METRO VANCOUVER REGIONAL DISTRICT
FINANCE AND INTERGOVERNMENT COMMITTEE

REGULAR MEETING

Wednesday February 6, 2019
1:00 pm
28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia

REVISED AGENDA

1. ADOPTION OF THE AGENDA

1.1 February 6, 2019 Regular Meeting Agenda
That the Finance and Intergovernment Committee adopt the agenda for its regular meeting scheduled for February 6, 2019 as circulated.

2. ADOPTION OF THE MINUTES

2.1 January 16, 2019 Regular Meeting Minutes
That the Finance and Intergovernment Committee adopt the minutes of its regular meeting held January 16, 2019 as circulated.

3. DELEGATIONS

4. INVITED PRESENTATIONS

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Release of the Independent Technical Review of the George Massey Crossing
Designated Speaker: Marcin Pachcinski, Division Manager, Planning and Environment

5.2 Board and Committee Meeting Minutes and Voting Provisions
Designated Speaker: Chris Plagnol, Corporate Officer
That the MVRD Board receive for information the report dated January 22, 2019 titled “Board and Committee Meeting Minutes and Voting Provisions”.

1 Note: Recommendation is shown under each item, where applicable.
5.3 Manager’s Report

*Designated Speaker: Carol Mason, Commissioner/Chief Administrative Officer*

That the Finance and Intergovernment Committee receive for information the report dated January 24, 2019 titled “Manager’s Report”.

5.4 Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018

*Designated Speaker: Chris Plagnol, Corporate Officer and Phil Trotzuk, Chief Financial Officer*

That the GVS&DD Board pass and finally adopt Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018.

5.5 MVRD Security Issuing Bylaw No. 1276, 2018

*Designated Speaker: Chris Plagnol, Corporate Officer and Phil Trotzuk, Chief Financial Officer*

That the MVRD Board:

a) pass and finally adopt Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018; and

b) forward Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018 to the Inspector of Municipalities for Certificate of Approval.

6. INFORMATION ITEMS


7. OTHER BUSINESS

*Note: This item was referred to the Finance and Intergovernment Committee from the January 25, 2019 meeting of the MVRD Board.*

7.1 2019 Budget – Regional Prosperity Initiative

That the MVRD Board abandon the Regional Prosperity Initiative included in the 2019 budget.

8. BUSINESS ARISING FROM DELEGATIONS

9. RESOLUTION TO CLOSE MEETING

*Note: The Committee must state by resolution the basis under section 90 of the Community Charter on which the meeting is being closed. If a member wishes to add an item, the basis must be included below.*

That the Finance and Intergovernment Committee close its regular meeting scheduled for February 6, 2019 pursuant to the Community Charter provisions, Section 90 (1) (g) and (k) as follows:

“90 (1) A part of the meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:
(g) litigation or potential litigation affecting the regional district;
(k) negotiations and related discussions respecting the proposed provision of a regional district service that are at their preliminary stages and that, in the view of the board or committee, could reasonably be expected to harm the interests of the regional district if they were held in public.”

10. ADJOURNMENT/CONCLUSION
That the Finance and Intergovernment Committee adjourn/conclude its regular meeting of February 6, 2019.

Membership:

Buchanan, Linda (C) - North Vancouver City
Dhaliwal, Sav (VC) - Burnaby
Booth, Mary-Ann - West Vancouver
Brodie, Malcolm - Richmond

Côté, Jonathan - New Westminster
Froese, Jack - Langley Township
Hurley, Mike - Burnaby
McCallum, Doug - Surrey

McEwen, John - Anmore
Stewart, Kennedy - Vancouver
Stewart, Richard - Coquitlam
Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Finance and Intergovernment Committee held at 1:04 p.m. on Wednesday, January 16, 2019 in the 28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:
Chair, Mayor Linda Buchanan, North Vancouver City
Vice Chair, Councillor Sav Dhaliwal, Burnaby
Mayor Mary-Ann Booth, West Vancouver
Mayor Malcolm Brodie, Richmond
Mayor Jonathan Coté, New Westminster
Mayor Jack Froese, Langley Township
Mayor John McEwen, Anmore
Mayor Kennedy Stewart, Vancouver (arrived at 1:07 p.m.)
Mayor Richard Stewart, Coquitlam (arrived at 1:27 p.m.)

MEMBERS ABSENT:
Mayor Mike Hurley, Burnaby
Mayor Doug McCallum, Surrey

STAFF PRESENT:
Carol Mason, Chief Administrative Officer
Janis Knaupp, Legislative Services Coordinator, Board and Information Services

1. ADOPTION OF THE AGENDA

1.1 January 16, 2019 Regular Meeting Agenda
Members were requested to consider a late delegation application.

It was MOVED and SECONDED
That the Finance and Intergovernment Committee amend the agenda for its regular meeting scheduled for January 16, 2019 by adding Item 3.1 Late Delegation – Roderick Louis.

CARRIED

It was MOVED and SECONDED
That the Finance and Intergovernment Committee adopt the agenda for its regular meeting scheduled for January 16, 2019, as amended.

CARRIED
2. **ADOPTION OF THE MINUTES**

2.1 **October 12, 2018 Regular Meeting Minutes**

*It was MOVED and SECONDED*

That the Finance and Intergovernment Committee adopt the minutes of its regular meeting held October 12, 2018 as circulated.

**CARRIED**

1:07 p.m. Mayor K. Stewart arrived at the meeting.

3. **DELEGATIONS**

3.1 **Late Delegation – Roderick Louis**

Mr. Louis expressed concerns regarding TransLink’s Broadway-Arbutus Corridor Project in the City of Vancouver highlighting TransLink reports related to the project’s strategic alternatives and business case, the need for further public consultation and benefits of Skytrain versus subway technology.

The delegation requested that the Finance and Intergovernment Committee amend its 2019 work plan to:

a) revoke or withdraw the Committee’s May 18, 2018 and MVRD Board’s May 25, 2018 endorsement(s) of TransLink’s *Phase 2 Investment Plan*, and Translink’s debt ceiling limit being raised from $4 Billion to $5.5 Billion; and

b) recommend that the MVRD Board write a letter to TransLink requesting that the company expeditiously conducts a cost-benefit analysis of:
   - potentially building an above-ground SkyTrain line from Broadway and Commercial to UBC (instead of building a subway) that is not an extension of the existing Millennium Line; and
   - having the project delivered as a Public-Private-Partnership versus having project delivered by the Province of BC.

On-table executive summary and presentation material is retained with the January 16, 2019 Finance and Intergovernment Committee agenda.

4. **INVITED PRESENTATIONS**

No items presented.

5. **REPORTS FROM COMMITTEE OR STAFF**

5.1 **2019 Finance and Intergovernment Committee Priorities and Work Plan**

Report dated January 4, 2019 from Carol Mason, Commissioner/Chief Administrative Officer, providing the Finance and Intergovernment Committee with the priorities and work plan for the year 2019.
It was MOVED and SECONDED
That the Finance and Intergovernment Committee endorse the work plan as presented in the report dated January 4, 2019 titled “2019 Finance and Intergovernment Committee Priorities and Work Plan”.

CARRIED

5.2 Financial Management Policy
Phil Trotzuk, Chief Financial Officer/General Manager, Financial Services, updated members on Metro Vancouver’s Financial Management Policy.

1:27 p.m. Mayor R. Stewart arrived at the meeting.

Members discussed taxpayer impact, increasing construction costs, and exploring other funding models to finance capital expenditures.

Request of Staff
Staff was requested to present to the Performance and Audit Committee on Metro Vancouver’s current debt service ratio, including models which contemplate 20% and 25% ratios and their corresponding household and capital expenditure impacts.

Presentation material titled “Financial Management Policy” is retained with the January 16, 2019 Finance and Intergovernment Committee agenda.

5.3 2019 Budgets and the 2019-2023 Financial Plans Requests for Information
Report dated January 9, 2019 from Carol Mason, Commissioner/Chief Administrative Officer, providing responses to Board requests for information arising out of the Metro Vancouver District Boards Special Meeting held on November 30, 2018 and December 7, 2018.

It was MOVED and SECONDED
That the MVRD Board receive for information the report dated January 9, 2019, titled “2019 Budgets and the 2019-2023 Financial Plans Requests for Information”.

CARRIED

5.4 Authorization to Attend 2019 Standing Committee Events
Report dated January 2, 2019 from Chris Plagnol, Corporate Officer, seeking the Finance and Intergovernment Committee’s approval of the 2019 events and conferences, that were identified as part of the board approved budget, authorizing remuneration for those members approved to attend each event.

It was MOVED and SECONDED
That the Finance and Intergovernment Committee approve attendance at the following events within the 2019 Leadership and Engagement program budget:
• Aboriginal Relations Seminar 2019
• ACE 2019 – Air and Waste Management Association’s Annual Conference and Exhibition
• American Planning Association National Planning Conference 2019
• American Water Works Association Annual 2019 Conference and Exposition
• BioCycle West Coast Conference 2019
• Canadian Housing and Renewal Association Conference 2019
• Canadian Institute of Planning Annual Conference 2019
• City Age 2019: Build the Future
• Electric Vehicle Roadmap Conference 2019
• Housing Central Conference 2019
• International Economic Development Council 2019 Annual Conference
• National Recreation and Parks Association Annual Conference 2019
• Odour Management Conference and Technology Showcase 2019
• Recycling Council of British Columbia 2019 Conference and Trade Show
• Solid Waste Association of North America Wastecon Conference 2019
• Special Park Districts Forum 2019
• Water Environment Federation Technical Exhibition and Conference 2019

CARRIED

5.5 Authorization to Attend 2019 International Events

Report dated January 3, 2019 from Heather Schoemaker, General Manager, External Relations, seeking approval of attendance and remuneration of board members to attend events that are within the mandate of Metro Vancouver’s international engagement objectives and making recommendations to the Board Chair.

It was MOVED and SECONDED
That the Finance and Intergovernment Committee approves attendance at the following international events within the 2019 Leadership and Engagement program budget:
• United Cities and Local Governments (UCLG) World Congress 2019
• United Cities and Local Governments (UCLG) Executive Bureau 2019
• ICLEI Resilient Cities 2019
• 2019 Study Tour
• Additional international conferences identified by the Chair that align with the priorities of the Leadership and Engagement Program

CARRIED

6. INFORMATION ITEMS

It was MOVED and SECONDED
That the Finance and Intergovernment Committee receive for information the following Information Item:
6.1 Media Release re: George Massey Tunnel Replacement Project dated December 17, 2018

CARRIED

7. OTHER BUSINESS
No items presented.

8. BUSINESS ARISING FROM DELEGATIONS
No items presented.

9. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED
That the Finance and Intergovernment Committee close its regular meeting scheduled for January 16, 2019 pursuant to the Community Charter provisions, Section 90 (1) (c), (g) and (k) as follows:
“90 (1) A part of the meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:
(c) labour or other employee relations;
(g) litigation or potential litigation affecting the regional district; and
(k) negotiations and related discussions respecting the proposed provision of a regional district service that are at their preliminary stages and that, in the view of the board or committee, could reasonably be expected to harm the interests of the regional district if they were held in public.”

CARRIED

10. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED
That the Finance and Intergovernment Committee adjourn its regular meeting of January 16, 2019.

CARRIED
(Time: 2:21 p.m.)

____________________________  ______________________________
Janis Knaupp,                      Linda Buchanan, Chair
Legislative Services Coordinator

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Minutes of the Regular Meeting of the MVRD Finance and Intergovernment Committee
held on Wednesday, January 16, 2019   Page 5 of 5

Finance and Intergovernment Committee
To: Finance and Intergovernment Committee

From: Marcin Pachcinski, Division Manager, Planning and Environment

Date: January 23, 2019

Meeting Date: February 6, 2019

Subject: Release of the Independent Technical Review of the George Massey Crossing

RECOMMENDATION

PURPOSE
To provide the Finance and Intergovernment Committee and MVRD Board with information on the recently released Independent Technical Review of the George Massey Crossing, including background information on the initial George Massey Tunnel Replacement Project, and next steps.

BACKGROUND
At its July 27, 2017 regular meeting, the MVRD Board adopted the following resolution:

That the MVRD Board send a letter to the new BC Minister Responsible for Transportation and Infrastructure requesting an update on the status of the George Massey Tunnel Replacement Project and extend to the Province its wish to work with the Province, Translink and other stakeholders on exploring viable options and alternatives for the tunnel replacement project.

In September 2017, the BC Government cancelled the procurement process for the project and announced an independent technical review of the George Massey Tunnel corridor. The technical review final report was completed in September 2018 and released in mid-December 2018. A summary of the technical review is provided in this report as information to the Finance and Intergovernment Committee and MVRD Board.

INITIAL GEORGE MASSEY TUNNEL REPLACEMENT PROJECT
The initial George Massey Tunnel Replacement Project was first announced by the BC Government in September 2012. The project, as developed and proposed by the Ministry of Transportation and Infrastructure at the time of the review, included the following components:

- building a new 10-lane, clear span bridge over the South Arm of the Fraser River, Deas Island Regional Park, and Deas Slough;
- replacing the Westminster Highway, Steveston Highway and Highway 17A interchanges;
- widening Highway 99 between Bridgeport Road in Richmond and Highway 91 in Delta to accommodate dedicated transit/High Occupancy Vehicle lanes; and
- decommissioning the George Massey Tunnel.

An overview of the above project components is provided in Attachment 1.
The Province granted an environmental certificate for the initial 10-lane bridge George Massey Tunnel Replacement Project in February 2017 and subsequently initiated a procurement process. Metro Vancouver staff provided technical comments regarding potential impacts on Metro Vancouver assets (including Deas Island Regional Park), infrastructure, and legislated responsibilities as part of the environmental assessment review process and also during the procurement phase. In June 2017, the MVRD (then GVRD) Board considered potential regional impacts and adopted several related Board resolutions (see Reference 1 for the impact analysis report and Board resolutions adopted at the June 2017 meeting).

**BC Hydro South Fraser Transmission Relocation**

A BC Hydro transmission line runs through the current George Massy Tunnel. Because the initial George Massey Tunnel Replacement Project involved decommissioning the existing Tunnel, BC Hydro investigated three alternatives to replace the current transmission line. A description of the three alternatives is provided in BC Hydro’s South Fraser Transmission Relocation Consultation Summary Report (Reference 2).

The chosen Alternative (an overhead transmission line) would have impacts on Deas Island Regional Park and potential impacts on Metro Vancouver utilities (potential impacts are described in Reference 1). BC Hydro construction work on the South Fraser Transmission Relocation project was suspended with the announcement of the Province’s cancellation of the initial George Massey Tunnel Replacement Project procurement process, pending the outcome of the independent technical review. BC Hydro staff confirmed that the suspension of work on the South Fraser Transmission Relocation is expected to remain in place until the Province decides on a tunnel replacement option (expected by fall 2020).

**INDEPENDENT TECHNICAL REVIEW OF THE GEORGE MASSEY CROSSING**

The Provincial decision in September 2017 to cancel the procurement process for the initial George Massey Tunnel Replacement Project was accompanied by an announcement that an independent technical review would be conducted to determine next steps for the crossing. The review, undertaken by Westmar Advisors, focused on what level of improvement is needed in the context of regional and provincial planning, growth and vision, as well as which option would be best for the corridor, be it the proposed 10-lane bridge, a smaller bridge or tunnel.

The Independent Technical Review of the George Massey Crossing, released in mid-December 2018, found that:

- the 10-lane bridge project did not fully address a number of key considerations, such as community alignment, liveability and cost, which likely resulted in stakeholder concerns;
- a smaller six-to-eight-lane bridge would accommodate the majority of traffic predicted by 2045;
- an immersed tube tunnel crossing of up to eight lanes is likely feasible for a new crossing and could be less expensive with fewer negative impacts;
- retrofitting the existing tunnel to use in tandem with a new crossing may be possible;
- the existing shoulder bus lanes work well and could be expanded as necessary;
- highway improvements are equally important to reducing congestion; and
- a realignment could further reduce the project’s scale, complexity and cost.
The Independent Technical Review also noted the need for increased capacity and improved travel time reliability in the non-peak direction during peak hours. A link to the full Independent Technical Review of the George Massey Crossing Final Report is provided in Reference 3.

NEXT STEPS
The Province has stated that, starting in January 2019, it will engage with regional municipalities and First Nations to identify new criteria and goals for a crossing that better align with regional plans, particularly Metro Vancouver and Mayors’ Council priorities. This will inform further engineering to assess appropriate bridge and tunnel options that are more in scale with community preference with a new business case to be developed by fall 2020.

The Province also stated that it will immediately be work on scoping work for improvements to the Steveston interchange to reduce congestion along the corridor, as well as improvements on the Delta side of the traffic network. In addition, safety improvements will be added to the existing crossing, including better lighting and drainage, resurfacing the tunnel approaches and upgrading safety systems.

Metro Vancouver staff will provide the Finance and Intergovernment Committee and MVRD Board with updates on discussions related to the independent technical review report, project proposals, and potential impacts to Metro Vancouver assets, infrastructure, and legislated responsibilities as new information becomes available.

ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
There are no financial implications related to this report. Future potential financial implications will be assessed once the Province has announced a preferred project option (expected in fall 2020).

SUMMARY / CONCLUSION
Since suspending the procurement process in September 2017 on a proposed 10-lane bridge replacement for the current George Massey Tunnel, the Province contracted Westmar Advisors to conduct an independent technical review of the crossing. The final report, released in mid-December 2018, found that:

- the 10-lane bridge project did not fully address a number of key considerations, such as community alignment, liveability and cost, which likely resulted in stakeholder concerns;
- a smaller six-to-eight-lane bridge would accommodate the majority of traffic predicted by 2045;
- an immersed tube tunnel crossing of up to eight lanes is likely feasible for a new crossing and could be less expensive with fewer negative impacts;
- retrofitting the existing tunnel to use in tandem with a new crossing may be possible;
- the existing shoulder bus lanes work well and could be expanded as necessary;
- highway improvements are equally important to reducing congestion; and
- a realignment could further reduce the project’s scale, complexity and cost.
The Province has stated it will work with the region’s municipalities and First Nations starting in January 2019 to identify new criteria and goals for a South Fraser crossing that better align with regional plans, particularly Metro Vancouver and Mayors’ Council priorities. Metro Vancouver staff will provide the Finance and Intergovernment Committee and MVRD Board with updates on discussions related to the independent technical review report, project proposals, and potential impacts to Metro Vancouver assets, infrastructure, and legislated responsibilities as new information becomes available.

**Attachment** *(Doc# 28024283)*
1. Excerpt of the George Massey Tunnel Replacement Project Certified Project Description for an Environmental Assessment Certificate (issued February 2017)

**References**
1. “George Massey Tunnel Replacement Project – Analysis of Regional Impact” staff report, dated June 14, 2016
2. BC Hydro South Fraser Transmission Line Consultation Summary Report (January 2016)
1. INTERPRETATION

In this Certified Project Description, terms that are capitalized but not defined have the same meaning as those terms defined elsewhere in the Certificate, including in the Table of Conditions.

This Certified Project Description describes the Project authorized by this Certificate, but does not obligate the Holder to construct or operate any aspect of the Project unless otherwise stated.

DEFINITIONS

Holder  The Proponent or, if this Certificate has been transferred in accordance with the conditions below, the person to whom this Certificate has been transferred in accordance with such conditions.

ACRONYMS

Certificate  Environmental Assessment Certificate
Project  George Massey Tunnel Replacement Project
Tunnel  George Massey Tunnel

2. OVERVIEW

The George Massey Tunnel Replacement Project (Project) replaces the George Massey Tunnel (Tunnel) across the South Arm of the Fraser River with a bridge, replaces the Westminster Highway, Steveston Highway and Highway 17A interchanges, and widens Highway 99 to accommodate dedicated transit/High Occupancy Vehicle (HOV) lanes between Bridgeport Road in Richmond and Highway 91 in Delta, British Columbia.

The Project is comprised of the following components:

- Highway 99 improvements and associated works;
- Bridge and approaches;
- Tunnel decommissioning; and
- Temporary activities.
Unless otherwise specified, all components associated with the Project must be located within the Certified Project Corridor shown on Mapsheets 00 to 16 in Appendix A of this document.

3. HIGHWAY 99 IMPROVEMENTS AND ASSOCIATED WORKS

The Project includes:

- A dedicated public transit road, up to 1.5 km in length, connecting Highway 99 to Van Horne Way;
- Two new public transit/HOV lanes, each up to 25 km in length, between Bridgeport Road in Richmond and south of Highway 91 in Delta;
- Integrated transit stops at the Steveston Highway and Highway 17A interchanges;
- Up to four new general purpose lanes and ramp connections;
- Drainage features, including but not limited to, ditches and culverts;
- Replacement of Highway 99 interchanges at Westminster Highway, Steveston Highway, and Highway 17A;
- Replacement of overpasses and underpasses at road crossings, including but not limited to, the Cambie Road, Shell Road, Blundell Road, Ladner Trunk Road, and 112th Street crossings;
- Multi-use paths at interchanges, including but not limited to, the Steveston Highway and Highway 17A interchanges, to facilitate east-west access across Highway 99, access to the multi-use pathways on the bridge, and connections to local roads and bicycle paths;
- Restoration of Green Slough Historical Alignment as shown on Mapsheet 7; and
- Landscaping.

Highway improvements and associated works must be located within the Certified Project Corridor, with the exception of laning transitions between upgraded highway and upgraded road crossings, and non-upgraded sections of the highway and road crossings.

4. BRIDGE AND APPROACHES

The Project includes:

- A 10-lane bridge with a clear span over the Fraser River (the Bridge);
- Connections between the multi-use pathways on the Bridge to Steveston Highway, River Road South, and the Millennium Trail;
- A southbound ramp exit for the Bridge, connecting to River Road South.
- Biofiltration ponds to manage stormwater runoff from the Bridge; and
- Removal of the Deas Slough Bridge.
The Bridge will include multi-use pathways for cyclists and pedestrians. The Bridge will have a length of up to 3.3 km, and a vertical navigational clearance of at least 57 m.

5. TUNNEL DECOMMISSIONING

The Project includes:

- Decommissioning, removal and offsite disposal of the four central in-river segments of the Tunnel;
- Decommissioning of the two remaining Tunnel segments, on either side of the four central segments, which will be left in place; and
- Decommissioning of the Tunnel approaches, ventilation shafts, and associated works, including the ventilation building.

6. TEMPORARY ACTIVITIES

The Project includes the following temporary components that may be located anywhere within or outside the Certified Project Corridor during Construction.

- Access roads and detours;
- Barging facilities;
- Bridges across Deas Slough, and at some or all of Highway 99 interchanges and overpasses;
- Laydown areas;
- Site office(s); and
- Other ancillary components and activities.
George Massey Tunnel Replacement Project

Certified Project Corridor

File Number

Project Details:

NOB:11, UTM, ZONE 11
BCGS 1:20,000 MAPSHEETS 902G015, 903G005, 903G006

George Massey Tunnel

Certified Project Corridor

Legend:

First Nation Reserve
Municipal Boundaries
Burns Bog Ecological Conservancy Area
Waterbody
Highway
Arterial/Collector Road

Sources:

Parks and Protected Lands, First Nations Reserves from GeoBC,
United States basemap data courtesy of USGS. Burns Bog
courtesy of The Corporation of Delta and based on the Metro
Vancouver Burns Bog Ecological Conservancy Area Management
Plan - May 2007, all other data courtesy of Canvec - GeoGratis.

NOTE: Concept Design Prepared Based on Photogrammetry Survey Information. Accuracy of
Design Information Presented is Limited Within Survey Tolerances Only. Coordinate
Information is Based on UTM and Has Not Been Converted to Ground Coordinates.

Finance and Intergovernment Committee
To: Finance and Intergovernment Committee

From: Chris Plagnol, Corporate Officer

Date: January 22, 2019

Subject: Board and Committee Meeting Minutes and Voting Provisions

RECOMMENDATION
That the MVRD Board receive for information the report dated January 22, 2019 titled “Board and Committee Meeting Minutes and Voting Provisions”.

PURPOSE
To provide background information and options for consideration with respect to how negative vote results are recorded in Board and Committee meeting minutes.

BACKGROUND
Review of the voting provisions set out in the Greater Vancouver Regional District Procedure Bylaw 1205, 2014 (“Procedure Bylaw”) has been identified as a priority in the Finance and Intergovernment Committee’s 2019 Work Plan, specifically with respect to recording in the meeting minutes the names of members who voted in opposition to a question.

This report outlines options for consideration.

CURRENT VOTING METHODS
Currently, the following two methods of voting are used at Board and committee meetings: rising vote and recorded vote. These two methods, and how the voting results are recorded in the minutes, are described below in more detail.

Rising Vote
Unless otherwise requested, the usual method of voting at committee and Board meetings is by way of a rising vote. In this case, the rising is shown by the raising of hands of those voting in the affirmative, and those voting in opposition. The Chair -- if having no doubt as to which side has the majority of votes -- will declare the result as either “carried” or “defeated”. The minutes will record the resolution and the result (“carried” or “defeated”) of the vote.

The Procedure Bylaw is silent on recording in the meeting minutes the names of those who voted in the negative. However, the long-standing practice has been to do so, but only if a member specifically requests their name to be recorded.

Recorded Vote
The alternate voting method is the recorded vote, sometimes called a “roll call” vote. In this method, each Director is called upon individually to voice their vote (“in favour” or “opposed”), which is then
recorded in the meeting minutes together with their weighted vote allocation. This method is authorized by the Procedure Bylaw but applies only to Board meetings.

The recorded vote method is far less common than the rising vote method. A review of the Board minutes shows that it is used on average about twice a year. Because it is a manual, time-consuming process, it is generally used when the result of a rising vote is in doubt or too close to call.

OPTIONS FOR CONSIDERATION
Based on the above voting methods, the Board may wish to direct staff to bring forward an amendment to the Procedure Bylaw in order to formally authorize a specific option described below.

It is worth noting that in most deliberative assemblies, a decision is achieved by the majority; it is a decision of the assembly, not of its members, and there is no record of how each member voted. In contrast to this approach, in representative assemblies (such as local government), the voting record of elected officials is of interest to the public.

Option 1 – Record Names in Minutes, if Requested
In this option, the Board maintains the status quo. That is, the minutes will record the names of committee members or Board members who voted in the negative, but only if they so request. Because this option is only a practice at the present time, the Board may wish to direct staff to bring forward an amendment to the Procedure Bylaw to enshrine it as a formal provision.

The benefit of this option is that it places the decision on the member as to whether they wish their negative vote to be recorded or not. The disadvantage of this option is that it may take a few extra minutes for the Chair and staff to ensure an accurate capture of the names of those who voted in the negative, and may not accurately reflect all those who actually voted in the negative.

Option 2 – Record Names in Minutes: Committee and Board
In this option, the Board requires the names of all those voting in the negative to be recorded in the minutes, both at Board and at Committee meetings. As this would be a mandatory requirement, the Board may wish to direct staff to bring forward an appropriate amendment to the Procedure Bylaw for consideration.

The benefit of this option is that it places on record how each member voted. In representative assemblies, such as local government, there is interest in the voting record of elected officials. A survey of MVRD member municipalities’ procedure bylaws reveals that more than half endorse this method of recording names. The disadvantage of this option is that additional time is required for the Chair and staff to ensure an accurate capture of the names of those who voted in the negative, and which is particularly challenging when a large number of Board Directors have voted in the negative.

Option 3 – Record Names in Minutes: Board Only
In this option, the Board requires the names of all those voting in the negative to be recorded in the minutes, but only at Board meetings. In most cases, the Board is the forum where Directors make the decisions, not at committee meetings. As this would be a mandatory requirement, the Board may
wish to direct staff to bring forward an appropriate amendment to the *Procedure Bylaw* for consideration.

The benefits and disadvantages of this option are similar to those set out above in Option #2.

**Technology Considerations**

This last option (Option 3) may benefit from the assistance of a technology solution that could expedite and automate the voting process by prompting Directors to vote using a software application. The introduction of a technology solution would expedite the recording in the board minutes the names of those who voted in the negative, as well as administering the recorded “roll call” vote. Though yet unknown, the disadvantage of this option may include the cost of technology development and maintenance.

**ALTERNATIVES**

1. That the MVRD Board receive for information the report dated January 22, 2019 titled “Board and Committee Meeting Minutes and Voting Provisions”.

2. That the MVRD Board direct staff to bring forward for consideration an amendment to *Greater Vancouver Regional District Procedure Bylaw 1205, 2014* with a preferred option for recording the names of members in the minutes who voted in opposition to a question.

**FINANCIAL IMPLICATIONS**

If the Board approves alternative one and receives for information, recorded votes will continue to be recorded only when requested by a member at a Board or Committee meeting.

If the Board approves alternative two, there are no immediate costs related to the implementation of these provisions in the Procedure Bylaw. However, the Board may also wish to explore a technological solution to automatically record votes. If this is requested, additional financial information will be brought back for consideration with the amendment to the Procedure Bylaw.

**SUMMARY / CONCLUSION**

The Finance and Intergovernment Committee’s 2019 Work Plan included a review of the Board’s *Procedure Bylaw*, specifically with respect to recording in the meeting minutes the names of members who voted in opposition to a question. Three options are presented for the Board’s consideration: (i) record only those who voted in the negative, at their discretion; (ii) record all who voted in the negative at both Board and committee meetings; or (iii) record all who voted in the negative, at Board meetings only. The latter option may benefit from a technology solution to expedite the voting process. Staff are seeking direction on whether the Board wishes to pursue one of the options presented in this report with direction to bring forward an appropriate amendment to the *Procedure Bylaw*. 

28321306

Finance and Intergovernment Committee
To: Finance and Intergovernment Committee

From: Carol Mason, Commissioner/Chief Administrative Officer

Date: January 24, 2019

Subject: Manager’s Report

RECOMMENDATION
That the Finance and Intergovernment Committee receive for information the report dated January 24, 2019, titled “Manager’s Report”.

Finance and Intergovernment Committee Work Plan
Attachment 1 to this report sets out the Committee’s Work Plan for 2019. The status of the Committee’s key priorities is shown as pending, in progress, or complete together with the quarter that each is expected to be considered by the Committee.

Attachment:
2019 Finance and Intergovernment Committee Work Plan
### Priorities

#### 1st Quarter

<table>
<thead>
<tr>
<th>Priority</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Standing Committee Events</td>
<td>Complete</td>
</tr>
<tr>
<td>2019 International Program</td>
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<td>George Massey Tunnel Replacement Project Update</td>
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<td>Zero Waste Conference Update</td>
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<td>Review of the Freedom of Information Bylaws</td>
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<td>Board Procedure Bylaw – Voting Procedures</td>
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<tr>
<td>Board Remuneration Independent Review Panel</td>
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<tr>
<td>First Nations – Intergovernmental Relationships</td>
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<tr>
<td>Building Project Update</td>
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<tr>
<td>“Local Government Matters” Update</td>
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<tr>
<td>Intergovernmental Communications and Engagement Update</td>
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#### 2nd Quarter

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<td>UBC Cliff Erosion Update</td>
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<tr>
<td>30 Year Financial Plan Scenarios</td>
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<tr>
<td>Board Strategic Plan Review</td>
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<tr>
<td>National Zero Waste Council Governance and Funding Update</td>
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<tr>
<td>Board Remuneration Independent Review Panel</td>
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<tr>
<td>Federal Gas Tax Fund Expenditures Policy Amendment Update</td>
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<tr>
<td>TransLink Federal Gas Tax Fund Semi-annual Report</td>
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<tr>
<td>Poplar Landing Update</td>
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<td>Litigation Updates</td>
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<td>“Local Government Matters” Update</td>
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#### 3rd Quarter

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<td><strong>4th Quarter</strong></td>
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<td>Annual Budget and Five Year Financial Plan – Regional District Service Areas and</td>
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<td>TransLink Federal Gas Tax Fund Semi-annual Report</td>
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<td>Federal Gas Tax Fund Expenditures Policy Amendments</td>
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<tr>
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<tr>
<td>Board Policies (As Required/Applicable)</td>
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</tbody>
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Finance and Intergovernment Committee
To: Finance and Intergovernment Committee

From: Chris Plagnol, Corporate Officer
      Phil Trotzuk, Chief Financial Officer

Date: February 4, 2019       Meeting Date: February 6, 2019

Subject: Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018

RECOMMENDATION
That the GVS&DD Board pass and finally adopt Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018.

PURPOSE
To seek final adoption of Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018 to provide the long term capital borrowing authority requirements of the next five years for the GVS&DD and to authorize the issuance of debenture debt for this purpose through the MVRD and the Municipal Finance Authority of British Columbia in the aggregate amount of $2,100,000,000.

BACKGROUND
At its October 26, 2018 meeting, the GVS&DD Board resolved to give three readings to Bylaw 321 and to forward the Bylaw to the Inspector of Municipalities for statutory approval. This report is included for reference as Attachment 3. The Bylaw is required to provide the long term capital borrowing authority requirements of the next five years for the GVS&DD and to authorize the issuance of debenture debt for this purpose through the MVRD and the Municipal Finance Authority of British Columbia in the aggregate amount of $2,100,000,000.

Statutory approval of the Bylaw was given on January 23, 2019, and is included as Attachment 1. This report is being brought forward for the Board to consider final adoption of the Bylaw.

ALTERNATIVES
1. That the GVS&DD Board pass and finally adopt Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018.

2. That the GVS&DD Board receive for information the report dated February 4, 2019, titled “Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018” and give alternate direction with respect to the borrowing limit as appropriate.

FINANCIAL IMPLICATIONS
If the Board approves alternative one, the GVS&DD will have the necessary authority to finance Metro Vancouver’s long term capital program. This will allow for the appropriate decisions regarding balancing the cost of financing with the associated financing risk.
Debt servicing costs related to this borrowing have already been incorporated into the 2019-2023 Financial Plan for both Liquid Waste and Solid Waste Services. There would be no additional financial impact.

Should this authority be reduced or not granted as under alternative 2, the ability to make necessary financing decisions in a timely manner would be constrained which may have a negative financial impact.

**SUMMARY / CONCLUSION**
The proposed borrowing bylaw was considered by the Board at its October 26, 2018 meeting where it was given three readings, and was subsequently given statutory approval by the Inspector of Municipalities. Therefore, it is recommended that the Board consider final adoption of Bylaw 321. Staff recommend Alternative 1.

**Attachments**
1. Statutory Approval dated January 23, 2019
2. *Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018* (Bylaw for Adoption)
Statutory Approval

Under the provisions of sections 36(1)

of the Greater Vancouver Sewerage and Drainage District Act

I hereby approve Bylaw No. 321

of the Greater Vancouver Sewerage and Drainage District,

a copy of which is attached hereto.

Dated this 23 day of January, 2019

Deputy Inspector of Municipalities
GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
BYLAW NO. 321, 2018
A Bylaw to Authorize the Issue and Sale of Debt not to Exceed the Aggregate Principal Amount of $2,100,000,000 (Canadian)

WHEREAS it is requisite and expedient for the Greater Vancouver Sewerage and Drainage District (the “District”) to issue and sell to the Metro Vancouver Regional District ("MVRD") a debenture or debentures or other form of security or indebtedness, not to exceed the aggregate principal amount of $2,100,000,000 in lawful money of Canada in order to borrow money to be applied for the purpose of undertakings authorized by the Greater Vancouver Sewerage and Drainage District Act (the “Act”) or for the purpose of discharging the payment of any matter or thing contemplated or authorized by the Act, including for the purpose of repaying or refunding either before or at maturity monies which have been borrowed by the District by the issue of temporary securities or other debentures or securities.

AND WHEREAS a debenture or debentures or other form of securities, including treasury bills, notes, temporary debentures, or other form of obligation, or indebtedness, not to exceed the aggregate principal amount of $2,100,000,000 in lawful money of Canada, is required to be issued and sold to realize net the sum required for the purposes aforesaid.

AND WHEREAS the Commissioner of the District has provided a report to the Board of the District in which she recommended for the purposes aforesaid the issue and sale to MVRD of a debenture or debentures or other form of security or indebtedness, not to exceed the aggregate principal amount of $2,100,000,000 in lawful money of Canada, and to enter into an agreement with MVRD all as provided below.

NOW THEREFORE the Board of the Greater Vancouver Sewerage and Drainage District enacts as follows:

1. For the purposes aforesaid and pursuant to the authority contained in the Act it shall be lawful for the District and the District is hereby authorized, with the approval of the Inspector of Municipalities, to borrow money by the issue and sale to MVRD of a debenture or debentures or other form of security or indebtedness, not to exceed the aggregate principal amount of $2,100,000,000 in lawful money of Canada as hereinafter provided.

2. The Debenture or Debentures shall be dated and issued on such date or dates as the Commissioner of the District shall determine and shall bear interest at such rate or rates and shall be payable on such date or dates during its currency or their currencies all as the Commissioner may determine. The aggregate borrowing authorized by this bylaw may be effected by different series or types of Debenture or Debentures each bearing different dates, maturities and interest rates and having such characteristics all as determined by the Commissioner. Payments in respect of the Debenture or Debentures shall be made to MVRD by the District by cheque or electronic funds transfer.
3. The Debenture or Debentures shall be issued in fully registered form without coupons and shall mature on such date or dates as the Commissioner shall determine. A debenture register shall be maintained at the head office of the District, or that of its Agent.

4. The Debenture or Debentures shall be payable as to principal and interest in lawful money of Canada or in such other currency as the Commissioner shall determine.

5. The District shall raise in each debenture year during the currency or currencies of the Debenture or Debentures a sum or sums sufficient in lawful money of Canada to pay interest and, if applicable, principal falling due from time to time on the Debenture or Debentures.

6. If the Debenture or Debentures are issued as a sinking fund debenture or debentures, a sinking fund shall be established by the District to retire or to assist in retiring the Debenture or Debentures at maturity and for such purpose the District shall raise in each debenture year during the currency or currencies of the Debenture or Debentures in accordance with the Act a sum or sums sufficient for such purpose in lawful money of Canada and deposit the same in the sinking fund or funds. In settling the sum or sums to be raised annually, the rate of interest on investments shall be estimated at 3.0% per annum, capitalized yearly.

7. The Debenture or Debentures, without limiting any other provision of this bylaw, may in the discretion of the Commissioner be issued subject to the District’s option to redeem in whole or at any time or from time to time, any part of the Debenture or Debentures on any date in advance of the maturity thereof and upon such terms and conditions as the Commissioner may determine, subject to the place of redemption and the price (including any premium) at which the Debenture or Debentures may be redeemed being specified by the Commissioner.

8. The Debenture or Debentures shall be in such form as the Commissioner of the District shall approve. The Debenture or Debentures shall rank pari passu with all other general obligations of the District except as to sinking funds.

9. The Debenture or Debentures may be sold for such sum or sums whether the same is the par value or more or less than the par value thereof and on such terms and conditions as the Commissioner may determine.

10. The District shall and is hereby authorized to enter into an agreement with MVRD in form and substance approved by the Commissioner which provides, inter alia,

(a) the District will provide and pay over to MVRD the sums required to discharge its obligations in accordance with the terms of the Debenture or Debentures; and

(b) if the sums provided for in the Debenture or Debentures are not sufficient to meet the obligations of MVRD in relation to the financing, the deficiency is a liability of the District.

11. The Commissioner is hereby authorized on behalf of the District to do all such things and to execute, with or without the seal of the District, and deliver all such agreements, documents or instruments that may be necessary or desirable to give effect to this bylaw. Any such
agreement, documents or instruments shall also be signed by any one of the Chair of the Board or the Treasurer of the District.

12. This bylaw shall take effect on the date it is passed and adopted.

13. This bylaw shall be cited as “Greater Vancouver Sewerage and Drainage District Debenture Bylaw No. 321, 2018”.

READ A FIRST, SECOND AND THIRD TIME this 26 day of October, 2018.


PASSED AND FINALLY ADOPTED this ______ day of _______________, 2019.

________________________________________
Sav Dhaliwal, Chair

________________________________________
Chris Plagnol, Corporate Officer
To: Performance and Audit Committee

From: Phil Trotzuk, Chief Financial Officer

Date: September 26, 2018

Subject: Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018

RECOMMENDATION
That the GVS&DD Board:

a) approve an additional $2,100,000,000 borrowing limit to fund capital infrastructure activities within the Greater Vancouver Sewerage and Drainage District;

b) give first, second and third reading to Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018 and forward to the Inspector of Municipalities for statutory approval.

PURPOSE
To consider the adoption of a bylaw to provide authority for the anticipated borrowing requirements of capital infrastructure activities within the Greater Vancouver Sewerage and Drainage District (GVS&DD).

BACKGROUND
Metro Vancouver regularly secures long-term financing to fund capital infrastructure related expenditures. In order for the GVS&DD to facilitate this necessary financing, the procedure, similar to municipalities, begins with the passing of a Borrowing Bylaw authorizing borrowing from the MFA through the MVRD. Borrowing Bylaws are sent to the regional district for inclusion in a Regional District Security Issuing Bylaw. Once all legal requirements (such as Inspector of Municipalities approval) are met, the borrowing and security issuing bylaws are forwarded to the MFA as the maximum accumulated borrowing authority and is drawn down over time based on actual borrowing.

This report introduces Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018 establishing the authority for infrastructure borrowing in the amount of $2,100,000,000, enabling long-term financing for the capital programs of both the Liquid Waste and Solid Waste functions of the GVS&DD over the next five years.

FINANCING AGENCY
The Municipal Finance Authority (MFA) is the financing agency for all municipalities and regional districts within B.C., except the City of Vancouver. It is also the financing agency for the GVS&DD and the GVWD. The MFA has two bond issues per year which provide opportunity for long term borrowing, one in each of the spring and fall.

The approval of this borrowing bylaw along with and an approved Metro Vancouver Regional District (MVRD) Security Issuing Bylaw will enable the MVRD will secure long-term funding for the capital
program of the GVS&DD in one or both of these MFA issues depending on the level of capital spending and funding required.

Borrowing requirements are estimated for the next 5-year period with the appropriate debt servicing costs included in the operating budget. Total GVS&DD debt servicing costs will appear in a combination of both Liquid Waste Services and Solid Waste Services.

BORROWING AUTHORITY

The Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018, Attachment 1, provides a block of borrowing authority in advance of any actual borrowing. This approach is required due to the significance and nature of GVS&DD capital program. As Metro Vancouver does not borrow in advance of spending, borrowing authority approved in advance is necessary to enable the appropriate matching of borrowing with the requirements, thereby avoiding unnecessary borrowing and the associated debt servicing costs. Finance staff determine borrowing requirements as close to each borrowing opportunity as possible. As a result, it is not operationally feasible to seek borrowing and security issuing bylaws for Board, Inspector of Municipalities and MFA approval each time long-term financing is required.

The borrowing authority under this bylaw is consistent with the expenditures included in the five-year financial plan. The plan includes the estimated borrowing for the next 5-year period and the associated debt service costs for both Liquid Waste Services and Solid Waste Services.

BORROWING AMOUNT

Liquid Waste Services and Solid Waste Services are in the process of developing a long term capital plan spanning the next 30 years. This plan builds on the existing 5-year capital plan that is presented to the Board each year during the budget process. The recommended borrowing amount in the Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018 meets the anticipated required funding to execute both the Liquid Waste Services’ and Solid Waste Services’ capital program over the next 5-year period. A summary of the required borrowing by each GVS&DD function can be found in the below table:

<table>
<thead>
<tr>
<th>Major Planned GVS&amp;DD Borrowing ($ millions)</th>
</tr>
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<tbody>
<tr>
<td>2019</td>
</tr>
<tr>
<td>Liquid Waste</td>
</tr>
<tr>
<td>Solid Waste</td>
</tr>
<tr>
<td>GVS&amp;DD 5-Year Total</td>
</tr>
<tr>
<td>GVS&amp;DD 5-Year Total</td>
</tr>
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</table>

The 5-Year Capital Plan for both Liquid Waste Services and Solid Waste Services can be found in Attachment 2 and Attachment 3 respectively.
ALTERNATIVES

1. That the GVS&DD Board:
   a) approve an additional $2,100,000,000 borrowing limit to fund capital infrastructure activities within the Greater Vancouver Sewerage and Drainage District;
   b) give first, second and third reading to Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018 and forward to the Inspector of Municipalities for statutory approval.

2. That the GVS&DD Board provide alternative direction with respect to the borrowing limit as appropriate then give three readings to Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018 and forward to the Inspector of Municipalities for Statutory Approval.

FINANCIAL IMPLICATIONS

The approval of alternative one will provide staff the necessary borrowing authority to make prudent financing decisions with regards to Liquid Waste and Solid Waste Services’ capital programs. The associated debt servicing costs for the recommended borrowing authority have been incorporated into the five-year financial plan and appropriately balance the cost of financing with the services being provided by the related infrastructure.

The approval of alternative two, resulting in a reduced borrowing authority, would limit staff’s ability to make financing decisions and may result in the delay of certain capital initiatives.

SUMMARY / CONCLUSION

Consistent with the five-year financial plan, the Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018 provides adequate long-term borrowing authority for both Liquid Waste and Solid Waste Services’ capital programs for the next five years. Staff recommend approval of Alternative one.

Attachments

1. Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018
2. 2019-2023 Liquid Waste Services Capital Plan
3. 2019-2023 Solid Waste Services Capital Plan
### Capital Expenditures

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<td><strong>AMWTP Stage 5 Expansion &amp; Outfall System</strong></td>
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<td>$650,000</td>
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<td>2020 CAPITAL PLAN</td>
<td>2021 CAPITAL PLAN</td>
<td>2022 CAPITAL PLAN</td>
<td>2023 CAPITAL PLAN</td>
<td>2019 TO 2023 TOTAL PROJECT COSTS</td>
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<td>--------------------------------------</td>
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<td>Support Pump Station</td>
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**Finance and Intergovernment Committee**

Harbour West & East Interceptors Reloc & Protect

VSA - Harbour West & East Interceptors Reloc & Protect

IWWTTP CDAC IPS Control Replacement

VSA - IWWTTP CDAC IPS Control Replacement

IWWTTP HVAC upgrade

VSA - IWWTTP HVAC upgrade

IWWTTP Influent Gate Refurbishment

VSA - IWWTTP Influent Gate Refurbishment

IWWTTP Maintenance and Administration Building HVAC

VSA - IWWTTP Maintenance and Administration Building HVAC

IWWTTP MCC/Power Distribution Assess/Replace - Phase 2

VSA - IWWTTP MCC/Power Distribution Assess/Replace - Phase 2

IWWTTP PA-Sed Tank & Gallery Wall Refurbishment

VSA - IWWTTP PA-Sed Tank & Gallery Wall Refurbishment

IWWTTP Replacement of CoGen Control System

VSA - IWWTTP Replacement of CoGen Control System

IWWTTP Sedimentation Tank

VSA - IWWTTP Sed Tank Trough Replacement

IWWTTP Siphon Chamber Refurbishment

VSA - IWWTTP Siphon Chamber Refurbishment

IWWTTP Water Supply

VSA - IWWTTP Water Supply

Iona Island Control & Instrumentation Replacement 2011

VSA - Iona Island Control & Instrumentation Replacement 2011

Iona McC/Power Distribution Assess/Replace

VSA - Iona McC/Power Distribution Assess/Replace

Iona Solids Handling Upgrade Project

VSA - IWWTTP Diapet 4 Roof Replacement & Mixing Upgrade

VSA - Iona Grit System Upgrade

VSA - Iona Solids Handling Upgrade Project

Iona Gate Control and Instrumentation Replacement

NSA - Iona Gate Control and Instrumentation Replacement 2013

LIWWTP - Process Waste Drainage (PWD) Replacement

LSA - LIWWTP - Process Waste Drainage (PWD) Replacement

LIWWTP CCI Isolation Gates

LSA - LIWWTP CCI Isolation Gates

LIWWTP CDAC Component Upgrade

LSA - LIWWTP CDAC Component Upgrade

LIWWTP Fibre Optic Infrastructure

LSA - LIWWTP Fibre Optic Infrastructure

LIWWTP High Efficiency Boiler

LSA - LIWWTP High Efficiency Boiler

LIWWTP PA-Sed Tank Refurbishment

LSA - LIWWTP PA-Sed Tank Refurbishment

Marshend PS Rehab

FSA - Marshend PS Rehab

New WestInterceptor - Annacis Section 2

FSA - NWI - Annacis Section 2 Improvement

New WestInterceptor Grt Chamber

FSA - New WestInterceptor Grt Chamber

New Westminster Interceptor Repair Columbia St. Section

FSA - New Westminster Interceptor Repair Columbia St. Section

NLWWTP Screw Pump Replacement

FSA - NLWWTP Screw Pump Replacement

NSI Rehab or Replacement

FSA - NSI Rehab or Replacement - Phase 2

TOTAL PROJECT COSTS
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**Total Project Costs for 2019-2023 Capital Plan:** $1,904,500,000
# Greater Vancouver Sewerage Drainage District

## Capital Programs Project Totals

### Liquid Waste Services

**2019 - 2023 Capital Plan**

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### Capital Funding

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<th>2022</th>
<th>2023</th>
<th>Total</th>
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### Debt Servicing

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<th>2022</th>
<th>2023</th>
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### CAPITAL FUNDING

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To: Finance and Intergovernment Committee

From: Chris Plagnol, Corporate Officer
Phil Trotzuk, Chief Financial Officer

Date: February 4, 2019

Subject: MVRD Security Issuing Bylaw No. 1276, 2018

RECOMMENDATION
That the MVRD Board:
a) pass and finally adopt Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018; and
b) forward Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018 to the Inspector of Municipalities for Certificate of Approval.

PURPOSE
To seek final adoption of Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018 to provide the long term capital borrowing authority requirements of the next five years for the GVS&DD and to authorize the issuance of debenture debt for this purpose through the MVRD and the Municipal Finance Authority (MFA) in the aggregate amount of $2,100,000,000.

BACKGROUND
At its October 26, 2018 meeting, the MVRD Board resolved to give three readings to Bylaw 1276. This report is included for reference as Attachment 2. This bylaw, which is being presented to the Board for consideration of final adoption, provides the necessary authority for the MVRD to enter into a financing agreement with the MFA for an amount of $2,100,000,000 on behalf of the GVS&DD.

This authority is consistent with the borrowing authority included in Greater Vancouver Sewerage and Drainage District Borrowing Bylaw Number 321, 2018 that is before the GVS&DD Board for consideration of its approval.

The GVS&DD Board must adopt the Greater Vancouver Sewerage and Drainage District Borrowing Bylaw Number 321, 2018 prior to the adoption of Bylaw 1276.

ALTERNATIVES
1. That the MVRD Board:
   a) pass and finally adopt Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018; and
   b) forward Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018 to the Inspector of Municipalities for Certificate of Approval.

2. That the MVRD Board receive for information the report dated February 4, 2019 “MVRD Security Issuing Bylaw No. 1276, 2018” and give alternate direction.
FINANCIAL IMPLICATIONS
If the Board approves alternative one, the MVRD will have the necessary authority to secure GVS&DD financing, as required, which will allow the necessary flexibility for the appropriate financial decisions to be made on a timely basis.

Debt servicing costs related to this borrowing have already been incorporated into the 2019-2023 Financial Plan for both Liquid Waste and Solid Waste Services. There would be no additional financial impact. As the debt servicing costs are the responsibility of the GVS&DD, there is no financial impact to the MVRD.

Should this authority be reduced or not granted under alternative 2, the ability to make necessary financing decisions in a timely manner would be constrained which may have a negative financial impact.

SUMMARY / CONCLUSION
The proposed Security Issuing Bylaw, in conjunction with the approved GVS&DD Borrowing Bylaw, provides the necessary authorization for the MVRD to borrow up to $2,100,000,000 on behalf of the GVS&DD as and when required. Staff recommend approval of the Bylaw as presented under alternative one.

Attachments
1. *Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018* (Bylaw for Adoption)
2. MVRD Security Issuing Bylaw No. 1276, 2018 Regarding GVS&DD Borrowing Bylaw No. 321, 2018 (Report for Reference)
WHEREAS the Municipal Finance Authority of British Columbia ("the Authority") may provide financing of capital requirements for regional districts by the issue of debentures, or other evidence of indebtedness of the Authority and lending the proceeds therefrom to the regional district on whose request the financing is undertaken;

AND WHEREAS the Metro Vancouver Regional District ("the Regional District") may finance undertakings of the Greater Vancouver Sewerage and Drainage District on request, on behalf of and at the sole cost of the Greater Vancouver Sewerage and Drainage District, pursuant to the provisions of the Greater Vancouver Regional District Regulation B.C. Regulation 173/90 as amended, the undertakings to be financed pursuant to the following bylaw adopted by the Greater Vancouver Sewerage and Drainage District board under the Greater Vancouver Sewerage and Drainage District Act:

<table>
<thead>
<tr>
<th>District</th>
<th>Bylaw</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater Vancouver Sewerage and Drainage</td>
<td>321, 2018</td>
<td>$2,100,000,000</td>
</tr>
</tbody>
</table>

AND WHEREAS for the purpose of providing financing under the Greater Vancouver Regional District Regulation, the Regional District Board may adopt a security issuing bylaw without adopting a loan authorization bylaw;

AND WHEREAS the Regional District Board, by this Bylaw, hereby requests that such financing be undertaken through the Authority;

NOW THEREFORE the Board of the Metro Vancouver Regional District in open meeting assembled enacts as follows:

1. The Authority is hereby requested and authorized to finance from time to time the aforesaid undertakings at the sole cost and on behalf of the Regional District, in Canadian Dollars or in such other currency or currencies as the Authority shall determine so that the amount realized does not exceed One Billion, One Hundred Million $2,100,000,000 in Canadian Dollars and/or the equivalent thereto and at such interest and with such discounts or premiums and expenses as the Authority may deem consistent with the suitability of the money market for the sale of securities of the Authority;

2. Upon completion by the Authority of financing undertaken pursuant hereto, the Chair and Chief Financial Officer of the Regional District, on behalf of the Regional District and under its seal shall, at such time or times as the Trustees of the Authority may request, enter into and deliver to the Authority one or more agreements which said agreement or agreements shall be substantially in the form annexed hereto as Schedule "A" and made part of this Bylaw (such...
agreement or agreements as may be entered into, delivered or substituted hereinafter referred to as the "Agreement") providing for payment by the Regional District to the Authority of the amounts required to meet the obligations of the Authority with respect to its borrowings undertaken pursuant hereto, which Agreement shall rank as debenture debt of the Regional District;

3. The Agreement in the form of Schedule "A" shall be dated and payable in the principal amount or amounts of money in Canadian Dollars, or as the Authority shall determine and subject to the Local Government Act, in such other currency or currencies as shall be borrowed by the Authority pursuant to Section 1 and shall set out the schedule of repayment of the principal amount, together with interest on unpaid amounts as shall be determined by the Treasurer of the Authority;

4. The obligation incurred under the Agreement shall bear interest from a date specified therein, which date shall be determined by the Treasurer of the Authority, and shall bear interest at a rate to be determined by the Treasurer of the Authority;

5. The Agreement shall be sealed with the seal of the Regional District and shall bear the signatures of the Chair and Chief Financial Officer;

6. The obligations incurred under the Agreement as to both principal and interest shall be payable at the Head Office of the Authority in Victoria and at such time or times as shall be determined by the Treasurer of the Authority;

7. During the currency of the obligation incurred under the Agreement to secure borrowing in respect of the Greater Vancouver Sewerage and Drainage District Bylaw No. 321, 2018, there shall be requisitioned annually an amount sufficient to meet the annual payment of interest and the repayment of principal;

8. The Regional District shall provide and pay over to the Authority such sums as are required to discharge its obligations in accordance with the terms of the Agreement, provided however that if the sums provided for in the Agreement are not sufficient to meet the obligations of the Authority, any deficiency in meeting such obligations shall be a liability of the Regional District to the Authority and the Regional District shall make provision to discharge such liability;

9. Pursuant to section 15 of the Municipal Finance Authority of British Columbia Act, at the request of the Treasurer of the Authority, the Regional District shall pay over to the Authority such sums and execute and deliver such promissory notes as are required to form part of the Debt Reserve Fund established by the Authority in connection with the financing undertaken by the Authority on behalf of the Regional District pursuant to the Agreement;

10. This Bylaw may be cited as “Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018”.
READ A FIRST, SECOND AND THIRD TIME this _26_ day of _October_, 2018.

PASSED AND FINALLY ADOPTED this ______ day of ________________, 2019.

________________________________________
Sav Dhaliwal, Chair

________________________________________
Chris Plagnol, Corporate Officer
The Metro Vancouver Regional District (the “Regional District”) hereby promises to pay to the Municipal Finance Authority of British Columbia at its Head Office in Victoria, British Columbia, (the "Authority") the sum of ____________________________$__________ in lawful money of Canada, together with interest thereon from the _____ day of _____________ 20___, at varying rates of interest, calculated semi-annually, in each and every year during the currency of this Agreement; and payments of principal and interest shall be as specified in the schedule attached, commencing on the _____ day of ______________ 20___, provided that in the event the payments of principal and interest hereunder are insufficient to satisfy the obligations of the Authority undertaken on behalf of the Regional District, the Regional District shall pay over to the Authority such further sums as are sufficient to discharge the obligations of the Regional District to the Authority.

Dated at _________________, British Columbia, this _____ day of _______________ 20___.

IN TESTIMONY WHEREOF and under the authority of Bylaw No. 1276, 2018 cited as “Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018”. This Agreement is sealed with the Corporate Seal of the Metro Vancouver Regional District and signed by the Chairperson and Treasurer thereof.

__________________________________________
CHAIR

__________________________________________
CHIEF FINANCIAL OFFICER
To: Performance and Audit Committee

From: Phil Trotzuk, Chief Financial Officer

Date: September 26, 2018  Meeting Date: October 4, 2018

Subject: Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018 Regarding GVS&DD Borrowing Bylaw No. 321, 2018

RECOMMENDATION
That the MVRD Board:

a) give first, second and third reading to Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018;

b) forward Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018 to the Inspector of Municipalities for statutory approval.

PURPOSE
To consider the adoption of a Security Issuing Bylaw for the issuance of debenture debt through the MVRD and the Municipal Finance Authority (MFA) in the amount of $2,100,000,000 providing long term capital borrowing authority for the GVS&DD for the anticipated requirements of the next five years.

BACKGROUND
The MVRD, as a member of the Municipal Finance Authority (MFA), is the Board approved borrowing conduit to secure long-term financing on behalf of the GVS&DD. Through a separate agreement, the GVS&DD is financially responsible for all debt service costs associated with debenture agreements entered into by the MVRD on its behalf. This security issuing bylaw is required in order to secure the long-term borrowing approved by the GVD&DD Board.

This report introduces Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018 granting the necessary authority for the MVRD to borrow funds through the MFA on behalf of the GVS&DD. This security issuing bylaw

SECURITY ISSUING BYLAW
The Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018, attached, grants the necessary authority for the GVS&DD to borrow $2,100,000,000 through the MFA on behalf of the GVS&DD. This authority is consistent with the borrowing authority provided by Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018.

ALTERNATIVES
1. That the MVRD Board:
   a) give first, second and third reading to Metro Vancouver Regional District Security Issuing Bylaw No.1276, 2018;
   b) forward Metro Vancouver Regional District Security Issuing Bylaw No.1276, 2018 to the Inspector of Municipalities for statutory approval
2. That the MVRD Board provide alternative direction with respect to the borrowing limit as appropriate then give three readings to *Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018* and forward to the Inspector of Municipalities for Statutory Approval.

**FINANCIAL IMPLICATIONS**

The approval of alternative one will provide the necessary authority to secure long-term financing consistent with the GVS&DD approved borrowing as required in terms of funding the GVS&DD capital programs. The financial impact of these securities will be the responsibility of the GVS&DD and, as such, are included in their five-year financial plan.

The approval of alternative two, resulting in a reduced borrowing authority, would limit staff’s ability to make financing decisions and may result in the delay of certain capital initiatives.

**SUMMARY / CONCLUSION**

The *Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018*, attached, grants the necessary authority for the MVRD to secure $2,100,000,000 in long-term financing through the MFA on behalf of the GVS&DD. This authority is consistent with the borrowing authority provided by the *Greater Vancouver Sewerage and Drainage District Borrowing Bylaw No. 321, 2018* and provides adequate long-term borrowing authority for both Liquid Waste and Solid Waste Services’ capital programs for the next five years. Staff recommends approval of alternative one.

**Attachments**

*Metro Vancouver Regional District Security Issuing Bylaw No. 1276, 2018*

26884160
To: Zero Waste Committee

From: Heather Schoemaker, General Manager, External Relations
Ann Rowan, Manager, Collaboration Initiatives, External Relations

Date: January 28, 2019

Subject: Metro Vancouver’s 2018 Zero Waste Conference

RECOMMENDATION
That the MVRD Board receive for information the report dated January 28, 2019, titled “Metro Vancouver’s 2018 Zero Waste Conference”.

PURPOSE
To provide the Zero Waste Committee and MVRD Board an overview of Metro Vancouver’s Eighth Annual Zero Waste Conference—“A Future without Waste: The Journey to A Circular Economy”—held on Thursday, November 8 and Friday, November 9, 2018 at the Vancouver Convention Centre.

BACKGROUND
The Zero Waste Conference directly supports the first two goals of the Integrated Solid Waste and Resource Management Plan related to waste prevention. The annual Zero Waste Conference has become a fixture on Metro Vancouver’s public engagement calendar attracting interest from all levels of government, the business sector, sustainability practitioners and academia within the region and increasingly across Canada.

This report provides a summary of the Zero Waste Conference held on November 8 and 9, 2018.

2018 ZERO WASTE CONFERENCE
Following the 2017 Zero Waste Conference, the Metro Vancouver Board directed staff to expand the one-day format into a day and half. This would enable the expansion of conference content and participation, including local, national and international engagement.

Metro Vancouver hosted the eighth annual Zero Waste Conference beginning on the morning of November 8 and ending after lunch on November 9, 2018. By all accounts, the programing was very successful including world class keynote speakers, thought-provoking panels and inspiring examples of success in waste prevention and circular economy solutions. As in previous years, the conference worked in close collaboration with the National Zero Waste Council — an organization focused on waste prevention and founded and supported by Metro Vancouver. There were four notable achievements in 2018:

- The demographics of the Conference participants continues to attract business people but the mix include more young innovators and entrepreneurs;
- The national character of the Conference is becoming stronger with business people and government staff registering from across Canada and beyond;
With an extra half day, a “deep dive” into the important and timely issue of plastic waste could be organized, including consideration of the science, policy and manufacturing challenges as well as a robust discussion of promising solutions; and

- There were positive results in seeking sponsorships for the Conference; sponsorships that strengthened the brand and provided additional revenues.

Program Highlights

The focus of the 2018 Zero Waste Conference was to highlight Canadian leadership on important issues of waste prevention and the circular economy while providing the opportunities from governments, businesses and innovators from around the globe that are continuing to break ground and serve as inspiration to push harder in terms of lasting solutions that will lead to a future without waste. The Conference drew in people committed to waste prevention but they left with a greater understanding of the circular economy and more zero waste ideas and solutions. On the first day of the Conference there were panels on technology innovation, materials and design innovation, business model transformation as well as Canadian leadership in food loss and waste. The focus of day two was on dealing with the challenge of plastic waste.

The keynote speakers were articulate and inspiring. Gerd Leonhard, a Futurist and Humanist, boldly predicted that we are up to the challenge of molding technology to fit our needs, Leyla Acaroglu, Design Disruptor, Creative Boundary Pusher and Cultural Provocateur, championed design as a disruptive force leading to a more sustainable world, Wayne Visser, Professor of Integrated Value and Chair of Sustainable Transformation with the Antwerp Management School, defined the value in ‘closing the loop’ in production, and Arthur Huang, Architect and Innovator and CEO and Founder of Miniwiz, energized the audience with his ground-breaking work upcycling waste into consumer products and buildings. A conversation with the leaders of government based initiatives in the circular economy from Finland, the Netherlands, and Scotland, talked about the role of government to take risks and encourage changes leading to a circular economy. Then for a change of pace, TV chef Bob Blumer demonstrated how to not waste food and use refrigerator cast-offs as raw materials for a delicious pizza, followed by a food loss and waste panel that brought together leaders around the National Zero Waste Council’s recently launched A Food Loss and Waste Strategy for Canada.

The conference included announcements related to the Canadian Innovation Showcase and National Zero Waste Council Design Portfolio. The Design Portfolio celebrates Canadian products in market that demonstrate an adherence to life cycle analysis and waste prevention in design. The Innovation Showcase recognized Canadian innovation consistent with the objectives of the Ocean Plastics Charter. In addition, three local young entrepreneurs – FoodMesh, ChopValue Manufacturing, and Nada - spoke to how a commitment to waste prevention led them to start their own companies: A good indicator of the business relevance of the Conference is that Brendan Seale, Head of Sustainability for Ikea Canada, chose his spot on the Business model Transformation Panel to announce that Canadian Ikea stores will buy back Ikea furniture in return for store credit and then will sell this furniture back at a reduced price in the store's "As Is" section.

The challenge of tackling plastic pollution took centre stage on the second day of the Conference. The opening keynote, Minister of Environment and Climate Change Canada, unfortunately, had to withdraw at the last minute but was able to send her Deputy Minister, Dr. Stephen Lucas, instead.
Dr. Lucas shared with the audience the range of initiatives Canada was leading to move towards a circular economy in plastics that would ensure that plastics are used and reused and then disposed properly at the end of their economic life. Malcolm Brodie, the Conference Host and Chair of Metro Vancouver’s 2018 Zero Waste Committee and the National Zero Waste Council, then engaged Dr. Lucas in a conversation of how best to facilitate the collaboration of governments, at all levels, business and industry, scientists and innovators in making real progress. University of Toronto researcher Chelsea Rochman delivered a sobering update on micro-plastics and the state of our ocean but offered hope through collaborative global action and regulation. Then a panel delved into the role of innovation in changing the design of products and packaging using plastics could minimize the amount of plastic waste and when combined with new systems for reuse and recycling of plastic material could move us toward a future of zero plastic waste. A highlight of the Conference was a special presentation and discussion of the founders of the Circular Economy Leadership Coalition (National Zero Waste Council is a founding member), who will be championing the adoption of a circular, sustainable approach to the Canadian economy.

The Zero Waste Conference is well recognized in terms of its ability to attract high caliber speakers and panelists and the 2018 event was exceptional. The participation of thought leaders and innovators from government, business, community organizations and academia has created the sense that the Zero Waste Conference hosted by Metro Vancouver is the preeminent event to learn from and network with people leading the discussion on waste prevention and the transition to the circular economy.

Attachment 1 provides the full program for the 2018 Zero Waste Conference including a description of the panels and biographies of keynotes, speakers, and moderators.

**Audience/Participation**

Total attendance at the 2018 Zero Waste Conference was just over 500. According to information provided during registration, 41% of the participants were from the private sector (from start-ups to corporate brands), 18% were from local governments (elected officials and staff), 8% from other orders of government and First Nations, 20% from not for profits/NGOs, 6% were students and faculty, and 7% were interested members of the public. The registration fee was $375 for the 2018 Conference and nearly $145,000 was raised in registration fees to augment the Conference budget.

The stronger focus on recognizing innovation and the role of business in tackling the zero waste challenge in the Conference program supported by enhanced marketing and social media seem to have increased interest in the Conference among a younger demographic as well as in the business community.

The Zero Waste Conference has traditionally included a satellite event hosted by the City of Toronto’s Solid Waste Management Services. This has involved an investment by both parties in some sophisticated technology to link both audiences. In 2018, a Toronto audience viewed a live stream of only the opening keynote and the panel on Materials and Design Change. This allowed the City of Toronto to focus their program on November 8 on local initiatives and ensured that people interested in the Conference program had to travel to the Vancouver Convention Centre.
Marketing
The Zero Waste Conference has a modest marketing budget of $30,000; this allows for a very limited buy of targeted print media – strategically taking advantage of special offers with specific media outlets. The goal is always to bring in new attendees as well as remind prior conference registrants to come back. In 2018 we secured space in a special circular economy insert in Maclean’s in addition to our normal ad purchase in Business in Vancouver. Given last year’s success, we also created promotional material for local and national “influencer” networks to allow them to easily reach out to their business contacts and local government colleagues.

E-marketing products promoting the Conference begin going out to our existing databases in May, starting with a “save the date” message. As keynote speakers and spark talks are confirmed, blogs and e-invitations are created and distributed – through extensive lists managed by Metro Vancouver and the National Zero Waste Council. These topic-specific evites go out every 2 weeks in the beginning and then the frequency escalates as the Conference draws near. In addition, to relying on these internal lists, we ask contacts in like-minded organizations with list serves, professional association notice boards and the Federation of Canadian Municipalities to help push out the evites. We also encourage speakers and moderators to market the conference through their own networks. In 2018, the members of the Circular Economy Leadership Coalition also played a key role in marketing the conference and their efforts generated positive results. We also send regular and coordinated messages through Face Book and Twitter.

A small amount of printed materials (banners and book marks) are created to be made available at our Community Breakfasts, trade shows and conferences that Metro Vancouver staff are attending prior to the Conference. A promotional power point slide is added to all related Metro Vancouver presentations and event agendas and in-house produced videos have a conference tag added.

Social and Earned Media
A pre-event video promoting the Conference drew nearly 337,800 views across Facebook, YouTube, and the conference website. (Reference 1 provides a link to this video.) This represents a mix of organic and paid views. We promoted this through boosted posts on Facebook, pushed it out on Twitter, and used pre-roll on YouTube.

The Zero Waste Conference blog is used to promote the Conference but also to stimulate thinking and conversations related to waste prevention and the circular economy. Seventeen blog posts were published in 2018, with 2559 visitors registering 5018 page views – for an average engagement of 1.96 page views per visitor.

In terms of social media, the total number of tweets related to the Conference were 1,128 with a potential reach of over 3 million; this represents an increase of more than 130% over last year. In addition, the large majority of those tweets came from key influencers such as Brendan Seale and Coro Strandberg who retweet our content and generate their own posts as well. Having people with a good following and solid sustainability credentials republish our promotional material is effective in terms of extending our reach. (Attachment 2 provides a report on Twitter traffic and examples of the tweets generated at the Conference.)
Media coverage of the 2018 Zero Waste Conference was exceptionally strong; including the front page story of The Georgia Straight on the opening keynote, Gerd Leonhard, that came out early on the opening day of the Conference. There were 22 TV and radio stories in addition to 9 print and online stories related to the Conference with many referring to the Ikea announcement and Bob Blumer’s culinary demo on how to reduce needless food waste. The tone of all media stories about the programming and messaging of the Conference.

**Campaign Materials**

The Zero Waste Conference aims to be a zero waste event – we do not provide printed versions of the program or other material. With over 14 hours of programming, the Conference generates a wealth of information, ideas, and conversations. In total there were six stimulating keynote presentations, two disrupter “spark” talks, two showcases celebrating Canadian innovation and seven thought-provoking panels. This was all video-taped and is available on the Conference website and can be used by those who attended the Conference and can be shared with those who missed it. Videos of keynotes and panels of all but the very first Conference are available on the website, representing a treasure trove of information as well as a marker of how the discussion of waste prevention and the transition to the circular economy is evolving in Canada. (Reference 2 provides a link to these videos.)

**Sponsorships**

For the first time, a relatively soft exploration of the potential of sponsorships to supplement the revenue sources for the Conference was launched. Three entities that were strongly associated with the importance of waste prevention and the promise of the circular economy—Canadian Stewardship Services Alliance, Cascades and the government of Holland—were pursued. All three responded favourably and we were able to raise $20,000 in sponsorships.

**NEXT STEPS: MAINTAINING THE MOMENTUM**

Over the eight years of its history, the Zero Waste Conference has grown in size and in profile as the venue to discuss waste prevention and the opportunities for establishing circular economy systems in Canada. The quality of the speakers and panels, pulling from thought leaders and innovators from Europe, Asia, the United States, locally and across Canada, provides a unique environment in North America to explore important themes and issues in waste prevention.

Advancing a waste prevention agenda in Canada is the mission of the National Zero Waste Council and the Council bookended the Conference by holding its AGM the day prior to the Conference. As the leadership of the Council grows in terms of stature, the scheduling of the Council’s AGM in close proximity to Metro Vancouver’s Conference creates a greater draw for business and thought leaders from across Canada interested in advancing waste prevention and the transition to the circular economy to come to Metro Vancouver.

The Conference will continue to be a day and half in 2019. The production value of the Conference does not need to be enhanced which will allow shifting some resources to expanded marketing efforts. In terms of programming, more white space will be created in order to enhance the networking opportunities among Conference participants.
ALTERNATIVES
This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS
The budget for the 2108 Zero Waste Conference was $212,000 supported under the 2018 General Government Program and managed by the External Relations Department. Projected revenues from conference fees and sponsorships were $105,000; actual revenues were $163,647.

SUMMARY / CONCLUSION
The focus of the 2018 Zero Waste Conference was to highlight Canadian leadership on important issues of waste prevention and the circular economy while providing the opportunities from governments, businesses and innovators from around the global that are continuing to break ground and serve as inspiration to push harder in terms of lasting solutions that will lead to a future without waste. Over a day and a half of programming on November 8 and 9 there were six stimulating keynote presentations, two disrupter “spark” talks, two showcases celebrating Canadian innovation and seven thought-provoking panels.

There were four notable achievements in 2018:

- The demographics of the Conference participants continues to attract business people but the mix include more young innovators and entrepreneurs;
- The national character of the Conference is becoming stronger with business people and government staff registering from across Canada and beyond;
- With an extra half day, a “deep dive” into the important and timely issue of plastic waste could be organized, including consideration of the science, policy and manufacturing challenges as well as a robust discussion of promising solutions; and
- There were positive results in seeking sponsorships for the Conference; sponsorships that strengthened the brand and provided additional revenues.

Attachments

References
1. Pre-event video: https://vimeo.com/281019495
A Future Without Waste: The Journey to A Circular Economy

Presented by Metro Vancouver and the National Zero Waste Council

FINAL PROGRAM

Conference MC: Vanessa Timmer, Co-Founder and Executive Director, One Earth and Board Member, National Zero Waste Council

DAY ONE - November 8

8:30 am WELCOMING/OPENING REMARKS

Malcolm Brodie, Conference Host, Chair, National Zero Waste Council and Chair, Metro Vancouver Zero Waste Committee

- The Right Honourable Justin Trudeau, Prime Minister of Canada - video welcome

8:45 am KEYNOTE - Gerd Leonhard, Futurist and Humanist

Gerd Leonhard, Futurist and Humanist, Zurich/Switzerland

“Humanity will change more in the next 20 years than they have in the last 300”

Making connections and advancing our thinking is one of the keys to progress. Futurist Gerd Leonhard is connecting the dots to our data-driven future – championing the benefits and highlighting the risks. Gerd’s vision of our future is that of great potential to make the world a better place for all. But he’s quick to point out the potholes on the road to a circular economy as well highlighting the technologies that will impact our lives the most, and outlining the human-scaled answers needed to ensure the 21st century landscape is a place we all want to live.

Moderator: Dr. Murali Chandrashekaran, Vice Provost, International, University of British Columbia

9:30 am TECHNOLOGY INNOVATION

The circular economy demands technological innovations on a scale not yet seen in our modern world. This pace of change is still quickening, continuing to yield unforeseen benefits and unintended consequences – from seeds of innovation planted using zero waste principles. We’ll be examining both the potential opportunities and potential pitfalls technology is creating as the circular economy grows.

Speakers

- Vanessa Grondin, Vice-President, Food and Beverage Industry, OPTEL
- Jay Thakkar, Manager, Accenture Strategy
- Garnet Miller, IT Architect, Cognitive Business Decision Support, IBM Services

Moderator: Chris Ripley, CEO, Smarter Sorting

10:15 am BREAK

10:30 am MATERIALS & DESIGN INNOVATION

Finance and Intergovernment Committee
New materials and zero waste designs. Innovations in deconstruction, recycling, repair, and reuse close the loop. What does it take to move beyond our “take-make-dispose” linear mode of thinking and into a circular model? It all starts with materials and product design - redefining our relationship with stuff and designing goods without the waste embedded in current production and consumption models. Learn how inventors and pioneers in disruptive design are leading the way to the circular economy transition.

SPARK Talk

- **Arthur Huang**, CEO and Founder of Miniwiz

A circular economy pioneer featured in the new three-part documentary series *Jackie Chan’s Green Heroes*, expect Arthur to challenge your preconceptions around trash, showing how upcycling can have a massive impact on waste, and fire up your imagination with new and creative ways to succeed in the circular economy.

Panel

- **Rhys Thom**, Senior Design Lead, Design for Change, IDEO
- **Kate Daly**, Executive Director, Center for the Circular Economy, Closed Loop Partners

**Moderator:** **Mikhael Metauro**, National Business Development & Sales Strategist, Cascades Recovery

11:30 am **KEYNOTE - Transformational leadership on the journey to the circular economy**

**A Conversation with Sitra, Zero Waste Scotland and The Netherlands**

Now is the time for innovative solutions and positive action. Around the world, comprehensive circular economy strategies are driving innovation and change - and much of that innovation is being led by governments. There is an important role for governments to play – not only as innovators and policy makers but as leaders encouraging change and risk. Learn from three national and international organizations at the forefront – Sitra, the Finnish Innovation Fund, Zero Waste Scotland and The Netherlands.

- **Mari Pantsar**, Director, Carbon-Neutral Circular Economy, Sitra
- **Iain Gulland**, Chief Executive, Zero Waste Scotland
- **Henk Snoeken**, Consul General of the Netherlands in Vancouver

**Moderator:** Kathryn Gretsinger, Vancouver Journalist and Senior Lecturer, UBC Graduate School of Journalism

12:30 pm **LUNCH**

1:15 pm **DESIGN PORTFOLIO SHOWCASE**

The National Waste Council design portfolio celebrates Canadian products and packaging that take the entire lifecycle into account during design, and are moving towards a circular economy by minimizing waste. From fashion to furniture, businesses are finding cost-savings, reduced environmental impacts, and increased consumer appeal by designing differently. Join us as we showcase the 2018 recipients.

**Presenters**

- **Malcolm Brodie**, Chair, National Zero Waste Council and Chair, Metro Vancouver Zero Waste Committee
• **Jim Downham**, President and CEO, Packaging Consortium (PAC) & Vice Chair, National Zero Waste Council

### 1:30 pm  KEYNOTE - Wayne Visser - Sustainability Innovation & Change Management/Closing the Loop

**Wayne Visser**, Professor of Integrated Value & Chair of Sustainable Transformation, Antwerp Management School

*“Unless we go to circular, it’s game over for the planet.”*

After years spent working on sustainability, Wayne Visser believes we are on the cusp of a major revolution - nothing short of the next industrial revolution. The time for fear-mongering and demonising companies has past. Now is the time for innovative solutions and positive action. This is nowhere more true than in the do-or-die challenge of creating a circular economy. A sobering thought. But Visser brings solutions - solutions to the challenges of pollution, resource depletion, and waste – a blueprint for the greener future.

**Moderator:** John Coyne, VP, Legal & External Affairs, Unilever Canada Inc. & Executive Chair, Canadian Stewardship Services Alliance

### 2:15 pm  BUSINESS MODEL TRANSFORMATION

Sweeping changes are coming to the marketplace. Circular principles bring challenges to traditional business practices, rewards for successful innovators, and a fundamental shift in the way we use the goods and services that drive our global economy. Exploring the factors bringing the biggest impacts, examining the trends still gaining momentum, and understanding the most effective ways to prosper in these exciting times – our speakers and panelists bring their creativity, experience, and vision to share with attendees.

**Panelists**
- **Guillaume Lavoie**, Lecturer, National School of Public Administration, University of Quebec
- **Megan Arnaud**, Retail Leader, EILEEN FISHER Renew
- **Brendan Seale**, Head of Sustainability, IKEA Canada

**“POP-UP” Profiles**
- **Jessica Regan**, CEO, FoodMesh
- **Felix Böck**, Founder and CEO, ChopValue Manufacturing Ltd.
- **Brianne Miller**, Founder and CEO, Nada

**Moderator:** Denise Taschereau, CEO & Co-Founder, Fairware

### 3:30 pm  LEADERSHIP TO PREVENT FOOD LOSS AND WASTE

Food waste remains one of the biggest areas of waste in our society - more than a third of the food produced and distributed in Canada never gets eaten.

In this session we’ll see how private/public collaborations, industry initiatives, and consumer-driven trends are all playing a part in the fight against food waste. We can achieve far greater success through collaboration and a unified vision for change.

**Zero Food Waste Culinary Showcase**
- **Bob Blumer**, Professional Gastronaut and host of Food Network’s The Surreal Gourmet
Bob Blumer would be the first to admit it. His cooking is garbage. Behind this startling claim however, Bob delivers real world food rescue tactics that will have you looking at your kitchen waste in a whole new way. The TV chef, 'gastronaut', and ambassador for Second Harvest in Toronto will be performing live at the 2018 Zero Waste Conference, demonstrating how leftovers and unused food can become delicious meals with a little imagination and an open mind.

Food Loss and Waste Strategy for Canada
In conjunction with key stakeholders the National Zero Waste Council launched A Food Loss and Waste Strategy for Canada—a systems based framework for preventing and reducing food waste, along with a national food waste reduction campaign: Love Food Hate Waste Canada / J’aime manger pas gaspiller.

Speakers
- Tom Rosser, Assistant Deputy Minister, Strategic Policy, Agriculture and Agri-Food Canada
- Sam Wankowski, Senior Vice President of Operations, Western Canada, Walmart Canada
- Lori Nikkel, CEO, Second Harvest
- Cher Mereweather, Executive Director, Provision Coalition


4:45 pm  KEYNOTE PRESENTATION - Dr. Leyla Acaroglu - Disrupting the Status Quo

Dr Leyla Acaroglu, Founder & Chief Disrupter, Unschool

Sustainability Provocateur, Designer, Sociologist, Experimental Educator and Social Change Maker. Acaroglu’s work illuminates the ways design impacts our perspectives and behaviours. Then she goes a step further. Looking at the stories we tell ourselves in our daily lives, in the myriad consumer choices we make, she sees the urge to make sustainable choices sabotaged by mistaken beliefs about materials and their properties. It's a big challenge, but adopting circular economy values and systems can leverage design and consumer culture as a potent catalyst for a massive change.

Moderator: Vanessa Timmer, Co-Founder and Executive Director, One Earth and Board Member, National Zero Waste Council

5:35 pm  Closing Remarks

Malcolm Brodie, Conference Host, Chair, National Zero Waste Council and Chair, Metro Vancouver Zero Waste Committee

DAY TWO - November 9

8:30 am  WELCOMING/OPENING REMARKS

Malcolm Brodie, Conference Host, Chair, National Zero Waste Council and Chair, Metro Vancouver Zero Waste Committee

- The Honourable George Heyman, Minister of Environment & Climate Change Strategy of British Columbia - video welcome

8:35 am  KEYNOTE - Dr. Stephen Lucas, Deputy Minister, Environment and Climate Change Canada

Finance and Intergovernment Committee
Dr. Stephen Lucas, Deputy Minister, Environment and Climate Change Canada

Moderator: Malcolm Brodie, Chair, National Zero Waste Council and Chair, Metro Vancouver Zero Waste Committee

PLASTICS INNOVATION FORUM

Plastics are remarkably convenient, inexpensive and useful. But their durability means plastic debris is everywhere. It is choking our oceans and its animals, and potentially moving toxins up the food chain. It represents a growing loss of economic value and source of avoidable greenhouse gases. Canada and the EU’s Oceans Plastic Charter, NGO efforts and innovative businesses are aiming at circular solutions to keep plastics in the economy and out of nature.

9:15 am  A GLOBAL CHALLENGE

Chelsea Rochman, Assistant Professor, Department of Ecology and Evolutionary Biology, University of Toronto

Global Panel

- Sonja Wegge, Project Manager for the New Plastics Economy, Ellen MacArthur Foundation
- Matthew Fraser, Senior Project Manager, Cities Programme, Circle Economy
- Daniella Russo, CEO & Founder, Think Beyond Plastic™

Moderator: Christina Seidel, Co-Chair of the Circular Economy Working Group, National Zero Waste Council

10:30 am  BREAK

10:45 am  ENABLING ENVIRONMENTS FOR CHANGE - CANADIAN INNOVATION SHOWCASE

Global plastic pollution poses a multi-dimensional challenge to humanity, often compared to climate change in terms of impact, breadth, and complexity. A challenge of this magnitude will often inspire a surge in searches for solutions. In order to accelerate the search for solutions, Canada’s National Zero Waste Council and Think Beyond Plastic™ are collaborating to produce this showcase featuring Canadian Innovations that are consistent with resource-efficient, lifecycle management approach to plastics in the economy outlined in the G7 Ocean Plastics Charter.

- Daniella Russo, CEO & Founder, Think Beyond Plastic™
- Jim Downham, President and CEO, Packaging Consortium (PAC) & Vice Chair, National Zero Waste Council

11:15 am  A PATH FORWARD FOR CANADA: CIRCULAR ECONOMY LEADERSHIP COALITION

The Circular Economy Leadership Coalition is a national alliance of Canadian leaders working together to eliminate waste and accelerate the reductions of carbon emissions from the Canadian economy through the advancement of a circular economy. Hear from CELC members about what’s in store, and provide your thoughts and ideas on a circular economy path forward for Canada.

Presentation

- Malcolm Brodie, Chair, National Zero Waste Council
- **Brendan Seale**, Head of Sustainability, IKEA Canada

**Speakers**

- David Hughes, President and CEO, The Natural Step Canada
- **Stephanie Cairns**, Director, Cities & Communities, Smart Prosperity Institute
- Kevin Groh, Vice President, Corporate Affairs and Communication, Loblaw
- Bob Walker, Head of ESG Services, NEI Investments

**Moderator:** **Nancy Wright**, Chief Operating Officer, Globe Series

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| 12:15 pm   | CLOSING LUNCH & CONFERENCE REFLECTIONS | **Mari Pantsar**, Director, Carbon-Neutral Circular Economy, Sitra  
Iain Gulland, Chief Executive, Zero Waste Scotland  
Wayne Visser, Professor of Integrated Value & Chair of Sustainable Transformation, Antwerp Management School  
Leyla Acaroglu, Founder & Chief Disrupter, Unschool  
Henk Snoeken, Consul General of the Netherlands in Vancouver |
| 1:15 pm    | CLOSING REMARKS                  | **Malcolm Brodie**, Conference Host, Chair, National Zero Waste Council and Chair, Metro Vancouver Zero Waste Committee |
A Future Without Waste: The Journey to A Circular Economy

DAY ONE - NOVEMBER 8

CONFERENCE MC

Vanessa Timmer
Co-Founder and Executive Director, One Earth and Board Member, NZWC

Dr. Vanessa Timmer is the Executive Director of One Earth, a Vancouver, Canada-based environmental ‘think and do tank’ creating and imagining sustainable ways of living in cities and around the world. One Earth collaborates with partners to transform how people live their lives – what they need, what they consume and produce, and what they aspire to – enabling everyone to live good quality of lives within their fair share of our planet’s resources.

Vanessa is also a Senior Research Fellow at Utrecht University with Pathways to Sustainability, the Urban Futures Studio, and the Copernicus Institute of Sustainable Development. She holds a Doctorate and studied at Queen’s University, Oxford, UBC and Harvard. Vanessa sits on the Multi-stakeholder Advisory Committee for the United Nations 10YFP Sustainable Lifestyles Programme. In Canada, she is a Board member of the National Zero Waste Council and of the Vancouver Foundation Partnership Committee. This year she received the 2018 YWCA Women of Distinction Award in Environmental Sustainability.

WELCOMING/OPENING REMARKS

Malcolm Brodie
Chair, Metro Vancouver Zero Waste Committee and Chair, NWZC

Malcolm Brodie has been a Board Director and Chair of the National Zero Waste Council since its inception in October 2013. He has also been a member of Council for the City of Richmond since 1996, and following a by-election, he was sworn in as Mayor on October 29, 2001. Mayor Brodie was re-elected on November 16, 2002, November 19, 2005, November 15, 2008, November 19, 2011, and November 15, 2014.

Malcolm Brodie has been appointed by his Council to the Board of Directors of Metro Vancouver and he currently is the Chair of the Zero Waste Committee and also serves on the Intergovernmental & Finance Committee, the Mayors’ Committee, the Performance & Procurement Committee, and the Federal Gas Tax Task Force. He represents Metro Vancouver on the Municipal Finance Authority, and in 2015, was elected as Chair. Before election to Council, Mayor Brodie was a practicing lawyer and had a long record of service to Richmond in the volunteer community.

OPENING KEYNOTE

Finance and Intergovernment Committee
Gerd Leonhard is a hunter and gatherer of human values from the future. From culture and society to commerce and technology, Gerd brings back the news from the future so business and society leaders can make better choices right now. In his latest book, Technology vs. Humanity, Gerd explores the key ethical and social questions which urgently require an answer before we increasingly abdicate our very humanity. For organizations in the grip of disruption, Gerd supplies visionary insights and concentrated wisdom that inform key decisions makers today. A musician by origin, Gerd Leonhard has now redefined the vocation of futurist as a new humanist.

Gerd was listed as one of the top 100 influencers in technology by Wired magazine (2015). His clients include over 200 companies and organizations in 50+ countries, including Google, IPG, UBS, Roche, WWF, Cisco, KPMG, Accenture, Nestlé, Unilever, US Social Security Agency, the BBC, Universal Studios, the EU Commission and many more.

MODERATOR

Murali Chandrashekaran
Vice Provost, International, University of British Columbia

Dr. Murali Chandrashekaran is the Vice Provost (International), at the University of British Columbia (UBC), Canada, and the Fred H. Siller Professor of Marketing and Behavioural Science at UBC’s Sauder School of Business. As Vice-Provost, International, Dr. Chandrashekaran provides leadership in shepherding the University's diverse and complex international activities on both campuses, and in advancing UBC's international strategic priorities.
TECHNOLOGY INNOVATION

Vanessa Grondin
Vice-President, Food and Beverage Industry, OPTEL

Vanessa Grondin has over 10 years' experience in the food & beverage industry, in multinationals and start-ups alike. During that time, she has held a variety of management positions, mainly in R&D, QA, as well as equipment design. As Vice-President of Optel's Food and Beverage Industry, Ms. Grondin's role is to promote OPTEL's digital traceability solutions, which uses cutting-edge technologies to optimize supply chains efficiency and reduce waste. A technology enthusiast, Vanessa loves to talk about how cloud solutions, AI, IoT, blockchain and various mobile functions such as chatbots can improve supply chain efficiency.

Jay Thakkar
Manager, Accenture Strategy

Jay consults global organizations on business strategy, digital strategy, circular economy, and sustainability – often working at the cross-section of business and technology. He advises large organizations on unlocking competitive advantage from the circular economy, shaping business strategy through the lens of growth, profitability, and sustainability, and the role of technology in transforming the way we do business. Jay has helped clients in over 9 countries and across several industries.

At Accenture Strategy in Toronto, he is a global SMA on circular economy, leads CoE for ESG analytics, and advises on digital transformations. Jay’s client engagements at Accenture are diverse and include Growth Strategy, Business Model Innovation, Product Innovation, Digital Strategy and Roadmaps. Jay actively engages on several forums helping shape the sustainability agenda and has closely worked with consortia like UNGC, Automotive Industry Action Group (AIAG), FICCI, FGI etc. in the past. When not busy helping transform the ways of business, Jay enjoys spending time in nature and walking trails.

Garnet Miller
IT Architect, Cognitive Business Decision Support, IBM Services

Delivering solutions for IBMs multi-national clients who are focused on becoming digital, Garnet works with both new and established companies who are using innovation to be disruptors to the norms and methods of business in their industry. Digital business models, focused on customer experience require new innovations in products and the making and delivery of products and services. Garnet works with his clients to create a Customer Experience that meets expectations and new innovations and big ideas are the underpinning of these business models. At IBM in Vancouver, Garnet works with IBMs global solution centres in Agriculture, Oil & Gas, Minning, and Mental Health Providers using AI & Machine Learning, Big Data, and Cloud solutions to solve modern business problems. When he's not at work Garnet enjoys outdoor activities.
Chris Ripley
Co-Founder and CEO of Smarter Sorting

Chris is the Co-Founder and CEO of Smarter Sorting. A true visionary, Chris is passion is driven by an obsession with problem solving, and deep seated frustration with the every-day waste and inefficiency that characterizes modern resource management. Having spent his career listening to magical solutions that might solve problems “later,” you could say that Chris is a visionary with no time for vision, instead choosing to focus his life and his career on the unlimited number of problems that can be solved right now. His passion is undergirded by decades experience manufacturing paint, building technology and running data analytics firms. It’s this unique knowledge set, ranging from the chemical to the regulatory to the technical, that allows Chris to see opportunities and imagine solutions invisible to many in the world of waste and recycling. When not obsessing over work, you’ll find Chris enjoying himself in, near or on water.
Spark Talk

Arthur Huang
CEO & Founder of Miniwiz

Arthur is a structural engineer, architect, innovator of loop economy building material solutions and specialized in post-consumer trash recycling applications to help to accelerate the shift to a close-loop economy. In 2005, He founded Miniwiz, an internationally operating company based in in Taiwan, Shanghai, Berlin and Milan, and dedicated to upcycling and consumer trash and industrial waste.

Under Arthur Huang’s leadership, Miniwiz received the “Technology Pioneers 2015” title by the World Economic Forum, recognizing the potential of the emerging industry that Miniwiz is leading and the positive impact of its activities on the state of the world. Arthur also was selected as a 2016 National Geographic Explorer.

Rhys Thom
Senior Design Lead, Design for Change, IDEO

Rhys Thom is an Organizational Designer and Senior Design Lead at IDEO, focused on helping clients and their companies harness creativity and the tools of design in order to be future fit. Rhys partners with leaders, organizations, NGOs, cities, and even countries to tackle complex challenges through design, spanning a range of topics from circular economy, to urban development, healthcare, and financial services. Together with his clients, Rhys designs the systems, tools, and behaviors that help organizations adapt and routinely innovate. During his time at IDEO, Rhys has co-led an innovation lab in Peru designing solutions for the country's emerging middle class, helped to design a scalable disaster response network that connects and mobilizes veterans across continents, co-founded IDEO's Circular Economy CoLab, and guided leaders of global companies on their journeys to build design and purpose-led organizations.

Prior to IDEO, he spent seven years at the World Resources Institute (WRI), a global sustainability think tank in Washington, D.C. There, Rhys was the Director of Information and Innovation for EMBARQ, the organization's center for sustainable transport and urban development. He helped to establish and grow EMBARQ's global network of organizations, working with cities and national governments around the world to design sustainable solutions for urban mobility. He also helped cultivate innovative partnerships with organizations like FedEx, Volkswagen, Caterpillar, Bloomberg Philanthropies, and Forum for the Future. Rhys served as the founding editor of TheCityFix, a website dedicated to sustainable urban design and transportation that was named one of the top 50 eco-blogs in the world by The Guardian.
Kate Daly
Executive Director, Center for the Circular Economy, Closed Loop Partners

Kate Daly is Executive Director of the Center for the Circular Economy at Closed Loop Partners. The Center is a hub for circular business acceleration, investment, and research in packaging, food, the built environment, electronics and apparel & textiles. Kate previously served as Senior Vice President at the NYC Economic Development Corporation, where she oversaw business development programs in sectors including advanced manufacturing, smart cities, cleantech, fashion, tech, and media. Prior to NYCEDC Kate served as the Executive Director of the NYC Landmarks Preservation Commission. Kate holds a B.A. from Cornell University and an M.S. from the University of Pennsylvania.

MODERATOR

Mikhael Metauro
National Business Development & Sales Strategist, Cascades Recovery+

Mikhael has been a proud member of the Cascades Family for over 15 years. With his undergraduate degree in Strategic Selling & Marketing, Mikhael currently works within the Recovery+ division of Cascades focusing on Business Development and Corporate Strategy. Day in and day out Mikhael has the opportunity to deal with a wide range of customers from different market segments and backgrounds with various types of discarded material recovery needs. “It’s amazing to see how more and more organizations are focusing on sustainability and have put the people power in place to start thinking about better ways to recover more and waste less. For me this is where my focus has been and always will be, working with organizations to help them achieve their sustainability goals through coaching, planning and execution.” Mikhael is focused on creating a world where all materials have a positive end of life – a truly Circular Economy.
Mari Pantsar
Director of Carbon-Neutral Economy at SITRA

Mari Pantsar leads the Carbon-neutral circular economy theme in Sitra - the Finnish Innovation Fund - an independent public foundation which operates directly under the supervision of the Finnish Parliament. She steers the strategy of the theme and is responsible for ensuring that all activities related to it direct Finland towards a more ecologically sustainable and competitive society.

Mari has two decades of experience managing the development of cleantech and circular economy initiatives in the private and public sector, with several companies and their boards. She has a doctorate in philosophy and holds the title of docent at the University of Helsinki and at Lappeenranta University of Technology.

Iain Gulland
CEO, Zero Waste Scotland

Iain is Chief Executive of Zero Waste Scotland and previously led its predecessor programme, WRAP Scotland. Zero Waste Scotland leads on the delivery of the Scottish Government’s Circular Economy strategy and other low carbon policy priorities, and is at the forefront of efforts to create a resource efficient, circular economy.

Iain has more than 25 years’ experience in sustainable resource management, including initiating recycling systems in the public and third sectors. He is the current President of the Association of Cities and Regions for Sustainable Resource Management (ACR+) and he is a member of a number of Scottish Government strategic groups including the Economy and Environment Leaders Group, the Board of the Low Carbon Infrastructure Transition Programme and the Expert Panel on Environmental Charges. He was voted the 'most influential person in the UK waste and resource efficiency sector' in 2014 by Resource Magazine, and he was granted Fellowship of Chartered Institution of Wastes Management in 2016.
Henk Snoeken  
Consul General of the Netherlands in Vancouver

Henk Snoeken is Consul-General of the Netherlands in Vancouver and is the government’s representative in BC, Alberta, Saskatchewan, Yukon, and the North West Territories. Before taking up his position in Vancouver, he had various positions in Dutch ministries. The latest were: Deputy Director for National Spatial Planning (2010-2014) and Deputy Director for International Relations (2014-2018) at the Ministry of Infrastructure and the Environment in the Netherlands. As a policymaker he has been working in the field of spatial planning, water management, logistics and sustainability, as such he has been involved in various Zero Waste and Circular Economy initiatives and was involved in setting up the Holland Circular Hotspot initiative. In the field of international relations, his focus was on climate policy, public-private cooperation and economic diplomacy. Mr. Snoeken was involved in various international trade missions focused on the Waste sector, eg to China, Indonesia and California. This has led to new international government cooperation and policy making between the Netherlands, China and Indonesia.

MODERATOR

Kathryn Gretsinger  
Vancouver journalist and Senior Lecturer, UBC Graduate School of Journalism
James D Downham  
President & CEO PAC Packaging Consortium, Vice Chair National Zero Waste Council

Jim Downham is a former package manufacturing CEO. Currently he is the CEO of PAC Packaging Consortium and Chairman of LeaderLinx, executive recruiter serving leading packaging companies. Jim is the Vice Chairman of the National Zero Waste Council. In 2014 Jim was inducted into the Packaging Hall of Fame; he is a Passionate Sustainability, Circular Economy and Brand Design Leader. Jim is a member of the 2018 Packaging Hall of Fame Commission.

PAC Packaging Consortium is a nonprofit association that serves global client partners across the packaging value chain to achieve their business objectives. Under Jim's leadership PAC has created several packaging programs including PAC NEXT and PAC FOOD Sustainability Programs; the IFS PAC secure globally recognized food packaging safety standard; intelliPACK, A Smart Packaging Innovation Catalyst; the PAC GLOBAL LEADERSHIP AWARDS and the PACed Certificate Program.

Jim serves on various packaging nonprofit boards and supports students through packaging design competitions and scholarships.

Malcolm Brodie  
Chair, Metro Vancouver Zero Waste Committee and Chair, NWZC

New Entrants in National Zero Waste Council’s Design Portfolio

- The Bokashi Composting Kit from Bokashi Living
- GlassSipper – reusable straw
- Greenomics - the Game
Wayne Visser
Professor of Integrated Value & Chair of Sustainable Transformation, Antwerp Management School

Dr Wayne Visser holds the Chair in Sustainable Transformation and is Professor of Integrated Value at Antwerp Management School. He is also Fellow of the University of Cambridge Institute for Sustainability Leadership, Director of the think-tank and media company, Kaleidoscope Futures, Founder of CSR International and Board Member of Migrant Entrepreneurs International.

Dr Visser previously served as Director of Sustainability Services for KPMG and Strategy Analyst for Capgemini in South Africa. His work as a strategy analyst, sustainability advisor, CSR expert, futurist and professional speaker has taken him to 75 countries in the past 30 years to work with over 150 clients. Dr Visser describes himself as a professional idea-monger, storyteller and meme-weaver. He sees his mission as helping to bring about transformative thinking and action in business and society. He believes that we all need to be purpose-inspired to make a positive difference.

MODERATOR

John Coyne
VP, Legal & External Affairs, Unilever Canada Inc. & Executive Chair, Canadian Stewardship Services Alliance, Inc.

John is a member of Unilever Canada’s board of directors, the Canadian Leadership Team and chair of the company’s Pension Committee.

John is well known for his leadership in corporate sustainability. He is a passionate activator of the Unilever Sustainable Living Plan, Unilever’s strategy to grow the business, reduce its environmental footprint and increase its positive contribution to society. John is Executive Chair of the Board of Canadian Stewardship Services Alliance, Inc., Chair of the Board of Stewardship Ontario and is a director of Evergreen. In addition, John is Co-Chair of the Partners in Project Green steering committee, a major environmental initiative of the Toronto Region Conservation Authority. John has been recognized for his leadership in corporate sustainability by being named a Clean 50 honouree in 2013 and a Clean 16 honouree in 2018. In 2015, John was appointed as a member of the Ontario Government’s Climate Action Group advising the Ontario Minister of the Environment on effective climate change actions that will help Ontario meet its greenhouse gas reduction goals and transition to a prosperous, low-carbon economy. In 2018, John was honoured to receive the Canadian General Counsel Award for Environmental, Social and Governance Leadership.

John also works closely with industry groups and other organizations. He is Chair of the board of the Look Good Feel Better Foundation and is director and past Chair of Cosmetics Alliance Canada.
Guillaume Lavoie
Lecturer, National School of Public Administration, University of Quebec

A public policy entrepreneur, Guillaume Lavoie is one of Canada’s most visible experts in the collaborative economy and its impacts on public policy and urban affairs. A former city councillor in Montreal, he authored Canada’s first by-law to regulate the sharing of private spaces. He is also a lecturer on the collaborative economy and public policy at the National School of Public Administration (ÉNAP), and delivered 180+ speeches on the topic, in Canada and abroad. In January 2018, he was appointed Chair of the Quebec government task force on the collaborative economy.

Megan Arnaud
Retail Leader, EILEEN FISHER Renew

Megan leads the Seattle retail division of the EILEEN FISHER Renew take-back program. Under Megan’s leadership Renew has grown into a multimillion dollar business and has been recognized as a major space for innovation. Modelling a circular economy through recapturing product and shifting consumer practices, Megan’s work at EILEEN FISHER Renew inspires her to create customer connection through community, developing a unique experiential retail model.

Brendan Seale
Head of Sustainability, IKEA Canada

As Head of Sustainability for IKEA Canada, Brendan Seale is responsible for activating the IKEA “People & Planet Positive” strategy across the country – to inspire and enable Canadians to live a healthier & more sustainable life at home, to achieve circular and climate positive operations, and lead towards a fair & inclusive Canadian society.

Previously Brendan served as Sustainability Advisor with The Natural Step Canada, and worked in communications with Barrick Gold Corporation. He holds an MSc in Strategic Leadership towards Sustainability from Blekinge Institute of Technology (Sweden), and a BA in Communication Studies & Multimedia from McMaster University.

Brendan’s feet like to keep the company of bicycle pedals, soccer cleats, ski boots, and infectious beats, and he is now a father to two young sons who have given his work a greater depth of purpose.
Jessica Regan  
CEO, FoodMesh  

Jessica is a 4 times entrepreneur, a certified B Corp consultant, and strategist for social impact businesses. For 12 years, Jessica has consulted for start-ups, non-profits, Fortune 100 companies, and all levels of government, including the United Nations, in areas of community economic development, and sustainability.

Since 2007, Jessica has served as the Vice-Chair of KASOW, a Kenyan-based social enterprise concentrating in areas of food security, health and education. And locally, Jessica serves on the Vancouver Food Policy Council, while developing her start up, the Mesh Exchange, a software company developing platforms to power the circular economy.

Felix Bock  
Founder & CEO, ChopValue Manufacturing Ltd. | Recycled Chopstick Products  

Felix Böck knocks on wood for a living, and lately, his friends can find him counting chopsticks in Vancouver. ChopValue Manufacturing Ltd., has allowed Felix to discover a way to connect his expertise and research focus on bamboo composite materials within the Vancouver community while doing his PhD at the University of British Columbia. Motivated to create global impact in the bamboo industry, he has gained experience by working on projects in over 20 countries with his firm CrossLink Technologies - where ChopValue originated as a product development exercise.

Brianne Miller  
Founder & CEO - Nada  

Brianne is a marine biologist turned entrepreneur with a passion for driving positive change. As an expert in zero waste living and local food systems, she loves connecting people to their environment and coming up with creative solutions to complex conservation problems. Having seen firsthand the impacts of our current food system on the oceans, Brianne is committed to revolutionizing the food system from the ground up so that future generations can continue to enjoy and benefit from the world’s oceans. Brianne is the founder of Nada, a package-free grocery store on a mission to inspire people to change the way they shop for groceries. She is a United Nations #notwasting ambassador, sits on the Vancouver Food Policy Council, and is a 2018 SheEO venture winner.
MODERATOR

Denise Taschereau  
CEO and Co-founder, Fairware

As chief executive officer (CEO) and co-founder of Fairware she is responsible for business development, product sourcing, as well as, Fairware’s ethical sourcing and sustainability programs. Denise got the idea to launch Fairware when she noticed how difficult it was to source promotional merchandise that reflected the social and environmental priorities of many of the brands and organizations she admired.

Prior to starting Fairware, Denise spent seven years as the Director of Sustainability and Community for Mountain Equipment Co-op, Canada’s largest outdoor retailer. At MEC, she oversaw the Co-op’s national environmental programs, community grant-making and ethical sourcing programs, and wrote their award-winning first Sustainability Report.

She is currently a mentor for Spring.is, an accelerator and incubator that is using business as a force for good to empower social impact leaders with the know-how, network and support needed to build a better business. Denise was a member of ETSY’s Manufacturing Advisory Board, a Board Member with the Green Meeting Industry Council and the past co-chair of Vision Vancouver. She has a Masters of Resource and Environmental Management from Simon Fraser University.

LEADERSHIP TO PREVENT FOOD LOSS AND WASTE

SHOW CASE

Bob Blumer  
Professional Gastronaut and host of Food Network’s The Surreal Gourmet

Bob Blumer is a professional gastronaut with an adrenaline addiction and a passion for wasted food. He has created and hosted three award-winning TV series that have aired in over 20 countries, written six acclaimed cookbooks, and broken eight food-related Guinness World Records.

In his books and appearances around the globe, Bob transforms ordinary ingredients into wow-inspiring dishes through simple cooking methods and whimsical presentations that have become his culinary trademark. Publishers Weekly summed up his most recent book Glutton for Pleasure as: “equal parts memoir, lavish art book, multi-genre soundtrack and culinary tour de force”.

Finance and Intergovernment Committee
Tom Rosser
Assistant Deputy Minister, Strategic Policy, Agriculture and Agri-Food Canada

Tom Rosser joined Agriculture and Agri-Food Canada (AAFC) as the Assistant Deputy Minister of Strategic Policy in January 2017. He is responsible for leading on major policy issues on behalf of the Department including Cabinet and intergovernmental affairs, development of a national food policy, as well as economic analysis. He is also the Department's Champion for mental health and wellness.

Before joining AAFC, he was the Senior Assistant Deputy Minister of Strategic Policy at Fisheries and Oceans Canada, responsible for policy development, Cabinet and Parliamentary Affairs, communications, economic analysis and trade.

Sam Wankowski
Senior Vice President of Operations, Western Canada, Walmart Canada

As the Senior Vice President for Walmart Canada’s Western Canada Operations, Sam is responsible for leading a world-class team while overseeing and executing a strategy aimed at ensuring sustainable value for Walmart’s customers.

Since joining Walmart more than 10 years ago, Sam has held a variety of roles across various divisions of the business including managing key hardlines portfolios for Walmart Canada. Prior to joining Walmart, Sam was held merchandising and marketing roles at Asda, a leading British supermarket retailer. Sam has a Bachelor of Honours in Business and Quality Management from The Nottingham Business School. Outside of work he is an avid runner and sports fan.

Lori Nikkel
CEO, Second Harvest

Lori is a vocal and passionate champion of environmental and social justice issues related to food and is sought after for her expertise internationally.

Lori advised on the development of the provincial Food and Organic Waste Framework with the Ministry of Environment and Conservation and Parks and is the Co-chair of the Food Working Group at the National Zero Waste Council – a leadership initiative that brings together governments, businesses and organizations to advance waste prevention in Canada.

As CEO for Second Harvest - Canada’s largest Foodrescue organization- she ensures that over 12 million lbs of nutrient dense surplus food is diverted to social service agencies. Her current project is www.Foodrescue.ca, a web-based platform that takes a local and technology approach to rescuing and delivering food.
Cher Mereweather
Executive Director, Provision Coalition

Cher is one of Canada's leaders in food manufacturing sustainability. As Executive Director of Provision Coalition, an organization she founded with the country's top food and beverage professional associations, Cher works directly with manufacturers to transform their business culture and operations. An advocate for change and a passionate spokesperson, Cher has dedicated her career to advancing sustainability concepts within the Canadian food industry and sustainability solutions at the firm level. Most recently, Cher has sharpened Provision's focus on the reduction of food loss and waste, responsible sourcing and climate change mitigation, by developing innovative technologies and on-line tools that will modernize facility processing.

Cher's career has included time with the Guelph Food Technology Centre where she established and directed the Sustainability Consulting Business Unit, and executive positions in environmental economics and policy with the Canadian agri-food think tank, the George Morris Centre. Cher holds a Bachelor and Master's degree in Environmental Economics and Policy. Cher has also been awarded the Canadian Grocer Generation Next award for her leadership, innovation and excellence in sustainability within the food and beverage industry.

MODERATOR

Denise Philippe
Lead on Food Waste and Loss Strategy for Canada, NZWC

Denise supports the National Zero Waste Council on projects, working groups, and organizational development. For the past 4 years, Denise has helped drive forward the Council's work on food waste prevention and reduction, largely through the initiatives of the Food Working Group, and the National Strategy on Food Waste Reduction. Denise is also a Senior Policy Advisor with Metro Vancouver, the regional government that houses the Council. She is a certified planner who has been engaged in community and land use planning, and stakeholder engagement for over two decades, in both Canada and overseas. She has a Master's in Education with expertise in environmental/sustainability education, facilitation and dialogue.
Leyla Acaroglu  
Founder & Chief Disrupter, Unschool

Design disruptor, creative boundary pusher, and cultural provocateur, Dr. Leyla Acaroglu (A-jar-a-loo) embodies the innovation that instigates positive environmental and social change.

A designer, social scientist, and sustainability expert, Leyla is internationally recognized as a leading force in the movement for design being used as effective catalyst for positive social and environmental change. She is the developer of the Disruptive Design Method and founder of the award-winning experimental educational initiative The UnSchool of Disruptive Design.

Leyla was awarded 2016 Champion of the Earth by the United Nations Environment Programme, and is an internationally respected keynote speaker and trusted expert, having led thousands of hours of workshops, lectures, activations, and educational experiences around the world. Leyla was a visiting scholar at NYU and an Innovator in Residence at the Center for Social Innovation NYC. She was also an invited Artist in Residence with Autodesk and managed the development of ‘Greenfly,’ one of the first online life cycle assessment tools for designers. Leyla is regularly invited to provide her professional opinions on radio and TV, having been a regular judge on the ABC TV show The New Inventors, along with a host of international programs.

MODERATOR

Vanessa Timmer  
Co-Founder and Executive Director, One Earth and Board Member, NZWC

CLOSING REMARKS

Malcolm Brodie  
Chair, Metro Vancouver Zero Waste Committee and Chair, NWZC
DAY TWO - NOVEMBER 9

WELCOME/OPENING REMARKS

Malcolm Brodie
Chair, Metro Vancouver Zero Waste Committee and Chair, NWZC

KEYNOTE

Stephen Lucas
Deputy Minister of Environment & Climate Change Canada

Dr. Stephen Lucas was appointed Deputy Minister of Environment and Climate Change Canada (ECCC) on January 23, 2017.

As Senior Associate Deputy Minister (Climate Change) from June 2016 to January 2017, Dr. Lucas led work in support of the development and adoption of the Pan-Canadian Framework on Clean Growth and Climate Change. Before joining ECCC, Dr. Lucas was Deputy Secretary to the Cabinet for Plans and Consultations and Intergovernmental Affairs at the Privy Council Office. From 2013 to 2014, he was Assistant Secretary, Economic and Regional Development Policy, at the Privy Council Office.

As Assistant Deputy Minister, Science and Policy Integration at Natural Resources Canada (NRCan) from 2009 to 2013, he was responsible for strategic policy development related to energy, mineral and forest resources, climate change and clean energy and international and intergovernmental relations. Prior to that, from 2007 to 2009, he was Assistant Deputy Minister, Minerals and Metals Sector, at NRCan, where he provided leadership on innovation, green mining and corporate social responsibility.

Dr. Lucas was Director General in the Health Products and Food Branch (HPFB) at Health Canada from 2003 to 2007, Senior Director at NRCan for Science, Innovation, Regional and Aboriginal Affairs from 2000 to 2003, and Director of Policy Planning and Coordination in the Earth Sciences Sector at NRCan from 1998 to 2000.

Dr. Lucas started his career as a research scientist at the Geological Survey of Canada in 1988. He has a Bachelor of Science with Honours in Geological Engineering from Queen’s University and a Ph.D. in structural geology and tectonics from Brown University.

MODERATOR

Malcolm Brodie
Chair, Metro Vancouver Zero Waste Committee and Chair, NWZC
Chelsea Rochman
Assistant Professor, University of Toronto

Chelsea Rochman is an Assistant Professor at the University of Toronto. She received her PhD in Ecology from the University of California, Davis and was a recipient of the Society for Conservation Biology’s David H. Smith Postdoctoral Fellowship. Chelsea has been researching the sources, sinks and ecological implications of plastic debris in marine and freshwater habitats for the past decade. She has published dozens of scientific papers in respected journals and has led international working groups about plastic pollution. In addition to her academic research, Chelsea works hard to translate her science beyond academia. She served as an expert witness, testifying in California about microplastics, and presented her work to the United Nations General Assembly in New York, NY, and at the US State Department in Washington, DC.

Matthew Fraser
Senior Project Manager, Cities Programme, Circle Economy

Matthew is driven by the need to realise a new economic model that deliver prosperity within the means of our planet, and acknowledges that cities have a pivotal role to play in catalysing that transition globally. In his role as a Senior Project Manager at Circle Economy, he works together with cities to scope their opportunities and realize innovative and practical circular economy strategies. He also leads the development of digital tools that will allow cities and businesses to harness local data to capitalise on the benefits brought by the circular economy and take the first critical steps toward implementation. Matthew’s background is rooted in sustainability advisory, where he previously tackled complex global challenges like the food system, logistics and mobility, and sustainable consumption.

Daniella Russo
CEO & Founder, Think Beyond Plastic™

Daniella Russo believes that intractable environmental challenges can be addressed by harnessing the forces of innovation and entrepreneurship, and the power of the markets to do good. Since 2009, she has led the development of an innovation eco-system enabling the circular economy incorporating bio-based, bio-benign materials from renewable sources, associated manufacturing, and innovative consumer and business products specifically designed to handle these new materials.

Daniella Russo is a serial entrepreneur. Her experience includes executive management of businesses from start-up phase through an IPO (such as Frame Technology, Infoseek and others), as well as Fortune-500 companies (Sun Microsystems, and Xerox PARC).
Daniella Russo is a member of the Founders Board of Advisors at StartX Stanford Student Startup Accelerator. She is an Associate Professor at the Middlebury Institute of International Studies Graduate Program in International Policy and Management. She serves on the Board of numerous NGOs and businesses.

Sonia Wegge
Project Manager, New Plastics Economy Initiative, Ellen MacArthur Foundation

Sonja is a Project Manager for the New Plastics Economy Initiative of the Ellen MacArthur Foundation. The New Plastics Economy is an ambitious three-year initiative to rethink and redesign the plastics system based on circular economy principles. It brings together key stakeholders from across the plastics value chain to change the way we produce, use and reuse plastics, starting with packaging.

Having a background in Packaging Engineering, Sonja gained some years of hands-on experience in industry before she found a new home on the Isle of Wight. Find out more about the initiative by visiting https://newplasticseconomy.org/

MODERATOR

Christina Seidel
Co-Chair of the Circular Economy Working Group, NZWC

Christina holds a Masters degree in Environmental Design (Environmental Science), as well as a B.Sc. in Mechanical Engineering, and is currently undertaking her PhD in Engineering Management, with a thesis topic of Assessing Recycling Options using Life-Cycle Assessment. She operates sonnevera international corp., a waste reduction consulting firm, and is the current Executive Director of the Recycling Council of Alberta. Christina loves rural life, choosing to live on a farm near Blufenton, Alberta, where her and her family raise Warmblood horses, and enjoy many other outdoor activities.
ENABLING ENVIRONMENTS FOR CHANGE - CANADIAN INNOVATION SHOWCASE

James D Downham
President & CEO PAC Packaging Consortium, Vice Chair National Zero Waste Council

Daniella Russo
CEO & Founder, Think Beyond Plastic™

FINALISTS

Luca Corbellini, Senior Developer, Smart Composites at Bioastra Technologies
Jocelyn Doucet, Co-founder and Chief Executive Officer of Pyrowave
Andy Chou, co-founder of Soapstand
Matt Livingstone, the Sustainability Lead for Sustainable Produce Urban Delivery (SPUD)
Malcolm Brodie  
Chair, Metro Vancouver Zero Waste Committee and Chair, NWZC

Brendan Seale  
Head of Sustainability, IKEA Canada

Stephanie Cairns  
Director of Cities and Communities & Policy Director of Circular Economy, Smart Prosperity Institute

David Hughes  
President and CEO, The Natural Step Canada

Kevin Groh  
Vice President, Corporate Affairs and Communication, Loblaw

Bob Walker  
Head of ESG Services, NEI Investments

MODERATOR

Nancy Wright  
Chief Operating Officer, Globe Series

Nancy has served as Chief Operating Officer of GLOBE Series since 2015 where she’s been responsible for the overall operations of the company and the events portfolio. Her strength in partnership building and corporate engagement have led her to connect with thousands of senior corporate and government leaders over the course of her career. Winner of Canada’s Clean50 award for 2017, she curates partnerships for GLOBE Series that catalyze innovation, advance the sustainable economy transition and transform business practices.

Previous to 2015 Nancy spent two decades building the GLOBE Foundation, a not for profit environmental business foundation with a mandate to promote the business case for sustainable development. Created in 1993, the Foundation became one of the most widely recognized business Foundations in Canada. Through her roles in marketing and operations, she helped build GLOBE Forum into one of the most famous brands of sustainable business conferences in the world.
CLOSING LUNCH & CONFERENCE REFLECTIONS

Mari Pantsar
Director of Carbon-Neutral Economy at SITRA

Iain Gulland
CEO, Zero Waste Scotland

Wayne Visser
Professor of Integrated Value & Chair of Sustainable Transformation, Antwerp Management School

Leyla Acaroglu
Founder & Chief Disrupter, Unschool

MODERATOR
Vanessa Timmer
Co-Founder and Executive Director, One Earth and Board Member, NZWC

CLOSING REMARKS
Malcolm Brodie
Chair, Metro Vancouver Zero Waste Committee and Chair, NWZC
Zero Waste Conference

Twitter Coverage Report

October - November 2018

Finance and Intergovernment Committee
#zwc18 had 495 mentions, while #zwc2018 had 138 mentions during the conference.
@nzwcouncil
Tweets: 38
Followers before ZWC 2018: 1,781
Followers after ZWC 2018: 1,929

@MetroVancouver
Tweets: 96
Followers before ZWC 2018: 29,643
Followers after ZWC 2018: 29,781

@ZWCVancouver
Tweets: 116
Followers before ZWC 2018: 55
Followers after ZWC 2018: 171

*Data on this page only reflects tweets using the official hashtags

Finance and Intergovernment Committee
Top Influencers by # of Tweets

- Coro Strandberg: 121
- David Hughes: 94
- Brendan Seale: 50
- Kelly Greene - Rmd City Councillor: 45
- Haley Anderson: 40
- Ebi Ember: 39
- Environment Canada: 36
- Iain Gulland: 34
- Jennie Lynn Moore: 33
- GLOBE Series: 31

Top Influencers by # of Followers

- Environment Canada: 694,628
- Prof Wayne Visser: 420,720
- Gerd Leonhard: 89,928
- Second Harvest: 82,565
- Stephen Gill FRSA: 50,502
- Mari Pantsar: 45,430
- Minister C. McKenna: 45,016
- Coro Strandberg: 42,770
- UBC Sauder School: 41,316
- Leyla Acaroglu: 40,955

Top Influencers by Engagement

- Coro Strandberg: 121
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- Brendan Seale: 50
- Kelly Greene - Rmd City Councillor: 45
- Haley Anderson: 40
- Ebi Ember: 39
- Environment Canada: 36
- Iain Gulland: 34
- Jennie Lynn Moore: 33
- GLOBE Series: 31

*Data on this page only reflects tweets using the official hashtags*
Retweets: 15
Like: 22

Retweets: 12
Like: 33

Retweets: 5
Like: 16

Retweets: 9
Like: 23

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