

Metro Vancouver Responses to Questions and Comments from Public/Technical Advisory Committee Members Related to:

- **Residuals Management Options Review**
- **Concrete and Asphalt Recycling Opportunities Review**
- **Solid Waste Management Plan Monitoring Process with Respect to the Current Solid Waste Management Plan**
- **Bottom Ash Beneficial Use Pilot Authorizations/Process**

1. Residuals Management Options Review

Feedback: Specific case study opportunities identified: Ecodeco Mechanical Biological Treatment Facilities, Glasgow Recycling & Renewable Energy Centre, Icova Amsterdam, wood recycling and disposal examples in the Netherlands, Diaper and Hygiene Product Recycling in Europe – consider tailoring treatment methods to specific waste streams.

Response: These specific examples of case studies will be considered by the consultant particularly looking at the potential for tailoring treatment methods for particular waste streams. Metro Vancouver is already taking this approach with examples including:

- All regional hospital garbage (excluding Biomedical Waste – as defined in the Hazardous Waste Regulation) is managed at the Waste-to-Energy Facility
- Various other special handle materials such as cruise ship waste, specified agricultural waste, waste pharmaceuticals etc. are handled at the Waste-to-Energy Facility
- Vancouver Landfill manages materials such as asbestos that are most appropriately managed through landfilling
- Metro Vancouver's pilot with Geocycle that will involve processing 6,000 tonnes of small load waste (material dropped off by mostly pick-ups and vans that is approximately 60% wood waste) to recover recyclables and alternative fuel for the cement plant

Feedback: When reviewing options consider local businesses that could utilize waste materials.

Response: The consultant will consider local opportunities for use of waste materials

Feedback: Metro Vancouver should focus on exploring how we stop creating so much waste rather than studying what to do with the residual garbage.

Response: The overarching goal of the solid waste management plan update is to continue to advance Metro Vancouver's North American leading success at waste reduction and recycling with the goal of continuing to reduce the amount of residual garbage requiring disposal. None-the-less, it is important as a region to plan for garbage that isn't either eliminated or recycled. The Residuals Management Options Review will provide technical information about a full range of options to manage residual garbage to assist in decision making.

Feedback: Suggestion that others have already completed a range of studies that have demonstrated emerging technologies are not successful to manage residual garbage, that the study is really a waste-to-energy study, and that Metro Vancouver should focus on minimizing garbage and consider only landfill options for managing garbage.

Response: Understanding the full range of options to manage residual garbage is appropriate to assist in decision making. The study includes assessment of landfilling as a technology approach along with all other means being used around North America and communities in other similar international jurisdictions. The study will utilize to the extent available, information from previous studies to minimize the duplication of this work compared to other work.

2. Bottom Ash Beneficial Use

Feedback: Question as to the environmental implications/testing requirements for using processed bottom ash as an input to cement plants, and whether the ultimate location of the use of the bottom ash is tracked as part of the process.

Response: The use of processed bottom ash as an input to cement plants reduces the use of mined materials and reduces greenhouse gas emissions through reduced mining and transportation requirements.

Metro Vancouver developed a bottom ash management plan in 2020. The plan includes comprehensive sampling, analysis, and public reporting programs. The plan explicitly describes the use of bottom ash that has been processed through the non-ferrous metal recovery system as an acceptable input to the cement process. The Ministry of Environment and Climate Change Strategy accepted the bottom ash management plan in 2021. Processed bottom ash is integrated into the cement kiln system ahead of the combustion elements of the cement production, and as such is subject to all of the same environmental processes as other input materials. There is no requirement to track the ultimate location of the processed bottom ash as it is incorporated into the general cement process, and mixed with all of the other input materials. It would be impractical and unnecessary to track given the large volumes of materials involved, and the comprehensive environmental protection systems in place to manage the bottom ash.

Bottom ash testing data, the bottom ash management plan, and the bottom ash management plan Ministry of Environment and Climate Change Strategy acceptance letter are all located at:

[Reports and Operational Certificate | Metro Vancouver](#)

3. Concrete and Asphalt Recycling Opportunities Review

Feedback: The Concrete and Asphalt Recycling Review should look at barriers to reduction, reuse, collection, and recycling; understanding the data on market for the materials; ensuring accurate and transparent metrics and data; and examine what is needed to support systems province-wide. It was suggested that the study should focus on reduction, reuse and recycling, rather than landfill cover, backfill, mine reclamation, or putting the materials in products that will be hard to recycle afterwards.

Response: The study scope includes reviewing barriers to reuse and recycling of diverted materials and will explore options to overcome those barriers. The reduction in the generation of the waste materials is, however, not included in this scope of work, but is considered through Metro Vancouver's other waste prevention and reductions efforts.

Data collection for the recycling of asphalt and concrete is complicated as many of the facilities that recycle concrete and asphalt are exempt from licensing and consequentially not required to report incoming and outgoing material quantities. Nonetheless, the study will review opportunities for further improving data collection.

Reviewing barriers and identifying potential opportunities for using concrete and asphalt for higher hierarchy uses will be a key element of the study.

Feedback: Wood recycling rates are relatively low, and as such a similar study on wood recycling opportunities would make sense.

Response: Nothing precludes conducting a wood recycling study in the future. The rationale for a concrete and asphalt study at this time is that it is an area where region and municipalities have substantial leverage to impact recycling opportunities through their own procurement practices and as such a study can provide near term benefit.

4. Solid Waste Management Plan Monitoring

Feedback: What is the role of the Public/ Technical Advisory Committee in the current solid waste management plan monitoring?

Response: The 2015 letter from Metro Vancouver to the Ministry of Environment (attachment 1), proposed replacing the Integrated Utility Management Advisory Committee with two Metro Vancouver elected official standing committees to monitor the implementation of the solid and liquid waste management plans. Specifically, the Zero Waste Committee would become the monitoring committee for the *Integrated Solid Waste and Resource Management Plan*.

Response from the Ministry of Environment accepting the proposed approach to use the Zero Waste Committee to review the implementation of the solid waste management plan (attachment 2).

5. Use of Waste Hierarchy in Updated Solid Waste Management Plan

Feedback: Are there requirements under the Environmental Management Act or otherwise to follow the Provincial 5 Rs waste hierarchy structure (Reduce, Reuse, Recycle, Recover, Residuals Management) for the updated solid waste management plan.

Response: The updated solid waste management plan could be structured to mirror the provincial waste hierarchy (also referred to as the "pollution prevention hierarchy" or "5Rs hierarchy") or in some alternative fashion. The provincial guide to solid waste management planning describes the waste hierarchy as "a useful tool for regional districts to use when looking at opportunities to improve their solid waste management system", and suggests that actions within the plan can be organized according to the hierarchy, but also leaves it open to regional districts to use alternative hierarchies. As the solid waste management plan progresses, the Public/Technical Advisory Committee will have the opportunity to provide input on the organization of the plan.

Attachments:

Attachment 1: Integrated Utility Management Advisory Committee – Alternate Approach – 2015 Mar 18 – Outgoing to Ministry of Environment

Attachment 2: Replacement of Integrated Utility Management Advisory Committee – 2015 Jul 22 – Incoming from Ministry of Environment

MAR 18 2015

File: PE-13-01-IU

Ms. Lori Halls, Assistant Deputy Minister
Ministry of Environment
Environmental Protection Division
PO BOX 9339 STN PROV GOVT
Victoria, BC V8W 9M1

Dear Ms. Halls:

Re: Integrated Utility Management Advisory Committee (IUMAC)

We are writing to seek the Ministry's confirmation that our proposed approach to replace the Integrated Utility Management Advisory Committee (IUMAC) with two specific standing committees designated to monitor the implementation of our solid and liquid waste management plans will satisfy the intent and spirit of the Ministry's expectations with respect to monitoring the implementation of these plans.

Metro Vancouver's approved Integrated Solid Waste and Resource Management Plan (ISWRMP action 2.11.1) and Integrated Liquid Waste and Resource Management Plan (ILWRMP action 3.5.1) share the following action:

Metro Vancouver will:

Establish a new overarching committee, the Integrated Utility Management Advisory Committee (IUMAC), to advise Metro Vancouver on plan implementation, particularly from the perspectives of integrated planning and resource recovery across utility systems.

As Metro Vancouver has worked within the IUMAC structure over the last three years, we have found it challenging to manage a single committee that has responsibility for monitoring the diverse and varying management plans for our solid waste and liquid waste services. The broad scope of the integrated committee has limited its effectiveness in providing the input and expertise on the implementation of these two distinct management plans.

In order to address these concerns, we are proposing an alternative approach that we believe will have greater accountability and be more effective in providing appropriate monitoring in the implementation of the ISWRMP and ILWRMP:

- We propose to focus on the two utilities of Solid Waste and Liquid Waste as individual entities and note that most Regional Districts are overseeing their utilities separately, as Metro Vancouver has also done in the past.
- We propose to utilize our Zero Waste Committee and our Utilities Committee, comprised of elected officials representing our member municipalities, to review the biennial reports on the

implementation of our Solid and Liquid Waste utility management plans. This approach is consistent with many other Regional Districts that also utilize their elected officials to oversee the implementation of their solid and liquid waste management plans.

- We propose to utilize the open committee process for the review of our biennial reports to facilitate public and stakeholder engagement and to provide a regular opportunity for input on the implementation of the Plans.
- We would continue to seek specific input from the organizations and individuals originally considered for participation on IUMAC who have expertise in specific areas of solid waste and liquid waste.

We would appreciate your confirmation that this approach, which reflects the model that exists in other regional districts in the Province, would be acceptable to the Ministry of Environment. Once we have confirmed your support, we will obtain the Metro Vancouver Board's approval of this model and our elected officials' participation.

If you have any questions on the proposed approach, please have your staff contact Paul Henderson, General Manager of Solid Waste Services (604-432-6442 or Paul.Henderson@metrovancover.org) or Simon So, General Manager of Liquid Waste Services (604-432-6479 or Simon.So@metrovancover.org). We sincerely appreciate your understanding and consideration of our request.

Yours truly,



Carol Mason
Commissioner/Chief Administrative Officer

PH/AM/tc

cc: Paul Henderson, General Manager, Solid Waste Services
Simon So, General Manager, Liquid Waste Services



JUL 27 2015

Reference: 280939

JUL 22 2015

Carol Mason
Commissioner/Chief Administrative Officer
Metro Vancouver
4330 Kingsway
Burnaby BC V5H 4G8

Dear Ms. Mason:

Thank you for your letter of March 18, 2015, regarding the replacement of the Integrated Utility Management Advisory Committee (IUMAC) with two specific standing committees to monitor the implementation of Metro Vancouver's solid and liquid waste management plans. I apologize for the delay in responding.

We understand that the broad scope of the IUMAC to monitor both the solid and liquid waste services was challenging and had limited effectiveness. The Ministry agrees and accepts your new approach to use your Zero Waste Committee and Utilities Committee to review the biennial reports on the implementation of the individual plans.

The Ministry encourages Metro Vancouver to continue to seek input from individuals and organizations that have expertise in specific areas of solid or liquid waste management.

Thank you again for writing.

Sincerely,

Lori Halls
Assistant Deputy Minister
Environmental Protection Division