%	W	W	Y	M	Y
North Vancouver City	Not Reported	W	W		M	
North Vancouver District	Not Reported	W	W		M	Y
Pitt Meadows	Not Reported	W	N/A		M	
Port Coquitlam	50%	W and B	W and B	Y	S	
Port Moody	67%	B	W	Y	M	
Richmond	54%	W	W	Y	M	Y
Surrey	Not Reported	W	W		S	
UBC/UEL	Not Reported	W	N/A	Y	M	Y
Vancouver	45%	W	B	Y	M	Y
West Vancouver	Not Reported	W	W		M	
White Rock	47%	W	W	Y	M	

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Waste Management Committee Meeting Date: July 13, 2011  
Intergovernmental Committee Meeting Date: July 20, 2011

To: Waste Management Committee  
Intergovernmental Committee

From: Heather Schoemaker, Department Manager, Corporate Relations  
Simon Cumming, Division Manager, External and Intergovernmental Relations,  
Corporate Relations

Date: June 29, 2011

Subject: **Future of the Region Sustainability Dialogues and Post-Dialogue Forum:  
Zero Waste Challenge – Accelerating Multi-Family Waste Diversion**

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That the Board:

- a) Request municipal recycling waste reduction coordinators to consider recommendations on solutions for multi-family space requirements as outlined in Attachment 1; and
- b) Direct staff to form a stakeholder group as identified in the dialogue and post-dialogue series, to consider actions to:
  1. Streamline the regulatory process and ensure policies and regulations at different levels are consistent; and
  2. Showcase model multi-family projects and work with stakeholders (e.g., strata associations and building managers, Condominium Homeowners Association, builders, and local governments) to develop customized education and outreach materials for this sector.

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## 1. PURPOSE

To provide information on the four regional Future of the Region Sustainability Dialogues and one Post-Dialogue Forum hosted by Metro Vancouver on the “Zero Waste Challenge - Accelerating Multi-family Waste Diversion”.

## 2. CONTEXT

The Future of the Region Sustainability Dialogues, hosted in collaboration with local Chambers of Commerce and Boards of Trade, are high-profile discussions intended to help decision makers shape the future of the region by presenting a range of views to challenge and stimulate fresh thought on regional issues.

The post-dialogue forums have the goal of bridging the gap from dialogue to action by convening a small group of dialogue participants, subject matter experts and key stakeholders to reflect on the outcomes of the dialogues and identify action areas for the consideration of the Metro Vancouver Board and other community organizations.

**Future of the Region Sustainability Dialogues and Post-Dialogue Forum: Zero Waste Challenge – Accelerating Multi-Family Waste Diversion**

Waste Management Committee Meeting Date: July 13, 2011

Intergovernmental Committee Meeting Date: July 20, 2011

Page 2 of 3

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In March and April of 2011, Metro Vancouver hosted a dialogue series on the topic of accelerating multi-family waste diversion. This dialogue series was the first in a special two-part series aimed at building on the momentum of the Zero Waste Challenge Conference of March 10, 2011 by exploring how to achieve higher diversion rates in specific sectors.

At the multi-family dialogue series participants were posed with the following scenario:

*While the Metro Vancouver region as a whole has a current waste diversion rate of 55 percent, the multi-family residential sector has a diversion rate of only 16 percent. With the majority of our growing population expected to live in multi-family households, how do we accelerate waste diversion in this sector? The multi-family residential sector faces unique challenges such as shared garbage bins, limited space for adding containers to collect recyclables or organics, and limited access for recycling collection vehicles. How do we overcome these challenges and who needs to be involved?*

Dialogues were held in Coquitlam (March 29), the North Shore (April 19), Vancouver (April 20) and Surrey (April 21). A post-dialogue forum was held on June 13, 2011. Participants in the series reflected the cross-section of stakeholders involved in multi-family waste diversion – municipal staff and elected officials, haulers and processors, architects, builders, developers, and the building/strata management industry.

Discussion shifted slightly from session to session, however, common challenges/barriers and areas for action and collaboration emerged. A detailed summary of the sessions can be found in Attachment 1 and a comprehensive transcript of each dialogue is available on the Metro Vancouver website in the Issues Summary Notes.

**Multi-family Waste Diversion Challenges and Barriers**

Multi-family waste diversion was chosen in part as a dialogue topic because the challenges and barriers to increasing diversion are quite unique to this sector. This dialogue series helped develop a better understanding of what these specific challenges are. Some of the key challenges raised by participants and panellists were:

- Anonymity and lack of accountability.
- Low participation and cross-contamination.
- Lack of convenience and accessibility.
- Inconsistent regulatory environment and requirements across municipalities.
- Inadequate and unpleasant spaces for recycling (e.g., lack of space and bins, no floor drains or ventilation, and poor lighting).
- High carrying costs for strata owners, building owners and renters.
- High turnover rates in some rental and strata buildings.

**Areas for Action and Collaboration**

Three key areas for collective action and collaboration emerged as priorities:

1. Bringing key stakeholder groups together to communicate directly and develop strategies (in particular, design/construction/legislative and regulatory bodies);
2. Streamlining the regulatory process and ensuring policies and regulations at different levels are consistent; and
3. Showcasing model multi-family projects and working with stakeholders (e.g., strata associations and building managers, Condominium Homeowners Association, builders, and local governments) to develop customized education and outreach materials for this sector.

Participants emphasized the need for different stakeholders to work together, but also indicated that Metro Vancouver was well positioned to continue to play the role of convener - bringing together different stakeholders, coordinating efforts and facilitating the flow of information.

### **3. ALTERNATIVES**

The Board may:

- a) Request municipal recycling waste reduction coordinators to consider recommendations on solutions for multi-family space requirements as outlined in Attachment 1; and
  - b) Direct staff to form a stakeholder group as identified in the dialogue and post-dialogue series, to consider actions to:
    1. Streamline the regulatory process and ensure policies and regulations at different levels are consistent; and
    2. Showcase model multi-family projects and work with stakeholders (e.g., strata associations and building managers, Condominium Homeowners Association, builders, and local governments) to develop customized education and outreach materials for this sector.
- OR
- b) Receive this report for information and take no further action.

### **4. CONCLUSION**

The dialogues and post-dialogue forum on accelerating multi-family waste diversion successfully built relationships with multi-family stakeholders and generated ideas for action to address challenges unique to this sector. Participants felt strongly that continuing to engage key stakeholders as identified in the dialogues and post-dialogue forum would greatly assist in developing tailored approaches and solutions for waste diversion in this sector.

#### **ATTACHMENT:**

1. Future of the Region Sustainability Dialogues – Summary of Dialogues and Post-Dialogue Forum (5273749)

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## Metro Vancouver Future of the Region Sustainability Dialogues

### Zero Waste Challenge: Accelerating Multi-Family Waste Diversion

#### SUMMARY OF DIALOGUES and POST-DIALOGUE FORUM

Metro Vancouver hosted four dialogues and one post-dialogue forum on the topic of accelerating multi-family waste diversion. Dialogues were held in Coquitlam (Mar 29), the North Shore (Apr 19), Vancouver (Apr 20), and Surrey (Apr 21). A post-dialogue forum was held on June 13, 2011 at Metro Vancouver's Head Office.

#### Panellists

##### All Dialogues

- *Ken Carrusca*, Division Manager, Integrated Planning Division, Metro Vancouver
- *Marg Gordon*, Chief Executive Officer, BC Apartment Owners and Managers Association
- *Tony Gioventu*, Executive Director, Condominium Home Owners' Association, (CHOA)

##### Coquitlam

- *John Dundee*, Manager, Common Services, City of Port Coquitlam
- *Brigitte Pronovost*, Supervisor, Solid Waste & Common Services, City of Port Moody

##### North Vancouver

- *Allen Lynch*, Manager, North Shore Recycling Program
- *Brian Burke*, Recycling Pilot Program Coordinator, Quayside Village Cohousing

##### Vancouver

- *Peter Judd*, General Manager of Engineering Services, City of Vancouver
- *Robin Petri*, Director, Land Development, Parklane Homes
- *Ralph Wells*, Sustainability Manager, University Neighbourhoods Association
- *Michael Geller*, President, The Geller Group; Adjunct Professor, SFU Centre for Sustainable Community Development

##### Surrey

- *Robert Costanzo*, Deputy Manager, Operations Engineering Department, City of Surrey
- *Deana Grinnell*, Director, Land Development, Parklane Homes

Location	Opening and Closing Remarks	Participants
Coquitlam Dialogue	Director Ernie Daykin, District of Maple Ridge Director Don MacLean, City of Pitt Meadows	<b>40</b>
North Shore Dialogue	Director Darrell Mussatto, City of North Vancouver	<b>43</b>
Vancouver Dialogue	Director Heather Deal, City of Vancouver	<b>83</b>
Surrey Dialogue	Director, Judy Villeneuve, City of Surrey	<b>31</b>
Post-Dialogue Forum	Director Darrell Mussatto, City of North Vancouver	<b>13</b>



The following is a sample of challenges and barriers and possible areas for action and collaboration suggested by panellists and participants. A comprehensive transcript of each dialogue is available on the Metro Vancouver website in the Issues Summary Notes.

## **Challenges and Barriers**

- Anonymity and lack of accountability
- Low participation
- Cross-contamination
- Lack of convenience and accessibility
- Inconsistent regulatory environment and requirements across municipalities
- Inadequate and unpleasant spaces for recycling (e.g., lack of space bins, no floor drains or ventilation, and poor lighting)
- High carrying costs for strata owners, building owners and renters
- High turnover rates in some rental and strata buildings

### *Additional comments from the post-dialogue forum:*

- Inconsistent standards from building to building and product-to-product.
- Building code regulations that restrict placement of waste diversion infrastructure.
- Provincial regulatory environment that may be indirectly limiting multi-family waste diversion (e.g., Rental Tenancy Act, Condominium Act).
- Lack of economic incentives.
- Lack of end-of-stream education (i.e., addressing “cradle-to-grave” lifecycle).
- Lack of customized solutions and outreach programs for the multi-family sector.
- Lack of “city-scale” best practices (i.e., other city/region case studies) and local multi-family recycling successes.

## **Areas for Action and Collaboration**

### **1. Information, Education and Outreach**

- 1.1. Showcase model multi-family projects with successful recycling initiatives and develop targeted education materials and training for strata managers and building owners.
- 1.2. Identify and support recycling champions within buildings.
- 1.3. Consider a competition or awards program to reward buildings with high diversion rates.
- 1.4. Work with strata councils to develop sample community statements, covenants and bylaws that set recycling goals, and assist councils in contracting waste management services supportive of expanded recycling and diversion.

### *Additional comments from post-dialogue forum:*

- Customize outreach programs for the multi-family sector recognizing that additional staffing may be needed to implement a tailored approach.
- Identify dedicated point of contacts for recycling in buildings.
- Differentiate for-profit and not-for-profit sectors – different needs, different clients.
- Include architects and builders in education and outreach.
- Clearly identify and promote incentives.
- Determine whether source separation or combined collection is the best method and tailor education programs accordingly.
- Include end-of-stream education to show end result and new recycled products.

## **2. Space, Access and Provision of Bins – Existing Buildings**

- 2.1. Work with building managers to retrofit garbage and recycling facilities with the goal of making spaces more functional, inviting, and visible.
- 2.2. Expand the number of recycling bins in multi-family buildings and reduce the number of garbage bins.
- 2.3. Facilitate recycling space retrofits as older strata and rental buildings consider larger renovation and upgrade projects.
- 2.4. Work with municipal staff, haulers and others to develop tailored solutions for individual buildings with different access and space requirements.  
E.g., consider communal neighbourhood collection points or on-site composting where appropriate or small truck pick-up where lane access is an issue etc.

### Additional comments from post-dialogue forum:

- Exercise caution when developing solutions – there are many costs involved that need to be considered (e.g., with respect to infrastructure/maintenance).
- Retrofitting can be expensive and there are regulatory/fire safety issues.
- Look at waste as a revenue source and provide incentives for accelerating diversion.

## **3. Space, Access and Provision of Bins - New Build Considerations**

- 3.1. Design larger communal recycling spaces as well as mixed-use areas that facilitate waste reduction through share, repair and reuse.
- 3.2. Design living spaces in units with recycling in mind (e.g., kitchen design that incorporates space for recycling/composting, garbage/recycling chutes and/or recycling/reuse space in common areas on each floor).
- 3.3. Consider opportunities for on-site composting and the use of waste in energy capture during the development of new master-planned communities.

### Additional comments from post-dialogue forum:

- Bring design/construction/legislative/regulatory sectors together to communicate directly and develop strategies.
- Consider implications of infrastructure to accommodate enhanced waste diversion (i.e., wider roadways and laneways for access may conflict with strategies to increase densification).
- Develop alternate business models that provide incentives to small businesses for waste and recycling solutions targeting the multi-family sector.
- Look to technology for solutions to waste management (e.g., Hong Kong's pressurized chute tubes and centralized collection amongst groups of high-rises.)

## **4. Regulation and Policy**

- 4.1. Focus on stream reduction by regulating diversion rates for specific streams and developing targeted recycling programs for streams with large volumes or that are not permitted in on-site recycling (e.g., polystyrene and electronics).
- 4.2. Mandate organics collection in multi-family buildings and adjust prices for landfill disposal so that diversion becomes the lower cost option and drives innovative solutions.
- 4.3. Develop consistent bylaws across municipalities to mandate adequate recycling space and expand enforcement to ensure compliance with municipal regulations and bylaws.
- 4.4. Consider incentives that will increase diversion, possibly targeting:

- 4.4.1. **Packaging** (e.g., provide an economic incentive upon return of TVs, small appliances and electronics, or expand advance disposal fees on large items with considerable packaging);
- 4.4.2. **Developers** (e.g., exclude waste management spaces from the FSR ratio to encourage developers to build recycling facilities that are accessible, easy to use and inviting); and
- 4.4.3. **Building Managers** (e.g., provide an economic incentive to building managers for each tote filled with recyclables).

Additional comments from post-dialogue forum:

- Streamline regulations and ensure policy and regulation are consistent.
- Use carrots before sticks; look at system holistically.
- Regulation needs to be imposed at the right level.
- All industry stakeholders need to be actively involved (private and public sectors; municipal, provincial and federal governments).



Waste Management Committee Meeting Date: July 13, 2011  
Intergovernmental Committee Meeting Date: July 20, 2011

To: Waste Management Committee  
Intergovernmental Committee

From: Heather Schoemaker, Department Manager, Corporate Relations  
Simon Cumming, Division Manager, External and Intergovernmental Relations,  
Corporate Relations

Date: June 29, 2011

Subject: **Future of the Region Sustainability Dialogues and Post-Dialogue Forum:  
Zero Waste Challenge – Accelerating Construction and Demolition Waste  
Diversion**

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That the Board:

- a) Request municipal recycling waste reduction coordinators to consider recommendations on solutions for accelerating construction and demolition waste diversion outlined in Attachment 1; and
  - b) Direct staff to form a stakeholder group as identified in the dialogue and post-dialogue series to consider actions to:
    1. Encourage Market Shifts through the creation of a one-stop online inventory of materials to help connect buyers to sellers.
    2. Develop strategies and actions to enhance and streamline bylaws, zoning and building codes to better allow for alternative building designs.
    3. Expand education and outreach to offer training at the site level and develop public information materials and focused communication strategies that target broad audiences and are consistent and integrated with collection systems.
- 

## **1. PURPOSE**

To provide information on the four regional Future of the Region Sustainability Dialogues and one Post-Dialogue Forum hosted by Metro Vancouver on the “Zero Waste Challenge - Accelerating Construction and Demolition Waste Diversion”.

## **2. CONTEXT**

The Future of the Region Sustainability Dialogues, which are hosted in collaboration with local Chambers of Commerce and Boards of Trade, are high-profile discussions intended to help decision makers shape the future of the region by presenting a range of views to challenge and stimulate fresh thought on regional issues.

The post-dialogue forums seek to bridge the gap from dialogue to action by convening a small group of dialogue participants, subject matter experts and key stakeholders to reflect

on the outcomes of the dialogues and identify potential action areas for the consideration of the Metro Vancouver Board and other community organizations.

In April/May of 2011, Metro Vancouver hosted a dialogue series on the topic of construction and demolition waste diversion. These dialogues were the second in a special two-part series aimed at building on the momentum of Metro Vancouver's March 20, 2011 Zero Waste Challenge Conference by exploring how to achieve higher diversion rates in specific sectors.

At the construction and demolition dialogue series participants were presented with the following scenario:

*Construction, renovation and demolition activities are the source of 1.3 million tonnes of waste materials generated in Metro Vancouver each year. What impact will compulsory waste reduction and recycling on construction and demolition sites and the banning of wood waste from disposal have on industry practices? What does this imperative for change mean for the industry, for local governments and for those contemplating a construction or renovation project in the future? What innovative solutions will increase waste diversion in this sector while also generating positive economic and social benefits for our region?*

Dialogues were held in the North Shore (Apr 26), Vancouver (Apr 28), Coquitlam (May 17) and Surrey (May 31). A post-dialogue forum was held on June 28, 2011. Participants in the series reflected the cross-section of stakeholders involved in the construction and demolition sectors including both small and large businesses, local governments (municipal staff and elected officials), Worksafe BC and non-profit organizations.

Discussions shifted slightly from session to session, however, common challenges/barriers and areas for action and collaboration emerged. A detailed summary of the sessions can be found in Attachment 1 and a comprehensive transcript of each dialogue is available on the Metro Vancouver website in the Issues Summary Notes.

### **Construction and Demolition Waste Diversion Challenges and Barriers**

The dialogues and post-dialogue forum helped develop a better understanding of what challenges are unique to the construction and demolition waste sector. Some of the key challenges raised by participants and panellists were:

- Underground construction and demolition economy that avoids oversight and scrutiny by appropriate authorities.
- Lack of proper facilities for processing and storage.
- Lack of appropriate regulation, and inconsistent regulation across municipalities.
- Lack of monitoring of waste disposal practices.
- Limited availability of and access to recycling depots.
- Contamination of collected recyclables.
- Use of non-recyclable materials in buildings.
- Market values where new is cheaper than salvage.
- Environmental impact of salvage/deconstruction (e.g., increased GHG's).

### **Areas for Action and Collaboration**

The dialogues and post-dialogue forum generated numerous ideas for action and collaboration with respect to enhancing industry practices and addressing the underground economy that enables some industry players to avoid appropriate waste disposal scrutiny. Some suggestions reinforced actions outlined in Goals 1 and 2 of Metro Vancouver's Solid Waste Management Plan and new suggestions specific to the construction and demolition sector were also identified.

**Policy, Regulation and Incentives:** Many participants and panellists underscored the need to use policy, regulation and incentives to address the underground economy that is associated with demolition and waste diversion. While some participants thought that expanded enforcement and regulation was the preferred way to change industry practices, others cautioned that additional regulation would continue to drive and grow the underground economy.

Possible options considered included licensing haulers and facilities to better monitor waste disposal practices, and using incentives to encourage the diversion of waste to authorized, licensed processing facilities. The need to possibly penalize uninsured contractors to reduce inappropriate waste disposal was also flagged as an issue/opportunity.

**Encourage Market Shifts:** Suggestions focused around ways to create a market for used materials so that materials on demolition sites are viewed as assets instead of liabilities. The creation of a one-stop online inventory of materials to help connect buyers to sellers was suggested as a way to increase the amount of deconstruction materials being reused, as was a grading system for used lumber that would facilitate expanded reuse of salvaged materials.

**Infrastructure and Technology Requirements:** In this category, the need for an online hub was again mentioned as a tool that could address a significant gap in information and facilitate a culture shift. Expanding pick-up capacity for consumers and ensuring that public education materials are consistent and integrated with collection systems was also identified as an opportunity, as was the need to develop reuse capacity for specific products (e.g., carpets).

**Building Design and Practices:** The need for enhanced and streamlined bylaws, zoning and building codes to better allow for alternative building designs, the application of LEED practices, and the use of less resource intensive materials to facilitate more efficient buildings and accommodate expanded recycling and re-use was a reoccurring theme throughout the sessions.

**Education:** Expanding education and outreach to offer training at the site level and developing information materials in different languages were two strategies identified for moving forward. Similarly, participants emphasized the value in developing focused communication strategies that targeted broad audiences (e.g., using Shaw TV to demonstrate residential recovery and recycling practices and how these initiatives can save the consumer money).

### **3. ALTERNATIVES**

The Board:

- a) Request municipal recycling waste reduction coordinators to consider recommendations on solutions for accelerating construction and demolition waste diversion outlined in Attachment 1; and
  - b) Direct staff, in consultation with key stakeholders as identified in the dialogue and post-dialogue series on construction and demolition, to consider actions to:
    1. Encourage Market Shifts through the creation of a one-stop online inventory of materials to help connect buyers to sellers.
    2. Develop strategies and actions to enhance and streamline bylaws, zoning and building codes to better allow for alternative building designs.
    3. Expand education and outreach to offer training at the site level and develop public information materials and focused communication strategies that target broad audiences and are consistent and integrated with collection systems.
- OR
- c) Receive this report for information and take no further action.

### **4. CONCLUSION**

The dialogues and post-dialogue forum on accelerating construction and demolition waste diversion successfully built relationships with key stakeholders and generated ideas for actions to address challenges unique to this sector. Participants felt strongly that continuing to engage key stakeholders as identified in the dialogues and post-dialogue forum would greatly assist in developing tailored approaches and solutions for waste diversion in this sector.

### **ATTACHMENT**

1. Future of the Region Sustainability Dialogues – Summary of Dialogues and Post-Dialogue Forum

**Metro Vancouver**  
**Future of the Region Sustainability Dialogues**  
**Zero Waste Challenge: Accelerating Construction and Demolition**  
**Waste Diversion**

**SUMMARY OF DIALOGUES and POST-DIALOGUE FORUM**

Metro Vancouver hosted four dialogues on the topic of accelerating construction and demolition waste diversion. Dialogues were held on the North Shore (Apr 26), Vancouver (Apr 28), Coquitlam (May 17), and Surrey (May 31). A post-dialogue forum was held on June 28, 2011 at Metro Vancouver Head Office.

**Panellists**

All Dialogues

- *Peter Simpson*, President and CEO, Greater Vancouver Home Builders' Association
- *Richard Babcock*, General Manager and Vice President of Business Development, Harvest Power Canada Ltd.

North Vancouver

- *Dennis Ranahan*, Division Manager, Solid Waste Planning and Business Modelling, Metro Vancouver
- *Susan Hildebrand*, Construction Manager and Director of Sustainability, Scott Construction
- *John Friswell*, Owner, CCI Renovations

Vancouver

- *Dennis Ranahan*, Division Manager, Solid Waste Planning and Business Modelling, Metro Vancouver
- *Susan Hildebrand*, Construction Manager and Director of Sustainability, SCOTT Construction
- *Pat Ryan*, Assistant Director, Building - Development Services, Deputy Chief Building Official, City of Vancouver
- *Diane Switzer*, Executive Director, Vancouver Heritage Foundation

Coquitlam

- *Dennis Ranahan*, Division Manager, Solid Waste Planning and Business Modelling, Metro Vancouver
- *Susan Hildebrand*, Construction Manager/Director of Sustainability, SCOTT Construction
- *Corinne Fulton*, General Manager, 3R Demolition
- *Robyn MacLeod*, Senior Building Official, City of Port Moody

Surrey

- *Ken Carrusca*, Division Manager, Integrated Planning Division, Metro Vancouver
- *Corinne Fulton*, General Manager, 3R Demolition

<b>Location</b>	<b>Opening/Closing Remarks</b>	<b>Participants</b>
North Shore Dialogue	Director Richard Walton, District of North Vancouver	<b>22</b>
Vancouver Dialogue	Director Geoff Meggs, City of Vancouver	<b>60</b>
Coquitlam Dialogue	Director Joe Trasolini, City of Port Moody	<b>34</b>
Surrey Dialogue	Mayor Rick Green, Township of Langley	<b>32</b>
Post-Dialogue Forum	Director Wayne Wright, City of New Westminster Director Sav Dhaliwal, City of Burnaby	<b>20</b>



The following is a sample of challenges and barriers and areas for action and collaboration suggested by dialogue panellists and participants. A comprehensive transcript of each dialogue is available on the Metro Vancouver website in the Issues Summary Notes.

### **Challenges and Barriers**

- Lack of facilities for processing and storage.
- Lack of appropriate regulation, and inconsistent regulation across municipalities.
- Lack of monitoring of waste disposal practices.
- Underground construction and demolition economy that avoids waste disposal scrutiny.
- Limited availability and access to recycling depots.
- Contamination of collected recyclables.
- Use of non-recyclable materials in buildings.
- Market values where new is cheaper than salvage.
- Environmental impact of salvage/breakdown (e.g., GHG's).

### **Areas for Action and Collaboration**

#### **1. Policy, Regulation and Incentives**

- 1.1 License haulers and facilities to better facilitate monitoring of waste disposal practices.
- 1.2 Consider incentives such as faster permit approvals and property tax rebates that would increase people's willingness to apply for building permits, and that encourage permit (construction and/or renovation) applicants to send their waste to authorized, licensed processing facilities.
  - 1.2.1 Work with other levels of government to approve a permanent tax rebate on home renovation, improvement and repair to help drive the underground construction and demolition economy above ground, and make it easier to monitor.
- 1.3 Initiate third party enforcement of landfill bans.
- 1.4 Develop policies and regulation that support the use of waste as a fuel source/ the use of residual waste as an energy recovery strategy (possibly also accounting for carbon costs).
- 1.5 Work with CRA and WorkSafe BC to find and penalize uninsured contractors to reduce inappropriate waste disposal.
- 1.6 Use the disposal fee structure to reward recycling.

#### **Additional comments from post-dialogue forum:**

- Incentives are important – front end recycling fees to properly fund programs.
- Licensing of facilities needs to happen at the regional level.
- Industry-led programs (e.g., product care) should be supported as a business model.
- Tax receipts should be provided for donated materials.
- Consideration should be given the role of PR/education campaigns.
- Deconstruction needs to be made more profitable where regarding happens higher up the supply chain to allow for broader uses.
- Strengthen regulations for deconstruction/construction industry (and link the two).

## **2. Encourage market shifts**

- 2.1 Create a market for used materials so that materials in demolition sites are viewed as assets instead of liabilities.
- 2.2 Implement programs such as salvage sales, and site tours that demonstrate the use of recycled materials to support market changes.
- 2.3 Provide tax credits for businesses, including those in the manufacturing and production sectors to use waste materials as feedstock (e.g., London Remade project, London, UK)
- 2.4 Reduce the cost of building assessments to avoid driving construction and demolition practices – and waste disposal – underground.

### *Additional comments from post-dialogue forum:*

- Instill “secondary values” to encourage first use of recycled product and build consumer support.
- Use common messaging.
- City, province and Metro Vancouver need to educate the public.
- An online inventory of materials (i.e., an information management directory system) would connect buyers and sellers.

## **3. Infrastructure and Technology Requirements**

- 3.1 Create clearing houses, exchanges and storage facilities accompanied by online inventories for recycled building materials, which people can use to purchase materials.
- 3.2 Make drop-off depots more available and easier to access
- 3.3 Set up authorized processing facilities.
- 3.4 Provide funding for new technology (research, development, and application) that addresses materials which are currently unrecyclable, e.g. compound and hazardous materials.

### *Additional comments from post-dialogue forum:*

- Integrate collection systems and public education.
- Expand pick-up capacity for consumer sector.
- Develop capacity in specific areas (e.g., carpet).
- Implement cost effective cradle-to-cradle technology.
- Develop detailed, user-friendly database that is government hosted.

## **4. Building Design and Practices**

- 4.1 Consider alternative building designs, the application of LEED practices, and the use of less resource intensive materials to build more efficiently, with longer-lasting equipment. By-law, zoning, and building code regulation support is required.
- 4.2 Modify the existing building code to better accommodate reduce and re-use.

## **5. Education**

- 5.1 Expand the target audiences for education and outreach strategies.
  - 5.1.1 Offer education at the site level for both contractors and residents, for both construction and demolition waste.
  - 5.1.2 Incorporate different languages and cultural needs into strategies.

- 5.2 Increase education and promotion on why the permit process exists and the importance to consumers
- 5.3 Provide more funding for education initiatives, e.g. Light House.
- 5.4 Focus communication strategies, e.g. TV showcase programs, on demonstrating residential recovery and recycling practices, and how these can save homeowners money.

*Additional comments from post-dialogue forum:*

- Shift broad public perception and values.
- Reinforce positive messaging, but also increase peer pressure (e.g., context messages regarding environmental, community impact).



Waste Management Committee Meeting Date: July 13, 2011

To: Waste Management Committee  
From: Mike Stringer, Senior Engineer, Policy & Planning Department  
Date: June 22, 2011  
Subject: **Amendment – Fraser Sewerage Area Boundary – 5900 Block 272 Street, Township of Langley**

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*Recommendation:*

That the Board approve the expansion of the Fraser Sewerage Area to include the properties described as Sec 8, TWP 14, NWD Parcel 1 RP15620, Suburban Block A (RP5080), Part SW1/4, except Plan 85898 (Road) and Sec 8, TWP 14, NWD Parcel A (RP5080), Part SW1/4, except Plan PCL1-RP 15620, Part in LMP 51701 in the Township of Langley as shown on plan SA-2376, Sheet 66 and described in the report titled “Amendment – Fraser Sewerage Area Boundary – 5900 block 272 Street, Township of Langley”.

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## 1. PURPOSE

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

## 2. CONTEXT

Sewerage 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 Township of Langley is considering an application to develop the northern part of Gloucester Industrial Estates for industrial use and has requested an expansion to the Fraser Sewerage Area.

The following summarizes the considerations for this boundary expansion:

- The request to expand the FSA was authorized by Township of Langley Council on June 13, 2011.
- There will be no financial impact on the GVS&DD.
- There will be no significant impact to the service levels provided by the GVS&DD system.
- The subject site is located within the Livable Region Strategic Plan Urban area, abutting, with road separation, the LRSP Green Zone and the ALR. The proposed Regional Growth Strategy includes this site within the Urban Containment Boundary and includes this site within the Industrial Land Use Designation.
- This small site is the only remaining portion of the Township of Langley’s Gloucester Industrial area that is not currently included in the Fraser Sewage Area. Sewer

- services are required to support the land use intended both by Township of Langley and Metro Vancouver plans.
- Extending the Fraser Sewerage Area boundary to include the subject site would not be inconsistent with either the LRSP or with the proposed Regional Growth Strategy.

### **3. ALTERNATIVES**

The Board may:

- a) approve the expansion of the Fraser Sewerage Area to include the properties described as Sec 8, TWP 14, NWD Parcel 1 RP15620, Suburban Block A (RP5080), Part SW1/4, except Plan 85898 (Road) and Sec 8, TWP 14, NWD Parcel A (RP5080), Part SW1/4, except Plan PCL1-RP 15620, Part in LMP 51701 in the Township of Langley as shown on plan SA-2376, Sheet 66 and described in the report titled “Amendment – Fraser Sewerage Area Boundary – 5900 block 272 Street, Township of Langley”.

The parcels are designated for industrial use in the Gloucester Community Plan. Amending the FSA to include the subject parcels will enable the Township to zone the parcels in accordance with the approved Gloucester Community Plan.

or

- b) Reject the expansion of the Fraser Sewerage Area to include the properties described as Sec 8, TWP 14, NWD Parcel 1 RP15620, Suburban Block A (RP5080), Part SW1/4, except Plan 85898 (Road) and Sec 8, TWP 14, NWD Parcel A (RP5080), Part SW1/4, except Plan PCL1-RP 15620, Part in LMP 51701 in the Township of Langley as shown on plan SA-2376, Sheet 66 and described in the report titled “Amendment – Fraser Sewerage Area Boundary – 5900 block 272 Street, Township of Langley”.

There are no reasons to reject the request for FSA boundary expansion.

### **4. CONCLUSION**

Staff recommends alternative a) above - that the application for FSA expansion be approved.

#### **ATTACHMENT:**

Drawing No. SA-2376, Sheet 66



Waste Management Committee Meeting Date: July 13, 2011

To: Waste Management Committee

From: Theresa Gregonia, Superintendent of WWTP Laboratories,  
Operations & Maintenance Department

Stan Bertold, Superintendent of Environmental Monitoring,  
Operations & Maintenance Department

Date: June 1, 2011

Subject: **2010 Quality Control Annual Report for GVS&DD**

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*Recommendation:*

That the GVS&DD Board receive for information the report titled “2010 Quality Control Annual Report for GVS&DD”.

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## **1. PURPOSE**

To provide the GVS&DD Board with a summary of the 2010 Quality Control Annual Report for the Greater Vancouver Sewerage and Drainage District (GVS&DD).

## **2. CONTEXT**

The attached Executive Summary of the 2010 Quality Control Annual Report summarizes the regulatory and process monitoring information gathered through the various monitoring programs that are in place for the GVS&DD, including those for: influent, effluent and process streams; effluent toxicity testing; biosolids quality as required by the Organic Matter Recycling Regulation (OMRR); and the receiving environment to meet the District’s commitments under the Liquid Waste Management Plan. The Annual Report will be made available on Metro Vancouver’s web site and through the Harry Lash Library.

Major conclusions and observations from the 2010 report respecting wastewater treatment system performance and reliability as well as biosolids and environmental quality monitoring are as follows:

- The GVS&DD wastewater treatment facilities treated over 449 billion litres of wastewater in 2010. The quantities of suspended solids and biochemical oxygen demand (BOD) removed were respectively about 50,750 tonnes and 48,477 tonnes.
- The overall performance of the GVS&DD’s five wastewater treatment plants (WWTPs) generally met Operational Certificate requirements. A review of the effluent monitoring program results showed that over 99.8% of requirements listed in the operational certificates were met. Exceptions are discussed in the next paragraph.

- In 2010, the WWTPs complied with Operational Certificate requirements with 15 exceptions that can be grouped into two types:
  - Type 1 exceptions (4 cases) were the result of the maximum daily discharge loadings for suspended solids exceeding the permitted load limits. Type 1 exceptions have no significant environmental impacts. This type of exception resulted from extremely high flows through the plants for four separate occasions in total.
  - Type 2 exceptions (11 cases) were the result of treatment equipment failures, power interruption and/or operational failures. Two of these cases dealt with the disinfection process, and the remainder involved bypasses of part or all of the treatment process.
- The weekly composite samples for determination of metal concentrations and fecal coliform counts in biosolids were generally well below the regulatory limits outlined in the OMRR. There was one incident in June when fecal coliform results at Annacis were higher than the Class-A limit. A review of plant operation and subsequent sampling confirmed that the samples were anomalous and, therefore, were not indicative of biosolids quality.
- All WWTP discharges were within the federal guideline which requires that the concentration of ammonia in the effluent should not be acutely toxic, as defined under the Canadian Environmental Protection Act. As well, there is no evidence of chronic toxicity potential from ammonia in the receiving environment due to the WWTP discharges.
- All effluent samples from all wastewater treatment plants passed the required monthly acute toxicity test using Environment Canada test protocols except for four samples of Iona effluent. These samples required oxygen in excess of that specified by the Environment Canada method.
- As in the previous two years, there were no occurrences of effluent acute toxicity related to surfactants (constituents of detergents and cleansing agents) at the Lions Gate Plant. This would suggest that the public education campaign to encourage North Shore residents to use less detergent has been effective in reducing the level of surfactants entering the Plant, and detergent and cleansing formulations are becoming more environmentally friendly.
- The bacteriological quality for primary-contact recreation was met for all bathing beaches during the bathing beach season from May through September. For non-bathing beach areas, the monitoring data indicated that False Creek easily met the working guideline limit for secondary or incidental contact activities. Gary Point, also a non-swimming area, did exceed the limit for primary-contact recreation at the end of the season but at that point in time easily met the secondary-contact guideline.

In the few situations where it was necessary to conduct extra sampling and testing of recreational waters, Metro Vancouver collaborated with the Health Authority and the municipality concerned to locate the cause. For example, East False Creek had several occasions with high individual fecal coliform counts, and these incidents were traced to a builder having a cross connection of a sanitary sewer to a storm outfall. The City of Vancouver identified the cross connection and promptly corrected the situation.

- No exceedances of water quality objectives were attributable to Metro Vancouver wastewater treatment plants.

- Monitoring of the marine receiving environment around the two primary wastewater treatment plant outfalls indicated some small and subtle changes. Further monitoring of the two areas will provide additional information to help determine their significance and if they are outfall related, are due to regional long-term fluctuations in oceanographic conditions, and are due to a combination of these or other factors.

### **3. ALTERNATIVES**

N/A

### **4. CONCLUSION**

The wastewater treatment plants are providing ongoing benefits through the reduction of contaminant loadings to the receiving environment, and are operating with no adverse affects on the environment. Biosolids produced by the WWTPs are being managed in compliance with the Organic Matter Recycling Regulation and the Environmental Management Act.

#### **ATTACHMENTS:**

1. Executive Summary of the 2010 Quality Control Annual Report for Greater Vancouver Sewerage and Drainage District (Orbit no. 5219409)
2. WWTP 2010 Operating Exceedance Summary (Orbit no. 5228240)

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## EXECUTIVE SUMMARY – 2010 Quality Control Annual Report for GVS&DD

The Greater Vancouver Sewerage and Drainage District (GVS&DD) operates five wastewater treatment plants (WWTPs) in the region. Three of the five plants provide full secondary treatment (Annacis Island, Lulu Island and Northwest Langley) and discharge into the lower Fraser River. The remaining two wastewater treatment plants (Iona Island and Lions Gate) discharge to Georgia Strait and First Narrows respectively and provide primary treatment only.

Under the provisions of the Waste Management Act, the B.C. Ministry of the Environment issued operational certificates to the GVS&DD in 2004. These certificates allow the District to operate each of its wastewater treatment plants and to discharge treated effluent to the receiving waters. The District's objective is to maintain ongoing compliance with the operational certificates including compliance with sewage quality parameters and by doing so continue to protect the receiving environment.

Metro Vancouver is committed to the principle of managing liquid waste in a manner that enhances environmental quality. This commitment is outlined in Metro Vancouver's Liquid Waste Management Plan (LWMP). The LWMP process is mandated by the Province of British Columbia and designed to ensure an integrated and local approach to informed liquid waste management decisions is followed.

The purpose of this report is to document the performance of the WWTPs during the previous year in regards to effluent quality and in meeting the regulatory requirements as specified by the Ministry of Environment. Most of the laboratory analytical services and data analyses upon which this report is based were provided by the Quality Control Division of the Operations and Maintenance Department. Other programs and projects discussed in this report are in support of ongoing commitments under the LWMP.

Outlined below is an overview of the information collected as a result of Quality Control's monitoring programs for the wastewater treatment plants, including monitoring for effluent toxicity, biosolids, and receiving environment quality.

### Wastewater Treatment Plants

#### Operational Certificates

The Operational Certificates (OCs) issued April 23, 2004 by the Ministry of Environment under the provisions of the Waste Management Act include daily compliance levels for flow and daily loadings for BOD (Biochemical Oxygen Demand) or cBOD (carbonaceous Biochemical Oxygen Demand, where applicable) and suspended solids. The loadings parameters listed as "maximum daily loadings" are used to calculate the annual waste discharge fees as required by the Waste Management Waste Permit Fee regulation and are based on a calendar year.

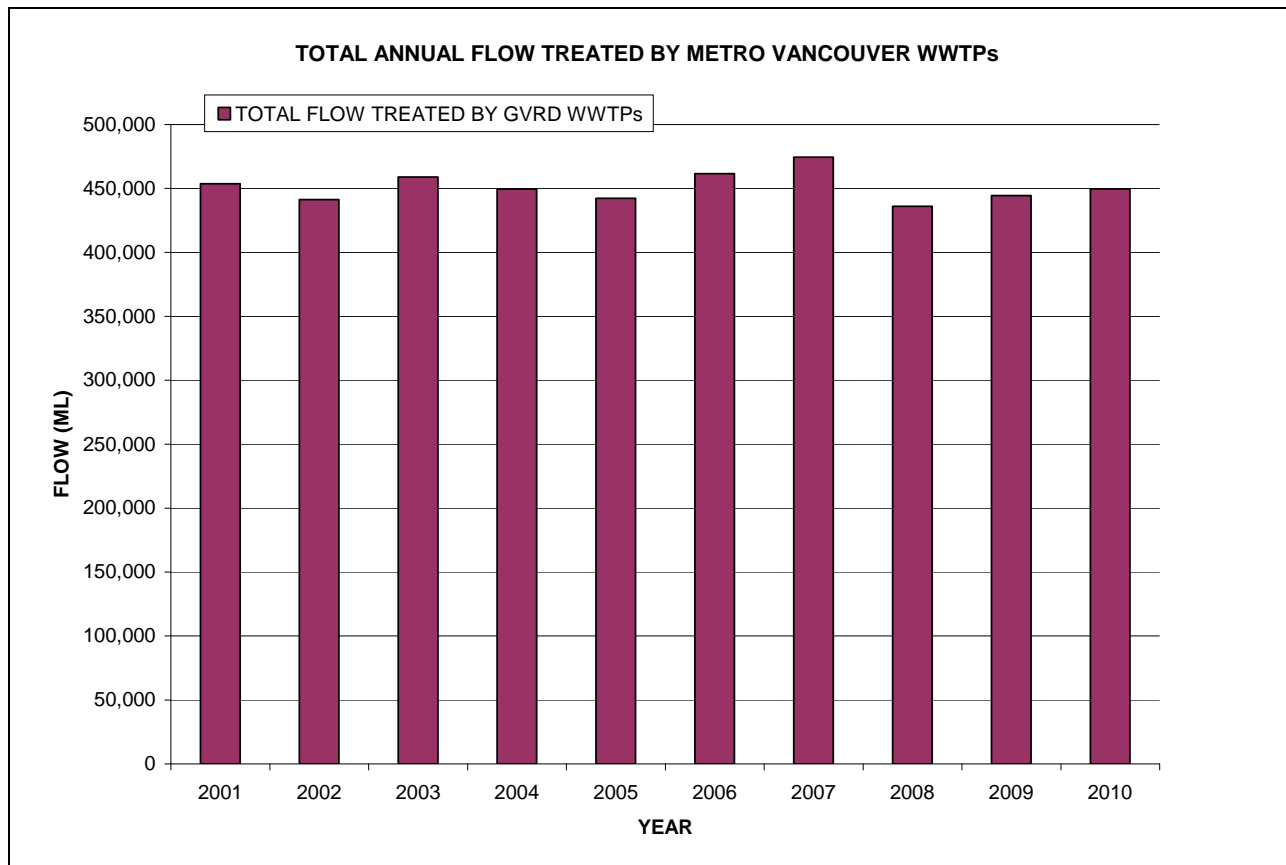
Additional requirements were listed for disinfection of the effluent at all WWTPs (except Iona Island) so that fecal coliform water quality objectives are not exceeded at the edge of the initial dilution zone as described in the Municipal Sewage Regulation. Where chlorine is used, it must be removed from the effluent before discharge to the receiving water.

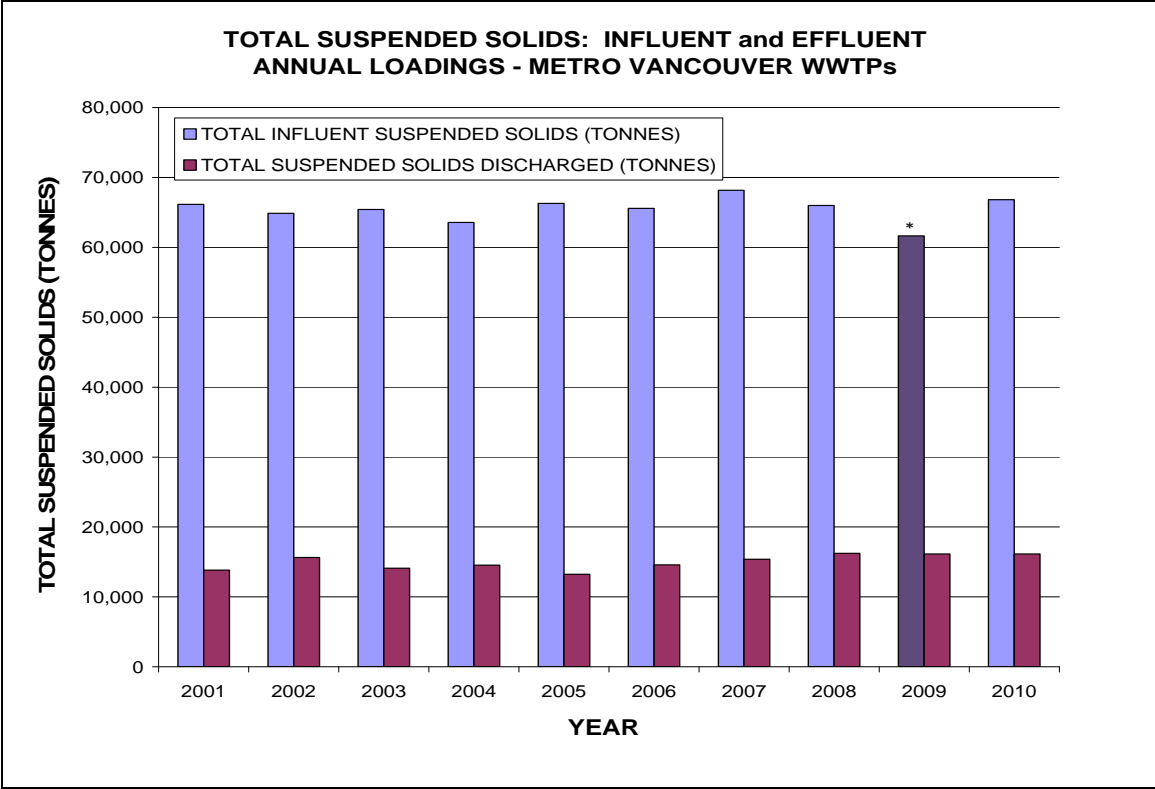
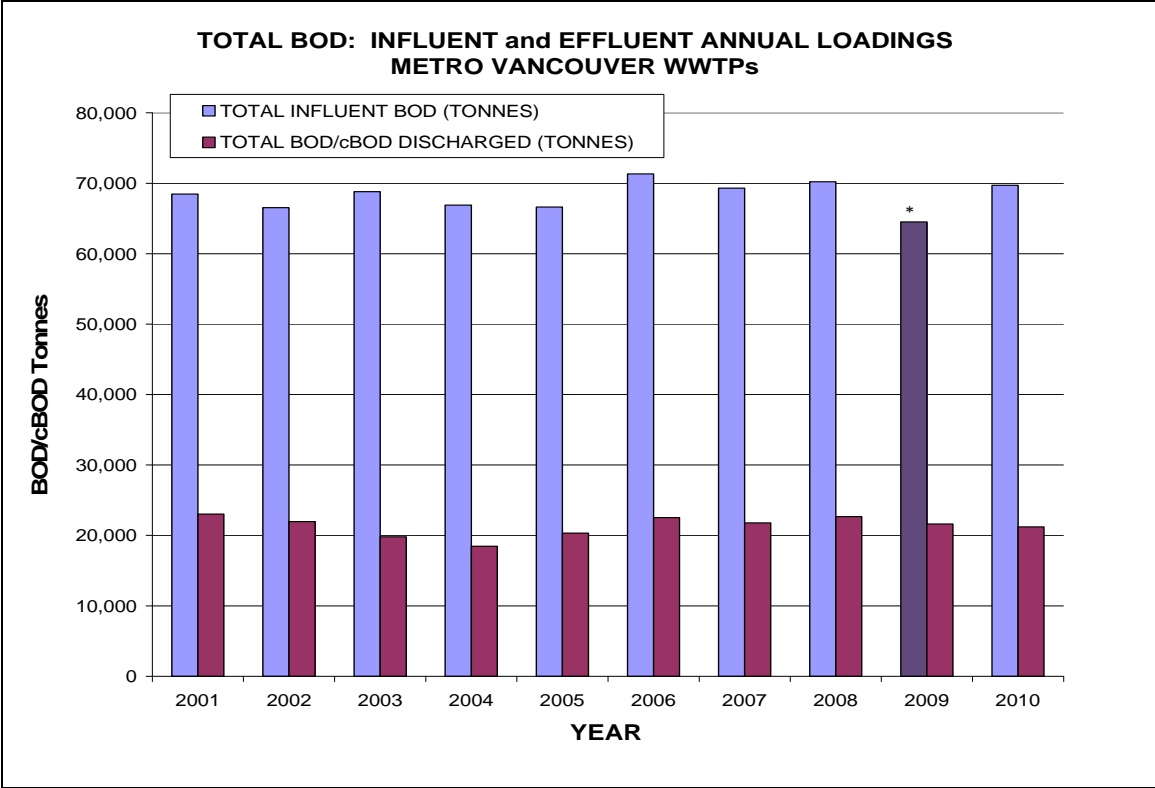
In 2010, over 449 billion litres of wastewater were treated at the GVS&DD's five wastewater treatment plants. Of this total, 243 billion litres received primary treatment (Iona Island and Lions Gate) with the remaining 207 billion litres treated at the three secondary wastewater plants (Annacis Island, Lulu Island and Northwest Langley). Individual treated effluent flows for

each wastewater treatment plant and quantities of BOD and suspended solids removed in 2010 are summarized as follows:

Total for 2010	ANNACIS	IONA	LIONS GATE	LULU	NWL	TOTAL
Effluent Flow, ML	175,996	207,924	34,628	26,836	4,352	449,736
BOD, Tonnes Removed	29,191	9,676	1,736	6,622	1,258	48,484
Susp. Solids, Tonnes Removed	27,473	14,139	3,613	4,520	1,001	50,745

Total wastewater flows, and influent/effluent loadings for BOD and suspended solids over a ten year period are shown on the following charts.





\*Annual data for 2009 influent BOD and total suspended solids does not include data from the Lulu Island WWTP due to anomalies associated with the raw influent sampler at this plant.

## Treatment Plant Performance and Compliance Review

In general, the overall performance of GVS&DD's five wastewater treatment plants (WWTPs) was good. Removal efficiencies for BOD and total suspended solids (TSS) were typical for primary and secondary wastewater treatment plants with one exception. High flows at the Iona Plant contributed to slightly lower reductions of TSS. Even though the TSS reduction at Iona was less than expected, the Operational Certificate requirement for this parameter and plant was met. The following table summarizes the reduction levels in BOD and TSS during 2010 for all the plants.

Wastewater Treatment Plant	% BOD Reduction	% TSS Reduction
Iona Island *	36	55
Lions Gate*	35	64
Annacis Island **	96	92
Lulu Island **	98	97
Northwest Langley**	97	91

\* Reduction for primary plants expected to be 30% for BOD and 60% for TSS.

\*\* Reduction for secondary plants expected to be 90% for both TSS and BOD.

In 2010, GVS&DD's WWTPs met compliance requirements throughout the year with 15 exceptions.

Daily suspended solids loadings were exceeded three times at Annacis WWTP and once at Northwest Langley WWTP. Non-compliances on the maximum daily discharge for SS loadings were due to extremely high flows in January, November and December.

There was one instance of effluent dechlorination failure at Annacis WWTP on April 6. Blockage of the SO<sub>2</sub> injection system venturi by debris temporarily disrupted the system for three minutes.

One case of disinfection failures occurred in May 20 at Annacis WWTP primarily due to equipment failures. An under voltage condition on power supplied to the plant resulted in a low flow shut down of the disinfection system for 25 minutes.

Untreated wastewater was discharged three times at Annacis WWTP and once at Iona WWTP. Events in Annacis WWTP were due to power interruption. About 6.1 % of the Annacis WWTP flow was bypassed on July 17. The other two events occurred in September 20 resulting to a total of 27% of the plant flow was bypassed. Iona plant bypassed less than 1% of the plant flow on August 7 due to influent pump failure during an extreme flow event.

There were four instances when Annacis WWTP bypassed its secondary treatment. Primary treated effluent was bypassed on July 17 and September 10 due to power failures. Trickling filter pump failure triggered the incident on September 12. A communication fault between the plant control system and the local bypass gate control caused the secondary bypass on October 14. All bypass samples collected during the bypass events met the requirements for primary treatment (130 mg/L BOD and TSS) except on September 10<sup>th</sup>, when the BOD result was 226 mg/L.

A summary of non-compliance with the parameters required by the Operational Certificates for the District's wastewater treatment plants is shown in the tables below.

**Iona Island WWTP** Operational Certificate ME 00023 - April 23, 2004

Parameter	2005	2006	2007	2008	2009	2010
Max. Daily Discharge (exceeded)	0	0	0	0	0	0
Biochemical Oxygen Demand (BOD)	0	1 (of 98)	0	0	1 (of 103)	0
Suspended Solids	0	0	0	0	0	0
BOD Daily Loading	0	0	0	1 (of 106)	0	0
Suspended Solids Daily Loading	0	0	2 (of 356)	1 (of 366)	0	0
Plant Bypass	2 (of 364)	1 (of 364)	0	0	2 (of 365)	1 (of 365)

**Lions Gate WWTP** Operational Certificate ME 00030 – April 23, 2004

Parameter	2005	2006	2007	2008	2009	2010
Max. Daily Discharge (exceeded)	0	0	0	0	0	0
Biochemical Oxygen Demand (BOD)	1 (of 101)	0	0	4 (of 106)	1 (of 103)	0
Suspended Solids	1 (of 361)	0	0	0	0	0
BOD Daily Loading	0	1 (of 101)	0	0	1 (of 103)	0
Suspended Solids Daily Loading	1 (of 361)	0	1 (of 363)	0	1 (of 365)	0
Chlorine Residual*	1 (of 166)	1 (of 160)	6 (of 157)	2 (of 170)	2 (of 156)	0
Disinfection Failure	0	2 (of 160)	0	0	3 (of 156)	0

\* measured during disinfection season only - after dechlorination. The chlorine residual must be removed from the effluent before discharge.

**Annacis Island WWTP** Operational Certificate ME 00387 – April 23, 2004

Parameter	2005	2006	2007	2008	2009	2010
Max. Daily Discharge (exceeded)	0	0	0	0	0	0
Carbonaceous Biochemical Oxygen Demand (cBOD)	0	0	0	0	0	0
Suspended Solids	0	0	1 (of 364)	2 (of 360)	0	0

Parameter	2005	2006	2007	2008	2009	2010
cBOD Daily Loading	0	0	0	1 (of 105)	0	0
Suspended Solids Daily Loading	1 (of 358)	5 (of 365)	7 (of 364)	3 (of 360)	1 (of 356)	3 (of 363)
Chlorine Residual*	0	0	1 (of 234)	0	0	1 (of 222)
Disinfection Failure	0	1 (of 224)	0	0	0	1 (of 222)
Plant Bypass	0	0	0	2 (of 366)	0	3 (of 365)
Secondary Bypass	5 (of 365)	2 (of 365)	5 (of 365)	2 (of 366)	0	4 (of 365)
<b>Primary Effluent During Secondary Bypass</b>						
Biochemical Oxygen Demand (BOD)	0	0	2 (of 5)	0	0	1 (of 4)
Suspended Solids	0	0	2 (of 5)	1 (of 2)	0	0

\* measured during disinfection season only - after dechlorination. The chlorine residual must be removed from the effluent before discharge.

**Lulu Island WWTP** Operational Certificate ME 00233– April 23, 2004

Parameter	2005	2006	2007	2008	2009	2010
Max. Daily Discharge (exceeded)	0	0	0	0	0	0
Carbonaceous Biochemical Oxygen Demand (cBOD)	0	0	0	0	0	0
Suspended Solids	0	0	0	0	0	0
cBOD Daily Loading	0	0	0	0	0	0
Suspended Solids Daily Loading	0	0	0	0	0	0
Chlorine Residual *	0	1	0	1 (of 222)	0	0
Disinfection Failure	0	1	0	0	1(of 221)	0
Plant Bypass	0	0	0	0	0	0
Secondary Bypass	3 (of 365)	0	3 (of 365)	0	1 (of 365)	0
<b>Primary Effluent During Secondary Bypass</b>						
Biochemical Oxygen Demand (BOD)	1 (of 3)	0	1 (of 3)	0	1 (of 1)	0
Suspended Solids	0	0	0	0	0	0

\* measured during disinfection season only - after dechlorination. The chlorine residual must be removed from the effluent before discharge.

**Northwest Langley WWTP** Operational Certificate ME 04339– April 23, 2004

Parameter	2005	2006	2007	2008	2009	2010
Maximum Discharge Rate	0	0	0	0	0	0
Carbonaceous Biochemical Oxygen Demand (cBOD)	0	0	0	0	0	0
Suspended Solids	8 (of 360)	0	1 (of 365)	1 (of 366)	0	0
cBOD Daily Loading	0	0	0	0	0	0
Suspended Solids Daily Loading	10 (of 360)	3 (of 364)	2 (of 365)	1 (of 366)	3 (of 365)	1 (of 363)
Chlorine Residual *	0	0	0	1 (of 214)	1 (of 215)	0

\* measured during disinfection season only - after dechlorination. The chlorine residual must be removed from the effluent before discharge.

### Biosolids Monitoring Program

#### Process Requirements and Quality Assurance/Quality Control Procedures

The Organic Matter Recycling Regulation (OMRR) governs the management of biosolids and compost as soil amendments in the Province of British Columbia. Under this regulation, sampling frequencies and criteria values for fecal coliforms and metals as specified for Class A and Class B biosolids are based on several parameters including: type of treatment process (pathogen reduction requirements, vector attraction reduction), the amount of dry solids produced on a monthly basis and the intended use of the material. The GVS&DD's monitoring program and contingency procedures ensure that any sub-class biosolids are identified, tracked and managed appropriately.

Thermophilic digesters at the Annacis Island WWTP consistently meet requirements for pathogen reduction and vector attraction reduction to produce a Class A quality biosolids suitable for recycling to land. The Lulu Island WWTP digesters are operated at mesophilic temperatures, producing Class B biosolids, also suitable for recycling to land. The Lions Gate WWTP provides thermophilic digestion achieving Class B biosolids quality.

The Iona Island WWTP operates mesophilic digesters which produce digested sludge complying with Class B pathogen levels. The Northwest Langley WWTP operates aerobic digesters that provide Class B biosolids. At both the Iona Island and Northwest Langley WWTPs, discharges from the digesters are further processed via lagoon stabilization and land-drying to produce a Class B biosolids product with soil-like consistency. These biosolids are currently stockpiled on site with anticipated use in future recycling projects.

#### Biosolids Quality

In 2010, the results of the testing programs, (grab samples for fecal coliform analyses and weekly composite samples for metals), showed that metals concentrations for biosolids were generally well below the criteria value limits specified by OMRR.

Data values produced during 2010 for fecal Coliforms in biosolids were within the Class A or Class B criteria except for one instance. Samples collected at Annacis WTP on June 28 had fecal coliform results of 4,600 MPN/g. Subsequent samples from the same centrifuge unit and upstream samples prior to the dewatering system were collected and results were lower than

the Class A limit of 1,000 MPN/g. The sample was an anomaly and contamination was the likely source of the unusual high fecal coliform result. The maximum value was 4,600 MPN/g and the geometric mean for all samples collected in the year was 86 MPN/gram.

### **Receiving Environment Monitoring**

The purpose of receiving environmental monitoring is to characterize environmental conditions in the vicinity of Metro Vancouver's wastewater treatment plant discharges, to show how well environmental quality objectives are being met, and to warn of possible environmental issues.

### **Toxicity Testing**

With a few exceptions, all effluent samples from all wastewater treatment plants passed the required monthly acute toxicity test using Environment Canada test protocols. The only exceptions occurred at the Iona Plant. In order for four samples of Iona effluent to pass, more oxygen had to be added to these samples in excess of the procedure in the technical specifications of the Environment Canada method.

Studies and ongoing monitoring carried out by Metro Vancouver, however, have shown that the high initial dilution of the Iona effluent in the marine environment will maintain dissolved oxygen at an acceptable concentration for the protection of aquatic life.

As in the previous two years, there were no occurrences of effluent acute toxicity related to surfactants (constituents of detergents and cleansing agents) at the Lions Gate Plant. This would suggest that the public education campaign to encourage North Shore residents to use less detergent has been effective in reducing the level of surfactants entering the Plant, and detergent and cleansing formulations are becoming more environmentally friendly.

Ammonia in the effluent is also monitored to determine the potential for an acutely lethal concentration of ammonia. Effluent ammonia levels in all wastewater treatment plants met the criteria of the CEPA (Canadian Environmental Protection Act) Threshold Curve. It has also been demonstrated that the chronic toxicity level of 0.019 mg/L of ammonia is not exceeded at the edge of the initial dilution zone for any of the treatment plants.

### **Recreational Water**

Metro Vancouver monitors the bacteriological quality of recreational waters in the region at about 40 locations. Both bathing and non-bathing beaches are monitored. In 2010, the bacteriological quality for primary-contact recreation was met for all bathing beaches during the bathing beach season from May through September.

For non-bathing beach areas, the monitoring data indicated that False Creek easily met the working guideline limit for secondary or incidental contact activities. Water quality in False Creek has improved over the past decade, and further improvements in water quality are expected to occur from ongoing works such as sewer system improvement including combined sewer separation. Garry Point, also a non-swimming area, did exceed the limit for primary-contact recreation at the end of the season but at that point in time easily met the secondary-contact guideline.

The bacteriological water quality at the bathing beaches was good during the summer months. In collaboration with Vancouver Coastal Health, Metro Vancouver conducted extra sampling and testing at some locations. For example, East False Creek had several occasions with high

individual fecal coliform counts, and these incidents were traced to a builder having a cross connection of a sanitary sewer to a storm outfall. The City of Vancouver identified the cross connection and promptly corrected the situation.

Garry Point, located near historic Steveston, experienced one day of very high fecal coliform counts and was posted from September 14 to 15<sup>th</sup>. The cause of these elevated counts was most likely a result of a bypass incident at the Annacis Island Wastewater Treatment Plant. The main cause of the plant incident was due to a power outage and equipment failure. In general, other possible contributors of fecal coliforms include combined sewer overflows, urban stormwater runoff, and the presence of geese and dogs.

### **WWTP Outfalls**

No exceedances of water quality objectives were attributable to Metro Vancouver wastewater treatment plants.

Monitoring of the marine receiving environment around the two primary wastewater treatment plant outfalls indicated some small and subtle changes. Further monitoring of the two areas will provide additional information to help determine their significance and if they are outfall related, are due to regional long-term fluctuations in oceanographic conditions, and are due to a combination of these or other factors. Currently, the wastewater treatment plants are operating with no adverse affects on the environment.

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**WWTP 2010 Operating Certificate Exceedance Summary**

Event	WWTP	Date	Type	Quantity	Duration	Cause	Remedial Measures
<b>TYPE 1</b>							
<b>Maximum Daily Discharge Loadings: Suspended Solids (4)</b>							
1	Annacis island	15-Jan-10	TSS	Limit of 20 t/day exceeded by 32%		High flow conditions.	
2	Annacis island	30-Nov-10	TSS	Limit of 20 t/day exceeded by 31%		High flow conditions.	
3	Annacis island	12-Dec-10	TSS	Limit of 20 t/day exceeded by 44%		High flow conditions.	
4	Northwest Langley	12-Dec-10	TSS	Limit of 0.5 t/day exceeded by 4%		High flow conditions.	
<b>TYPE 2</b>							
<b>Disinfection: Annacis Island (2)</b>							
5	Annacis Island	6-Apr-10	Undechlorinated effluent	0.9 ML	3 min	Dechlorination system blockage during routine system maintenance work.	Modified operating and maintenance procedures. Interlocked chlorination system to shut-off when SO2 flow is interrupted.
6	Annacis Island	20-May-10	Unchlorinated effluent	12.8 ML	25 min	High winds contributed to BC Hydro power instability and equipment failures in the plant. Disinfection system shut down due to low effluent flow as designed, resulting in a lack of chlorination.	Plant systems were functioning as designed to respond to power outages. Alarms changed to indicate higher priority for attention.
<b>Plant Bypass: Iona Island (1)</b>							
7	Iona Island	7-Aug-10	Plant Bypass	0.2 ML	12 min	Unexpected high flow (1067 MLD) experienced during dry season. One of four operating influent pumps stopped due to motor overload; two other pumps were unavailable due to maintenance activities.	Pump drive settings have been adjusted after consultation with pump experts. Ensured that adequate influent pump capacity is available at all times.
<b>Plant Bypass: Annacis Island (3)</b>							
8	Annacis Island	17-Jul-10	Plant Bypass	24 ML	1 hr 39 min	BC Hydro power interruption resulted in a plant-wide power failure.	Plant electrical systems have been reviewed and upgrades have been implemented or are in progress. Upgrade of cogeneration system is in progress. BC Hydro has added protection to plant power supply system. Streamlined communications with BC Hydro have been implemented to ensure quick response and notification.
9	Annacis Island	10-Sep-10	Plant Bypass	9.85 ML	30 min	A vehicle hit a BC Hydro power pole which resulted in the loss of both power feeds to the plant.	
10	Annacis Island	10-Sep-10	Plant Bypass	81.4 ML	4 hr 15 min	BC Hydro required a shutdown to effect repairs associated with Event # 9 above. Cogeneration system failed to provide adequate backup power.	

Event	WWTP	Date	Type	Quantity	Duration	Cause	Remedial Measures
<b>Secondary Bypass: Annacis Island (4)</b>							
11	Annacis Island	17-Jul-10	Secondary Bypass	9.2 ML	48 min	Same incident as reported in Event # 8. Secondary bypass occurred at the same time.	See Event # 8 above.
12	Annacis Island	10-Sep-10	Secondary Bypass	8.9 ML	4 hr 15 min	Same incident as reported in Event # 10 . Secondary bypass occurred at the same time.	See Event # 10 above.
13	Annacis Island	12-Sep-10	Secondary Bypass	11.0 ML	1 hr 29 min	A trickling filter pump stopped due to high vibration which resulted in the bypass gate opening. Pump was restarted, but the gate was not closed until site inspection rectified gate operation.	Implemented changes to operation of bypass gates and trickling filter pumps; Reviewed and implemented changes to operator response procedures. Automation changes made to trickling filter pump operation.
14	Annacis Island	14-Oct-10	Secondary Bypass	3.3 ML	9 min	Communication fault occurred between the plant control system and the local gate control system resulting in bypass gate opening.	Provided annunciator alarm connected to secondary bypass gate operation; Reviewed control logic that opens the bypass gates.
<b>Primary Effluent BOD Exceedance associated with Secondary Bypass: Annacis Island (1)</b>							
15	Annacis island	10-Sep-10	Primary Effluent BOD during Secondary Bypass	Limit of 130 mg/L exceeded by 74%		Same incident as reported in Event # 10 . Secondary bypass occurred at the same time; primary effluent sampled and analyzed.	See Event # 10 above.



Waste Management Committee Meeting Date: July 13, 2011

To: Waste Management Committee  
From: Toivo Allas, Manager, Policy and Planning Department  
Date: June 24, 2011  
Subject: **Manager's Report**

---

*Recommendation:*

That the Waste Management Committee receive for information the report dated June 24, 2011 titled "Manager's Report".

---

**1. Table of 2011 Priorities – Toivo Allas**

The Attachment to this report is the Waste Management Committee 2011 Workplan (table of priorities) indicating the quarter that the priority will be considered by the Waste Management Committee. Completed items are shown in bold.

**ATTACHMENT:**

Waste Management Committee 2011 Workplan

## Waste Management Committee 2011 Workplan

### 1st Quarter

#### Key priorities

- **2011 Committee Priorities**
- **Zero Waste Challenge Communications Plan**
- Review Status of Metro Vancouver Biofuel Facility in Surrey
- Regional Framework for Organics Processing Facilities
- Regional Implementation Strategy for Recycling Drop-Off Facilities (Eco-Centers)
- **2011 GVS&DD Capital Projects**
- **Preliminary Zero Waste Challenge Strategy (discussion document for Conference)**
- **Zero Waste Challenge Conference**

### 2<sup>nd</sup> Quarter

#### Key priorities

- **North Shore Integrated Resource Recovery Study**
- **Regional Data Reporting**
- **Report Back on Minister's Comments/Approval of the Integrated Liquid Waste and Resource Management Plan**
- Report Back on Minister's Comments/Approval of the Integrated Solid Waste and Resource Management Plan
- Tsawwassen First Nation – GVS&DD Membership
- Quality Control Annual Report for GVS&DD
- RAAC's Review of Sewerage Cost Allocation (Tier 1 / Tier 2)
- **District Energy Opportunities at the Burnaby Waste-to-Energy Facility**
- **Lulu Island WWTP – Microsludge Biomethane Project**
- **Status of Capital Expenditures**
- Zero Waste Challenge Strategy and Action Plan
- **Material Disposal Bans Update**

### 3rd Quarter

#### Key priorities

- National Zero Waste Marketing Council Proposal
- Proposal to convene a global dialogue on sustainable solid waste management working through existing international bodies such as United Cities and Local Governments and others.
- Metro Vancouver Smart Phone Application ("App") for Metro Vancouver Recycles.org
- Integrated Utility Management Advisory Committee Terms of Reference (dependent on approval of Plans by the Minister)
- EPR Program for Packaging – Ministry's Process (dependent on Minister's review)
- Expand Private Sector Solid Waste Bylaw Scope to Cover More Recyclable

Materials

- **Waste to Energy Facility – 2010 Financial Update**
- GVS&DD/Wastech Comprehensive Agreement – 2010 Financial Results

**4th Quarter**

Key priorities

- Zero Waste Challenge Christmas Campaign
- Status of Capital Expenditures
- Revise Private Sector Solid Waste Bylaw Fee Schedule to encourage more resource recovery
- Amend Bylaw to Reduce Restaurant and Grease Discharges to Sewer
- Opening of the Annacis Wastewater Centre
- North Shore Integrated Resource Recovery – Next Steps
- 2012 Solid Waste Tipping Fee Bylaw
- 2012 Program and Priorities

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## INFORMATION ITEMS

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# City of Richmond

6911 No. 3 Road  
Richmond, BC V6Y 2C1  
www.richmond.ca

May 26, 2011  
File: 10-6370-01/2011-Vol 01

**City Clerk's Office**  
Telephone: 604-276-4007  
Fax: 604-278-5139

Metro Vancouver Waste Management Committee  
4330 Kingsway  
Burnaby, BC  
V5H 4GH

**Attention: Director Greg Moore**

Dear Director Moore:

**Re: City of Richmond - Report 2010 - Towards Excellence in Recycling and Solid Waste Management**

This is to advise that Richmond City Council, at its meeting held on Tuesday, May 24, 2011, considered the above matter, and adopted the following resolution:

*That the "Report 2010: Towards Excellence in Recycling and Solid Waste Management", be:*

- (1) endorsed and made available to the community through the City's website and other communications medium;*
- (2) used as the basis to prepare the Solid Waste Sustainability Strategic Program as a component of the City's Sustainability Framework; and*
- (3) forwarded to the Metro Vancouver Waste Management Committee for information.*

A copy of the related staff report as well as the City of Richmond Report 2010 - Towards Excellence in Recycling and Solid Waste Management booklet are attached for your information in accordance with Part (3) of the Council resolution. If you require additional copies of either document, or have any questions, please contact Suzanne Bycraft, Manager, Fleet & Environmental Programs at 604-233-3338.

Yours truly,

David Weber  
Director, City Clerk's Office

pc: Suzanne Bycraft



**City of  
Richmond**

**Report to Committee**

**To:** Public Works and Transportation Committee

**Date:** May 4, 2011

**From:** Tom Stewart, AScT.  
Director, Public Works Operations

**File:** 10-6370-01/2011-Vol  
01

**Re: Report 2010: Towards Excellence in Recycling and Solid Waste Management**

**Staff Recommendation**

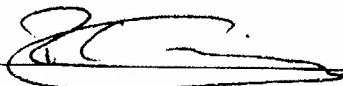
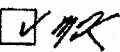

That the "Report 2010: Towards Excellence in Recycling and Solid Waste Management", be:

- a) endorsed and made available to the community through the City's website and other communications medium, and
- b) used as the basis to prepare the Solid Waste Sustainability Strategic Program as a component of the City's Sustainability Framework.



Tom Stewart, AScT.  
Director, Public Works Operations  
(604-233-3301)

Att.

FOR ORIGINATING DEPARTMENT USE ONLY					
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>		<b>CONCURRENCE OF GENERAL MANAGER</b>		
Sustainability	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>				
<b>REVIEWED BY TAG</b>	YES <input checked="" type="checkbox"/> 	NO <input type="checkbox"/>	<b>REVIEWED BY CAO</b>	YES <input checked="" type="checkbox"/> 	NO <input type="checkbox"/>

## Staff Report

### Origin

On October 25, 2010, Council endorsed the municipal actions identified in the draft Integrated Solid Waste and Resource Management Plan (ISWRMP). This plan establishes a new diversion target of 70% by 2015 and an aspirational target of 80% by 2020.

In order to help plan for future initiatives to meet the new targets in the ISWRMP, this report presents the "*Report 2010: Towards Excellence in Recycling and Solid Waste Management*" (*Report 2010*), Attachment 1. This report presents a snapshot of Richmond's comprehensive programs, the significant growth and results of these programs to date, as well as future strategies being considered to move toward our new 70% diversion target.

The *Report 2010* provides the opportunity to report to the community on the City's recycling and solid waste management initiatives. It can also serve as the impetus to develop a recommended Solid Waste Strategic Program in order to fulfill a key piece in the City's Corporate Sustainability Framework per Council Term Goal #7:

"Sustainability and the Environment – Demonstrate leadership in and significant advancement of the City's agenda for sustainability through the development and implementation of a comprehensive strategy that among other objectives includes incorporating sustainability into our City policies and bylaws".

### Analysis

The City of Richmond first introduced recycling services in December, 1990. Since that time, the City has been expanding services to reduce the amount of waste going to landfills while at the same time promoting a healthy and sustainable future.

The "*Report 2010: Towards Excellence in Recycling and Solid Waste Management*" highlights the significant progress, growth and investment the City has made in expanding recycling services for residents to achieve the current 50% waste diversion target. It presents the opportunity to report our progress to the community as well as communicate the suite of programs available and potential new initiatives being considered to help reach the new goal of 70% diversion.

### *Report Overview*

The report contains an executive summary and five chapters relating to existing City program services, potential future initiatives, community awareness programs, partnership programs and a resource/reference section. The topics covered by each chapter area are described below.

The ***Programs and Services*** Chapter highlights the various individual recycling and waste reduction initiatives the City provides and reports on how each has contributed to the overall diversion target. The City services provided not only increase options for recycling -- they also help remove materials which can adversely impact the environment and civic infrastructure. As an example, compact fluorescent tubes (which contain toxic materials) were added to the

Recycling Depot in 2010. Used cooking oil and animal fat/grease were also added (as requested by Council) to reduce the impact of this material on the sewer infrastructure. In April, 2010, the City's Green Can program was introduced. This service enables single-family residents to divert food scraps from their garbage and place them in a separate bin for centralized composting. A pilot program is currently underway in 2011 to test a similar program for residents in townhomes.

The Chapter, *The Road Ahead*, provides some insights into areas of potential focus or new programs/initiatives as a result of Council's endorsement of the municipal action items contained within the ISWRMP (Goals 1 and 2). These initiatives will centre on increased education/outreach, and new programs and policy approaches to increase recycling in the residential, commercial and demolition waste sectors. All new initiatives will be brought forward to Council individually for consideration prior to implementation.

The *Community Programs* Chapter highlights the City's existing outreach programs as part of raising awareness to foster changing behaviours in relation to waste reduction, recycling practices and overall environmental awareness. Numerous workshops are offered every year on composting and related topics. In addition, staff participate in various community events to promote waste reduction and recycling with the assistance of community volunteers (youth teams and others).

In *Working in Partnership to Improve Waste Management*, we highlight our partner organizations that we work closely with to promote waste reduction and recycling, along with the many product stewardship partners we support to promote recycling and/or safe disposal of a variety of materials. This chapter includes specific information on return locations.

Finally, the *Tips and Resources* Chapter provides a handy resource section, with detailed references and specific how-to's about the City's various recycling programs and lists specific locations for disposal of household hazardous waste products, including those covered under product stewardship programs.

#### *Proposed Communications*

Subject to Council approval, the *Report 2010* will be posted on the City's web site and made available through various communications medium as well as at waste reduction and recycling outreach initiatives.

#### *Foundation for Solid Waste Strategic Program*

In addition to serving to communicate progress results to the community, the *Report 2010* provides the foundation needed for the City to develop a Solid Waste and Recycling Strategic Program as part of the City's Sustainability Framework.

The purpose of the City's Sustainability Framework is to bring together the City's various initiatives into one strategic, cohesive and complete program with specific goals, targets and actions. A key focus of the Framework is to better enable the City advance a complete approach to sustainability where all core priority areas are being adequately addressed. The complete approach to sustainability also means that interconnections among various elements (e.g., climate

change mitigation and waste management) can be better delineated and understood. Greater awareness of interconnections will enable the City to better manage trade-offs (e.g., where improvements in one area come at a cost of another) and achieve greater results per unit of effort/cost by advancing action initiatives that address multiple objectives simultaneously.

The *Report 2010* identifies the importance of Richmond's recycling and solid waste management initiatives in helping to transition towards a more sustainable community. By reducing waste and encouraging the reuse of materials, effective solid waste management helps preserve limited resources, reduces greenhouse gas emissions, and avoids dangerous levels of climate change. Effective solid waste management also helps ensure that toxic materials are managed appropriately to protect the health and safety of people and the natural environment upon which they depend. Given these considerations, effective waste management was identified as a sustainability priority focus area to be included in the City's Sustainability Framework. To advance this initiative, it is suggested that staff develop and report back on a proposed Solid Waste Strategic Program, based largely on the details provided in the *Report 2010*, in collaboration with the City's Sustainability Services unit.

### **Financial Impact**

There is no direct financial impact with this report.

### **Conclusion**

The *Report 2010: Towards Excellence in Recycling and Solid Waste Management* presents a reflection of where we have been, where we currently are, and where we are going in relation to responsible waste management for the Richmond community. The significant progress and expansion of the City's services, as highlighted in the report, is a testament to the investment and continued commitment Council has made in delivering excellence in recycling and waste management services. This report also recommends that the *Report 2010* be used as a basis to develop a proposed Solid Waste Strategic Program, in order to complete another major milestone in the development of the City's Sustainability Framework.



Suzanne Bycraft  
Manager, Fleet & Environmental Programs  
(604-233-3338)

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THE REGIONAL MUNICIPALITIES OF  
DURHAM AND YORK



# NEWS RELEASE

29 JUNE 2011

## MOE issues certificate of approval for energy-from-waste facility

**WHITBY, ON** – The Regional Municipalities of Durham and York are pleased to announce the Ontario Ministry of the Environment (MOE) has issued a certificate of approval (CofA) for the Durham/York energy-from-waste (EFW) facility on June 28. There is one CofA covering operational requirements related to air, noise, waste and stormwater and this CofA reflects the technical specifications of the Project Agreement, Environmental Assessment conditions of approval and the Regions' integrated waste management system, as well as complies with all relevant regulations.

"This decision is historic for the Region of Durham. It allows us to be a provincial leader in the area of waste management, allowing Durham residents increased responsibility for the handling of our own waste," said Roger Anderson, Durham Regional Chair and Chief Executive Officer. "It is important to thank the province for helping us to reach this milestone. Plus, it couldn't have been done without the more than five years of public consultation and research into this issue. Our residents confirmed that they expect this facility to be clean and safe—and that's how we intend to build it."

"Ministry of the Environment approval of this final step of the Durham/York Residual Waste Study signals the start of an exciting future. Municipalities across the country will be closely following this project as it provides both a sustainable and innovative municipal waste management solution," said York Region Chairman and CEO Bill Fisch. "The partnership between York and Durham was instrumental in bringing this project to fruition. Staff from both Regions worked through a detailed process to get to this point and with the MOE's approval of the CofA, we are now able to start construction of the EFW facility. Our EFW facility will set the standard for the future of waste management."

The Durham/York facility will process waste to create energy in the form of steam, electricity and heat with an approved capacity of 140,000 tonnes per year. The facility will only process municipally collected household waste (garbage) left over after the Regions' aggressive diversion efforts, such as recycling and composting. The EFW facility will also be capable of recovering materials such as metal.

"Today's announcement is an important step in ensuring that residents of Durham and York Regions will have a long-term solution for managing our garbage," said Cliff Curtis, Durham Region's Commissioner of Works. "With this facility, we will be able to transform our garbage into energy and reduce our carbon footprint. This facility is just one part of the solution; the rest of it lies in our diversion efforts. We have a goal of 70 per cent diversion and with the help of our residents, we will reach our goal."

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Preliminary design and engineering of the facility is well underway. It is anticipated that construction of this facility will begin in the fall of 2011 with a target operation date of 2014. The EFW facility will be located in Clarington's Energy Business Park, on a 12-hectare parcel, north of the Courtice Water Pollution Control Plant in Durham Region.

Covanta Energy Corporation is the full service contractor to design, permit, build, start up, commission and operate the 140,000-tonne-per-year EFW facility for Durham and York Regions. Covanta is the largest provider of EFW services in North America, with 41 operating facilities in the United States, including 24 that were designed and built directly by Covanta.

For more information on the Durham/York Residual Waste Study, visit [www.durhamyorkwaste.ca](http://www.durhamyorkwaste.ca), call toll-free at 1-800-667-5671, or email [info@durhamyorkwaste.ca](mailto:info@durhamyorkwaste.ca).

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