AGENDA

WASTE MANAGEMENT COMMITTEE REGULAR MEETING

Wednesday, April 13, 2011
1:00 p.m.
2nd Floor Boardroom
4330 Kingsway, Burnaby, BC

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

Please advise 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.
April 13, 2011
2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

A G E N D A

1. ADOPTION OF THE AGENDA

1.1 April 11, 2011 Regular Meeting Agenda

Staff Recommendation:
That the Waste Management Committee adopt the agenda for its regular meeting scheduled for April 11, 2011 as circulated.

2. ADOPTION OF THE MINUTES

2.1 March 9, 2011 Regular Meeting Minutes

Staff Recommendation:
That the Waste Management Committee adopt the minutes of its regular meeting held March 9, 2011 as circulated.

3. DELEGATIONS

No Items presented.

4. INVITED PRESENTATIONS

No Items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 North Shore – Integrated Resource Recovery Study

Designated Speaker: Fred Nenninger, Regional Utility Division Manager, Policy and Planning Department
Verbal Report and Presentation

5.2 Metro Vancouver 2011 Zero Waste Challenge Conference

Designated Speakers: Heather Schoemaker, Manager, Corporate Relations Department
Toivo Allas, Manager, Policy and Planning Department
Recommendation:
That the Waste Management Committee receive for information the report dated April 5, 2011 titled “Metro Vancouver 2011 Zero Waste Challenge Conference”.

5.3 Interim Report on Single Family Residential Waste and Recycling

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

Recommendation:

That the Committee receive the report titled "Interim Report on Single Family Residential Waste and Recycling" for information.

5.4 Regional Residential Waste Drop-Off (RDO) Facility in South Surrey

Designated Speaker: Ken Carrusca, Integrated Planning Division Manager, Policy and Planning Department

Recommendation:

That the Waste Management Committee receive this report on the schedule to establish the Regional Residential Waste Drop-Off (RDO) Facility in South Surrey for information.

5.5 Status of District Energy Opportunities at the Waste-to-Energy Facility

Designated Speaker: Ken Carrusca, Integrated Planning Division Manager, Policy and Planning Department

Recommendation:

That the Waste Management Committee receive for information this report on the opportunities for establishment of district energy systems using heat from the Metro Vancouver Waste-to-Energy Facility in Burnaby.

5.6 Status of Utilities Capital Expenditures to December 31, 2010

Designated Speakers: Tim Jervis, Manager, Engineering and Construction Department

Phil Trotzuk, Financial Planning and Operations Manager

Recommendation:

That the Board receive the report titled Status of Utilities Capital Expenditures to December 31, 2010, dated March 31, 2011 for information.

5.7 Attendance at the Recycling Council of British Columbia's (RCBC) Zero Waste Conference, Whistler, June 8-10, 2011

Designated Speaker: Heather Schoemaker, Manager, Corporate Relations

Recommendation:

That the Board authorize the Chair to appoint a Metro Vancouver Director to attend the RCBC Zero Waste Conference, June 8-10, 2011 in Whistler.

5.8 Manager's Report

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

Recommendation:

That the Waste Management Committee receive for information the report dated February 18, 2011, titled "Manager's Report".

6. INFORMATION ITEMS

No items presented.

7. OTHER BUSINESS

No items presented.

8. RESOLUTION TO CLOSE MEETING

No items presented.

9. ADJOURNMENT

Staff Recommendation:

That the Waste Management Committee conclude its regular meeting of April 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 1:05 p.m. on Wednesday, March 9, 2011 in the 2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

PRESENT:
Chair, Director Greg Moore, Port Coquitlam
Vice Chair, Director Heather Deal, Vancouver (arrived at 1:29 p.m.)
Councillor Mary-Wade Anderson, White Rock
Director Derek Corrigan, Burnaby
Director Ernie Daykin, Maple Ridge
Director Linda Hepner, Surrey (arrived at 1:14 p.m.)
Director Don MacLean, Pitt Meadows
Director Darrell Mussatto, North Vancouver City
Director Wayne Wright, New Westminster

ABSENT:
Director Pamela Goldsmith-Jones, West Vancouver
Councillor Scott Hamilton, Delta
Director Harold Steves, Richmond
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, Corporate Secretary's Department

1. ADOPTION OF THE AGENDA

1.1 March 9, 2011 Regular Meeting Agenda

It was MOVED and SECONDED
That the Waste Management Committee:
a) amend the agenda for its regular meeting scheduled for March 9, 2011 by adding item 3.1 Hilda Bechler; and
b) adopt the agenda as amended.

CARRIED

2. ADOPTION OF THE MINUTES

2.1 February 15, 2011 Regular Meeting Minutes

It was MOVED and SECONDED
That the Waste Management Committee adopt the minutes of its regular meeting held February 15, 2011 as circulated.

CARRIED

3. DELEGATIONS

3.1 Hilda Bechler

Hilda Bechler, Sustainable Community Development Services, advocated for local manufacturing as an alternative to incineration and landfill. The following was highlighted by the presenter:

- The Integrated Solid Waste and Resource Management Plan depends on private sector economic activity and remanufacture increase to meet the plan's priority goals of greater diversion than disposal; however, this may take too long. Instead of continued investment in disposal economy, local governments should focus on investments in renewing local economy
- Investing in zero waste would enable phasing out landfills by increasing diversion to 95% or more; this could be done only with local remanufacturing, local EPR and expanded diversion infrastructure
- Capital costs of incinerators exceed significantly capitals costs for recycling and other diversion activities
- Waste-to-energy perpetuates landfills
- Incinerators built now will be burning recoverable resources until 2050, while fossil fuels and critical materials are being depleted and world population grows to 9.2 billion. Remanufacturing also uses fossil fuels and electricity but creates sustainable economic growth in return
- The best returns on health and climate change impacts are gained by avoiding all forms of burning
- Overseas markets collapse with the rising cost of oil, which is predicted to reach $200/barrel by 2012; the only possible contingency is remanufacturing recycled materials locally
- As an immediate opportunity, the Catalyst Paper recycling plant in Coquitlam, the only plant on the West Coast, is for sale

1:14 p.m.
Director Hepner arrived at the meeting.

On-table executive summary is retained with the March 9, 2011 Waste Management Committee agenda.

Agenda Varied
The order of the agenda was varied to consider the remainder of the regular agenda and the closed agenda prior to item 4.1.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw – Staff Appointments

Report dated January 26, 2011 from Ray Robb, Regulation and Enforcement Division Manager, Policy and Planning Department, seeking updates to staff appointments under the *Environmental Management Act* and GVS&DD Municipal Solid Waste and Recyclable Material Regulatory Bylaw 181, 1996 as amended by Bylaw 183, 1996.

It was MOVED and SECONDED

That the Board, pursuant to the *Environmental Management Act* and Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw 181, 1996 as amended by Bylaw 183, 1996:

a) Appoint Marlene Fuhrmann, Larry Avanthay, Michelle Jones and Percy Leung as Officers; and
b) Rescind Tanya Tulk and Karen Pyne as Officers.

CARRIED

5.2 Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007 – Staff Appointments

Report dated January 26, 2011 from Ray Robb, Regulation and Enforcement Division Manager, Policy and Planning Department, seeking updates to staff appointments under the *Environmental Management Act* and GVS&DD Municipal Solid Waste and Recyclable Material Regulatory Bylaw 299, 2007.

It was MOVED and SECONDED

That the Board, pursuant to the *Environmental Management Act* and Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007:

a) Appoint the following Metro Vancouver staff:
   Marlene Fuhrmann, Larry Avanthay, Michelle Jones and Percy Leung as Municipal Sewage Control Officers; and
b) Rescind the following Metro Vancouver staff:
   Tanya Tulk and Karen Pyne as Municipal Sewage Control Officers; and
c) Appoint the following City of Vancouver staff:
   Rosalie Budau as a Municipal Sewage Control Officer.

CARRIED

5.3 Zero Waste Challenge Communications Plan

Report dated February 18, 2011 from David Hocking, Corporate Communications Division Manager, Corporate Relations Department, providing an update on Metro Vancouver's planned 2011 communications and outreach activities in support of the Zero Waste Challenge Strategy.

Presentation material titled "Zero Waste Challenge Communications Plan" is retained with the March 9, 2011 Waste Management Committee agenda.

1:29 p.m.

Director Deal arrived at the meeting.

It was MOVED and SECONDED
That the Waste Management Committee receive for information the report entitled Zero Waste Challenge Communications Plan, dated February 18, 2011.

CARRIED

5.4 Manager's Report

Report dated February 18, 2011 from Toivo Allas, Manager, Policy and Planning Department, providing an update on the East Fraserlands district energy project and on the 2011 Committee workplan.

Request of Staff

Staff was requested to provide at a subsequent Waste Management Committee meeting an update on the East Fraserlands district energy project governance model.

It was MOVED and SECONDED
That the Waste Management Committee receive for information the report dated February 18, 2011, titled "Manager's Report".

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 March 9, 2011 pursuant to the *Community Charter* provisions, Sections 90(1) (e) 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:

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

CARRIED

ADJOURNMENT

It was MOVED and SECONDED
That the Waste Management Committee adjourn its March 9, 2011 regular meeting.

CARRIED
(Time: 1:42 p.m.)

RECONVENE

The Waste Management Committee reconvened its March 9, 2011 regular meeting at 1:43 p.m. with the same members in attendance.

Agenda Order Resumed
The order of the agenda resumed with item 4.1.

4. INVITED PRESENTATIONS

4.1 Robert Lange, New York City Department of Sanitation

Robert Lange, Director, Bureau of Waste Prevention, Reuse and Recycling, New York City Department of Sanitation, was present to discuss solid waste prevention, reuse and recycling in New York City. Members were informed about the following:

- New York City (City) collects 11,000 tonnes of waste materials/day; a small portion of waste is incinerated in a New Jersey facility; most of the waste is exported to landfills in Pennsylvania, Virginia, and Ohio
- The plan to build an incinerator was met with strong environmental opposition in the 1980's; the City is now re-examining the newest waste-to-energy technologies as a possible waste disposal tool
- Recyclables are defined as items that have a sustainable and long-term market
- Despite $6 million/year spent by the City on education and communication on recycling, compliance remains a challenge
- Advertising and education is mostly Internet-based; social media are also widely used by the City
- The biggest challenge is to motivate people to do more
- Convenience is extremely important for public participation in the recycling programs
- Multifamily recycling program focuses on capture rather than diversion; 34% of residential waste is recyclable – 1/2 of that is captured
- Enforcement has always been part of the City's recycling program; the level of compliance would not have been achieved without extensive enforcement capabilities
- The recycling program cannot be successful if it were not enforceable with waste generators
- Clear bags can be inquired by multifamily buildings staff; repeat violators (disposing recyclable material) can be fined repeatedly
- Residential dwellings must be serviced by municipal workers; remaining waste is collected by private haulers; free market system applies to private haulers
- Dual stream recycling is being used by the City; paper is collected separately from plastic and glass
- Dual bin trucks are used in suburban areas; single loader is used in metropolitan core and in multifamily complexes
- Municipal trucks have to be flexible to perform in a most effective way a number of functions, such as refuse, cleaning, recycling, and snow removal; this to some extent dictates infrastructure
- The Apartment Building Recycling Initiative (ABRI) is a volunteer-based recycling improvement program targeted to tenants, superintendents, and building managers; the program provides a volunteer acceptable to both parties that helps to coordinate recycling in the building
- The City experimented with the collection of residential food waste in the early 1990's as part of the Intensive Zone Pilot. This aspect of the pilot

project met lots of challenges, such as high costs of collection, storage in multifamily dwellings between collections, odour and vermin issues, contamination of the product, and difficulties marketing the end product. It was concluded that food waste will not be designated as a material for source separation and collection
- Composting in the City is decentralized
- The City conducted a comprehensive Residential and Street Basket Waste Characterization Study in 2004 to 2005 to determine the amount and composition of waste disposed by NY residents
- Recycling has social and environmental benefits; however, it is not correct that money will be saved
- The City is not permitted to collect waste at night time
- Contaminated material must be dealt with at the curb; it is disposed by refuse trucks
- There is not a bag limit for single family homes
- The City has an extensive beverage container refund program
- Restaurant industry is served by commercial collection
- The economic downturn resulted in 10% waste reduction in the City
- Waste stream is dynamic; flexible goals must be adopted by local governments to adjust to changing economies

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Greater Vancouver Sewerage and Drainage District Municipal Solid Waste and Recyclable Material Regulatory Bylaw – Staff Appointments

This item was previously considered.

5.2 Greater Vancouver Sewerage and Drainage District Sewer Use Bylaw No. 299, 2007 – Staff Appointments

This item was previously considered.

5.3 Zero Waste Challenge Communications Plan

This item was previously considered.

5.4 Manager's Report

This item was previously considered.

6. INFORMATION ITEMS

This section was previously considered.

7. OTHER BUSINESS

This section was previously considered.

8. RESOLUTION TO CLOSE MEETING

This section was previously considered.

9. ADJOURNMENT

It was MOVED and SECONDED
That the Waste Management Committee conclude its regular meeting of March 9, 2011.

CARRIED
(Time: 2:34 p.m.)

Klara Kutakova,
Assistant to Regional Committees

Greg Moore, Chair

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REPORTS

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Waste Management Committee Meeting Date: April 13, 2011

To: Waste Management Committee

From: Heather Schoemaker, Manager, Corporate Relations
Toivo Allas, Manager, Policy and Planning

Date: April 5, 2011

Subject: **Metro Vancouver 2011 Zero Waste Challenge Conference**

Recommendation:

That the Waste Management Committee receive for information the report dated April 5, 2011 titled "Metro Vancouver 2011 Zero Waste Challenge Conference".

1. PURPOSE

To provide the Waste Management Committee with an overview of Metro Vancouver's inaugural Zero Waste Challenge Conference.

2. CONTEXT

Metro Vancouver's inaugural Zero Waste Challenge Conference was held at Burnaby's Hilton Metrotown on Thursday, March 10th. It was attended by over 350 people, and with 450 livestream viewers, 800 participants in all. The conference engaged a broad representation of those involved in waste management including municipal elected officials and professional staff, the business community – waste generators, haulers, processors – NGOs and residents. Framed around *a shared agenda for action*, the conference was designed to:

- Introduce the Metro Vancouver Zero Waste Challenge Strategy;
- Showcase the success stories and initiatives towards Zero Waste; and
- Engage stakeholder debate and discussion on barriers/actions

The agenda included a challenge from Grade 4 students from the Village of Anmore to do a better job managing our garbage; remarks from moderator Greg Moore (Chair of Metro Vancouver's Waste Management Committee), Metro Vancouver Chair Lois Jackson and Deputy Minister of Environment, Cairine MacDonald; a keynote presentation and Q&A from Robert Lange, Director of Waste Reduction, Reuse and Recycling with New York City's Department of Sanitation; a series of "rapid fire" regional waste management success stories from local municipalities, private sector organizations and non-profit groups; and a staff presentation on Metro Vancouver's draft Zero Waste Challenge Strategy.

Mr. Lange carried a strong but cautionary message from New York City, which has struggled to achieve its own diversion goals despite significant budgets and stringent enforcement capacity and strategies; he advised that Metro Vancouver's targets cannot be reached without some significant shifts in how the region approaches its waste management practices, and dramatic changes in public attitudes about recycling. Citing Metro

Vancouver's unique governance structure as one of its biggest challenges, he raised the need for cooperation and strong political leadership. Mr. Lange also indicated that *"Metro Vancouver should be congratulated for developing a Zero Waste Strategy which leaves no sector untargeted; a strategy that goes well beyond expectations about individual household compliance and looks aggressively toward the role that the commercial and industrial sector will have to play in successfully achieving your ambitious diversion goals. A strategy which recognizes as well the need for engaging with industry not just locally but nationally and internationally, to bring about reductions in product toxicity and greater manufacturer responsibility for the true cost of their products, beyond simply manufacturing and distribution."*

A series of "rapid fire" regional success stories included small neighbourhood zero waste initiatives, municipal initiatives, innovative stories of large scale conglomerates embracing zero waste, and work by processors and recyclers.

Staff presented Metro Vancouver's draft Zero Waste Challenge Strategy. Clint Mahlman, Senior Vice-President of Retail Operations and Distribution at London Drugs was the luncheon keynote speaker. London Drugs has put sustainability, and in particular zero waste, at the forefront of its operations.

A series of concurrent breakout sessions were organized around the five strategic priorities of the Zero Waste Challenge Strategy document: organics, businesses and institutions, construction and demolition, multi-family and product design. Participants were asked to consider two questions – what are the barriers to implementing the actions identified in the Zero Waste Challenge Strategy, and what actions beyond those of local government are needed to achieve Metro Vancouver's diversion targets. The voting results from each breakout session (Attachment 1) identified the top three barriers and actions for the five strategic priorities identified in the Zero Waste Challenge Strategy.

A "Dragon's Den" panel of subject matter experts debated the merits and drawbacks of the conclusions reached by participants in the breakouts. The Dragon's Den included Bernie Magnan, Chief Economist at the Vancouver Board of Trade; Rod Muir, National Waste Diversion and Sustainability Campaigner for Sierra Club Canada; Neil Hastie, President and CEO of Encorp Pacific Canada; Paul LaBranche, Executive Vice-President of the Building Owners and Managers Association of BC; and Colin Isaacs, Principal at Ontario-based sustainability consultants, the CIAL Group.

Media Coverage

The conference received detailed, factual and sustained reporting in regional (Vancouver Sun, the Province, CTV, CBC), community (Black Press chain and others) and ethnic media outlets. Coverage reflected Metro Vancouver's key themes for the conference – reducing waste is the key priority and requires the active participation of residents, businesses and governments at all levels.

Use of Social and Multi Media

The conference, except for the breakout sessions, was filmed and livestreamed through Metro Vancouver's website. Video clips, presentations and highlights of the conference can be found at http://www.metrovancouver.org/region/ZeroWasteConference. In the weeks leading up to the conference, a blog was hosted on the conference website to provide information on the nature and purpose of the conference; the morning segment of the event was livestreamed, as was the Dragon's Den; and Metro Vancouver staff "tweeted"

throughout the conference to further engage followers who could not attend the session in person. In all, close to 450 viewers either watched the event itself (average viewing time 16 minutes) or logged on to view the archived conference video on Metro Vancouver's website (average viewing time 19 minutes). During the conference itself, 392 tweets (including 62 from Metro Vancouver) and 113 "re-tweets" were posted by attendees.

Resource materials were hosted on Metro Vancouver's website. A Discussion Forum has also been added to the website in an effort to broaden the discussion beyond the conference, and on to the larger issue of our region's efforts to work toward zero waste.

Feedback

An online feedback form provided the opportunity for conference participants to give Metro Vancouver detailed comments on the event and its various components. A series of five questions were asked, with the following results:

Question 1: How do you rate the conference overall?
Average mean score – 4.33 (out of 5); median score – 4.00

Question 2: How do you rate the keynote speakers?
Average mean score – 3.92 (out of 5); median score – 4.00

Question 3: How do you rate the Regional Success Stories?
Average mean score – 4.33 (out of 5); median score – 4.00

Question 4: How do you rate the Breakout Sessions?
Average mean score – 3.96 (out of 5); median score – 4.00

Question 5: How do you rate the Dragon's Den Panel?
Average mean score – 3.91 (out of 5); median score – 4.00

3. ALTERNATIVES

None presented.

4. CONCLUSION

Metro Vancouver's Zero Waste Challenge Conference attracted over 800 participants, either in person or online. The conference included presentations and discussions on how to achieve aggressive reductions in waste. Participants provided important input to the discussion on barriers and actions to achieving our waste diversion targets. Anecdotal and formal feedback both indicated that participants were satisfied with the conference's content and process, and gave it a high rating.

The draft Zero Waste Challenge Strategy served as a discussion guide at the conference. Representing a range of actions that, subject to further consideration by the Board of Directors, are available to meet the region's aggressive waste diversion targets, the feedback from the conference will be used to review and finalize a Zero Waste Challenge Strategy and Action Plan.

ATTACHMENT

1. Zero Waste Challenge Conference Breakout Sessions Voting Results (5016932)

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Zero Waste Challenge Conference

Breakout Session Results

Stream 1 – Organics

PARTICIPANTS' TOP 3 BARRIERS:
1. Public doesn't accept separating organics (43%)
2. Lack of public understanding & education (13%)
3. Lack of organics Infrastructure (14%)

Additional Barriers identified:
- Lack of convenient organics collection
- Problems finding a profitable use of compost
- Proper separation of organics without contamination
- Lack of standardized messaging & service delivery

TOP 3 RECOMMENDED ACTIONS:
1. Developers ensure space for organics
2. Metro Vancouver site and build organics facilities
3. Businesses/Residents/Schools/haulers educate and enforce

Additional Actions identified:
- Encourage businesses and residents to install processing technology on site
- Implement more 'pay-as-throw' programs for garbage (e.g. different sized containers)
- Government provide incentives for infrastructure development
- Governments increase enforcement for disposal bans and regulations
- Governments and businesses develop neighbourhood and business champions

Stream 2 – Multi-family

PARTICIPANTS' TOP 3 BARRIERS:
1. Anonymity prevents Social Pressure (27%)
2. Need Continued Ed. on Recycling (27%)
3. Lack of Mandatory Recycling Bylaws (27%)

Additional Barriers identified:
- Lack of space and recycling bins
- Poor sense of community within building
- Hard to change habits
- High resident turnover

TOP 3 RECOMMENDED ACTIONS:
1. Develop Education & Engagement 3Rs Toolkit for Buildings(30%)
2. Activate Resident Champions & Recycling Committees (28%)
3. Dramatically Raise Garbage Fees & Reduce Recycling Costs (16%)

Additional Actions identified:

- Create 3Rs competitions between buildings
- Provide incentives for stratas to amend their strata bylaws
- NGOs & schools provide cross cultural community education
- Require adequate recycling space in new buildings
- Develop incentive program for 3Rs by government/NGOs
- Haulers measure actual weight

Stream 3 – Construction & Demolition

PARTICIPANTS' TOP 3 BARRIERS:
1. No regulation requiring deconstruction and waste diversion (43%)
2. Lack of existing infrastructure & accessibility & convenience (23%)
3. Lack of incentives & cost of disposal is too low (23%)

Additional Barriers identified:

- Difficulty in recycling small quantities of co-mingled renovation waste
- Difficult market for deconstruction materials

TOP 3 RECOMMENDED ACTIONS:
1. Provide incentives for deconstruction projects (e.g. increase tipping fee & speed of permit processing) (31%)
2. Local governments require contractor to work with licensed recycling facilities for permit (26%)
3. Promote reuse of used material (i.e. building codes) (14%)

Additional Actions identified:

- Promote Public Private Partnerships
- Provide recycle space at transfer stations
- Deconstruction companies &/or municipalities promote value of deconstruction & related activities
- Municipalities need to offer deconstruction permits ahead of demolition permits
- Local government to provide infrastructure for performance bond through construction waste management
- Metro Vancouver needs to be more cost effective to make program affordable

Stream 4 – Business & Institutions

PARTICIPANTS' TOP 3 BARRIERS:
1. Lack of enforcement(19%)
2. Lack of education(17%)
3. Perception that cost is too high(17%)

Additional Barriers identified:

- Lack of infrastructure
- Lack of convenience to workplaces
- Lack of uniformity of collection services
- Insufficient data for comparison purposes
- Lack of supply-chain accountability

TOP 3 RECOMMENDED ACTIONS:
1. Provide incentive programs (government and business) (33%)
2. Internal education by business sector and government (13%)
3. Accelerate extended producer responsibility (12%)

Additional Actions identified:

- Ingrain education at all school levels
- Public awareness and norms change
- Scaleable models based on business size
- Businesses to adopt sustainable procurement policies
- Develop case studies to promote best practices
- Municipal rezoning flexibility to accommodate infrastructure

Stream 5 – Product Design

PARTICIPANTS' TOP 3 BARRIERS:
1. Lack of Incentive to Brand Owner(28%)
2. Planned Obsolescence(28%)
3. Disposal Fee not Reflected in Production Cost(17%)

Additional Barriers identified:

- National and International Trade Agreements
- Industry Awareness and Product Development
- Lack of Consumer Empowerment
- Product Chain is not Oriented to Lower Waste
- Lack of Communication on Recyclability of Product

TOP 3 RECOMMENDED ACTIONS:

1. Force Producers to Absorb EPR Cost(21%)
2. Match EPR Product Costs with Sustainable Performance(21%)
3. Common global standards for products/packaging(21%)

Additional Actions identified:

- Disposal Fee on All Imported Goods (Government)
- International Community must include Recyclability in Trade Requirements
- Provincial Regulations to enforce recycling hierarchy for prod. responsibility
- Government to implement design incentives to make completely recyclable products

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Waste Management Committee Meeting Date: April 13, 2011

To: Waste Management Committee

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

Date: April 4, 2011

Subject: **Interim Report on Single Family Residential Waste and Recycling**

Recommendation:

That the Committee receive the report titled "Interim Report on Single Family Residential Waste and Recycling" for information.

1. PURPOSE

To present the annual figures for single-family residential garbage, recycling, and yard waste/food waste data, in response to a request by the Waste Management Committee.

2. CONTEXT

Solid waste originates from three main sectors: Single Family Residential, Institutional, Commercial & Industrial (ICI) which includes many multi-family residences, and Demolition, Land-clearing & Construction (DLC).

Metro Vancouver issues a Solid Waste Summary around July of each year which provides total garbage and recycling data for all sectors and municipalities in the region for the prior calendar year. That summary is issued only once yearly because data on waste and recycling quantities is only available to Metro Vancouver on an annual basis from the ICI and DLC sectors.

However, most municipalities are able to provide data from single-family residences on a quarterly basis. This report is the first quarterly Interim Report of that single-family residential data. While single-family residential data can be compiled more frequently, it should be noted that it represents only about 1/3 of the total waste stream. The full picture of solid waste management in the region, including private haulers and take-back (extended producer responsibility) programs will continue to be published annually.

Waste diversion is the amount of material recycled divided by the total amount of waste generated, expressed as a percentage. The following table presents the estimated waste diversion from each municipality for single-family homes, based on the data reported by the municipality. As described in the previous section, the table below does not include business sector data which is only available annually, nor multi-family residential data as private haulers usually combine that data with data from their business clients.

Municipality	Single Family Curbside Residential Diversion (%)
Anmore	23%
Belcarra*	35%
Bowen Island*	41%
Burnaby	48%
Coquitlam	52%
Delta	46%
Langley City*	58%
Langley Township	52%
Lions Bay*	37%
Maple Ridge	No residential collection by the municipality
New Westminster*	31%
North Vancouver City	49%
North Vancouver District	53%
Pitt Meadows*	38%
Port Coquitlam	59%
Port Moody	61%
Richmond	52%
Surrey*	44%
UBC*	43%
UEL	43%
Vancouver	43%
West Vancouver	56%
White Rock*	36%
Total Metro Vancouver Single Family Residential	49%

* *Diversion rate is based on 2009 data.*

3. ALTERNATIVES

None presented.

4. CONCLUSION

This quarterly Interim Report presents a snapshot of single-family residential waste and recycling data. Single-family residential data can be compiled more frequently, but represents only about 1/3 of the total waste stream. The next update report will include all sectors including the business sector and demolition, landclearing and construction sector, and is scheduled to be presented at the Waste Management Committee's July meeting.

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Waste Management Committee: April 13, 2011

To: Waste Management Committee

From: Ken Carrusca, Integrated Planning Division Manager
Policy and Planning Department

Date: April 4, 2011

Subject: **Regional Residential Waste Drop-Off (RDO) Facility in South Surrey**

Recommendation:

That the Waste Management Committee receive this report on the schedule to establish the Regional Residential Waste Drop-Off (RDO) Facility in South Surrey for information.

1. PURPOSE

To provide the Waste Management Committee with an update on the schedule to establish the regional residential waste drop-off (RDO) facility in Surrey.

2. CONTEXT

The 1995 Solid Waste Management Plan called for Metro Vancouver to provide a transfer station in Surrey and stated that "given the large land area of the municipality it may be advisable to locate a smaller satellite transfer station in the Cloverdale/South Surrey area". This smaller facility would provide the same basic waste disposal and recycling services as all regional transfer stations, but for residential drop-off (RDO) only.

In 2001, Metro Vancouver committed to work with the City of Surrey to establish the South Surrey RDO facility, as part of the process for rezoning the site for the Surrey Transfer Station in Port Kells. Attached is an excerpt from the Surrey Council minutes of December 10, 2001 which outlines commitments for the region and the city as conditions of the rezoning.

An RDO facility in South Surrey will help alleviate the demand on the regional solid waste management system. A basic RDO is a site of approximately 2 hectares in size, with permanent facilities for receiving loads of garbage delivered by residential vehicles. In addition, it is standard practice for all of Metro Vancouver's existing regional transfer stations to have containers for drop-off of common recyclable materials such as paper and cardboard, lead acid batteries, propane tanks, large appliances and other metals, mattresses, gypsum, and yard trimmings.

Capital funds have been set aside in 2012 and 2013 in Metro Vancouver's long range capital plan for the establishment of this facility. Based on conceptual design work, staff estimate that this facility will cost in the range of $7-8 million dollars. Metro Vancouver and Surrey are currently looking at potential sites for the facility, and once a site has been acquired, design of the facility can begin in 2012, with construction expected in 2013.

Longer term, the City of Surrey intends to expand this facility into an Eco-Centre at their cost.

3. ALTERNATIVES

None presented.

4. CONCLUSION

The 1995 Solid Waste Management Plan called for Metro Vancouver to provide a transfer station in Surrey and stated that “given the large land area of the municipality it may be advisable to locate a smaller satellite transfer station in the Cloverdale/South Surrey area”. In 2001, Metro Vancouver committed to providing the Surrey RDO facility as a condition for the rezoning of the site for the Surrey Transfer Station.

This smaller facility will provide the same basic waste disposal and recycling services as all regional transfer stations, but for residential drop-off (RDO) only. Staff estimate that this facility will cost in the range of $7-8 million dollars. Metro Vancouver and Surrey are currently looking at potential sites for the facility, and once a site has been acquired, design of the facility can begin in 2012, with construction expected in 2013. Longer term, the City of Surrey intends to expand this facility into an Eco-Centre at their cost.

ATTACHMENT
Excerpt from Surrey City Council Minutes of December 10, 2001

4958152

5.4 ATTACHMENT

Excerpt from Surrey City Council Minutes of December 10, 2001

14. "Surrey Zoning By-law, 1993, No. 12000, Amendment By-law, 2001, No. 14592"

7901-0266-00 - City of Surrey, c/o Greater Vancouver Regional District (Ken Carrusca) and Planet Consulting Group Inc. (Oleg Verbenkov)

IL (BL 12000) to CD (BL 12000) - Portions of 9752 - 192 Street and 9810 - 192 Street - to permit the development of a solid waste transfer station by the Greater Vancouver Sewerage and Drainage District (GVS&DD)/Greater Vancouver Regional District (GVRD).

Approved by Council: November 26, 2001

It was Moved by Councillor Hunt

Seconded by Councillor Steele

That "Surrey Zoning By-law, 1993, No. 12000, Amendment By-law, 2001, No. 14592" pass its third reading.

RES.R01-2989 Carried

It was Moved by Councillor Hunt

Seconded by Councillor Tymoschuk

That Council:

1. Direct the GVRD and the City to undertake the road system improvements proposed for 2003 as well as those proposed for 2012 within 5 years.

2. Direct the GVRD to establish a neighbourhood monitoring committee to address the communities on-going concerns.

3. Direct the GVRD to implement a comprehensive pest and rodent management program with regular monitoring throughout the year, as part of the Transfer Station's annual Operating Plan. This should be undertaken by a third party consultant with regular reports to the MOE, the City and area businesses.

4. Direct the City to undertake enhanced litter pickup around Harvie Road and 96 Avenue area.

5. Direct the GVRD to plan a second residential drop-off facility, as required in the S.W.M.P., for implementation in 3 to 4 years.

RES.R01-2990 Carried

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Waste Management Committee Meeting Date: April 13, 2011

To: Waste Management Committee

From: Ken Carrusca, Policy and Planning Department

Date: April 5, 2011

Subject: **Status of District Energy Opportunities at the Waste-to-Energy Facility**

Recommendation:

That the Waste Management Committee receive for information this report on the opportunities for establishment of district energy systems using heat from the Metro Vancouver Waste-to-Energy Facility in Burnaby.

1. PURPOSE

At its meeting on March 9, 2011, the Waste Management Committee requested an update on the status of the district energy system being proposed to service the East Fraserlands development in southeast Vancouver. This report responds to that request and provides additional information on the opportunity to establish district energy systems along a corridor from the Metro Vancouver Waste-to-Energy Facility in Burnaby to the East Fraserlands development.

2. CONTEXT

In May 2008, the Waste Management Committee received a delegation from the City of Vancouver on the topic of Vancouver's efforts to investigate a low-carbon energy opportunity for the East Fraserlands property development in Vancouver. At the time the City of Vancouver was actively investigating their role in establishing a district energy system and they were working with Parklane Homes as the primary land holder of the East Fraserlands development. This development is located on a 50 hectare site south of Marine Way between Kerr Street and Boundary.

The Board directed staff to investigate with the cities of Vancouver and Burnaby, the feasibility of district heating opportunities using heat from the Metro Vancouver Waste-to-Energy Facility. Parklane Homes had indicated a strong interest in establishing a district energy system at East Fraserlands, and there were other potential areas in Burnaby. Shortly thereafter, primarily as a result of the slow-down in the housing market, the anticipated East Fraserlands property development was delayed.

Investigations resumed, with the ownership of the district heating energy utility examined by both the City of Vancouver and Parklane Homes in 2010. The City of Vancouver decided that it would not actively engage further in establishing a district energy utility at this site, with one of the considerations in their decision being that Vancouver would have needed to own infrastructure (i.e. utility hot water piping) outside of its municipal boundaries.

District energy systems are designed to supply heat for both space heating and hot water to buildings. These systems can be described as three separate components:

(1) Energy Source
For the purposes of our discussion, this is the existing Metro Vancouver Waste-to-Energy Facility in Burnaby, along with the connections to (2), below.

(2) Heat Supply Piping
The underground insulated steel piping used to carry hot water between the Waste-to-Energy Facility and the distribution system.

(3) Distribution System
The distribution centres for the hot water within the property developments and the associated piping to service each building's individual heat demand.

Metro Vancouver is working to obtain conceptual designs and cost estimates for components (1) and (2) that are identified above, so that an overall business case can be developed and presented to the Waste Management Committee and Board for consideration. This work extends to a review of the opportunity for Metro Vancouver to own and operate component (2) as a regional energy utility. Parklane Homes has committed to a hot-water based heating system within its development – this is component (3) – and have retained professionals in designing those systems.

Discussions with staff in Burnaby have continued in order that additional energy users can be identified and pursued. The intent of Metro Vancouver's efforts are that the overall district energy system, should it be established, can also supply heat to energy users in Burnaby, or be expanded to supply heat to such users in the future.

3. ALTERNATIVES

No alternatives are presented.

4. CONCLUSION

Metro Vancouver is working to develop the business case for a district energy system using heat from the existing Metro Vancouver Waste-to-Energy Facility in Burnaby. The basis for this work is the opportunity to supply heat to the East Fraserlands development in southeast Vancouver and to other potential users in Burnaby.

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Water Committee Meeting Date: April 13, 2011
Waste Management Committee Meeting Date: April 13, 2011
Finance Committee Meeting Date: April 14, 2011

To: Water Committee
Waste Management Committee
Finance Committee

From: Tim Jervis, Manager, Engineering and Construction Department
Phil Trotzuk, Financial Planning and Operations Manager

Date: March 31, 2011

Subject: **Status of Utilities Capital Expenditures to December 31, 2010**

Recommendation:

That the Board receive the report titled *Status of Utilities Capital Expenditures to December 31, 2010,* dated March 31, 2011 for information.

1. PURPOSE

To report on the status of utilities capital expenditures. By their nature, capital projects in the utilities are typically multi-year; therefore, this report provides a comparison between the total project budgets and total projected expenditures to project completion.

2. CONTEXT

This is the third in a series of three reports on capital expenditures for 2010 which follows the Capital Expenditure reporting process as approved by the Board. This process provides for regular status reports on capital expenditures with interim reports sent to the Waste Management, Water and Finance Committees in June and October and a final year-end report to the Committees and Board in April.

In addition to this report, due to its size and complexity, separate detailed updates on the Seymour-Capilano Filtration Project are provided to the Water Committee and Board quarterly.

The capital projects are separated into two types: “Ongoing” and “Completed”. Narrative information is provided describing key aspects of specific projects and each project is presented in the context of Total Projected Project Costs to Completion as compared to the Total Approved Budget.

Appendix A contains summary information on “Ongoing Projects” and “Completed Projects”. The information presented is for Total Project Completion which will generally cover multiple years. Capital project budgets typically include a minimum contingency of 10%.

Ongoing Capital Projects:

The Water District is projecting to spend $27.97 million (2%) less than the approved total project budgets for those projects in progress and included in Schedule 1.

The Sewerage and Drainage District is projecting to spend $32.04 million (10%) less than the approved total project budgets for those projects in progress and included in Schedule 2.

Completed Capital Projects:

These are projects that have been completed during 2010, some of which extended over multiple years. Overall, the Water District and the Sewerage and Drainage District projects in this category are under spent by $8.52 million (9%) and $15.88 million (35%), respectively.

Narrative information for specific projects is presented in Appendix B with individual project financial information included as follows: Schedule 1 – Water and Schedule 2 – Sewerage and Drainage (both Liquid and Solid Waste).

ATTACHMENTS:

Appendix A: Capital Expenditure Summary Information as at December 31, 2010
Schedule 1: Water District Capital Expenditures
Schedule 2: Sewerage & Drainage District Capital Expenditures
Appendix B: Capital Project Status Information as at March 31, 2011

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Appendix A

Capital Expenditure Summary Information
As at December 31, 2010

Ongoing Projects	Total Projected Expenditures to Completion	ACE/ Total Budget	Projected Variance
Water	$1,454,555,749	$1,482,528,323	$27,972,574
Sewerage and Drainage	$289,255,965	$321,299,135	$32,043,170
Total Ongoing Projects:	**$1,743,811,714**	**$1,803,827,458**	**$60,015,744**

2010 Completed Projects	Total Actual Expenditures	ACE/ Total Budget	Variance
Water	$87,770,699	$96,286,000	$8,515,301
Sewerage and Drainage	$29,296,331	$45,176,500	$15,880,169
Total Completed Projects:	**$117,067,030**	**$141,462,500**	**$24,395,470**

Appendix B

Capital Project Status Information
As at March 31, 2011

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1. Greater Vancouver Water District

Major GVWD capital projects are generally proceeding on schedule and within budget. The following capital program items and exceptions are highlighted:

i) Drinking Water Treatment Program

- Construction of the Seymour-Capilano Filtration Project (SCFP) continues. As of the end of March 2011, twin tunnels completion is 75% and the balance of the project is at 98% overall completion. The filtration plant is complete and in operation filtering water from the Seymour source. The raw water and treated water tunnel drives were completed in October and November 2010, respectively. Raise boring of the Capilano shafts is underway and is currently projected to complete in mid-April 2011. Installation of the welded steel liner pipe is scheduled to commence in May 2011.

- Detailed design for the Coquitlam UV Disinfection project is 97% complete and work continues on completing the electrical design. The contracts for supply and delivery of low and high voltage switchgear, motor control centres, power transformers and large diameter valves have been awarded. Construction site environmental and archaeological assessments are complete and applicable permits are being acquired. Site preparation work is scheduled for spring 2011, with general construction to begin in summer 2011 and completion by late 2013.

ii) Infrastructure Growth Program

- Detailed design for Maple Ridge Main West, between the Barnston/Maple Ridge Pump Station and Abernethy Way at 232nd Street is 95% complete. Construction is scheduled in two phases in 2011 and 2013 to coordinate with Maple Ridge's road improvement program. This project will increase the capacity and reliability of water supply to Maple Ridge.

- Preliminary design of Barnston/Maple Ridge Pump Station is 100% complete. Detailed design is scheduled for completion in late 2011 and construction of the new pump station by 2013. Completion of the pump station will significantly increase water supply capacity to Langley, Surrey and Maple Ridge during the peak demand season.

- Discussions with the City of Surrey regarding siting of the Clayton Tank continue. The existing tank has structural and seismic deficiencies and needs to be enlarged to meet growing demand. An RFP is being prepared for conceptual design of a new reservoir to replace the Clayton Tank.

iii) Infrastructure Maintenance Program

- Construction tenders for the final phase of 25th Avenue Main No. 2 (Kersland Reservoir to Cambie Street/29th Avenue) was awarded in September 2010 and construction is scheduled to be completed by April 2011.

- Construction of Douglas Road Main No. 2 Phase 4 (13th Avenue Section) commenced in August 2010 and is expected to be complete by spring 2011.

- Detailed design for 16th Avenue Main No. 3 between Arbutus Street and Sasamat Street is 100% complete. The pipe supply contract was awarded in October 2010. Construction tenders are scheduled to be issued in April 2011 with construction to be complete by late 2011.

- Construction of the Hastings Street Pre-build Crossing for Douglas Road Main No. 2 was successfully completed in August to accommodate City of Burnaby's road improvement program. Pipe testing and final pavement restoration were completed in September.

iv) Infrastructure Risk Management Program

- Work on seismic upgrading of Capilano Mains No. 4 and 5 at the North Shaft of the 1st Narrows crossing has been delayed to coordinate with soil remediation being undertaken by Environment Canada at the Pacific Environmental Centre site at the south foot of Capilano Road in North Vancouver. A staged upgrade program has been developed and detailed design is substantially complete. The remediation work by Environment Canada continues to take longer than anticipated.

- Design of the new tunneled crossing of the Fraser River at Port Mann is complete. Discussions have been concluded with the Gateway Program, and property purchases and rights of way have been negotiated and signed off by both parties. This lengthy negotiation process, along with design complexities, has delayed the design phase of this project. The RFP for tunnel construction has closed and negotiations with the highest ranked proponent have been completed. This contract was recently awarded to the joint venture, McNally/Aecon.

- Preliminary design of the proposed tunneled crossing of Burrard Inlet at 2nd Narrows is underway. Data review and some geophysical work have been completed and tunnel alignment option development is underway. Exploratory drilling is expected to commence in the spring of 2011. Preliminary discussions have been held with the affected municipalities on either side of the crossing. Port Metro Vancouver has expressed an interest in this project to enhance ship passage through the Second Narrows.

- Construction of the Newton Reservoir seismic upgrade in Surrey has been awarded to Kenaiden Construction. The seismic upgrade construction is well underway and is anticipated to be complete by June 2011.

- Design of the seismic and operational upgrade of the Kennedy Reservoir in Surrey is now underway and is expected to be complete in mid-2011. Construction is anticipated to commence in fall 2011.

v) Infrastructure Upgrade Program

- The Seymour/Capilano Water Use Planning process is now underway, which includes consideration of the Capilano Hydropower project. In conjunction with the water use planning process, an RFP will be issued to update the feasibility study for this project and to assist with answering technical questions that may come from the water use planning team. This RFP is expected to be issued in spring 2011.

- Construction of the Central Park Distribution System Upgrade is approximately 80% complete and is expected to be completed by summer 2011. This project will provide increased flexibility for the operation of the water system at Central Park and increased water flows to the southern municipalities of the region.

2. Greater Vancouver Sewerage & Drainage District

a) Liquid Waste

Major GVS&DD liquid waste capital projects are generally proceeding on schedule and within budget. The following capital program items and exceptions are highlighted:

i) Infrastructure Growth Program

- FSA – Annacis Island WWTP Stage 5 Trickling Filter Pump – Construction is 85% complete with the new trickling filter pump installed and partially tested in November 2010. Due to unplanned repairs on an existing pump, the remaining work was deferred to 2011. The new pump discharge header installation work resumed in March 2011 and the project is expected to be complete in September 2011.

- FSA – Northwest Langley WWTP Phase l Upgrade – The first draft of the Project Definition Report will be submitted in April 2011 followed by the Geotechnical Assessment Technical Memo in May 2011.

- FSA – North Nicomekl Trunk Sewer No. 2 - Construction of this trunk sewer is now complete. This project provides additional capacity to service the East Langley area according to the Langley Servicing Agreement.

- FSA – South Surrey Interceptor Twinning, King George Section – Construction of Phase 1 commenced in late September 2010 and is about 65% complete. Completion of Phase 1 construction is expected by spring 2011. Detailed design and property acquisition for Phase 2 continue. Construction tenders for Phase 2 are scheduled to be issued in April 2011 after all the necessary rights-of-way have been secured.

ii) Infrastructure Maintenance Program

- VSA/NSSA – Motor Control Centre (MCC) Replacement and Control/Instrumentation Programs – These projects are progressing but continue to be behind schedule due to workload.

- VSA – Iona Island WWTP Chemically-Enhanced Polymer Treatment System – Construction of the new system was completed in June 2010, followed by decommissioning of the existing system. Record drawings and the project closure report will be completed 2nd quarter of 2011.

- FSA – Annacis Island WWTP Disinfection System – Construction and commissioning of the new system is complete. Demolition work on the existing gaseous system will commence shortly. Record drawings and closure report will be completed 2nd quarter of 2011.

- NSA – Lions Gate WWTP Digester No. 4 Refurbishment – Construction is approximately 90% complete with overall completion planned for May 2011.

- NSA – Lions Gate WWTP Sludge Control Building 1 – Design is underway and construction is planned to be complete in fall 2011.

iii) Infrastructure Risk Management Program

- VSA – Highbury Interceptor – North Arm Crossing Rehabilitation – This crossing is comprised of three 1.7m diameter siphons under the north arm of the Fraser River. These pipes carry all the flows from the City of Vancouver and parts of Burnaby to the Iona Island WWTP. The rehabilitation work involves re-lining all three siphon pipes utilizing trenchless "cured in-place pipe" technology. Phases 1 and 2 of the rehabilitation work were successfully completed in the summer of 2009 and 2010, respectively. Rehabilitation of the third and final siphon is scheduled for summer 2011.

- NSA – Lions Gate WWTP Sodium Bisulphite System Project – Design and construction are substantially complete.

iv) Infrastructure Upgrade Program

- FSA – Sapperton Pump Station – Design flows for the new pump station have now been finalized. Design is scheduled to commence in 2011 and construction is planned for 2012-2013.

- VSA – Jervis Forcemain Extension to 8th Avenue Interceptor – This project involves a combination of tunneling and conventional open-cut construction. Tunneling work commenced in July 2010 and the project is 98% complete, with final restoration completion expected by April 2011. Upon completion of this extension, the final system tie-ins and commissioning for the new Jervis Forcemain No. 2 can proceed in the spring of 2011.

- LSA – Lulu Island WWTP SHS Upgrade – Construction is complete, with testing and commissioning underway and will be complete for the start of the 2011 disinfection season.

v) *Infrastructure Opportunity Program*

- FSA – Lulu Island WWTP MicroSludge and Green Biomethane – Preliminary engineering and a capital cost estimate, together with an economic analysis and life cycle cost work have now been completed. A report to the GVS&DD Board is scheduled for the second quarter of 2011.

- FSA – Annacis Island Codigestion Facility – Construction, testing and commissioning are now complete.

- FSA – Annacis Wastewater Centre – Design of the academy building has been completed and construction is approximately 60% complete, with anticipated substantial completion in the fall of 2011.

- FSA - Annacis Island Demonstration Membrane Reclaim Water System – An RFP for design services has closed and evaluation is underway.

vi) Infrastructure Annacis Stage 5 Expansion Program

- FSA – Annacis Island WWTP Stage 5 Project Definition Study – Project definition work is 90% complete.

b) Solid Waste

i) Landfills Program

- Design work for Phase 1 of the Coquitlam Landfill gas collection system upgrade is completed. Construction is scheduled for fall 2011.

- Design work for Phase 1 of the Coquitlam Landfill leachate collection system upgrade is completed. Construction is scheduled for fall 2011.

ii) Waste-to-Energy Facility Program

- Preliminary design for the NOx Treatment System upgrade is underway. Detailed design is expected to begin in the second quarter of 2011.

- The seismic upgrade project is in the detailed design stage with completion anticipated in the third quarter of 2011. Construction is scheduled to commence in late 2011 or early 2012.

- Award of a supply contract for the Feedwater Treatment Plant upgrade is expected in the second quarter of 2011.

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Water District Capital Expenditures
As of Dec 31, 2010

8.8

Program	Project ID	Project Description	Total Project: Total Projected Project Actuals	Total Project: ACE / Total Project Budget	Total Project: Total Projected Project Variance	Note	Percent Complete	Project on Schedule? (Y/N)	Comments
		On-going Grand Totals	**1,454,555,749**	**1,482,528,323**	**27,972,574**				
		Completed Grand Totals	**87,770,699**	**96,286,000**	**8,515,301**				
ON-GOING PROJECTS									
		Seymour Capilano Filtration Project	803,796,000	820,000,000	16,204,000	(e)(h)	82%	Y	
	A0053	DWTP Second Disinfect Cons	9,900,000	9,900,000	-		99%	Y	
	A0155	Coq UV Disinfect Detail Design	5,750,000	5,750,000	-		95%	N	Equipment procurement and design delays.
	A0163	Coq UV Disinfection Construct	110,000,000	110,000,000	-		2%	Y	
Drinking Water Treatment Cap			929,446,000	945,650,000	16,204,000				
	A0034	Cape Horn Reservoir Unit 2	420,000	420,000	-		49%	Y	
	A0035	Coq Main No 4 Stg 1 Intake	1,100,000	1,100,000	-		13%	Y	
	A0036	Maple Ridge Main Stage II	780,000	780,000	-	(b)	99%	Y	
	A0037	Sasamat Pump Station	115,000	115,000	-		82%	Y	
	A0038	Sey Main No 5 Cap Coll to Bow	2,500,000	2,500,000	-		98%	Y	
	A0039	Seym Main No 5 Stg 2 Cons	1,800,000	1,800,000	-		98%	Y	
	A0041	Sey Main No 5 S Monashee Sect	4,000,000	4,000,000	-		99%	Y	
	A0042	Sey Main No 5 S River Crossing	3,700,000	3,700,000	-		98%	Y	
	A0122	Sey Main No 5 BC Hydro ROW Sec	11,500,000	11,500,000	-		99%	Y	
	A0136	Sey Main No 5 S Maplewood Sect	10,700,000	10,700,000	-		98%	Y	
	A0140	Coquitlam Intake No 2	630,000	630,000	-		52%	Y	
	A0152	Maple Ridge Main Pre-Build	3,500,000	3,500,000	-	(b)	97%	Y	
	A0164	Burnaby Mtn PS 2 Pre Design	300,000	300,000	-		70%	Y	
	A0165	16th Ave Main No 2 Design	700,000	700,000	-		99%	Y	
	A0166	16th Ave Main No 2 Construct	6,000,000	6,000,000	-		99%	Y	
	A0171	Barnston Maple Ridge PS	3,800,000	3,800,000	-	(c)	39%	Y	
	A0173	Newton Pump Station No 2	200,000	200,000	-		85%	Y	
Infrastructure Growth Cap			51,745,000	51,745,000	-				
	A0002	Des and Cons Remed E2 Shaft P1	1,500,000	1,500,000	-		95%	Y	
	A0075	Phase 2Rem Cons E2 Drain Cl Da	850,000	850,000	-		95%	Y	
	A0134	Douglas Road Main 2 Stage 1	12,500,000	12,500,000	-		99%	Y	
	A0146	Douglas Rd Main 2 Stage II	8,980,190	11,000,000	2,019,810	(a)(d)	99%	Y	
	A0150	Douglas Rd Mn2-13 Ave Sect Des	700,000	700,000	-		99%	Y	
	A0151	25th Ave Main 2 Construction	8,300,000	12,000,000	3,700,000	(a)(d)	90%	Y	
	A0168	Cleveland Dam Elevator Replace	7,300,000	7,300,000	-		10%	N	Architectural design revision.
	A0169	DRM2 Royal Oak Prebuild	2,000,000	2,000,000	-		90%	Y	
	A0170	DRM2 13th Ave Section Pipes	16,000,000	16,000,000	-		65%	Y	
	A0181	DRM2 Kincaid Section - Design	300,000	300,000	-		43%	N	Traffic control requirements under review.
	A0182	DRM2 Delta Section - Design	300,000	300,000	-		45%	Y	
	A0184	16th Ave Main No 3 Rehab Des	600,000	600,000	-		95%	Y	
	A0187	16th Ave Main No. 3	13,900,000	13,900,000	-		10%	Y	
	A0189	DRM2 Hastings Crossings	250,000	250,000	-		99%	Y	
Infrastructure Maintenance Cap			73,480,189	79,200,000	5,719,811				
	A0014	CD Fish Hatch Impact Mitig	3,603,453	3,900,000	296,547	(g)	98%	Y	
	A0018	Design Sec Narrows Tun Bur Inl	834,235	850,000	15,765		99%	Y	
	A0024	Seymour Falls Dam Seismic Cons	42,801,570	47,800,000	4,998,430	(d)	98%	Y	
	A0026	Van Hts Res Remedial Work	3,650,000	3,650,000	-		94%	Y	
	A0110	Capilano Main 5 Seismc Upg Des	1,550,000	1,550,000	-		97%	Y	Post construction monitoring.
	A0114	Cap Main 1st Narw Seis Upg Des	250,000	250,000	-		98%	Y	
	A0116	Seism Up Kers LMtn CenPk West	230,000	230,000	-		69%	Y	
	A0130	P Mann FR Xing No 2 Detail Des	3,931,182	3,900,000	(31,182)	(f)	99%	Y	
	A0135	Cambie Richm Mains Seis Const	6,760,000	6,760,000	-		99%	Y	
	A0145	Whalley Reservoir Upgrade	2,730,797	3,500,000	769,203	(a)(d)	90%	Y	
	A0160	Cleveland Dam ADAS Phase II	800,000	800,000	-		67%	Y	
	A0162	P Mann Water Supply Tunnel Con	239,000,000	239,000,000	-		2%	Y	
	A0167	Second Narrows Water Tunnel	1,500,000	1,500,000	-		36%	Y	
	A0172	Newton Res Seismic Upg Design	300,000	300,000	-		99%	Y	
	A0174	South Delta Main No 3	300,000	300,000	-		0%	N	Reviewing Water Supply needs with Delta
	A0177	Seis Upg Design 4 Pump Station	250,000	250,000	-		8%	Y	
	A0178	Newton Res Seis Upgrd Const	3,000,000	3,000,000	-		36%	Y	
	A0186	Kennedy Hts Res Seism Upg Des	500,000	500,000	-		17%	Y	
	A0188	Seymour Falls Dam ADAS Ph II	300,000	300,000	-		2%	Y	
Infrastructure Risk Mgmt Cap			312,291,236	318,340,000	6,048,764				
	A0158	Water Meter Upgrades	350,000	350,000	-		82%	Y	
	A0159	Pt Moody Connector Main Meter	400,000	400,000	-		19%	N	Design delays.
	A0161	Capilano Power Feasibil Study	250,000	250,000	-		3%	N	Coordinating with Joint Water Use Plan.
	A0175	Water Optimization Auto Instru	1,608,000	1,608,000	-		28%	Y	
	A0179	Mathers Ave Capilano Crossing	500,000	500,000	-		0%	N	RFP in progress.
	A0180	Cntrl Prk Dist Sys Opt	12,000,000	12,000,000	-		65%	Y	
	A0183	Coq. Comm. Improvements-Design	150,000	150,000	-		0%	Y	
	A0185	Cap Main No5 PH BFV Chmbr	2,600,000	2,600,000	-		9%	Y	
Infrastructure Upgrade Cap			17,858,000	17,858,000	-				
	A0149	Boundary Rd Main No 5 Phase 3	39,000,000	39,000,000	-		95%	Y	
	A0154	Boundary Rd Main No 5 BHPS	7,500,000	7,500,000	-		94%	Y	
Infrastructure Boundary Main 5 Cap			46,500,000	46,500,000	-				

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Water District Capital Expenditures
As of Dec 31, 2010

Program	Project ID	Project Description	Total Project: Total Projected Project Actuals	Total Project: ACE / Total Project Budget	Total Project: Total Projected Project Variance	Note	Percent Complete	Project on Schedule? (Y/N)	Comments
	A8000	South Fraser Perimeter Rd	554,079	554,079	-		37%	Y	
	A8001	Hwy 1 Widen and PM Bridge Twin	2,024,743	2,024,743	-		85%	Y	
	A8002	N Fraser Perimeter Pitt R Brdg	3,261,195	3,261,195	-		95%	Y	
	A8003	N Fraser Perim Lougheed Pitt M	260,000	260,000	-		7%	Y	
	A8004	Border Infrast Proj Waterworks	75,000	75,000	-		93%	Y	
	A8005	Hwy 91 Nelson Interchange	84,306	84,306	-		8%	Y	
	A8006	NFPR Coq New Westminster	50,000	50,000	-		0%	N	Project delayed by Translink.
	A8007	202 St Hwy 1 Langley BusExch	50,000	50,000	-		3%	Y	
	A8008	Evergreen Line	200,000	200,000	-		10%	N	Project delayed by Translink.
Infrastructure Relocation Cap			6,559,323	6,559,323	-				
	A0176	Kathleen Building Acquisition	16,676,000	16,676,000	-		87%	Y	
Infrastructure Opportunity Prgm Cap			16,676,000	16,676,000	-				
Total Net Revenues and Expenditures of On-going Projects			**1,454,555,749**	**1,482,528,323**	**27,972,574**				
COMPLETED PROJECTS									
Drinking Water Treatment Cap			-		-		0%		
	A0032	Barnston MR Pump Station	200,049	200,000	(49)	(c)	100%		
	A0147	Cap Main 5 Pipe Pre Purchase	8,295,350	10,000,000	1,704,650	(a)(d)	100%		
Infrastructure Growth Cap			8,495,399	10,200,000	1,704,601				
	A0050	SCADA Replacement Project	2,680,398	3,000,000	319,602	(d)	100%		
	A0119	SCADA Replacement Proj Des	401,636	500,000	98,364		100%		
	A0138	25th Ave Main RAV Project	456,079	500,000	43,921		100%		
	A0148	25th Ave Main No 2 Design	483,852	500,000	16,148		100%		
	A0156	Tilbury Angus Scour Protection	1,352,181	1,986,000	633,819	(a)(d)	100%		
Infrastructure Maintenance Cap			5,374,144	6,486,000	1,111,856				
Infrastructure Relocate Coq Dam Cap			-		-		0%		
	A0016	Little Mtn Res Seis Upg Recon	32,437,921	37,600,000	5,162,079	(a)	100%		
Infrastructure Risk Mgmt Cap			32,437,921	37,600,000	5,162,079				
Infrastructure Upgrade Cap			-		-		0%		
	A0097	Boundary Rd Main No 5 I North	21,112,171	21,500,000	387,829	(d)	100%		
	A0142	Boundary Road Main 5 Phase 2	19,353,273	19,500,000	146,727	(d)	100%		
	A0143	Boundary Rd Main 5 South Desig	997,791	1,000,000	2,209		100%		
Infrastructure Boundary Main 5 Cap			41,463,235	42,000,000	536,765				
Infrastructure Relocation Cap			-		-		0%		
Infrastructure Opportunity Prgm Cap			-		-		0%		
Total Net Revenues and Expenditures of Completed Projects			**87,770,699**	**96,286,000**	**8,515,301**				

Notes:

(a) Competitive construction market resulted in a positive variance.
(b) GVWD share - 59.80%: Maple Ridge share - 40.20% (37615 or A0036).
(c) GVWD share - 39.18%: District of Maple Ridge share - 14.09%, City of Langley 4.91%, Township of Langley - 41.82%. (A0032 and A0171)
(d) Full contingency not required.
(e) Projected final net cost to Metro Vancouver of twin tunnels component will be dependant upon the results of future litigation.
(f) Increased design engineering fees associated with complex geotechnical and structural conditions.
(g) Allowance for additional fisheries impact mitigation not required.
(h) Separate quarterly status reports for the Seymour-Capilano Filtration Project are being provided to the Water Committee and GVWD Board.

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Sewerage and Drainage District Capital Expenditures
As of Dec 31, 2010

8.8 ogram Desc? roject ID	Project Description	Total Projects: Total Projected Project Actuals	Total Projects: ACE / Total Project Budget	Total Projects: Total Projected Project Variance	Note	Percent Complete	Project on Schedule? (Y/N)	Comments
	On-going Grand Totals	**289,255,965**	**321,299,135**	**32,043,170**				
	Completed Grand Totals	**29,296,331**	**45,176,500**	**15,880,169**				
ON-GOING PROJECTS								
Z0005	NW Langley WWTP Upgrade	10,579,628	12,000,000	1,420,372	(4)	99%	Y	
Z0046	LIWWTP Stage4 Phase2 Expansion	19,687,840	26,000,000	6,312,160	(1)	99%	Y	
Z0047	AIWWTP Trickling Filter Pump	5,360,000	5,360,000	-		85%	N	Pump discharge header completion postponed to low flow season 2011.
Z0049	NLWWTP Phase 1 T2 Design	5,500,000	5,500,000	-		5%	Y	
G0003	Sapperton Forcemain Const	4,800,000	4,800,000	-		84%	N	Awaiting Sapperton Pump Station design completion.
G0004	Front St Pres Sewer Skytrain	3,750,000	3,750,000	-		95%	N	Coordinating final tie-in with Sapperton PS Design
G0033	SSI Colebrook Road Section Ph2	10,985,886	14,310,000	3,324,114	(2)(3)	99%	Y	
G0041	Sapperton Pump Station Design	1,500,000	1,500,000	-		5%	N	Project scope under review.
G0042	SSI King George Design	2,800,000	2,800,000	-		63%	Y	
G0043	NSI Port Mann Twinning	600,000	600,000	-		48%	Y	
G0044	N Nicomekl Trk Sewer No 2 Des	451,140	1,000,000	548,860	(5)	99%	Y	
G0045	BLNI Sperling Sect Design	600,000	600,000	-		4%	Y	
G0046	N Nicomekl Trk Sewer No 2 Cons	7,016,061	14,000,000	6,983,939	(5)	99%	Y	
G0048	NLWWTP Phase 1 T1 Design	3,500,000	3,500,000	-		6%	Y	
G0049	SSI K George Section Constr	30,000,000	30,000,000	-		22%	Y	
G0050	Katzie Pump Upgrade - Design	200,000	200,000	-		2%	Y	
G0051	Katzie Genset - Assessment	50,000	50,000	-		0%	Y	
SD Infrastructure Growth		107,380,555	125,970,000	18,589,445				
N0046	Cost Alloc Billing Network	5,230,000	5,230,000	-		90%	Y	
N0191	Iona Outfall Jetty Repairs PH3	700,000	700,000	-		75%	Y	
N0192	IIWWTP Sed Tanks Struct Assess	200,000	200,000	-		91%	Y	
N0214	LGWWTP Oper Bldg Ren Design	200,000	200,000	-		99%	Y	
N0287	Iona Outfall Control Chamber	531,991	650,000	118,009	(2)	91%	Y	
N0290	Iona Is WWTP Control and Ins	750,000	750,000	-		84%	Y	
N0294	IIWWTP 2005 MCC Replacement	600,000	600,000	-		79%	N	Project delayed due to workload.
N0296	Gleneagles PS 2 5 Rehab Design	400,000	400,000	-		21%	N	Project scope under review.
N0297	AIWWTP Liquid Disinfect System	1,277,862	1,390,000	112,138	(1)	99%	Y	
N0300	Gleneagles PS3 Construction	900,000	900,000	-		89%	Y	
N0303	Iona WWTP Control Instrument	750,000	750,000	-		85%	Y	
N0306	LGWWTP 2006 MCC Replacement	349,650	550,000	200,350	(1)	75%	N	Project delayed due to workload.
N0307	Iona WWTP 2006 MCC Replacement	700,000	700,000	-		37%	N	Project delayed due to workload.
N0318	FSA Sewer Repair	2,000,000	2,000,000	-		68%	Y	
N0321	LGWWTP Control Instrument 2008	300,000	300,000	-		33%	N	Project delayed due to workload.
N0322	IIWWTP Control Instrument 2008	500,000	500,000	-		7%	N	Project delayed due to workload.
N0323	LGWWTP O&M Facility Constr	300,000	300,000	-		93%	Y	
N0325	Gleneagles PS 1 Rehab	500,000	500,000	-		0%	N	Project scope under review.
N0326	IIWWTP CEPT System Replacement	5,027,909	7,000,000	1,972,091	(1)	99%	Y	
N0328	Crescent Scour Protect	1,038,000	1,038,000	-		10%	Y	
N0330	IIWWTP IPS Liner & Grit Repair	252,110	267,000	14,890	(1)	99%	Y	
N0332	AIWWTP Disinfection Const	8,298,855	13,000,000	4,701,145	(1)	98%	Y	
N0333	LGWWTP Dig 4 Refurbishment	7,360,000	7,360,000	-		78%	Y	
N0336	IIWWTP 2009 MCC Replacement	1,375,000	1,375,000	-		24%	N	Project delayed due to workload.
N0337	LGWWTP 2009 MCC Replacement	830,000	830,000	-		23%	N	Project delayed due to workload.
N0340	Lions Gate Ctrl and Instr Repl	200,000	200,000	-		0%	Y	
N0341	Iona Control and Instr Replace	500,000	500,000	-		7%	Y	
N0342	Coquitlam Intercep Repair Cons	2,830,000	3,800,000	970,000	(2)	99%	Y	
N0343	IIWWTP PA Tanks Infl Gate Repl	610,000	610,000	-		60%	Y	
N0350	NW Interceptor Grit Chamber	250,000	250,000	-		2%	N	Project scope revised.
N0351	AIWWTP PATank Corrosion Repair	4,500,000	4,500,000	-		31%	Y	
N0352	VSA IIWWTP IPS VFD replacement	900,000	900,000	-		2%	Y	
N0353	Lynn PS Prelim Design	500,000	500,000	-		24%	Y	
N0357	IIWWTP Grit Tower Replacement	2,000,000	2,000,000	-		2%	N	Project scope revised.
N0358	AIWWTP Clarifier Corrosion Rep	1,946,000	1,946,000	-		2%	Y	
N0359	LCOC roof replacement	560,000	560,000	-		2%	N	Waiting for appropriate weather to complete.
N0360	IIWWTP HVAC upgrade	2,095,000	2,095,000	-		15%	Y	
N0361	Marshend PS Rehab Construction	7,000,000	7,000,000	-		1%	N	Construction to commence after rezoning is complete
N0363	Still Creek Rehab	200,000	200,000	-		0%	Y	
N0364	SSI Rehab Construction	3,000,000	3,000,000	-		2%	N	Project scope revised.
N0365	AIWWTP MCC Replacement	2,844,000	2,844,000	-		0%	Y	
N0366	IIWWTP 12kv Feeder Replacement	897,000	897,000	-		3%	Y	
N0368	AIWWTP Gas Compressor Repl	800,000	800,000	-		0%	Y	
SD Infrastructure Maint Cap		72,003,377	80,092,000	8,088,623				
N0022	Sys Air Mgmt Odour Control	80,000	80,000	-		85%	Y	
N0056	FSA Easement Acquisition Progr	1,500,000	1,500,000	-		72%	Y	
N0067	South Surrey Inter Rehab Desgn	200,000	200,000	-		88%	Y	
N0301	Jervis FM False Creek Crossing	6,000,000	6,000,000	-		99%	Y	
N0311	Highbury Int Siphon Upgrade	500,000	500,000	-		88%	Y	
N0319	Jervis Planetarium	6,550,000	9,000,000	2,450,000	(2)	99%	Y	
N0327	LGWWTP Refurb of DSST1 Design	900,000	900,000	-		62%	Y	
N0331	Highbury Siphon Repair Const	8,000,000	8,000,000	-		65%	Y	
N0338	LGWWTP SBS System Design Const	3,495,000	3,495,000	-		74%	Y	
N0339	LGWWTP Third Influent Screen	820,000	820,000	-		60%	Y	
N0348	NLWWTP Outfall	1,500,000	1,500,000	-		4%	N	Permitting delay.
N0349	Highbury Overflow Facility	110,000	110,000	-		10%	Y	
N0362	ISMP for Port Moody Coquitlam	250,000	250,000	-		0%	N	Delay in hiring consultant.
SD Infrastructure Risk Mgmt Cap		29,905,000	32,355,000	2,450,000				
N0023	VSA Statutory Right of Way	670,000	670,000	-		63%	Y	
N0027	8th Ave Interceptor Air Mgmt	100,000	100,000	-		74%	Y	
N0028	Highbury Interceptor Air Mgmt	100,000	100,000	-		92%	Y	
N0030	Jervis St and Kent Ave Pump St	120,000	120,000	-		34%	N	Project scope revised.

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Sewerage and Drainage District Capital Expenditures
As of Dec 31, 2010

8.8

ogram Desc?	Project ID	Project Description	Total Projects: Total Projected Project Actuals	Total Projects: ACE / Total Project Budget	Total Projects: Total Projected Project Variance	Note	Percent Complete	Project on Schedule? (Y/N)	Comments
	N0043	NSSA Easement Acq 1995	225,000	225,000	-		99%	Y	
	N0064	Ventilation and Odour Control	112,500	112,500	-		2%	Y	
	N0065	NW Sewer overflow Oper Impr	1,300,000	1,300,000	-		45%	Y	
	N0066	New West Const CSO Storage Pro	4,917,000	4,917,000	-		99%	Y	
	N0069	Sapperton PS Upgrade Design	1,200,000	1,200,000	-		52%	N	Project scope revised
	N0070	Sewer Int Vent and Odour	400,000	400,000	-		90%	Y	
	N0302	Jervis PS Upgrade Construction	860,899	1,400,000	539,101	(7)	99%	Y	
	N0320	Jervis Ext to 8th Ave	975,000	975,000	-		95%	Y	
	N0324	AIWWTP Gas flow Meter Replace	542,202	542,202	-		8%	Y	
	N0334	Jervis FM Extension to 8Al	6,624,000	9,000,000	2,376,000	(2)	80%	Y	
	N0344	Cloverdale SSO Treatment	150,000	150,000	-		8%	Y	
	N0345	Katzie SSO Treatment	150,000	150,000	-		8%	Y	
	N0346	Lynn Creek SSO Treatment	750,000	750,000	-		1%	Y	
	N0356	LIWWTP SHS Upgrade Phase 2	1,000,000	1,000,000	-		66%	Y	
	N0367	Carvolth Sanitary Trunk Sewr 2	400,000	400,000	-		1%	Y	
	N0369	LIWWTP gas flowmeter repl	236,000	236,000	-		0%	Y	
SD Infrastructure Upgrade Cap			20,832,601	23,747,702	2,915,101				
	N8000	South Fraser Perimeter Rd	230,403	230,403	-		86%	Y	
	N8001	Hwy 1 Widen and PM Bridge Twin	5,714,815	5,714,815	-		96%	Y	
	N8003	BIP CTS Relocation	589,215	589,215	-		99%	Y	
SD Infrastruct Relocation Cap			6,534,433	6,534,433	-				
	X0001	VSA IONA WWTP Upgrade Design	4,000,000	4,000,000	-		34%	Y	
	X0002	NSA LG WWTP Upgrade Design	2,500,000	2,500,000	-		4%	Y	
SD Infr Sec Treat Upgrade Cap			6,500,000	6,500,000	-				
	X0006	Microsludge and Green Biometha	300,000	300,000	-		97%	Y	
	N0335	Annacis Codigestion Facility	3,500,000	3,500,000	-		79%	Y	
	N0347	Sapperton Pump Stn Sewer Heat	200,000	200,000	-		0%	N	Developer undecided until business case is complete
	N0354	Annacis Wastewater Centre	9,000,000	9,000,000	-		40%	N	Commodity piping design delay
	N0355	AIWWTP Membrain Reclaim System	400,000	400,000	-		12%	Y	
SD Infr Opportunity Prgm Cap			13,400,000	13,400,000	-				
	Z0048	Annacis Stage 5 Phase 1 T2	20,200,000	20,200,000	-		6%	Y	
SD Infr Annacis Stg 5 Exp Cap			20,200,000	20,200,000	-				
	L0022	COQ LF Flyash Cell 2 Design	200,000	200,000	-		99%	Y	
	L0023	COQ LF Flyash Cell 2 Construct	700,000	700,000	-		95%	Y	
	L0029	CLF LFG Upgrades Design	250,000	250,000	-		79%	Y	
	L0030	CLF Leachate Upgrades	750,000	750,000	-		9%	Y	
	L0032	CCLF Annex Construction	2,500,000	2,500,000	-		99%	Y	
	L0033	CLF LFG Upgrade Construction	2,850,000	2,850,000	-		0%	Y	
SW Landfills Capital			7,250,000	7,250,000	-				
	L0020	NOx Reduction Project Design	900,000	900,000	-		14%	Y	
	L0026	WTEF Seismic Detailed Design	1,000,000	1,000,000	-		40%	N	Additional design scope and complexity
	L0028	WTEF Feedwater Treatment Plant	1,050,000	1,050,000	-		10%	N	Award of supply contract expected in Q2
	L0031	WTEF FF Baghouse Constr	2,300,000	2,300,000	-		99%	Y	
SW Waste to Energy Fac Cap			5,250,000	5,250,000	-				
Total Net Revenues and Expenditures of On-going Projects			**289,255,965**	**321,299,135**	**32,043,170**				
COMPLETED PROJECTS									
	G0009	Katzie Forcemain Twinning Ke	-	600,000	600,000	(12)	100%		
	G0039	NSI 104 Ave Extension	2,388,177	2,400,000	11,823		100%		
	G0040	Maple Ridge FM No 2 Katzie Sec	571,748	1,300,000	728,252	(1)	100%		
SD Infrastructure Growth			2,959,925	4,300,000	1,340,075				
	N0001	Columbia St Pump Stn Upgr Con	10,542,217	10,650,000	107,783		100%		
	N0187	IIWWTP 2004 Motor Cont Ctr Rep	595,503	625,000	29,497		100%		
	N0193	Chilco Forcemain Replacement	1,049,454	1,430,000	380,546	(1)	100%		
	N0213	LGWWTP Raw SewPump Eng Dr Rep	1,060,386	1,750,000	689,614	(4)	100%		
	N0304	Lions Gate Control Instrument	398,414	400,000	1,586		100%		
	N0309	LGWWTP Digester4 Refurbishment	578,006	580,000	1,994		100%		
	N0315	Marshend PS Design	799,972	800,000	28		100%		
	N0329	Highbury Scour Protect	-	236,500	236,500	(8)	100%		
SD Infrastructure Maint Cap			15,023,953	16,471,500	1,447,547				
	N0310	Jervis Force Main Planetarium	499,642	500,000	358		100%		
	N0313	Coquitlam Intercept Repair Des	140,586	150,000	9,414		100%		
SD Infrastructure Risk Mgmt Cap			640,227	650,000	9,773				
	N0057	Bby S Slope Interc West Branch	-	2,300,000	2,300,000	(10)	100%		
	N0058	Cloverdale SSO Storage Fac Cns	3,359,947	3,385,000	25,053		100%		
	N0062	Burn S Slope Interc Twinning	-	1,025,000	1,025,000	(10)	100%		
	N0194	Jervis Forcemain Ext 8th Ave	288,005	300,000	11,995		100%		
	N0282	Jervis Pump Station Wet Well	-	150,000	150,000	(11)	100%		
	N0298	CloverdaleSSO Storage Facility	4,164,626	4,195,000	30,374		100%		
	N0312	Lynn Branch Siphon Twinning	-	300,000	300,000	(9)	100%		
	N0314	Port Moody PS Odour Construct	1,323,312	1,500,000	176,688	(1)(2)	100%		
SD Infrastructure Upgrade Cap			9,135,889	13,155,000	4,019,111				
	N8002	Cloverdale Sew Relocate Design	99,917	100,000	83		100%		
SD Infrastruct Relocation Cap			99,917	100,000	83				
	X0004	Lulu Biogas Microsludge Design	-	400,000	400,000	(6)	100%		

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Sewerage and Drainage District Capital Expenditures
As of Dec 31, 2010

8.8 ogram Desc	Project ID	Project Description	Total Projects: Total Projected Project Actuals	Total Projects: ACE / Total Project Budget	Total Projects: Total Projected Project Variance	Note	Percent Complete	Project on Schedule? (Y/N)	Comments
	X0005	Lulu Biogas Microsludge Constr	-	8,600,000	8,600,000	(6)	100%		
SD Infr Opportunity Prgm Cap			-	9,000,000	9,000,000				
	L0024	WTEF Fabric Filter Baghouse	182,991	200,000	17,009		100%		
	L0025	WTEF Air Cooled Condenser	131,273	150,000	18,727		100%		
	L0027	WTEF Clean Room Construction	1,122,156	1,150,000	27,844		100%		
SW Waste to Energy Fac Cap			1,436,420	1,500,000	63,580				
Total Net Revenues and Expenditures of Completed Projects			**29,296,331**	**45,176,500**	**15,880,169**				

Notes:

(1) Project will be completed under budget - savings due to competitive pricing.
(2) Full contingency not required.
(3) Soil conditions better than expected.
(4) Reduction in scope.
(5) Savings due to revised final alignment.
(6) Project cancelled by GVS&DD Board.
(7) Odour unit deleted from project scope.
(8) Project cancelled. Protective cover over main better than expected.
(9) Project replaced by Lynn Creek SSO Treatment.
(10) Project cancelled. Current sewer capacity remains adequate.
(11) Current conditions in pump station considered adequate.
(12) Need for this twinning project has been superceded by upgrade in the downstream system.

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Waste Management Committee Meeting Date: April 13, 2011

To: Waste Management Committee

From: Heather Schoemaker, Manager, Corporate Relations

Date: April 5, 2011

Subject: **Attendance at the Recycling Council of British Columbia's (RCBC) Zero Waste Conference, Whistler, June 8-10, 2011**

Recommendation:

That the Board authorize the Chair to appoint a Metro Vancouver Director to attend the RCBC Zero Waste Conference, June 8-10, 2011 in Whistler.

1. PURPOSE

To seek Board authorization for a Metro Vancouver Director to attend the RCBC Zero Waste Conference taking place in Whistler June 8-10, 2011.

2. CONTEXT

The Recycling Council of British Columbia (RCBC) will hold their annual conference in Whistler, BC June 8-10, 2011. The theme of the conference is Zero Waste, specifically Extended Producer Responsibility (EPR), which is an important component of Metro Vancouver's Integrated Solid Waste and Resource Management Plan currently before the province. The keynote speaker is Glenn Monroe, a consultant to Environment Canada, speaking on the topic of applying more visible end-of-life recycling fees to products as they are purchased.

Metro Vancouver has submitted presentations for consideration by the conference organizers and will host a booth including MetroVancouverRecycles.org and video highlights of the Zero Waste Challenge Conference.

Estimated costs to attend the conference are as follows:

Accommodation	$ 405 (3 x $135)
Remuneration	$ 1,932 (3 x $644)
Per Diem	$ 259 (3 x $86.35)
Registration Fee	$ 545
Mileage	$ 137 (132 km)
Total	$ 3,278

3. ALTERNATIVES

The Board may:

a) Approve the attendance a Metro Vancouver Director at the RCBC Zero Waste Conference; or
b) Recommend an alternative course of action; or
c) Take no further action.

4. CONCLUSION

RCBC will host its annual conference in Whistler June 8-10, 2011. The focus of the conference is zero waste and more specifically EPR. Participation at the conference provides an opportunity to continue the discussion initiated at Metro Vancouver's recent Zero Waste Challenge Conference, with an important audience that includes municipalities, businesses and the provincial government.

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Waste Management Committee Meeting date: April 13, 2011

To: Waste Management Committee

From: Toivo Allas, Manager, Policy and Planning Department

Date: March 22, 2011

Subject: **Manager's Report**

Recommendation:

That the Waste Management Committee receive for information the report dated March 22, 2011 titled "Manager's Report".

1. New EPR Programs in 2011 – Toivo Allas

Four new Extended Producer Responsibility (EPR) programs will begin in 2011: Small Appliances (July 1), Smoke/Carbon Monoxide Detectors (tentatively July), Lead-Acid Batteries (July 1), and Antifreeze (July 1). Most of these programs have been conducting public consultation during early 2011. Metro Vancouver continues to review and provide input to the industry stewards and the Provincial government on the development of these EPR programs. In addition, as these programs come online, Metro Vancouver will add these to the list of "prohibited items". Metro Vancouver enforces its restrictions on "prohibited items" through random inspections of loads, with a charge of $50 plus removal/cleanup costs added if prohibited items are found.

2. Table of 2011 Priorities – Toivo Allas

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

ATTACHMENT:
Waste Management Committee 2011 Workplan

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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**

2nd 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