



AGENDA

WASTE MANAGEMENT COMMITTEE Regular Meeting

**Wednesday, September 17, 2008
1:00 p.m.**

**2nd Floor Boardroom
4330 Kingsway, Burnaby, British Columbia**

Please advise Grace Santos-Ocampo at (604) 432-6253 if you are unable to attend.

Chair, Director Marvin Hunt, Surrey
Vice Chair, Director Pamela Goldsmith-Jones, West Vancouver
Councillor Mary-Wade Anderson, White Rock
Councillor Ernie Daykin, Maple Ridge
Councillor Fin Donnelly, Coquitlam
Director Ralph Drew, Belcarra
Councillor Dan Johnston, Burnaby
Councillor Craig Keating, North Vancouver City
Director Peter Ladner, Vancouver
Director Joe Trasolini, Port Moody
Director Wayne Wright, New Westminster

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September 9, 2008

NOTICE TO THE GVRD WASTE MANAGEMENT COMMITTEE

You are requested to attend a Regular Meeting of the GVRD Waste Management Committee to be held at 1:00 pm on September 17, 2008 in the 2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

A G E N D A

1. ADOPTION OF THE AGENDA

1.1 September 17, 2008 Regular Meeting Agenda

Staff Recommendation:

That the Waste Management Committee adopt the agenda for its regular meeting scheduled for September 17, 2008 as circulated.

2. ADOPTION OF THE MINUTES

2.1 July 9, 2008 Regular Meeting Minutes

Staff Recommendation:

That the Waste Management Committee adopt the minutes of its regular meeting held July 9, 2008 as circulated.

3. DELEGATIONS

No items presented.

4. INVITED PRESENTATIONS

No items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Metro Vancouver's Draft Liquid Waste Management Plan Progress Report

Designated Speaker: Fred Nenninger

Recommendation:

That the Waste Management Committee receive the report titled "Metro Vancouver's Draft Liquid Waste Management Plan Progress Report" for information.

5.2 Update on the Development of the Solid Waste Management Plan

Designated Speaker: Toivo Allas

Recommendation:

That the Committee receive for information the report titled "Update on the Development of the Solid Waste Management Plan."

5.3 Metro Vancouver Packaging Symposium

Designated Speaker: Andrew Marr

Recommendation:

That the Waste Management Committee receive for information the report dated September 5, 2008, titled “Metro Vancouver Packaging Symposium”.

5.4 Management of Disposable Shopping Bags

Designated Speaker: Andrew Marr

Recommendation:

That the Board recommend that (a) Metro Vancouver work with local business associations to encourage the charging of nominal fees for disposable shopping bags, and (b) each member municipality consider implementing a bylaw that requires retailers to charge for disposable shopping bags.

5.5 Amendment – North Shore Sewerage Area Boundary – Lower Seymour Conservation Reserve

Designated Speaker: Mike Stringer

Recommendation:

That the Board approve the expansion of the North Shore Sewerage Area to include the footprints of the Seymour Capilano Filtration Plant, Rice Lake Gatehouse, Learning Lodge, LSCR Operations and Bone Yard as shown on plan SA-2282, Sheet 3 and described in the report titled “Amendment – North Shore Sewerage Area Boundary – Lower Seymour Conservation Reserve”.

5.6 Manager’s Report

Designated Speaker: Toivo Allas

Recommendation:

That the Waste Management Committee receive for information the report dated August 28, 2008, titled “Manager’s Report”.

6. INFORMATION ITEMS

- 6.1** Correspondence from Rod Muir, Waste Diversion Campaigner, The Sierra Club of Canada to Waste Management Committee Chair Marvin Hunt dated September 5, 2008 regarding *Metro Vancouver Draft Solid Waste Management Plan*.

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 September 17, 2008.

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 1:04 p.m. on Wednesday, July 9, 2008 in the 2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

PRESENT:

Chair, Director Marvin Hunt, City of Surrey
Vice Chair, Director Pamela Goldsmith-Jones, District of West Vancouver
(departed at 2:59 p.m.)
Councillor Mary-Wade Anderson, City of White Rock
Councillor Ernie Daykin, District of Maple Ridge
Councillor Fin Donnelly, City of Coquitlam
Director Ralph Drew, Village of Belcarra
Councillor Dan Johnston, City of Burnaby
Councillor Craig Keating, City of North Vancouver
Director Peter Ladner, City of Vancouver
Director Joe Trasolini, City of Port Moody

ABSENT:

Director Wayne Wright, City of New Westminster

STAFF:

Johnny Carline, Commissioner/Chief Administrative Officer
Toivo Allas, Manager, Policy and Planning Department
Tom Heath, 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 July 9, 2008 Regular Meeting Agenda

It was MOVED and SECONDED

That the Waste Management Committee:

- a) amend the agenda for its regular meeting scheduled for July 9, 2008 by:
 - i. adding item 3.2 Marco A. Murillo, Skillful People Inc
 - ii. adding item 3.3 Neil Powell, McBride Sapperton Residents' Association of New Westminster
 - iii. adding a cover report to item 5.6 Amendment – Fraser Sewerage Area Boundary – 16th Avenue and 52nd Street, Corporation of Delta
 - iv. withdrawing item 5.10 Communications, Public Education and Outreach Strategy: Update Report
 - v. adding item 5.14 Metro Vancouver's Solid Waste Management Planning
 - vi. adding item 6.4 Concerns about Proposed Waste to Energy Facilities; and
- b) adopt the agenda as amended.

CARRIED

2. ADOPTION OF THE MINUTES

2.1 May 14, 2008 Regular Meeting Minutes

It was MOVED and SECONDED

That the Waste Management Committee adopt the minutes of its regular meeting held May 14, 2008 as circulated.

CARRIED

2.2 June 11, 2008 Special Meeting Minutes

It was MOVED and SECONDED

That the Waste Management Committee adopt the minutes of its special meeting held June 11, 2008 as circulated.

CARRIED

3. DELEGATIONS

3.1 Helen Spiegelman, Zero Waste Vancouver

Helen Spiegelman, on behalf of Zero Waste Vancouver, informed the Committee that Zero Waste Vancouver launched a campaign on June 25, 2008 opposing development of Waste-to-Energy facilities in Metro Vancouver. The proposal to build three to six Waste-to-Energy facilities is incompatible with the Zero Waste philosophy; the presenter requested that the Committee shift its focus to enforcement of community and producers responsibility for garbage generated. Zero Waste Vancouver will co-operate with Metro Vancouver on the development of a Solid Waste Management Plan.

3.2 Marco A. Murillo, Skillful People Inc.

Marco A. Murrillo, Skillful People Inc., proposed to the Committee that the Canfor Site be used for synthetic soil manufacturing rather than as a site for a Waste-to-Energy facility. The synthetic soil would be produced at the Canfor site in New Westminster Braid Industrial complex, where materials to create the synthetic soil, like wood waste chips, organics, sand, silt aggregates, and calcium sulphate (secondary fertilizer), are readily available. Wood chips are produced by Urban II Recycling and Fuels Ltd., sorted sand and silt aggregates from dredging are available by the riverside, and calcium sulphate is available from New West drywall (a drywall recycling company).

The Committee encouraged the presenter to submit his proposal as a Request for Information and Qualifications for Processing of Source-Separated, Readily Biodegradable Organics.

3.3 Neil Powell, McBride Sapperton Residents' Association of New Westminster

Neil Powell, President, McBride Sapperton Residents' Association of New Westminister, spoke in opposition to a Waste-to-Energy (WTE) facility proposed for the Canfor site in New Westminister. He expressed the following concerns:

- No public consultations concerning the location of an incinerator were held in New Westminister
- Impact of the increased truck traffic (to and from the WTE facility) on New Westminister's residents and businesses
- Known and unknown effect of incinerators on health of the residents in the area
- Impact of the incinerator on the Brunette River, a sensitive, salmon bearing river
- Close proximity of the facility to Royal Columbian Hospital
- Costs of the construction of incineration
- Incinerating technologies being favoured in the upcoming Solid Waste Management Plan.

The presenter asked the Committee to consider the impact of a Canfor facility on the industrial area and the surrounding neighbourhood and requested that the Committee shifts its focus on increased recycling efforts and increased extended producer responsibility instead of incineration.

4. INVITED PRESENTATIONS

4.1 Solid Waste Management Plan Reference Panel

Brock Macdonald, on behalf of the Solid Waste Management Plan (SWMP) Reference Panel, provided an outline of the SWMP Reference Panel recommendations:

- Set clear targets and direction (focus on reduction of waste rather than management of waste)
- Be a leader in public education and engagement (be a leader in public education, simplify messaging, focus on program delivery rather than duplication of messaging)
- Support Extended Producer Responsibility (play integrating role in the discussions with member municipalities, other regional districts and senior government)
- Create clear roles for municipalities (such as through mandated diversion planning through demolition and building permit process)
- Encourage and support private sector investment (such as recycling parks)

Report titled "Metro Vancouver Solid Waste Reference Panel Recommendations" was distributed at the meeting and is retained with the July 9, 2008 Waste Management Committee agenda package.

4.2 Liquid Waste Management Plan Reference Panel

Kim Stephens and Christianne Wilhelmson, on behalf of the Liquid Waste Management Plan (LWMP) Reference Panel, provided an outline of the LWMP Reference Panel findings and recommendations. The following was highlighted:

- Consider changing the name of the plan to the Liquid Resource Management Plan
- The panel did not have sufficient time to fully discuss issues
- The panel endorses the goals, strategies and action categories with the following amendments :
 - Protect public health and the environment, with emphasis on the receiving environment
 - Manage liquid resources affordably and effectively with emphasis on resource recovery
- The two core strategies governing the plan are:
 - Reduce what needs to be conveyed and or treated: source control (toxins), inflow and infiltration (particularly on private land), rainwater runoff volume (from private lands)
 - Close the loop so that environmental impacts are greatly reduced (green infrastructure)
- An integrated, adaptable, innovative and affordable approach to liquid waste management must be adopted to achieve livability and sustainability objectives
- Success of the plan depends on the vision, leadership from the region and the Waste Management Committee, integration in systems, innovation, and affordable solutions
- To ensure financial sustainability, consider life-cycle costs
- Concern that the upgrades of the primary treatment plants will take place first in 12 to 22 years
- Sewage treatment management planning should be considered in terms of a return on investment rather than cost recovery
- Concerns about unfunded municipal liabilities resulting from the need for perpetual reinvestment in sewerage infrastructure (storm water management) – consider a different approach, an integrated solution
- A design with nature approach and reuse of resources are key to climate change adaptation which must be part of the plan
- Work with staff on the proposed actions and together we will do it right

5. REPORTS FROM COMMITTEE OR STAFF

Agenda Varied

The Committee proposed to receive jointly items 5.1 to 5.5 and items 5.7 and 5.8.

5.1 Strategy for Updating the Liquid Waste Management Plan: Consultation Program Results

Report dated June 12, 2008 from Marie Griggs, Public Involvement Division Manager, Engineering and Construction Department, summarizing the consultation program and the input received on the proposed strategies for updating the Liquid Waste Management Plan between March 6 and May 30, 2008.

2:59 p.m.

Director Goldsmith-Jones departed the meeting.

5.2 Strategy for Updating the Solid Waste Management Plan: Consultation Program Results

Report dated June 12, 2008 from Marie Griggs, Public Involvement Division Manager, Engineering and Construction Department, summarizing the consultation program and the input received on the proposed strategies for updating the Solid Waste Management Plan between March 6 and May 30, 2008.

Request of staff

Staff was requested to email the Committee the executive summary of the Life Cycle Assessment.

5.3 Metro Vancouver's Draft Liquid and Solid Waste Management Plans

Report dated June 26, 2008 from Fred Nenninger, Regional Utility Planning Division Manager, Policy and Planning Department, providing an update on the status of the draft Liquid and Solid Waste Management Plans.

5.4 Metro Vancouver's Participation in Canada's First National Engineering Vulnerability Assessment of Public Infrastructure

Report dated June 26, 2008 from Brent Burton, Senior Engineer, Policy and Planning Department, informing about the engineering vulnerability assessment of public infrastructure project and outlining some of the key findings.

5.5 2007 North American Waste Management Systems Comparison Study: Outstanding Communities and Programs in North America and Beyond

Report dated June 10, 2008 from Albert van Roodselaar, Utility Analysis and Environment Division Manager, Policy and Planning Department, informing about the Metro Vancouver study titled "2007 North American Waste Management Systems Comparison Study: Outstanding Communities and Programs in North America and Beyond" and outlining recommendations for increasing waste diversion in the region.

Request of Staff

Staff was requested to consider inclusion of per person footprint (production of solid waste per person) as follow up information.

5.6 Amendment – Fraser Sewerage Area Boundary – 16th Avenue and 52nd Street, Corporation of Delta

The order of the agenda was varied to consider Item 5.6 later in the meeting.

5.7 Waste-to-Energy Facility 2007 Financial Update

Report dated June 3, 2008 from Chris Allan, Senior Engineer, Engineering and Construction Department, providing a 2007 financial update for the Metro Vancouver Waste-to-Energy facility as per recommendations from an Internal Audit.

- 5.8 GVS&DD/Wastech Comprehensive Agreement – 2007 Financial Results**
Report dated June 13, 2008 from Dennis Ranahan, Senior Engineer, Engineering and Construction Department, providing the year 2007 financial results for the GVS&DD/Wastech Comprehensive Agreement.

It was MOVED and SECONDED

That the Board receive for information the following reports:

- the report titled *Strategy for Updating the Liquid Waste Management Plan: Consultation Program Results* dated June 12, 2008;
- the report titled *Strategy for Updating the Solid Waste Management Plan: Consultation Program Results* dated June 12, 2008; and
- the report dated June 13, 2008 titled “GVS&DD/Wastech Comprehensive Agreement – 2007 Financial Results”.

That the Waste Management Committee receive for information the following reports:

- the report titled “Metro Vancouver’s Draft Liquid and Solid Waste Management Plans” for information.
- the report, dated June 26, 2008, titled “Metro Vancouver’s Participation in Canada’s First National Engineering Vulnerability Assessment of Public Infrastructure” and be advised that the recommended strategies to adapt to climate change are being incorporated into the updated Liquid Waste Management Plan;
- the report, dated June 10, 2008, titled “2007 North American Waste Management Systems Comparison Study: Outstanding Communities and Programs in North America and Beyond” and be advised that the recommended strategies to increase the region’s waste diversion rate are being considered in the new draft Solid Waste Management Plan; and
- the report titled “Waste-to-Energy Facility - 2007 Financial Update”, dated June 3, 2008.

CARRIED

Agenda Resumed

The order of the agenda resumed with Items 5.6, and 5.9 to 5.14 being before the committee.

- 5.6 Amendment – Fraser Sewerage Area Boundary – 16th Avenue and 52nd Street, Corporation of Delta**

On-table report dated July 3, 2008 from Mike Stringer, Senior Engineer, Policy and Planning Department, together with report dated May 13, 2008 from Mike Stringer, Senior Engineer, Policy and Planning Department, responding to a request from the Corporation of Delta for GVS&DD approval to amend the Fraser Sewerage Area boundary.

It was MOVED and SECONDED

That the Board approve the expansion of the Fraser Sewerage Area to include the area located west of 52nd Street along 16th Avenue in the Corporation of Delta as shown on plan SA-2376, Sheet 36 and described in the report titled "Amendment – Fraser Sewerage Area Boundary – 16th Avenue and 52nd Street, Corporation of Delta".

CARRIED

Councillor Donnelly voted in the opposition.

- 5.9 Powell River Regional District – Waste Disposal Agreement Renewal**
Report dated June 24, 2008 from Dennis Ranahan, Senior Engineer, Engineering and Construction Department, seeking authorization to renew the existing GVS&DD/Powell River Regional District Agreement for Waste Disposal at Cache Creek under the existing terms and conditions for a further one year term expiring December 31, 2009.

It was MOVED and SECONDED

That the Board authorize the Commissioner to:

- a) Renew the existing GVS&DD/Powell River Regional District Agreement for Waste Disposal at Cache Creek under the existing terms and conditions for a one year term expiring December 31, 2009, subject to the necessary approvals being obtained by the Powell River Regional District from the Thompson Nicola Regional District and the Village of Cache Creek; and
- b) Carry out any amendments to other agreements as necessary to effect the above.

CARRIED

- 5.10 Communications, Public Education and Outreach Strategy: Update Report**

Pursuant to item 1.1, the item was withdrawn.

- 5.11 Solid and Liquid Waste Management Plans Reference Panels: Amendment to the Terms of Reference**

Report dated June 12, 2008 from Marie Griggs, Public Involvement Division Manager, Engineering and Construction Department, seeking an amendment of the Terms of Reference for the Solid Waste Management Plan and Liquid Waste Management Plan Reference Panels such that the current consultation period from "April to June 2008" be modified to allow the Panels to provide input to Metro Vancouver until the submission of the draft plans to the Board for final approval.

It was MOVED and SECONDED

That the Board amend the Terms of Reference for the Solid and Liquid Waste Management Plans Reference Panels to extend their mandate until the draft plans are submitted to the Metro Vancouver Board for final approval.

CARRIED

- 5.12 Status of Utilities Capital Expenditures to April 30, 2008**

Report dated May 30, 2008 from Tim Jervis, Manager, Engineering and Construction Department and Phil Trotsuk, Financial Planning and

Operations 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, 2008*, dated May 30, 2008 for information.

CARRIED

5.13 Manager's Report

Toivo Allas, Manager, Policy and Planning Department, informed the Committee that the Request for Information and Qualifications (RFIQ) for Processing of Source-Separated, Readily Biodegradable Organics will close at 4 p.m. on July 9, 2008. Staff will provide an update on the RFIQ at the September Waste Management Committee meeting.

Members requested an update on the status of the Solid Waste Composition Study.

Request of Staff

Staff was requested to provide the Solid Waste Composition to committee members.

It was MOVED and SECONDED

That the Waste Management Committee receive for information the report dated June 18, 2008, titled "Manager's Report".

CARRIED

5.14 Metro Vancouver's Solid Waste Management Planning

On-table report dated July 4, 2008 from Johnny Carline, Commissioner/Chief Administrative Officer, following-up on actions pertaining to the development of Metro Vancouver's Solid Waste Management Plan.

Distinct Proposition

Councillor Keating requested that the recommendation be separated into distinct propositions.

It was MOVED and SECONDED

That the Board direct staff to issue a non-binding call for an Expressions of Interest (EOI) inquiring as to the current availability of existing solid waste disposal/ processing options in the United States. Following receipt and screening of the submissions that are received, public consultation on the options under consideration will be carried out.

CARRIED

Councillors Donnelly, Johnston and Keating voted in the negative.

The Committee expressed concern about the perception that the waste disposal technologies for the new Solid Waste Management Plan (SWMP) have been decided. The Committee proposed to table the recommendation canvassing municipalities for availability of potential waste-to-energy or other technologies areas or site.

The Committee was informed that the SWMP has to specify sites for waste disposal facilities. Discussion ensued on pros and cons of determining waste disposal facility site prior to making decision on waste disposal technologies. Concerns were expressed about determining facility locations prior to making decision on technologies; members reasoned that site requirements will vary based on technology and/or a combination of technologies used. The Committee requested that their concerns be conveyed to the Ministry of Environment at the upcoming meeting.

It was MOVED and SECONDED

That the Waste Management Committee receive for information the report dated July 4, 2008, titled "Metro Vancouver's Solid Waste Management Planning".

CARRIED

It was MOVED and SECONDED

That the Board canvass member municipalities on potential areas or sites which they would make available and where potential waste-to-energy or other technologies could be integrated into existing land use or proposed land development, giving particular attention to the available synergies of coupling to existing or proposed district energy systems.

CARRIED

6. INFORMATION ITEMS

- 6.1** Correspondence from Dennis Back, Director of Administrative Services, District of North Vancouver to Board Chair Lois Jackson dated May 7, 2008 regarding *Metro Vancouver Exporting of Solid Waste*.
- 6.2** Correspondence from Bill Rempel, President of the Downtown Vancouver Business Improvement Association to Board Chair Lois Jackson dated May 5, 2008 regarding *Implementation of a Dumpster Free Program*.
- 6.3** Email correspondence and vision flow-chart from Brent Hansen Environmental, dated June 11, 2008 for information.
- 6.4** **Concerns about Proposed Waste to Energy Facilities**
On-table letter dated July 8, 2008 from Elaine Golds, Conservation Chair, Burke Mountain Naturalists, to Chair Hunt and the Waste Management Committee, expressing concerns about proposed waste to energy facilities.

It was MOVED and SECONDED

That the Waste Management Committee receive for information the following:

- 6.1 Correspondence from Dennis Back, Director of Administrative Services, District of North Vancouver to Board Chair Lois Jackson dated May 7, 2008 regarding *Metro Vancouver Exporting of Solid Waste*.

- 6.2 Correspondence from Bill Rempel, President of the Downtown Vancouver Business Improvement Association to Board Chair Lois Jackson dated May 5, 2008 regarding *Implementation of a Dumpster Free Program*.
- 6.3 Email correspondence and vision flow-chart from Brent Hansen Environmental, dated June 11, 2008 for information.
- 6.4 Concerns about Proposed Waste to Energy Facilities

CARRIED

7. OTHER BUSINESS

No items presented.

8. RESOLUTION TO CLOSE MEETING

No items presented.

9. ADJOURNMENT

It was MOVED and SECONDED

That the Waste Management Committee conclude its regular meeting of July 9, 2008.

CARRIED

(Time: 4:10 p.m.)

Klara Kutakova,
Assistant to Regional Committees

J. Marvin Hunt, Chair

REPORTS FROM COMMITTEE OR STAFF

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Waste Management Committee Meeting Date: September 17, 2008

To: Waste Management Committee

From: Fred Nenninger, Division Manager
Regional Utility Planning

Date: August 18, 2008

Subject: **Metro Vancouver's Draft Liquid Waste Management Plan Progress Report**

Recommendation:

That the Waste Management Committee receive the report titled "Metro Vancouver's Draft Liquid Waste Management Plan Progress Report" for information.

1. PURPOSE

To update the Waste Management Committee on the status of the draft Liquid Waste Management Plan.

2. CONTEXT

At their meeting on February 29, 2008, the Board directed staff to proceed with consultation on the discussion document titled "Strategy for Updating the Solid Waste and Liquid Waste Management Plans". The input received from this consultation process was summarized and considered in developing the Draft Plans.

The five-year review and updating of the Plan is being based on the sustainability principles that have now been adopted by the Board. The Plan is also being re-written using the sustainability framework structure and is being prepared based on a goals, strategies, actions and measures format.

A key new direction in the updated Plan will be an increased focus on the recovery of materials and energy intrinsic in utility systems. The opportunities associated with integrated resource management will lead to more sustainable on-site development that more fully integrates materials and energy related to drinking water, liquid waste and solid waste management. These opportunities will be particularly relevant for new developments and municipalities are expected to play a key role as new approaches and technologies are utilized at the building-site level. Over time this will have an impact by reducing the size of the centralized facilities.

Staff has met with the Regional Engineers Advisory Committee (REAC) and their Liquid Waste Sub-Committees to review and further develop the Draft Plan. A joint REAC and REAC Liquid Waste Sub-Committee workshop was held in July with a particular focus on the municipal actions in the Draft Liquid Waste Management Plan.

The Draft Plan is being considered at the September REAC and RAAC (Regional Administrative Advisory Committee) meetings and will be presented to the Committee and Board in October. It will also be ready to distribute to the LWMP Reference Panel, which will provide further input to the Committee on the specific strategies and actions being proposed in the Draft Plan.

Once approved, the Draft Plan will be ready for the next stage of consultation. The consultation strategy for the Draft Plan is being developed and staff continues to work with the Ministry of Environment to confirm the next steps for consultation with the public and senior agencies.

3. ALTERNATIVES

No alternatives are presented.

4. CONCLUSION

Metro Vancouver has worked with the Regional Engineers Advisory Committee (REAC) to finalize Metro Vancouver's Draft Liquid Waste Management Plan for presentation to the Waste Management Committee in October.



Waste Management Committee Meeting Date: September 17, 2008

To: Waste Management Committee
 From: Toivo Allas, Manager of Policy and Planning
 Date: September 3, 2008
 Subject: **Update on the Development of the Solid Waste Management Plan**

Recommendation:

That the Committee receive for information the report titled "Update on the Development of the Solid Waste Management Plan."

1. PURPOSE

To provide the Waste Management Committee with an update on the development of the Solid Waste Management Plan.

2. CONTEXT

Development of an Amended Solid Waste Management Plan

At a Special Meeting of the Metro Vancouver (GVS&DD) Board held on July 25, 2008, the following resolution was adopted:

"That the Board direct staff to pursue the development of an amended Solid Waste Management Plan by sequentially carrying out the following actions:

- i. Develop a report setting out the strategies and actions recommended by Metro Vancouver staff to achieve a 70% waste diversion target by 2015;
- ii. Develop a report by an outside consultant assessing the relative characteristics and merits of landfills and waste to energy (various technologies) as means to process or dispose of the remaining 30% of the waste stream;
- iii. Consult with the community, municipal staff, First Nations and stakeholders on these two reports;
- iv. Report back to the Board, through the Waste Management Committee on the results of these consultations and the implications for an amended Metro Vancouver Solid Waste Management Plan."

The 3Rs – Reduce, Reuse, and Recycle

Metro Vancouver staff have been working throughout the summer to develop detailed strategies, actions and implementation steps that will form the components of the amended Solid Waste Management Plan which will need to be implemented to achieve the 70%

waste diversion targets. This combination of activities will be addressed through the well-known 3Rs of reduce, reuse and recycle. These strategies, actions and implementation steps will target single and multi-family residential waste handled directly by most municipalities; light industrial, commercial and institutional (ICI) waste that is handled largely by the private sector; and demolition, landclearing, and construction (DLC) waste.

A variety of management methods will be used such as material disposal bans, restrictions or regulations; financial incentives and penalties; variable fees for different materials; expanded producer responsibility (i.e. "EPR" or take back or deposit systems); and communication, education, and other outreach activities. Collectively, the strategies, actions and implementation steps will address a wide variety of materials that can be diverted from disposal – prominently among them are household and restaurant / commercial organic waste; paper, cardboard and other packaging; and wood. So while the actions may encompass different sectors (i.e. residential, ICI, DLC), different materials (e.g. organics, paper, wood) and different management mechanisms (i.e. disposal bans, EPR) they will be integrated into a comprehensive strategy that will form part of the new plan.

The 4th and 5th Rs – Recovery of Energy and Residual Disposal

On the basis that Metro Vancouver can attain its 70% waste diversion target by 2015 there will still be a need to manage the remaining 30% of the waste stream. This refers to the 4th and 5th R of recovery of energy and residuals management, which together with the first 3Rs comprise the 5Rs solid waste management hierarchy. As per part (ii.) of the July 25, 2008 Board recommendation, an outside consultant has been retained in order to assess the relative merits of processing the residual materials through some form of waste-to-energy process (the 4th R), or alternatively simply disposing them at landfill (the 5th or last R of the hierarchy). The consultant's work will include a comprehensive review of widely used processes as well as other technologies such as gasification, plasma, refuse-derived fuel, etc. compared to disposal options and will speak to the environmental, financial and social impacts of each.

The intent is to present the goals, strategies and actions to achieve 70% waste diversion along with the consultant's report assessing the options on handling the 30% residual material at a future meeting of the Committee and Board, with a recommendation that both reports be taken out to the community for comment.

3. ALTERNATIVES

This report is presented to the Committee for information.

4. CONCLUSION

Metro Vancouver is working with its member municipalities to develop an updated Solid Waste Management Plan. The plan will have the Sustainable Region Initiative as its framework and will be based on the 5Rs solid waste management hierarchy. Metro Vancouver plans to bring reports to the Board on the detailed strategies, actions and implementation steps to achieve 70% diversion and a consultant's report assessing the methods of managing or disposing the remaining 30% residual material.



Waste Management Committee Meeting Date: September 17, 2008

To: Waste Management Committee

From: Andrew Marr, Senior Engineer, Policy and Planning Department

Date: September 5, 2008

Subject: **Metro Vancouver Packaging Symposium**

Recommendation:

That the Waste Management Committee receive for information the report dated September 5, 2008, titled "Metro Vancouver Packaging Symposium".

1. PURPOSE

To update the Waste Management Committee on the outcome of the Metro Vancouver Packaging Symposium.

2. CONTEXT

As directed by the Waste Management Committee, staff convened a Packaging Symposium on May 28-29, 2008 to explore management of packaging waste, using BC's policy and regulatory framework for industry-led extended producer responsibility (EPR) and also using non-EPR tools and incentives. The Packaging Symposium was developed in collaboration with an advisory committee, which included representatives of government, industry, and non-governmental organizations.

The Symposium had approximately 150 participants and featured expert speakers representing retailers, the packaging industry, the waste management industry, non-governmental organizations and elected officials (Waste Management Committee Chair Marvin Hunt and Vice-Chair Pamela Goldsmith-Jones, and Metro Vancouver Board Vice-Chair Peter Ladner).

In addition to presentations by packaging experts, participants engaged in group discussions focused on how packaging waste might be addressed through regulations and other policy tools, and which packaging types or materials are priorities to address. A detailed summary of the Symposium is being completed and will be sent electronically to the Waste Management Committee before the September 17 meeting.

While the management of packaging is a large issue beyond the ability of any single event to resolve, there was overall agreement on a number of issues:

- Most participants agreed that convenience for the consumer was critical, e.g. through return-to-retail programs, or through establishment of more consolidated 'one-stop' recycling sites which could involve local government.

- Participants came to general agreement on various principles they would like to see applied to existing and future EPR programs for packaging by the Provincial government. Participants also recognized that EPR programs are not necessarily 'take-back' programs operated entirely by industry. In some cases, local governments do provide collection/recycling services or infrastructure on behalf of product stewards, if suitable terms and sufficient compensation can be agreed upon.
- The need for actions that complement and support the reduction and recycling of packaging was strongly emphasized. In particular, participants supported:
 - adequate public education programs by industry and local governments to reduce packaging at the source and to promote its recycling, and
 - regulatory tools from local governments that increase the diversion of packaging wastes from disposal.

The findings of the Packaging Symposium have since been used in conjunction with other input from the public, municipalities and stakeholders to develop an overall packaging strategy within the new draft Solid Waste Management Plan. This strategy comprises over two dozen different actions related to the management of packaging in the following areas of the Plan:

- Public education (such as new and enhanced tools and materials for communicating with residents and businesses about solid waste reduction and recycling)
- Social marketing (such as new community-based social marketing programs targeting specific sectors like schools, and specific materials like paper products)
- Business partnerships (such as waste auditing with business associations)
- Regulations (such as increased enforcement frequency and penalties for disposal bans on packaging materials)
- Collaborative work with senior governments (such as regional staff expediting development of provincial and federal packaging regulations)

3. ALTERNATIVES

None presented.

4. CONCLUSION

In May, 2008 Metro Vancouver held a Packaging Symposium with packaging industry experts, governments, and the public to discuss the future management of packaging.

The issues discussed in the symposium, combined with input from the public, municipalities and stakeholders have since been used to develop an overall packaging management strategy within the new draft Solid Waste Management Plan. At this time, the draft plan includes over two dozen implementation tasks related to the management of packaging in areas including:

- public education,
- social marketing,
- business partnerships,
- regulations, and
- collaborative work with senior governments.



Waste Management Committee Meeting Date: September 17, 2008

To: Waste Management Committee

From: Andrew Marr, Senior Engineer, Policy and Planning Department

Date: September 5, 2008

Subject: **Management of Disposable Shopping Bags**

Recommendation:

That the Board recommend that (a) Metro Vancouver work with local business associations to encourage the charging of nominal fees for disposable shopping bags, and (b) each member municipality consider implementing a bylaw that requires retailers to charge for disposable shopping bags.

1. PURPOSE

To respond to the Board's request that staff report back with a specific action plan for managing single-use shopping bags.

2. CONTEXT

Different cities and nations have enacted bans, taxes and other regulatory measures to reduce or eliminate disposable shopping bags. These actions have been taken with the intent of reducing waste going to landfills, reducing litter, or for the educational value of targeting such a visible waste material. However, controversy exists regarding the actual costs and benefits of some of these actions, especially bans and taxes. As well, some life cycle studies indicate that disposable bags that are alternatives to plastic (such as paper or biodegradable plastics) may represent as great or greater environmental impact.

Roughly half of all disposable shopping bags are reused as household garbage bags. If those disposable shopping bags were no longer available, or became too expensive, some consumers would start buying conventional plastic garbage bags (which are thicker and heavier than disposable shopping bags). This could have the unintended result of actually increasing the amount of plastic disposed¹.

A Metro Vancouver Packaging Symposium on May 28-29, 2008 looked at all packaging materials and also discussed options specifically for managing disposable shopping bags. Staff evaluated options raised at the Packaging Symposium and used in other locales, and assessed them against environmental, social, and economic criteria.

¹ A 15 Euro tax on disposable plastic bags in Ireland reduced plastic grocery bag use but apparently increased overall plastic use as consumers purchased new plastic bags instead of reusing grocery bags (PIFA/Kidwell Associates).

While all options have their pros and cons, a strategy with overall benefits is to eliminate 'free' disposable shopping bags (whether plastic, paper or other materials) by requiring all retailers to charge customers a nominal fee for these bags. Provided that the nominal fee is less than the cost of a conventional garbage bag, this would create a small financial incentive to reduce use of disposable shopping bags, without the unintended result of encouraging more consumers to buy conventional garbage bags.

Metro Vancouver² does not have the legal authority to regulate distribution of disposable shopping bags, but could encourage and promote the charging of nominal fees for disposable shopping bags through outreach to local business associations.

Municipalities have the ability to require retailers to charge for disposable shopping bags through bylaws. Metro Vancouver could play a coordinating role by developing a template bylaw for member municipalities, if desired.

Disposable shopping bags represent only a very small portion of municipal solid waste, so action to reduce their disposal would not have a large direct impact on the waste stream. However, taking action on such a visible packaging item would have educational value and generate public awareness that could spill over into other waste reduction and recycling activities.

3. ALTERNATIVES

The Board may:

1. Recommend that (a) Metro Vancouver work with local business associations to encourage the charging of nominal fees for disposable shopping bags, and (b) each member municipality consider implementing a bylaw that requires retailers to charge for disposable shopping bags.
2. Pursue other alternative educational or regulatory strategies.

Staff recommends alternative 1.

4. CONCLUSION

The Board has directed staff to look at strategies for reducing/managing shopping bags. Different strategies have been assessed against social, environmental, and economic criteria. An approach that has benefits overall is to require retailers to charge a nominal fee for disposable shopping bags.

Metro Vancouver could encourage and promote the charging of nominal fees for disposable shopping bags through outreach to local business associations.

Municipalities could require retailers to charge for disposable shopping bags through bylaws. Metro Vancouver could play a coordinating role by developing a template bylaw for member municipalities, if desired.

² According to section 25(3) of the Environmental Management Act



Waste Management Committee Meeting Date: September 17, 2008

To: Waste Management Committee

From: Mike Stringer, Senior Engineer, Policy and Planning

Date: July 23, 2008

Subject: **Amendment – North Shore Sewerage Area Boundary – Lower Seymour Conservation Reserve**

Recommendation:

That the Board approve the expansion of the North Shore Sewerage Area to include the footprints of the Seymour Capilano Filtration Plant, Rice Lake Gatehouse, Learning Lodge, LSCR Operations and Bone Yard as shown on plan SA-2282, Sheet 3 and described in the report titled “Amendment – North Shore Sewerage Area Boundary – Lower Seymour Conservation Reserve”.

1. PURPOSE

This report seeks Board approval to amend the North Shore Sewerage Area boundary.

2. CONTEXT

Sewerage and drainage area boundaries are occasionally amended 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 Seymour Capilano Filtration Plant (SCFP), under construction by GVWD, has utilized a temporary connection to the District of North Vancouver (DNV) sewer system to manage sanitary sewage disposal during the construction phase. As construction is nearly completed, the GVWD wishes to finalize the sewer connection to the DNV and GVS&DD sewer system. A triple bottom line analysis was carried out to review options for long term sewer servicing for the SCFP. This analysis concluded that connecting to the sanitary sewer was considerably cheaper and had lower environmental and recreational impact on the LSCR than a septic tank and tile field or a membrane bioreactor.

The SCFP is located in the Lower Seymour Conservation Area which is included in the Liveable Region Strategic Plan (LRSP) Green Zone. This area is not in the North Shore Sewerage Area (NSSA). In order to finalize sanitary sewer connections for the SCFP it is necessary to amend the NSSA boundary.

The LSCR has a number of buildings and facilities in the general area of the SCFP which require sewer servicing. These facilities are the Rice Lake Gatehouse, LSCR Operations Centre, Learning Lodge and the Bone Yard (watershed operations centre and equipment and material storage) that are currently served by septic fields or storage tanks requiring regular pump outs. The SCFP connection will be completed as soon as approval is granted

and the GVWD would like the option of being able to connect the LSCR facilities to the DNV and GVS&DD sewer if the cost of maintaining the septic fields and pumping out the storage tanks becomes too high. The locations of the facilities are shown in Drawing SA-2282, Sheet 3 (**Attachment 1**).

Metro Vancouver staff reviewed the planned connections with DNV staff and received a letter supporting the boundary expansion provided the total flows to the DNV sewer system do not exceed 63 cubic metres per day and instantaneous flows do not exceed 2.1 litres per second. The flows from the GVWD facilities will not exceed these limits. The letter is provided in **Attachment 2**.

The following summarizes the considerations for this boundary expansion:

- There are no financial impacts on the GVS&DD. Any costs related to the sewer connection will be paid by the GVWD.
- There will be no significant impact to the service levels provided by the GVS&DD system.
- District of North Vancouver staff has indicated support for the boundary expansion.
- The DNV Official Community Plan dated 1991 designates the area as “Parks, Recreation or Wilderness” which permits “water supply”.
- The LSCR is located in the LRSP Green Zone. The expansion of the NSSA will be restricted to the footprints of the existing facilities.
- GVWD hired a consultant to consider various options for treating wastewater from the SCFP. The consultant concluded that connection to sewer was environmentally and financially superior to the other options.

3. ALTERNATIVES

The GVS&DD Board may:

- a) Approve the expansion of the North Shore Sewerage Area to include the footprints of the Seymour Capilano Filtration Plant, Rice Lake Gatehouse, Learning Lodge, LSCR Operations and Bone Yard as shown on plan SA-2282, Sheet 3 and described in the report titled “Amendment – North Shore Sewerage Area Boundary – Lower Seymour Conservation Reserve”.
- b) Reject the proposed boundary expansion.

4. CONCLUSION

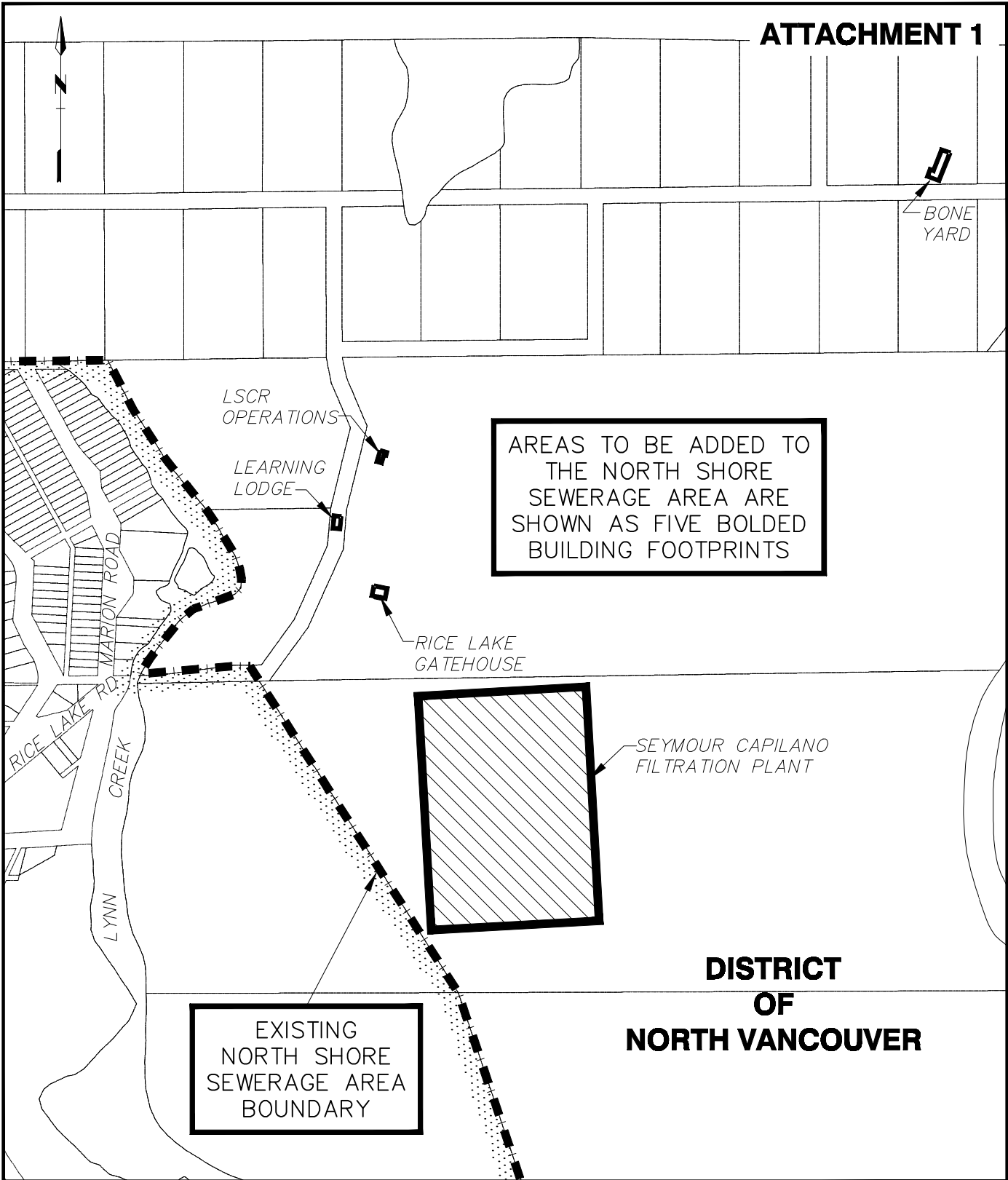
Staff recommends alternative a).

Attachment:

1. Drawing SA-2282, Sheet 3 (erim 4659983)
2. Letter from District of North Vancouver (erim 4653103)

004653094

ATTACHMENT 1



				GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT			
				Design: MS	NORTH SHORE SEWERAGE AREA AMENDMENT	SCALE: N.T.S.	
				Drawn: JM		DISTRICT FILE SA-2282	
				Checked: _____		SHEET 3	
				Approved _____		DOCUMENT CODE	
A	JULY 08	MS		LOWER SEYMOUR CONSERVATION AREA DISTRICT OF NORTH VANCOUVER			
Issue	Date	Des'n	App'd				
				Manager _____			
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District of North Vancouver

355 West Queens Road
North Vancouver
British Columbia
V7N 4N5



Jozsef L. Dioszeghy, P. Eng.
Director of Environment, Parks & Engineering Services

Telephone 604 990 2450
Fax 604 990 3831
Web www.dnv.org

Attachment 2

July 4, 2008
File: 0470-35/17

Metro Vancouver
Engineering & Construction
Water & Wastewater Treatment Engineering
4330 Kingsway
Burnaby, BC
V5H 4G8

ENG. & CONSTRUCTION

ORIG. REC'D. MF
FILE NO. WA 11-02-SCFP/50
COPIES Beavill/MStranger
ACTION COPY MF
INFO COPY DN
OTHER DEPTS. _____

Attention: **Mr. Mark Ferguson, P.Eng.**
Senior Engineer/Superintendent

Dear Mr. Ferguson:

Re: Seymour-Capilano Filtration Plant and Lower Seymour Conservation Reserve - Expansion of the North Shore Sewerage Area and Connection to DNV Sewer

We refer to your letter of April 29, 2008 indicating that an expansion to the boundary of the North Shore Sewerage Area within the District of North Vancouver (DNV) is necessary so that specified facilities within the Lower Seymour Conservation Area may be connected to the DNV sewer system.

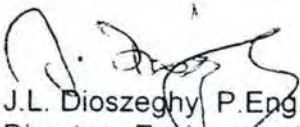
As stated in your letter, the areas to be added to the North Shore Sewerage Area are to be limited to the building footprints of the specific facilities to be connected, namely:

1. Metro Vancouver "Bone Yard"
2. LSCR Operations Facility
3. Learning Lodge
4. Rice Lake Gatehouse
5. Seymour-Capilano Filtration Plant

Approximate locations of these facilities are shown on a sketch (attached for reference) which was included with your letter. The letter indicates that total sewage flow discharging to the DNV sewer system from these facilities will be a maximum of 63 m³. per day.

The DNV has no issues with the suggested boundary expansion, provided that it is for the limited and sole purpose of permitting the above-named facilities to be connected to the DNV sewer system, and that total maximum flows discharged to the DNV sewer system do not exceed 63 m³. per day. Intermittent instantaneous flows are not to exceed a total of 2.1 l/s. DNV charges for conveying these flows will be based on metered rates under Bylaw 6656 and applicable amending bylaws.

Yours truly,


J.L. Dioszeghy, P.Eng.
Director - Environment, Parks and Engineering Services
Attach.



Waste Management Committee Meeting Date: September 17, 2008

To: Waste Management Committee

From: Toivo Allas, Manager, Policy and Planning Department

Date: August 28, 2008

Subject: **Manager's Report**

Recommendation:

That the Waste Management Committee receive for information the report dated August 28, 2008, titled "Manager's Report".

Carbon Footprint for Metro Vancouver's Solid and Liquid Waste Management Systems

The Waste Management Committee requested on July 9, 2008 that staff calculate the per capita carbon footprint for Metro Vancouver's solid and liquid waste management systems.

This 'carbon footprint' is an estimate of the global warming potential of greenhouse gases emitted in the course of operating Metro Vancouver's solid and liquid waste management systems. This is expressed using a standard unit: the equivalent amount of CO₂ in kg or tonnes per person. For Metro Vancouver, the solid and liquid waste carbon footprints¹ are as follows:

- Solid Waste: 130.6 kg of CO₂e per person is emitted annually in the process of managing solid waste for Metro Vancouver
- Liquid Waste: 4.6 kg of CO₂e per person per person is emitted annually in the process of managing liquid waste for Metro Vancouver

Staff is not aware of similar carbon footprint calculations done for other metropolitan areas and therefore figures are not available to compare with other locales.

However, Metro Vancouver's carbon footprint for solid waste is based on an annual solid waste disposal of 0.72 tonnes per person. As a proxy for comparing carbon footprints, one can compare our annual waste disposal per person with that of other metropolitan areas.

For example, San Francisco's actual carbon footprint for solid waste is unknown, but it would be based on their annual solid waste disposal of 0.84 tonnes per person. The solid waste disposal rate represents the amount of garbage that remains and requires disposal after recycling. It is noteworthy that San Francisco has a reported recycling rate of 70%, which is higher than Metro Vancouver's recycling rate of 52%. However, because San Francisco apparently also generates more waste per person, it ultimately has a higher disposal rate per person than Metro Vancouver.

¹ These numbers are calculated based on the 2005 Metro Vancouver Corporate Greenhouse Gas Inventory, the Intergovernmental Panel on Climate Change standards for carbon accounting, and the estimates of persons in this region serviced with solid and liquid waste services in 2005.

Lions Gate Bio-methane Project with Terasen

The Terasen bio-methane project at Lions Gate Wastewater Treatment Plant obtained \$366,000 in funding from BC's Innovative Clean Energy Fund on July 18. Terasen Gas will use QuestAir Technologies' system to upgrade excess biogas at the plant into pipeline-quality methane and inject it into Terasen's natural gas grid. Metro Vancouver is providing no funding for this \$1.2 million project. Staff are starting discussions with Terasen Gas on contractual and project initiation issues.

Microsludge® Project at Lulu Island

The Microsludge Project at Lulu Island Wastewater Treatment Plant obtained \$3.0 million funding from BC's Innovative Clean Energy Fund on July 18. The project will combine Paradigm's Microsludge technology to increase biogas production at the plant with advanced cogeneration systems to provide a clean and renewable source of electricity and heat from wastewater sludge. The project is expected to cost \$9.0 million and Metro Vancouver has committed up to \$3.0 million. Metro Vancouver has applied for additional funding from Western Economic Diversification and Union of British Columbia Municipalities sources. Funding announcements are expected in mid-September 2008.

Status of Organic Waste Processing Facility

As per Board direction, Metro Vancouver staff is considering all available technologies for managing source-separated organics such as food and yard wastes. Metro Vancouver retained an independent expert consultant to evaluate 23 submissions received in response to a non-binding Request for Information & Qualifications (RFIQ). Based on their evaluations and discussions with regional and municipal staff, the consultant has selected the submissions that they have assessed to be proven and viable. These included both composting and biofuel technologies.

A regional processing facility could potentially be supplied with organic wastes from several sources. Municipalities are intending to co-collect food and yard wastes from single-family residences, based on its cost-effectiveness. Multi-family food wastes pose greater operational challenges. While local governments have no control or ownership of commercial and institutional food wastes, Metro can work with businesses to facilitate collection of source-separated food wastes.

The advanced qualification process for a regional processing facility for organic wastes is currently underway targeting those proponents whose RFIQ submissions were selected by an independent consultant based on an assessment of their potential viability and the proven nature of the technology.

INFORMATION ITEMS

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September 5, 2008

Mr. Marvin Hunt,
Chair, Metro Vancouver Waste Management Committee,
4330 The Kingsway,
Burnaby, B.C.
V5H 4G8

From: The Sierra Club of Canada

Subject: Metro Vancouver Draft Solid Waste Management Plan

1. Purpose :

The purpose of this memo is to provide information and recommendations related to the goals and strategies found within Draft Solid Waste Management Plan for Metro Vancouver.

2. Content

Goal 1: Minimize Waste Generation

Strategy #1: Foster a Zero Waste Ethic

The consequence of our current waste(ful) practices upon which you must focus, is their substantial contribution to Greenhouse Gas (GHG) production.

Nearly ½ the energy we consume, in Canada, is used just to make stuff, which we then, all to quickly discard and in doing so discard the embodied energy in that item's production.

Meanwhile as much as 60% of the waste we bury is what I'll term decomposable;

all forms of wood, all forms of paper, foodscrap yard and garden material that is available for degradation under *anaerobic conditions* when buried in a landfill. The byproduct of this anaerobic decomposition is methane (CH₄) a GHG over 110 times more potent than CO₂ by volume, in it's much shorter residency time of 20 – 30 years.

Strategy #2: Advocate Senior Levels of Government.

Your biggest and easiest target here is improper packaging. Either: too much of it, not recyclable, toxic (PVC) and little or no recycled content. These issues can only be dealt with properly at the Federal Level and I encourage you all to do so. Perhaps you might consider joining in the Sierra Club of Canada's Improper Packaging Campaign. More information can be found at http://ontario.sierraclub.ca/campaigns/waste_diversion/improper_packaging_campaign/

Goal 2: Maximize Reuse, Recycling and Material/Energy Recovery

Strategy #3: Reduce wood waste being disposed

Changing the building permit process seems straightforward enough and a reminder, that wood is part of that decomposable component of waste. In addition much of it is pressure treated using amongst other toxic chemicals, arsenic, it seems to me one of those last things you'd want to burn.

Strategy #4: Reduce Paper and Paperboard being disposed

Again part of the decomposable and it is very, very, true still lots of it in the waste stream. At this point I draw your attention to an article I recently wrote for Solid Waste and Recycling Magazine. Entitled the "Myth of Residual Waste" it details the composition of so-called residual waste and is attached

What you will learn is that almost 45% of so-called residual wouldn't or should not be burnt; foodscraps yard and garden material, metal glass rock and brick etc. This helps explain why waste-to-energy plants are so inefficient and why the small amount of power they produce is so expensive. A bit more on this later. Another 40% of so-called residual is either paper or plastic which via the 3 R's we should easily reduce by 2/3's. The point is true residual waste is well under 10%!

Strategy #5: Target organics for recovery

Foodscraps (please, please not food waste) together with yard and garden is still another part of the decomposable group. Furthermore foodscraps being high in water require more energy to dry out than they return in combustion. In addition to 90% or more of the single family households in Nova Scotia and Prince Edward Island, foodscrap collection is currently available to nearly 2 million households in Ontario including the City of Toronto with 490,000 households the largest program of it's kind in North America. The Sierra Club of Canada is intimately familiar in this area and would welcome the opportunity to assist Metro Vancouver Communities in taking this logical next step in our diversion efforts.

Strategy # 6 Target plastics

Again lots of plastics in so-called residual waste and big part of it improper packaging

Strategy #7 Target Multifamily and IC&I sectors.

The Sierra Club contends, for several different reasons, that Multi-family recycling is easier than single family. As for the IC&I sector the division is strictly arbitrary. After all it not like we put someone else in a suit or skirt, caffeinate them, and kick them out the door – it's us. It should be relatively straightforward to extent waste diversion habits from home to work, school or play.

Strategy #8 Expand Waste-to-Energy

You can imagine how opposed we are to this particular strategy. From a GHG mitigation perspective waste diversion trumps landfill or incineration hands down.

The best incinerators in the wood capture only 30% of the caloric value in waste far less efficient if you consider the additional embodied energy

Both the Region of Peel, just West of Toronto and the Country of Sweden have in common the fact that they burn 50% of the waste they generate. From that they both get only about 1 – 2% of household electrical needs. The waste from half the homes to get electricity for 1 - 2 % of homes. This is what I mean by inefficiency of WTE I'd like to close at this point this more information regarding the aforementioned Plasco. First attached you'll find a letter sent to Ottawa Mayor Larry O'Brien

outlining your position on Plasco at that time (June 2008) things didn't look good. In addition to being 6 – 12 months behind schedule, the fact was that to date, very little testing had been accomplished.

Though our review of the Monthly Engineers report and other information sources the follow picture emerged;

Operating at 10% - 20% of rated capacity - 7.5 – 15 tons per day vs. 75,
Sending back to the City approximately 33 - 50% of the waste being received,
Had yet to run for 24 hours continuously,
Had operated for a total of just 10 days,
And perhaps most importantly,
Had produced just 1 hour of power!

Since then I can tell you that the Ottawa facility suffered a shutdown July 15th and has not restarted - that was nearly two months ago.

We wouldn't count on this alternative and would recommend strongly that you forge ahead with diversion efforts

With thanks,

Rod Muir,
Waste Diversion Campaigner,
The Sierra Club of Canada

Attachments:

Letter to Ottawa Mayor Larry O'Brien from the Sierra Club of Canada Re: Our view of Plasco Energy

The Myth of Residual Waste, Solid Waste and Recycling Magazine, June/July 2008

The Myth of Residual Waste – Chart



June 20, 2008

Mayor Larry O'Brien,
City of Ottawa,
110 Laurier Street,
Ottawa, Ontario
K1P 1J1

Re: As per your request – Our thoughts on Plasco Energy Test Project

Dear Mayor O'Brien;

The purpose of this letter is to formalize remarks I made to you as we discussed the Plasco Energy test, during our meeting of Wednesday June 18, 2008.

Let me begin by restating our recommendation. That given the delays in this test project and the extremely limited performance to date, the City seek a 1 year delay in the royalty agreement arrangement, to July 1 2009.

Let me also, if I may, remind you of the importance of waste diversion vs. burial or any type of currently available thermal technology. That the majority, 60% or more, of so-called residual waste is comprised of; metal, glass, stone, foodscraps and recyclable material that wouldn't or shouldn't be burnt. (See attached chart showing the composition of the 40% "residual" waste which the Regions of York and Durham wish to burn) In our view, diversion rates of 70% are easily attainable under current conditions and that with changes in policies and practices at the Federal and Provincial levels, examples being packaging legislation and furniture and mattresses diversion respectively, rates of 90% are achievable.

In our view currently available thermal technologies are a;

Highly inefficient means to make electrical power – provide only 1 – 2% of needs,
Costly means to make power - (\$150 - \$250 per ton of waste),
Net, significant, contributor to Greenhouse Gases – vs. diversion
Produce emissions, including smog,
Produce by-products that may require disposal – including bottom and fly ash and slag,
and perhaps most importantly,
Divert your three most precious commodities, time, money and ideas away from diversion.



That having been said we are aware that Plasco promises somewhere in the neighborhood of five times the energy production, at something in the neighborhood of ¼ the price (although this does seem to be going up) while maintaining much lower than expected emission levels. All unproven, to-date, of course.

Which leads me to the meat of the matter. Plasco was intended as a test facility, in addition to being 6 – 12 months behind schedule, the fact is to date, very little testing has been accomplished.

Though our review of the Monthly Engineers report and other information sources the follow picture emerges;

Operating at 10% or less of rated capacity - 7.5 tons per day vs. 75,
Sending back to the City approximately 50% of the waste being received,
Has yet to run for 24 hours continuously,
Has operated for a total of just 10 days,
And perhaps most importantly,
Has produced 1 hour of power!

This clearly indicates that forging ahead with a deal, no matter how many conditions are applied, just isn't a prudent use of time and other resources.

We recognize that there is a financial gain for the City by signing a letter of commitment by July 1, 2008. But this of course is a Plasco dedicated deadline which it seems to us the City could quickly and easily renegotiate to July 1, 2009, given the above noted delays and limited performance.

Let's test, as intended.

Thanks for seeking our input on this important matter. Good luck with your deliberation.

Rod Muir
Waste Diversion Campaigner
The Sierra Club of Canada



SIERRA CLUB CANADA

COMPOSITION OF THE 40% OF SO-CALLED "RESIDUAL" WASTE (AFTER 60% DIVERSION)

Ferrous Non-Combustible	10.9%	White Goods, E-waste, Bulky Items
Glass		3.9
Metal Containers		<u>2.4</u>
	Sub-total	<u>17.2</u>
Food & Pet Waste		18.1
Leaf and Branches		<u>4.3</u>
	Sub-total	<u>22.4</u>
HHW		.3
Textiles		<u>2.4</u>
	Sub-total	<u>42.3</u>
Paper	Recyclable	15.0
	Non-Recyclable	<u>11.7</u>
	Sub-total	<u>26.7</u>
		Compostable & Sanitary Products
Plastic	Recyclable	3.0
	Film	2.4
	Mixed	<u>6.8</u>
	Sub-total	<u>12.3</u>
	Paper & Plastic Sub-total	<u>39.0</u>
Combustible		18.6
	Grand Total	<u>99.9</u>

York/Durham "Residual" Waste Study
Supplement to Annex E-5
Comparative Analysis of Thermal Treatment and Remote Landfill of Lifecycle Basis
July 4, 2007
Genivar and Jacques Whitford

Solid Waste & Recycling, June/July 2008

The Myth of "Residual Waste"

A look at what's in that "final third" of the waste stream

By Rod Muir

Recently, I was asked by my good friend John Nicholson (a consultant and contributing editor to this magazine) to address a meeting of the Air and Waste Management Association (AWMA) Ontario Sector, regarding my position on generating energy from "residual waste."

This invitation provided me with the opportunity to research the composition of so-called residual waste -- you know, the roughly 35 to 40 per cent (depending who you talk to) of residential waste that's left over after blue box recycling and source-separated "green bin" composting.

Luckily, the Regions of York and Durham (just outside Toronto) have, as part of their recent EA process, modeled what would remain in (what they label) the 40 per cent of waste after maximized diversion. The results -- what's in that final 40 per cent -- are as follows.

Almost a fifth (17.2 per cent) is material that wouldn't even burn, including metals (13.3 per cent) and glass (3.9 per cent).

Another almost fifth (18.1 per cent) is food that on average (we're told) contains between 70 and 80 per cent water. You don't get much energy from burning water, last time I tried. (See for yourself; tonight, build a small fire and then throw dinner on it to see what happens.)

To continue, there is 4.3 per cent in leaf-and-yard material (easily composted). Rounding out this group are HHW (0.3 per cent, and stuff you most certainly *don't* want to burn) and textiles (2.4 per cent -- also something that'd be nice to not burn).

Taken together, all of the above totals 42.3 per cent of the "residual waste" -- stuff that either won't burn or that we should not burn.

This helps explain why waste-to-energy plants are so inefficient and why the small amount of power they produce is so expensive.

So, what remains?

First, there's the paper/fibre category, more than a quarter of the total (26.6 per cent). This has two sub-categories; recyclable (15 per cent) and non-recyclable (11.6 per cent). Obviously we could recycle the "recyclable" paper/fibre. What about the non-recyclable sub-category. It's described as compostable paper and sanitary products. As with food scraps, I wonder just how much energy can be generated by burning a soaking wet diaper and why we wouldn't compost the "compostable" paper.

What am I missing here?

Within the all-important plastics category are: recyclable plastic (3 per cent), film (2.5 per cent) and mixed plastics (6.8 per cent) for a total of 12.3 per cent.

Note that combined the paper fibre and plastic categories total 40 per cent. Now, imagine if by reduction, packaging legislation, reuse, stimulated via taxation, simple separation for recycling (and, of course, market development for this recycled material) we could divert two-thirds of the "40 per cent residual waste." What would we be left with?

Just 13.6 per cent of the original 40 per cent of the paper/fibre and plastic categories!

Is it really worth building a mass-burn incinerator or a new-fangled (and expensive!) gasification plant to address that tiny fraction of the waste stream? I think not.

To say we have "maximized diversion" (at 60 per cent) is, to me, false. Like any other product or service we have non-users, light users, medium users and heavy users of diversion, and there is much more we can do to move residents onward and up this continuum. As I like to say, if can get people to eat at McDonalds, we should be able to get them to do anything!

And remember, we now know have a great reason when recycling a tonne of paper and plastic recyclables; recycling them eliminates two to three tonnes of CO₂.

Okay, so now what's left?

The last, rather large category (18.6 per cent) is called "combustible material" which is described as building renovation material, miscellaneous goods and other material.

Imagine, again, if by Internet exchanges, depots, a fourth stream of collection and return-to-retail we could reduce this category by two-thirds, leaving us 6.3 per cent of the original 18.6 per cent. Add to this the 13.6 per cent in paper fibres and plastics, and I'd argue we have 20 per cent of the so-called "residual waste", or just *eight per cent of the total waste stream* to deal with as residual, not the 40 per cent that many wish which to burn.

Just eight per cent. (Remember that number.)

MBT and stabilized landfill

Some people say that rather than incinerate "residual waste" it should be treated in a different process.

Another interesting way to cut the numbers is to examine the amount of methane-producing carbon in residual waste. By adding food (again, 18.1 per cent), leaf-and-yard (4.3 per cent) and paper (26.7 per cent) and let's -- for exactness -- say one per cent for cotton and other natural textiles, you arrive at 50 per cent.

Add to this a good portion of the 18.6 per cent identified as combustible (as, after all, if it's combustible it has carbon in it) and it's very easy to imagine that 60 per cent or more of "residual waste" has the capacity to generate methane.

It seems to me that only the food portion (18.1 per cent) would really be suitable for mechanical biological treatment (MBT) and stabilization (for a stabilized landfill). There's not much stabilization of the leaf-and-yard, textiles or paper, which can occur in just 14 days, and of the other materials. There's no stabilization of the oil-based materials (12.3 per cent) nor metal or glass (17.3 per cent).

This would appear to be the case in Halifax where applying MBT to the 50 per cent of the city's waste not diverted plucks out just three percentage points of metals and gains another five percentage points via moisture reduction of the food -- at a cost once calculated by Toronto Councilor Bas Balkissoon at \$2,000 per diverted tonne!

Rod Muir is Waste Campaigner for Sierra Club Canada and founder of Waste Diversion Toronto in Toronto, Ontario. Contact Rod at rodmuir@sympatico.ca

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