

**METRO VANCOUVER REGIONAL DISTRICT
CLIMATE ACTION COMMITTEE**

REGULAR MEETING

Friday, March 15, 2019

1:00 p.m.

28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia

A G E N D A¹

1. ADOPTION OF THE AGENDA

1.1 March 15, 2019 Regular Meeting Agenda

That the Climate Action Committee adopt the agenda for its regular meeting scheduled for March 15, 2019 as circulated.

2. ADOPTION OF THE MINUTES

2.1 February 8, 2019 Regular Meeting Minutes

That the Climate Action Committee adopt the minutes of its regular meeting held February 8, 2019 as circulated.

3. DELEGATIONS

3.1 Alex Boston, Executive Director, Renewable Cities and Fellow, SFU Morris J. Wosk Centre for Dialogue

Subject: Better Climate, Better Economy, Better Community

4. INVITED PRESENTATIONS

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Key Climate Change Developments Since the Adoption of the Climate 2050 Strategic Framework

Designated Speakers:

Joshua Power, Policy Analyst

Jason Emmert, Senior Planner

Conor Reynolds, Division Manager, Air Quality and Climate Change Policy Planning and Environment Department

¹ Note: Recommendation is shown under each item, where applicable.

That the MVRD Board receive for information the report dated February 20, 2019, titled "Key Climate Change Developments Since the Adoption of the Climate 2050 Strategic Framework".

5.2 Climate 2050 Roadmaps Development Process and Engagement Approach

Designated Speakers:

Sheryl Cumming, Air Quality Planner, Planning and Environment Department

Jason Emmert, Senior Planner, Planning and Environment Department

Lucy Duso, Policy Coordinator, External Relations Department

That the MVRD Board receive for information the report dated February 21, 2019, titled "Climate 2050 Roadmaps Development Process and Engagement Approach".

5.3 Consultation on a Cannabis Production Emission Regulation for Metro Vancouver

Designated Speakers:

Julie Saxton, Air Quality Planner

Esther Berube, Division Manager, Bylaw and Regulation Development

Kathy Preston, Lead Senior Engineer

Planning and Environment Department

That the MVRD Board:

- a) Receive for information the report titled "Consultation on a Cannabis Production Emission Regulation for Metro Vancouver", dated February 27, 2019; and
- b) Direct staff to proceed with consultation on the proposed approach to regulating air emissions from cannabis production, based on the bylaw development discussion paper attached to the report titled "Consultation on a Cannabis Production Emission Regulation for Metro Vancouver", dated February 27, 2019.

5.4 Metro Vancouver's Electric Vehicle Public Outreach Programs

Designated Speaker:

Erik Blair, Senior Policy and Planning Analyst

Planning and Environment Department

That the MVRD Board receive for information the report dated February 12, 2019, titled "Metro Vancouver's Electric Vehicle Public Outreach Programs".

5.5 Staff Appointments for the Purpose of Serving Summons under the *Offence Act*

Designated Speaker:

Ray Robb, Division Manager, Environmental Regulation and Enforcement

Planning and Environment Department

That the MVRD Board appoint, for the purpose of serving summons under section 28 of the *Offence Act* for alleged violation of MVRD air quality management bylaws, all Metro Vancouver staff currently appointed as officers under the *Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008*.

5.6 Manager's Report

Designated Speaker:

Roger Quan, Director, Air Quality and Climate Change

Planning and Environment Department

That the Climate Action Committee receive for information the report dated February 22, 2019, titled "Manager's Report".

6. INFORMATION ITEMS

7. OTHER BUSINESS

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.

10. ADJOURNMENT/CONCLUSION

That the Climate Action Committee adjourn/conclude its regular meeting of March 15, 2019.

Membership:

Carr, Adriane (C) - Vancouver
Dhaliwal, Sav (VC) - Burnaby
Arnason, Petrina - Langley Township
Dupont, Laura - Port Coquitlam
Hocking, David - Bowen Island

Kruger, Dylan - Delta
McIlroy, Jessica - North Vancouver City
McLaughlin, Ron - Lions Bay
Pettigrew, Steven - Surrey
Steves, Harold - Richmond

van den Broek, Val - Langley City
Williams, Bryce - Tsawwassen
Yousef, Ahmed - Maple Ridge

**METRO VANCOUVER REGIONAL DISTRICT
CLIMATE ACTION COMMITTEE**

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Climate Action Committee held at 1:01 p.m. on Friday, February 8, 2019 in the 28th Floor Committee Room, 4730 Kingsway, Burnaby, British Columbia.

MEMBERS PRESENT:

Chair, Councillor Adriane Carr, Vancouver
 Vice Chair, Councillor Sav Dhaliwal, Burnaby
 Councillor Petrina Arnason, Langley Township
 Councillor Laura Dupont, Port Coquitlam
 Councillor David Hocking, Bowen Island
 Councillor Dylan Kruger, Delta
 Councillor Jessica McIlroy, North Vancouver City
 Mayor Ron McLaughlin, Lions Bay
 Councillor Steven Pettigrew, Surrey
 Councillor Harold Steves, Richmond
 Mayor Val van den Broek, Langley City
 Chief Bryce Williams, Tsawwassen
 Councillor Ahmed Yousef, Maple Ridge

MEMBERS ABSENT:

Director Justin LeBlanc, Electoral Area A

STAFF PRESENT:

Roger Quan, Director, Air Quality and Climate Change, Planning and Environment
 Carol Mason, Chief Administrative Officer
 Genevieve Lanz, Legislative Services Coordinator, Board and Information Services

1. ADOPTION OF THE AGENDA

1.1 February 8, 2019 Regular Meeting Agenda

It was MOVED and SECONDED

That the Climate Action Committee adopt the agenda for its regular meeting scheduled for February 8, 2019 as circulated.

CARRIED

2. ADOPTION OF THE MINUTES

2.1 January 11, 2019 Regular Meeting Minutes

It was MOVED and SECONDED

That the Climate Action Committee adopt the minutes of its regular meeting held January 11, 2019 as circulated.

CARRIED

3. DELEGATIONS

No items presented.

4. INVITED PRESENTATIONS

No items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 2019 Liquid Waste Sustainability Innovation Fund Applications

Report dated January 24, 2019 from Fred Nenninger, Director, Policy, Planning and Analysis, Liquid Waste Services, summarizing the staff evaluation of applications for funding from the Liquid Waste Sustainability Innovation Fund and providing recommendations for GVS&DD Board approval.

Members were provided a presentation on the Liquid Waste Sustainability Innovation Fund applications, highlighting the following projects: multiphase composite coating for sewer pipe protection, pump station optimization, and reinventing the wastewater biomass process within a circular economy.

Presentation material titled "Liquid Waste Sustainability Innovation Fund – 2019 Applications" is retained with February 8, 2019 Climate Action Committee agenda.

It was MOVED and SECONDED

That the GVS&DD Board approve the allocation from the Liquid Waste Sustainability Innovation Fund for the following projects:

- a) Multiphase Composite Coating for Sewer Pipe Protection: \$620,000 over four year starting in 2019;
- b) Pump Station Optimization: \$330,000 over three years starting in 2019;
- c) Reinventing the Wastewater Biomass Process Within a Circular Economy: \$2,985,000 over six years starting in 2019.

CARRIED

5.2 2019 Regional District Sustainability Innovation Fund Applications

Report dated January 24, 2019 from Roger Quan, Director, Air Quality and Climate Change, Planning and Environment, summarizing the staff evaluation of applications for funding from the Regional District Sustainability Innovation Fund and providing recommendations for MVRD Board approval.

Members were provided a presentation on the Regional District Sustainability Innovation Fund applications, highlighting the following projects: Climate Literacy Modules, Sustainable Infrastructure and Buildings Design Guide, and Integrated Transit-Oriented Affordable Housing Implementation Calculator.

Presentation material titled “Regional District Sustainability Innovation Fund – 2019 Applications” is retained with February 8, 2019 Climate Action Committee agenda.

It was MOVED and SECONDED

That the MVRD Board approve the allocation from the Regional District Sustainability Innovation Fund for the following projects:

- a) Climate Literacy Modules: \$160,000 over two years starting in 2019;
- b) Sustainable Infrastructure and Buildings Design Guide: \$150,000 over two years starting in 2019;
- c) Integrated Transit-Oriented Affordable Housing Implementation Calculator: \$100,000 in 2019.

CARRIED

5.3 2019 Water Sustainability Innovation Fund Applications

Report dated January 18, 2019 from Inder Singh, Director, Policy, Planning and Analysis, Water Services, summarizing the staff evaluation of applications for funding from the Water Sustainability Innovation Fund and providing recommendations for GVWD Board approval.

Members were provided a presentation on the Water Sustainability Innovation Fund applications highlighting the following projects: Next Generation Snowpack Monitoring, and Treating Potential Emerging Contaminants at the Seymour Capilano Filtration Plant.

Presentation material titled “Water Sustainability Innovation Fund – 2019 Applications” is retained with February 8, 2019 Climate Action Committee agenda.

It was MOVED and SECONDED

That the GVWD Board approve the allocation from the Water Sustainability Innovation Fund for the following projects:

- a) Next Generation Snowpack Monitoring: \$160,000 over two years starting in 2019;

- b) Treating Potential Emerging Contaminants at the Seymour Capilano Filtration Plant: \$300,000 over two years starting in 2020.

CARRIED

5.4 MVRD Notice of Bylaw Violation Enforcement and Dispute Adjudication Amending Bylaw No. 1281, 2019

Report dated January 14, 2019 from Mia Edbrooke, Senior Policy Analyst, Planning and Environment, seeking MVRD Board adoption of *MVRD Notice of Bylaw Violation Enforcement and Dispute Adjudication Amending Bylaw No. 1281, 2019*.

Members were provided a presentation on *MVRD Notice of Bylaw Violation Enforcement and Dispute Adjudication Amending Bylaw No. 1281, 2019*, highlighting the diesel emissions reduction program, Tier 0 and Tier 1 engine designations, and proposed offences and penalties.

Presentation material titled "Ticketing Bylaws Amendments to Support the Non-Road Diesel Engine Emission Regulation" is retained with the February 8, 2019 Climate Action Committee agenda.

It was MOVED and SECONDED

That the MVRD Board:

- a) give first, second and third reading to *Metro Vancouver Regional District Notice of Bylaw Violation Enforcement and Dispute Adjudication Amending Bylaw No. 1281, 2019*; and
- b) pass and finally adopt *Metro Vancouver Regional District Notice of Bylaw Violation Enforcement and Dispute Adjudication Amending Bylaw No. 1281, 2019*.

CARRIED

5.5 MVRD Ticket Information Utilization Amending Bylaw No. 1282, 2019

Report dated January 14, 2019 from Mia Edbrooke, Senior Policy Analyst, Planning and Environment, seeking MVRD Board adoption of *Metro Vancouver Regional District Ticket Information Utilization Amending Bylaw No. 1282, 2019*.

It was MOVED and SECONDED

That the MVRD Board:

- a) give first, second and third reading to *Metro Vancouver Regional District Ticket Information Utilization Amending Bylaw No. 1282, 2019*; and
- b) pass and finally adopt *Metro Vancouver Regional District Ticket Information Utilization Amending Bylaw No. 1282, 2019*.

CARRIED

5.6 Manager's Report

Report dated January 21, 2019 from Roger Quan, Director, Air Quality and Climate Change, Planning and Environment, updating the Climate Action Committee on the status of the 2019 Committee Work Plan, highlighting additional funding for

the woodstove exchange program, an update on the National Energy Board reconsideration process for the Trans- Mountain pipeline expansion, and the Vancouver Fraser Port Authority's cancellation for the project permit for the proposed coal shipment facility at Fraser-Surrey docks.

Request of Staff

Staff was requested to report back to the March 15, 2019 Climate Action Committee meeting with an analysis of the Intergovernmental Panel on Climate Change report and CleanBC Plan to inform discussion at the Board Strategic Planning Session in April.

It was MOVED and SECONDED

That the Climate Action Committee receive for information the report dated January 21, 2019, titled "Manager's Report".

CARRIED

6. INFORMATION ITEMS

No items presented.

7. OTHER BUSINESS

No items presented.

8. BUSINESS ARISING FROM DELEGATIONS

No items presented.

9. RESOLUTION TO CLOSE MEETING

No items presented.

10. ADJOURNMENT/CONCLUSION

It was MOVED and SECONDED

That the Climate Action Committee conclude its regular meeting of February 8, 2019.

CARRIED

(Time: 3:18 p.m.)

Genevieve Lanz,
Legislative Services Coordinator

Adriane Carr, Chair

March 7, 2019

Memo

To Chair Adriane Carr & Climate Action Committee Members, Metro Vancouver

Fr Alex Boston, Executive Director–Renewable Cities, Fellow–SFU MJ Wosk Centre for Dialogue

Re Summary of March 15th Presentation to Climate Action Committee

Title

Better Climate, Better Economy, Better Community

Themes

- Explore regional greenhouse gas emissions targets, highlighting achievements and limitations
- Highlight the vital role of land use planning – local government’s primary area of authority – and its implications on key Climate 2050 issue areas:
 - Nature and Ecosystems - resilience to climate change and terrestrial carbon protection
 - Transportation – managing congestion, cost and carbon
 - Agriculture – protect terrestrial carbon and a globally significant food security sector
 - Buildings – location, form and use of residential buildings has immense potential for cutting carbon and congestion and advancing affordability
 - Land Use & Growth Management – a central sector for resilient and renewable cities
- Highlight the synergies between two other Climate 2050 issue areas, and the critical role in carbon management in the challenging heavy-duty transportation sector:
 - Waste – increasing organic diversion and sustainable waste management supported by new revenue streams
 - Energy – intensifying renewable natural gas generation through anaerobic digestion in sewage and food waste management.

Actions

The specific actions we are asking the committee to take:

- Encourage strategic and systemic approaches to climate action that simultaneously advance some top policy priorities, notably affordability and congestion management
- Advance a local government lens in the Government of BC’s CleanBC strategy, deepening opportunities for Metro Vancouver and member municipalities
- Participate in [Renewable Cities State-City Collaboration on Clean Energy Transformations Conference](#), May 29-30 in Vancouver, in parallel with the 2019 Clean Energy Ministerial Summit convening energy ministers from world's largest economies

To: Climate Action Committee

From: Joshua Power, Policy Analyst
Jason Emmert, Senior Planner
Planning and Environment Department

Date: February 20, 2019 Meeting Date: March 15, 2019

Subject: **Key Climate Change Developments Since the Adoption of the Climate 2050 Strategic Framework**

RECOMMENDATION

That the MVRD Board receive for information the report dated February 20, 2019, titled “Key Climate Change Developments Since the Adoption of the Climate 2050 Strategic Framework”.

PURPOSE

To report back on key developments since the MVRD Board adoption of the Climate 2050 Strategic Framework, including the provincial *CleanBC* plan and the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C.

BACKGROUND

At its January 11, 2019 meeting, the Climate Action Committee adopted the following resolution:

That the Climate Action Committee:

- a) endorse the work plan as presented in the report dated December 21, 2018, titled “2019 Climate Action Committee Priorities and Work Plan”; and*
- b) direct staff to report back early in 2019 on key developments since the Climate 2050 Strategic Framework was adopted by the MVRD Board in September 2018, such as the October Intergovernmental Panel on Climate Change report and new CleanBC Plan, and an analysis of implications.*

This report responds to part (b) of the resolution, and includes a staff analysis of the implications of the CleanBC Plan and the findings of the IPCC report. At the February 8 Climate Action Committee meeting, the Committee also noted that this report would be useful to inform discussion at the Board Strategic Planning Session in April.

KEY DEVELOPMENTS SINCE THE ADOPTION OF CLIMATE 2050

In September 2018, the MVRD Board adopted the *Climate 2050 Strategic Framework* (Reference 1), the first component of the *Climate 2050* strategy. Since the adoption of that framework, there have been two key developments that may have implications for *Climate 2050*. The first is the publication of a report in October 2018 by the Intergovernmental Panel on Climate Change (IPCC), which examines the impacts of 1.5°C versus 2°C of global warming, and the actions required to limit warming to 1.5°C. The second is *CleanBC*, the Province’s new plan focused on clean growth and

climate change that was released in December 2018. *CleanBC* outlines a range of new policies and actions to reduce greenhouse gas (GHG) emissions while creating jobs and economic opportunities.

The *Climate 2050 Strategic Framework* sets out the guiding principles for *Climate 2050*. One principle is that Climate 2050 be “dynamic”, which guides staff to evolve the development and implementation of the strategy to respond to new information. This dynamic approach will be emphasized in the *Climate 2050 Roadmaps* that are being developed over the course of 2019-2020 to respond to the key issue areas identified in the *Climate 2050 Strategic Framework*.

CLEANBC PLAN

Similar to *Climate 2050*, the *CleanBC* plan (Reference 2) will be developed and implemented in phases with its initial release focused on clean and renewable energy actions in the industrial, building, and transportation sectors. *CleanBC* is intended to bring together actions on climate change, clean energy, and sustainability to drive economic growth and reduce greenhouse gas emissions in the province. Through the development process, the Province has been advised by the Climate Solutions and Clean Growth Advisory Council, which includes local government elected officials and staff.

Implications for the *Climate 2050 Roadmaps*

Metro Vancouver is responding to the threat of global and local climate impacts by developing a series of *Climate 2050 Roadmaps*. These guiding documents are organized around ten issue areas which reflect the functions and responsibilities under Metro Vancouver’s mandate and encompass the sectors in the region which are vulnerable to climate impacts. The development of goals, strategies, and actions, as part of the *Roadmap* process, aims to accelerate progress towards deep emissions reductions while at the same time planning for adaptation to regional climate impacts.

CleanBC and *Climate 2050* are both comprehensive climate change strategies that will include policy actions to reduce GHG emissions and adapt to the impacts of climate change. Both use similar groupings of policies and actions (e.g., buildings, transportation, industry). Overall, *CleanBC* is well aligned with the direction of *Climate 2050* and includes many of the policy recommendations that Metro Vancouver submitted as part of the previous consultation on the *BC Climate Leadership Plan* as well as the *CleanBC* intentions papers. Metro Vancouver’s response to the *CleanBC* intentions papers can be found in the Attachment.

Both strategies are aligned in the pursuit of an 80% reduction in GHG emissions by 2050. The Province has also identified interim reduction targets of 40% by 2030 and 60% by 2040. The Phase I actions identified in *CleanBC* are expected to achieve three quarters of the 2030 target. Like *Climate 2050*, *CleanBC* is intended to be a dynamic document that will be updated and expanded over time.

CleanBC sets out many enabling actions that will support regional GHG emissions reductions. In developing the *Climate 2050 Roadmaps* and the next air quality and greenhouse gas management plan, Metro Vancouver will evaluate opportunities to support and accelerate the actions in the *CleanBC* plan in the Metro Vancouver region. Staff will analyze the priority opportunities to implement those actions, and aim to address any identified gaps, with specific attention to how *CleanBC* aligns with the actions currently underway by Metro Vancouver and its member jurisdictions.

The Province intends to continue to engage stakeholders, including local governments, during Phase II of *CleanBC* development. In Phase II, the Province will identify new strategies and actions to further reduce emissions to achieve the 2030 target, as well as actions for adapting to a changing climate. The Province is expected to conduct its next round of public consultation on *CleanBC* in summer 2019. At that time, Metro Vancouver and its members will be able to provide comments. This timing aligns well with the development of several of the *Climate 2050 Roadmaps*, allowing Metro Vancouver to take into account the additional Provincial policies and actions in Phase II of *CleanBC*.

Understanding the need to prioritize and accelerate immediate actions that achieve deep emissions reductions, the *Climate 2050 Roadmap* process is focused on identifying high impact actions in a co-creation process with residents, businesses, other orders of government, and other stakeholders. As part of that process, staff will develop sector-specific reduction targets for 2050 and interim target years. The development process for Climate 2050 roadmaps, and the associated engagement approach, are the subject of Report 5.2 in the Committee's March 15, 2019 agenda package.

IPCC SPECIAL REPORT ON GLOBAL WARMING OF 1.5°C

The Paris Agreement, signed in 2015 by Canada and the majority of nations around the world within the United Nations Framework Convention on Climate Change (UNFCCC), aims to strengthen the global response to the threat of climate change. The objective of the agreement is to keep global temperature rise this century below 2°C and to pursue efforts to limit the temperature increase even further to 1.5°C.

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) released a special report which examines the impacts of 1.5°C versus 2°C of warming, and the actions required to limit warming to 1.5°C (Reference 3). In December 2018, as a follow up to that report, the IPCC released a Summary for Urban Policymakers which synthesizes this report for urban stakeholders and explains why limiting the temperature increase to 1.5°C is necessary and how it can be achieved (Reference 4). The IPCC Special Report makes it clear that limiting global warming to 1.5°C is possible and crucial to prevent exacerbated, and in some cases irreversible, climate impacts. Limiting warming will require immediate, unprecedented and far-reaching system transitions that result in deep emissions reductions across all sectors.

The report does not translate the global carbon budget into emissions targets for different jurisdictions, but instead, examines different global emission scenarios that are used to estimate changes in global average temperature. The report concludes that global net anthropogenic CO₂ emissions should reach net zero around 2050 and other, non-CO₂ greenhouse gas emissions should undergo deep reductions to limit the temperature increase to 1.5°C by the end of the century.

In addition, the report outlines the need for some carbon dioxide removal by mid-century to achieve *net negative emissions*, a future where more emissions are being removed from the atmosphere than are being added to it. Reaching net zero, and then subsequently net negative emissions globally, will require a combination of deep emissions reductions from fossil fuel use and an expansion of natural carbon sinks through measures like reforestation and soil carbon sequestration.

Climate Emergency Declaration

The IPCC Special Report highlights that although the Paris Agreement was a historic step in global coordination on climate, the commitments under the agreement are not sufficient to prevent temperature rise above 1.5°C. Under current national commitments, the average global temperature is on track to reach about 3°C of warming by the end of the century.

A growing number of governments across the world are making climate emergency declarations. For some jurisdictions, this declaration is a mostly symbolic acknowledgement that climate change poses a serious threat, and for others, like the City of Vancouver, the declaration comes with a call for immediate action to dramatically strengthen the climate action mandate.

As of February 2019, two cities in Canada have declared climate emergencies: Vancouver on January 16, followed by Halifax on January 29. There has also been a movement at the regional level for declaring a climate emergency. On January 23, the Capital Regional District's Parks and Environment Committee voted unanimously in favour of declaring a climate emergency. That motion was considered and unanimously passed by the CRD Board on February 13, 2019.

Implications for the *Climate 2050 Roadmaps*

As noted above, Metro Vancouver is developing a series of *Climate 2050 Roadmaps*, organized around ten issue areas, and aimed at accelerating progress towards deep emissions reductions while at the same time planning for adaptation to regional climate impacts.

The Climate Projections for Metro Vancouver (Reference 5) that are being used for planning and design are based on the "business-as-usual" IPCC global emissions scenario that predicts over 3°C of warming by the end of the century. It is prudent for Metro Vancouver to plan for these significant climate impacts in the absence of sufficient global commitments on greenhouse gas emission reductions. While preparing for impacts under this warming scenario, Metro Vancouver is simultaneously pursuing deep emissions reductions in an attempt to limit this warming and the severity of the associated local impacts.

Metro Vancouver's current 80% reduction target by 2050 is an ambitious goal that will require major shifts in energy use and the economy across the region. From 2007-2015, the region achieved a 12% reduction in greenhouse gas emissions. Achieving the 80% target will require unprecedented government and private actions and investment at all levels.

The goals, strategies, actions, and targets identified in the *Roadmaps*, coupled with the urgency conveyed by the IPCC Special Report, could serve as a basis to revisit Metro Vancouver's 80% reduction target after the development of the *Roadmaps*. For reduction targets beyond 2050, more detailed analysis is needed, but the Metro Vancouver region will need to consider net negative emissions targets to remain consistent with 1.5°C of warming. Given the general alignment between Metro Vancouver and Provincial targets, revisiting the targets for 2050 and beyond would benefit from further discussions with the Province.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

There are no financial implications associated with receiving this report for information. Metro Vancouver has budgeted for the development of the *Climate 2050 Roadmaps* over the course of 2019 to 2020. Given the key new developments described in this report, and pending direction from the Committee and Board, staff will consider the financial implications including additional resource needs and submit requests through the regular budget process as the Roadmaps are developed. Reduction of greenhouse gas emissions should continue to be the main focus of Climate 2050, while acknowledging that adapting to climate change may require substantial capital expenditures by Metro Vancouver and member jurisdictions.

SUMMARY / CONCLUSION

Since the adoption of the *Climate 2050 Strategic Framework* in September 2018, the BC government released the *CleanBC* plan and IPCC released the Special Report on the impacts of global warming of 1.5°C. Both of these publications have implications for *Climate 2050*.

CleanBC and *Climate 2050* are aligned in their phased, dynamic approach and many of the policies Metro Vancouver supported in previous submissions are reflected in the plan. Staff will continue to coordinate with the Province on the development of Phase II of *CleanBC*.

According to the IPCC report, limiting global warming to 1.5°C versus 2°C is possible and crucial to prevent exacerbated, and in some cases irreversible, climate impacts. The commitments under the Paris Agreement are not sufficient to prevent temperature rise above 1.5°C. In response to these findings, a growing number of governments across the world are making climate emergency declarations to strengthen their climate mandates.

The *Climate 2050 Roadmaps* will provide a platform to identify the pathways to deeper emissions reductions and accelerated adaptation actions in the region. As part of the *Roadmap* development process, Metro Vancouver will engage stakeholders across the region and implement a bottom up approach of developing goals, target, strategies and actions for each issue area. Based on this work, and the urgency outlined in the IPCC report, there is an opportunity to revisit the 80% reduction target in *Climate 2050* following development of the *Roadmaps*.

Attachment

1. Report dated August 24, 2018, titled "Metro Vancouver Comments on the B.C. Clean Growth Strategy Intentions Papers" (*Doc #28659222*)

References

1. [Climate 2050 Strategic Framework](#)
2. [CleanBC Full Report](#)
3. [IPCC Special Report on Global Warming of 1.5°C](#)
4. [IPCC Special Report on Global Warming of 1.5°C: Summary for Urban Policymakers](#)
5. [Climate Projections for Metro Vancouver](#)

To: Climate Action Committee

From: Joshua Power, Policy Analyst
Ali Ergudenler, Lead Senior Engineer
Parks, Planning and Environment Department

Date: August 24, 2018 Meeting Date: September 19, 2018

Subject: **Metro Vancouver Comments on the B.C. Clean Growth Strategy Intentions Papers**

RECOMMENDATION

That the MVRD Board write to the Minister of Environment and Climate Change Strategy conveying its position on the B.C. Clean Growth Strategy intentions papers, as outlined in the report titled “Metro Vancouver Comments on the B.C. Clean Growth Strategy Intentions Papers” dated August 24, 2018, as previously communicated by staff.

PURPOSE

To outline the content of the Metro Vancouver staff submission to the Province of B.C. on the *Clean Growth Strategy* intentions papers, and seek MVRD Board support for the submission via a letter to the Minister of Environment and Climate Change Strategy.

BACKGROUND

The Province of B.C. is in the process of developing a long-term *Clean Growth Strategy* that is expected to be released in the fall of 2018. As an initial step, the Province has released its first three intentions papers on three major sectors of the economy: *Clean Transportation*; *Clean, Efficient Buildings*; and *A Clean Growth Program for Industry*. The intentions papers were available for comments from July 20 to August 24, 2018.

Due to the constraints of the comment period and the Committee/Board meeting schedules, Metro Vancouver staff submitted technical comments in accordance with the deadlines imposed by the Province, and identified them as not having being endorsed by the Board. This report provides information for the Climate Action Committee and the MVRD Board about the staff review of the intentions papers, and seeks support for the comments that staff submitted to the Province on August 24, 2018.

B.C.’s CLEAN GROWTH STRATEGY INTENTIONS PAPERS

B.C.’s *Clean Growth Strategy* is intended to bring together actions on climate change, clean energy, and sustainability to drive economic growth and reduce greenhouse gas emissions in the Province. The *Clean Growth Strategy* is expected to integrate with the Province’s *Economic Development Strategy* and set out a pathway to meet B.C.’s greenhouse gas targets. The *Clean Growth Strategy* is intended to be a living document that will be continually updated and expanded as new opportunities arise. The initial actions will focus on Transportation, Buildings, and Industry, as outlined in the first set of intentions papers. Highlights of the proposed actions on these three *Clean Growth Strategy*

intentions papers are summarized in Attachment 1. The Province intends to release further intentions papers and seek input on other topics such as *Communities*, *Global Energy Opportunities*, *Low Carbon Energy*, and *Adapting to a Changing Climate*, beginning in 2019.

Previous Staff Submission on Provincial Climate Leadership Plan

In 2015 and 2016, the Climate Action Committee and the MVRD Board received reports on the *Climate Leadership Plan* Phase I and Phase II consultations, related to the climate action plan being developed by the Province of B.C. at that time. Metro Vancouver staff worked closely with its member jurisdictions and identified five foundational policy areas, as well as a list of detailed policy recommendations, related to climate change. These policy areas and related recommendations were endorsed by the MVRD Board and submitted to the Province as part of the previous consultation on the *Climate Leadership Plan* (Reference).

Alignment with Climate 2050

Metro Vancouver staff have had ongoing discussions with Provincial staff on each other's climate actions, and the respective climate strategies and plans. As noted in Report 5.1 in the September 2018 Climate Action Committee agenda, Metro Vancouver staff conducted an engagement session with staff from multiple Provincial ministries to gather input on *Climate 2050*, Metro Vancouver's new regional climate action strategy.

The recent Clean Growth Strategy intentions papers were reviewed by Metro Vancouver staff for their alignment with Climate 2050, which is currently being developed, as well as the alignment with the following five foundational policy areas previously communicated in Metro Vancouver's earlier submissions on the provincial Climate Leadership Plan:

1. widespread adoption of low/zero carbon vehicles;
2. transition to net-zero-carbon new buildings and near net-zero-carbon existing buildings;
3. support for local government actions to reduce and shorten vehicular trips and increase trips by walking, cycling, and transit;
4. carbon pricing to create a market signal to stimulate adoption of low carbon technologies and practices; and
5. tools and resources that can assist local governments to adapt to current and future climate change.

These foundational policies are aligned with the overarching approach laid out in the *Climate 2050* Strategic Framework. Metro Vancouver staff's review of the three intentions papers indicates that the policy directions and proposed actions are closely aligned with the intent of the first four foundational policy areas, listed above. The province intends to seek input on the fifth policy area – adapting to climate change – in the summer of 2019 as part of a consultation on additional topics. The policies proposed in the intentions papers are also closely aligned with the vision, guiding principles, and issue areas outlined in the *Climate 2050* Discussion Paper. The final policies adopted in the *Clean Growth Strategy* will be important considerations as Metro Vancouver develops the *Climate 2050 Roadmaps* in 2019-2020.

Staff Comments on B.C. Intentions Papers

Detailed comments on the Province's three intentions papers, linkages to *Climate 2050*, and further commentary to strengthen the proposed policies are provided in the staff letter that was submitted to the Province on August 24, 2018 (Attachment 2). Metro Vancouver staff will continue to be engaged in B.C.'s *Clean Growth Strategy* development process, keeping the Climate Action Committee and the MVRD Board informed about the process and seeking input/direction as necessary.

ALTERNATIVES

1. That the MVRD Board write to the Minister of Environment and Climate Change Strategy conveying its position on the B.C. Clean Growth Strategy intentions papers, as outlined in the report titled "Metro Vancouver Comments on the B.C. Clean Growth Strategy Intentions Papers" dated August 24, 2018, as previously communicated by staff.
2. That the MVRD Board receive for information the report titled "Metro Vancouver Comments on the B.C. Clean Growth Strategy Intentions Papers" dated August 24, 2018, and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

Metro Vancouver is in the process of developing a new regional climate action strategy, *Climate 2050*, which is well aligned with the Province's *Clean Growth Strategy* for major sectors of the economy. The adoption of the *Clean Growth Strategy*, with the implementation of the proposed actions in the intentions papers, would support the delivery of Metro Vancouver's climate actions and may reduce resources needed for the implementation of regional climate programs and projects.

SUMMARY / CONCLUSION

Metro Vancouver staff reviewed the policies proposed by the Province in the B.C. *Clean Growth Strategy* intentions papers pertaining to *Clean Transportation*; *Clean, Efficient Buildings*; and *A Clean Growth Program for Industry*; and submitted comments to the Province before the August 24 submission deadline. The proposed policies in the intentions papers are well aligned with the foundational policy areas previously identified by Metro Vancouver to achieve Provincial greenhouse gas reduction targets, as well as with *Climate 2050*, Metro Vancouver's new regional climate action strategy. Implementation of the policies outlined in the intentions papers would help the Province and the Metro Vancouver region meet their greenhouse gas targets. Particularly high-impact actions include the zero-emission vehicle mandate, transit investments, mobility pricing, changes to the BC Building Code, and implementation of a *Clean Growth Program for Industry*.

Staff recommend Alternative 1, that the MVRD Board write to the Minister of Environment and Climate Change Strategy conveying its position on the B.C. *Clean Growth Strategy* intentions papers, as previously communicated in a staff submission.

Attachments: (Doc #26823093)

1. Highlights of the Proposed Actions in *Clean Transportation*, *Clean Efficient Buildings*, and *A Clean Growth Program for Industry* Intentions Papers.

2. Metro Vancouver Staff Comments on the BC *Clean Growth Strategy* Intentions Papers, Letter from Neal Carley, General Manager of Parks, Planning and Environment to Ministry of Environment and Climate Change Strategy, dated August 24, 2018.

Reference: [Metro Vancouver Staff Submission to the B.C. Climate Leadership Plan, Phase II Engagement, MVRD Board Meeting, April 29, 2016](#)

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ATTACHMENT

Highlights of Proposed Intentions Papers Actions and Alignment with Metro Vancouver Recommendations

The three B.C. *Clean Growth Strategy* intentions papers that were released on July 20, 2018 for public input outline proposals for the province's Transportation, Buildings and Industry sectors. Many of the actions for these sectors are well aligned with the recommendations that were communicated to the Province in Metro Vancouver's earlier submissions on the 2016 *Climate Leadership Plan*. This alignment is highlighted in the table below. The policies proposed in the intentions papers will be important considerations in the development of Metro Vancouver's *Climate 2050 Roadmaps* in 2019 and 2020.

Metro Vancouver recommendations on B.C. <i>Climate Leadership Plan</i> (2016)	Alignment with proposals in B.C. <i>Clean Growth Strategy</i> Intentions Papers (2018)	Alignment with Metro Vancouver <i>Climate 2050 Roadmaps</i> (2019-2020)
Enact a zero emissions vehicle requirement.	Zero emissions vehicle mandate that would require automakers to report on their sales in 2019, meet targets starting in 2020 for new vehicle sales (increasing annually to at least 10% in 2025 and 30% in 2030), and a possible ban on the sale of new gasoline and diesel light duty vehicles by 2040.	Transportation Roadmap
Continue funding for the Clean Energy Vehicles (CEV) program.	Continue incentives for the CEV Program until zero emissions vehicles make up 5% of all new light-duty vehicle sales.	
Require access to electric charging in residential and commercial buildings.	Take measures to encourage charging station installations at businesses and other buildings.	
Accelerate market penetration of zero emission and near-zero emission vans, tour buses, and trucks.	Expand the Specialty Use Vehicle Incentive Program, which supports the purchase of clean heavy duty vehicles, buses, transport trucks, motorcycles, and heavy equipment.	
Update the provincial Low Carbon Fuel Standard.	Increase the stringency of the Low Carbon Fuel Standard by decreasing the average carbon intensity of fuels by 15% by 2030 compared to 2010 levels.	
Provide sustainable funding for transit, active transportation infrastructure investments and smart growth planning.	Continue to invest in transit and investment in clean transportation infrastructure that is inter-connected, providing easy access to clean options and reducing demand for vehicles.	
Enable user-pricing options (e.g. mobility pricing, distance based insurance).	Development of demand-management programs, which focus on finding ways to reduce traffic overall, so people ultimately drive less.	

Set incremental targets outlining the market transformation pathway(s) to net zero buildings.	Increase the energy efficiency requirements in the B.C. Building Code in 2022 and 2027 to provide more certainty to industry, building owners, and communities. In addition, expand the Energy Step Code to other building types.	Buildings Roadmap
Mandate home energy labelling.	The Province is considering an energy efficiency labeling requirement whereby buildings would undergo an assessment and be given an energy efficiency rating, which would be disclosed when the property was listed for sale or rent.	
Consider the most effective use of carbon tax revenues in support of climate action and mitigation of any negative impacts of the carbon tax.	The Clean Growth Program for Industry directs apportionment of B.C.'s carbon tax paid by industry into incentives that encourage them to reduce emissions.	Industry Roadmap

Parks, Planning and Environment Department
Tel. 604 432-6350 Fax 604-453-0338

File: CP-02-02-GHGR-03

AUG 24 2018

Ministry of Environment and Climate Change Strategy
VIA EMAIL: clean.growth@gov.bc.ca

Dear Sir or Madam:

Re: Metro Vancouver Staff Comments on the BC Clean Growth Strategy Intentions Papers

Metro Vancouver staff are pleased to submit comments on the Province of British Columbia's first round of intentions papers that have been developed to help shape the upcoming provincial *Clean Growth Strategy*. Staff support the approach for the strategy to be "a living document" that includes both mitigation and adaptation measures, integrating provincial goals for climate action, clean energy, and sustainability.

Metro Vancouver's previous recommendations on the Province's *Climate Leadership Plan* identified five foundational policy areas to reach provincial and local greenhouse gas reduction targets. These policy areas are also reflected in *Climate 2050*, the regional climate action strategy that Metro Vancouver is currently developing. This letter summarizes Metro Vancouver staff comments on the new intentions papers pertaining to *Clean Transportation*, *Clean Growth Program for Industry*, and *Clean, Efficient Buildings* including their alignment with those five foundational policy areas. Expanded and additional commentary on the three intentions papers is provided in the attachment.

This letter presents the views of Metro Vancouver staff. These views have not been reviewed or endorsed by the MVRD Board of Directors due to time constraints and meeting schedules. The MVRD Board's Climate Action Committee will consider this letter at its September 19, 2018 meeting along with the staff recommendation that the MVRD Board endorse staff comments contained in this letter at its subsequent meeting. If the Board endorses or amends staff comments, they will be resubmitted to the Province at that time.

GENERAL COMMENTS ON INTENTIONS PAPERS AND LINKS TO CLIMATE 2050

Metro Vancouver is currently developing *Climate 2050*, a new regional climate action strategy, which will guide climate action in the region. The iterative and flexible approach proposed for the development of the *Clean Growth Strategy* aligns well with the dynamic approach Metro Vancouver is using for the development and implementation of *Climate 2050*.

Similar to the *Climate 2050 Strategic Plan*, the *Clean Growth Strategy* begins by laying out a framework for a clean growth future and a pathway to meeting the Provincial emissions targets. The approach of addressing each sector through a series of intentions papers and iterations of the Strategy matches the approach that Metro Vancouver is taking in developing Issue Area Roadmaps

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throughout 2019 and 2020. To the extent possible, Metro Vancouver proposes working closely with the Province as it develops its actions and strategies for each of the identified sectors to share information and resources. These iterative approaches also allow for continuous and targeted involvement from stakeholders in the development of the actions and strategies.

Metro Vancouver staff are supportive of the process and structure of the *Clean Growth Strategy* and suggest the following enhancements to the overarching strategy:

- Establish sector-based greenhouse gas reduction targets to provide greater clarity for sector-based actions;
- Include the dual priorities to reduce overall per capita energy use and to reduce overall greenhouse gas emissions;
- Include references to sector-related co-benefits and performance indicators such as reduced traffic congestion, economic activity, job creation, affordability, and equity for a more holistic strategy;
- Include more emphasis on the role of local governments as partners in the Province's *Clean Growth Strategy*, and identify opportunities for local governments to provide input.

ALIGNMENT OF INTENTIONS PAPERS RECOMMENDATIONS WITH METRO VANCOUVER FOUNDATIONAL POLICY AREAS

In Metro Vancouver's submissions to the Province on the *Climate Leadership Plan* in 2015 and 2016, staff identified five foundational policy areas necessary to reach provincial and local greenhouse gas reduction targets:

1. Widespread adoption of low/zero carbon vehicles;
2. Transition to net-zero-carbon new buildings and near net-zero-carbon existing buildings;
3. Support for local government actions to reduce and shorten vehicular trips and increase trips by walking, cycling, and transit;
4. Carbon pricing to create a market signal to stimulate adoption of low carbon technologies and practices; and
5. Tools and resources that can assist local governments to adapt to current and future climate change.

These foundational policy areas are strongly reflected in the *Climate 2050 Discussion Paper* and Metro Vancouver's existing management plans. Staff supports the direction of the *Clean Growth Strategy* and the three intentions papers released by the Province which are closely aligned with these foundational policy areas. This alignment is further explored below by highlighting some of the Province's high-impact programs and policies proposed in the intentions papers.

CLEAN TRANSPORTATION

Low/Zero Carbon Vehicles

The *Clean Transportation* intentions paper proposes the introduction of a zero-emissions vehicle (ZEV) mandate with an eventual ban on the sale of new gasoline and diesel light duty vehicles. The introduction of a zero-emission vehicle mandate is an important and timely policy to affect the turnover of the vehicle fleet and reduce greenhouse gas emissions. The Province also proposes continued funding for the *Clean Energy Vehicle Program* to offset the costs of ZEVs while simultaneously increasing the stringency of the Low Carbon Fuel Standard. These policies will build

on the early successes of Metro Vancouver's various electric vehicle outreach programs and charging network initiatives.

Urban Form that Supports Walking, Cycling, and Transit

The expanded reliance on the use of personal vehicles, whether autonomous, zero-emissions, or both, could exacerbate the inefficient use of the regional transportation systems, including provincial highways. Staff are supportive of the Province's recommendations in the *Clean Transportation* intentions paper to continue investing in public transit and clean transportation infrastructure to help reduce demand for vehicles, thereby reducing emissions and congestion. Staff are especially supportive of "integrating transportation and land use planning for interconnected infrastructure, public transit, and cycling routes."

Pricing the use of the road system can help mitigate unnecessary congestion and associated emissions while incentivizing the use of public transit, walking, cycling, and carpooling. Staff encourages the Province to work closely with local governments and Translink to further develop the options for a fair system of regional mobility pricing. Staff support undertaking pilot initiatives that can test the effectiveness, public acceptance, fairness, and equity of such a system, including the impact on residents with low income or reduced mobility.

CLEAN GROWTH PROGRAM FOR INDUSTRY

Carbon Pricing

The Province's recent decision to incrementally increase the B.C. Carbon Tax by \$5 per tonne per year until it reaches \$50 per tonne in 2021 and the proposed use of revenues to reduce greenhouse gas emissions in certain sectors is in alignment with Metro Vancouver's previous submissions related to carbon pricing. For instance, the *Clean Growth Program for Industry* proposes to use the incremental carbon tax above \$30 per tonne to be returned to industry in the form of incentives.

Reducing Emissions from Industry

As a region with few large industrial facilities and many small industrial facilities, staff encourage the Province to expand the participation criteria for the *Clean Growth Program for Industry* to capture operations with lower total emissions. The program design should also incorporate regular updates to the performance criteria to ensure that funding is stimulating innovation and changes in business practices that continue to drive down emissions. Although it is important to protect energy-intensive, trade-exposed industries from "carbon leakage," it is equally important to ensure that continuous improvement in emissions reductions occur for such facilities. Staff also encourage the Province to designate a portion of the revenue from the increase in the carbon tax to fund local government climate actions.

CLEAN, EFFICIENT BUILDINGS

Energy Labelling

The *Clean, Efficient Buildings* intentions paper proposes an energy labelling and disclosure requirement for homes and other buildings. Energy labelling and disclosure has been identified as an important precursor for market transformation on energy efficient buildings. Without widely available and easily understood energy labels, energy efficiency is generally not considered in the decision-making processes when it comes to construction and real estate transactions. Since 2016, Metro Vancouver has fostered local home energy labelling and disclosure through the *RateOurHome.ca* pilot program as a way to increase public and industry understanding of home

energy efficiency and greenhouse gas emissions. A province-wide building energy labelling and disclosure framework is an important mechanism to build industry and consumer awareness, understanding, and demand for more energy efficient buildings with lower carbon footprints.

Stronger Code and Standards

In addition to building energy labelling, Metro Vancouver staff also support the Province's following proposals related to improved building codes and standards to reduce greenhouse gas emissions: setting a predictable schedule for incremental increases in energy efficiency requirements in the BC Building Code; expansion of the BC Energy Step Code to capture all new construction; the development of a retrofit energy code; increased energy efficiency standards for building equipment; and exploring greenhouse gas emission intensity regulations and targets with stakeholders. Together, these actions will make British Columbia a global leader in low carbon buildings.

ADAPTING TO A CHANGING CLIMATE (SUMMER 2019)

The Province intends to seek additional input on adapting to a changing climate in summer 2019 as part of the planning process and public consultation on the *Clean Growth Strategy*. Metro Vancouver staff look forward to the opportunity to provide comments on climate change adaptation as part of the *Clean Growth Strategy* at that time.

SUMMARY

In closing, Metro Vancouver staff appreciate the opportunity to provide input on the *Clean Growth Strategy* intentions papers during this consultation period. The policies proposed by the Province in the intentions papers pertaining to *Clean Transportation*, *Clean Growth Program for Industry*, and *Clean, Efficient Buildings* are strongly aligned with the foundational policy areas previously identified by Metro Vancouver to achieve provincial greenhouse gas reduction targets and the direction of *Climate 2050*, Metro Vancouver's new regional climate action strategy, currently under development. Metro Vancouver staff encourage the Province to implement the policies outlined in the intentions papers, especially the high-impact actions, such as the zero-emission vehicle mandate, mobility pricing, energy labelling, changes to the BC Building Code, and implementation of the *Clean Growth Program for Industry*. Additional comments on the intentions papers can be found in the attachment to this letter.

We look forward to future opportunities to engage on the development of the *Clean Growth Strategy*.

Sincerely,



B. Neal Carley, M.A.Sc., P.Eng.
General Manager, Parks, Planning & Environment

NC/EB/jp

Attachment: Metro Vancouver Staff Additional Comments on the *BC Clean Growth Strategy* Intentions Papers

Metro Vancouver Staff Additional Comments on the *BC Clean Growth Strategy* Intentions Papers

This attachment presents the views of Metro Vancouver staff. These comments are intended to provide expanded and additional commentary on the Province's new intentions papers concerning *Clean Transportation*, *Clean Growth Program for Industry*, and *Clean, Efficient Buildings*.

Clean Transportation

Increase investments in zero-emission vehicles

Metro Vancouver staff support the increase of investments in zero-emission vehicles that would help expand the electric vehicle charging infrastructure and increase the uptake of clean vehicles. Metro Vancouver staff also encourage the Province to:

- Continue offering the *Clean Energy Vehicle Program*, and consider increasing this incentive for low-income and non-profit participants. During Metro Vancouver's policy work on light duty vehicles in 2016 and 2017, staff identified a concern that low-income populations are currently unable to purchase hybrids and electric vehicles due to the higher initial purchase price;
- Provide additional non-financial incentives to zero-emission vehicles and expand existing benefits, such as increasing HOV lanes on provincial roads;
- Consider financial benefits for zero-emission vehicles that have been successful in other jurisdictions, such as rebates on ferry fares or insurance;
- Take measures to lower the cost for the installation of charging stations at businesses and other buildings by coordinating with BC Hydro on a specific rate category for electric vehicle charging and with the BC Utilities Commission on the resale of electricity;
- Develop a "Right to Charge" framework for the installation of charging infrastructure in strata buildings when technically feasible to reduce the barrier for residents to charge vehicles in strata buildings; and
- Develop or enhance programs to preserve the durability and operating performance of medium-duty and heavy-duty vehicles (e.g. AirCare for trucks; more stringent exhaust opacity limits for diesel particulate matter filters on trucks).

Introduce a zero-emission vehicle mandate

The introduction of a zero-emission vehicle mandate is an important and timely policy to affect the turnover of the vehicle fleet and reduce greenhouse gas emissions. Metro Vancouver staff support

the outlined timeline and targets for the ZEV mandate for the light-duty vehicle market and encourage the Province to:

- Stay aligned with targets from other provinces to ensure there is a consistent supply of vehicles in all jurisdictions with a ZEV mandate; and
- Expand the ZEV mandate to eventually include all surface transport, such as commercial coach buses, commercial trucks, and motorcycles, with financial support from an expanded *Specialty-Use Vehicle Incentive Program*.

Support for cleaner fuels

- Align the provincial Vehicle Emissions Standards with other progressive jurisdictions.

Cleaner transportation systems

A number of the potential actions outlined in the section on cleaner transportation systems align with the goals, strategies and actions in the regional growth strategy *Metro Vancouver 2040: Shaping Our Future* and Metro Vancouver's *Integrated Air Quality and Greenhouse Gas Management Plan*, particularly actions related to "continued investments in public transit" and "integrating land-use and transportation planning for interconnected infrastructure, transit and cycling." Metro Vancouver staff encourages the Province to:

- Consider regional mobility pricing to mitigate unnecessary congestion and associated emissions, and incentivize the use of transit, walking, cycling, and carpooling. Encourage pilot initiatives, in partnership with local governments and Translink, to reduce excess congestion and associated emissions (and test appropriate ways to mitigate financial impacts on lower income travelers);
- Require the collection and reporting out of vehicle kilometres travelled (VKT) data to support regional planning. Reliable VKT will help support community planning that reduces vehicle trips and promotes walking, cycling and public transit. This data would complement fuel sales data and other transportation data sources to help all levels of government achieve a clearer picture of behaviour change;
- Establish provincial or region-specific targets for the reduction in VKT, based on VKT data. Alternatively, encourage or require local governments to establish VKT reduction targets in local plans and policies;
- Integrate climate considerations into transportation and land use plans to improve policy measures and actions to help achieve emissions targets;
- Develop more detailed guidance and expectations for the integration of regional transportation and land use planning to achieve reductions in emissions;

- Prepare technical guidelines on recommended ways to estimate the emissions impacts of land use and transportation decisions;
- Consider establishing a requirement and associated guidelines for proponents of provincial highway expansion projects to model and document the projected transportation patterns and emissions locally and regionally, in particular as part of the environmental review process. Currently, the provincial environmental review process does not contain clear guidelines on information requirements for transportation-related impacts; therefore, the treatment of transportation-related impacts has been inconsistent from one environmental review process to another;
- Explore requirements for large employers to undertake transportation demand management plans and provide incentives to their employees to seek alternatives to single-occupant vehicle commuting;
- Establish requirements for transit priority measures in provincially-funded road and transit projects. Transit priority measures, such as queue jumpers and bus lanes, can improve transit journey times and reduce operating costs;
- Continue the development of a modern regulatory environment for app-based rideshare considering modal priorities (i.e. transit, walking, cycling and multi-occupant vehicles);
- Work with TransLink to promote or sponsor innovative approaches to encouraging carpooling, such as online carpool matching platforms;
- Work with TransLink to consider transit fare incentives programs for lower-income residents;
- Work with the Federal government to set targets for access to transit and services for First Nations communities;
- Work with the Federal government and rail companies to accelerate zero-emission or near-zero-emission locomotives;
- Work with partners to increase stringency of marine and aviation emission standards; and
- Provide sustainable funding for public transit, active transportation infrastructure investments, and smart growth planning.

Clean, Efficient Buildings

Energy labelling requirement

Metro Vancouver staff support the Province's proposal for an energy efficiency labelling and disclosure requirement for homes and other buildings. Metro Vancouver staff encourage the Province to:

- Consider a benchmarking system such as ENERGY STAR Portfolio Manager for large buildings such as commercial complexes and multi-unit residential buildings; and
- Require building energy benchmarking data to be reported annually and made available to the provincial government, the relevant local government, and utilities to inform and improve policy and program design.

Financial incentives

In addition to the incentives for energy efficiency improvements, Metro Vancouver staff encourage the Province to:

- Consider incentives for renewable energy retrofits. On-site and grid-connected renewable energy will be necessary to achieve the level of net-zero-energy buildings envisioned by the Province. This should include the introduction of a favourable feed-in tariff rate to increase technology adoption and support net-zero-energy building policies;
- Include adequate outreach for incentive programs to ensure that a wide range of building owners and property managers are aware and well-positioned to take advantage of the offers;
- Consider focusing on social housing units where tenants would benefit from reduced energy bills; and
- Consider the financial implications for affordable housing providers to construct energy-efficient buildings or retrofit existing buildings.

Stronger codes and standards

Stronger codes and standards are critical to advance energy-efficient construction in a predictable and effective manner. Metro Vancouver staff support the proposals related to improved building codes and standards and encourages the Province to:

- Articulate how the public sector in British Columbia will show leadership in the construction of net-zero-energy buildings;
- Continue to engage local governments in the consultation on the development of new building codes;

- Move more quickly on regulating greenhouse gas emission intensity or provide resources to assist the construction industry in reducing building emissions; and
- Support post-secondary institution technical programs that cover holistic energy retrofits and are not based solely on proprietary home performance certifications.

A Clean Growth Program for Industry

Metro Vancouver staff encourage the Province to:

- Expand the *Clean Growth Program for Industry* incentive and fund to operations with lower emissions, if these industries are able to quantify their emissions to the same level of rigour as large industrial operations;
- Design regulations to target specific industries or any industrial facility that emits over a certain limit. Incentive programs are crucial in achieving significant emission reductions from industries; however, based on experience from other jurisdictions, these programs work best when they are coupled with specific targets and regulations. Evaluate various regulatory options such as "cap and trade" and targeted regulations for specific industries;
- Incorporate regular updates to the performance criteria into the program design to determine which facilities are eligible for carbon tax refunds under the Industrial Incentive; and
- Ensure that the selection criteria for projects supported under the Clean Industry Fund be explicit and defensible to avoid funding projects that might have occurred without the program in place.

To: Climate Action Committee

From: Sheryl Cumming, Air Quality Planner, Planning and Environment Department
Jason Emmert, Senior Planner, Planning and Environment Department
Lucy Duso, Policy Coordinator, External Relations Department

Date: February 21, 2019 Meeting Date: March 15, 2019

Subject: ***Climate 2050 Roadmaps Development Process and Engagement Approach***

RECOMMENDATION

That the MVRD Board receive for information the report dated February 21, 2019, titled “*Climate 2050 Roadmaps Development Process and Engagement Approach*”.

PURPOSE

To provide an overview of the *Climate 2050 Roadmap* development process and the approach to engagement and outreach.

BACKGROUND

This report responds to an action in the 2019 Climate Action Committee work plan to provide an update on the *Climate 2050* strategy and describe the *Roadmap* development process and engagement approach underway in 2019 and 2020. Details on engagement for each *Roadmap* will be provided at subsequent Committee meetings.

In September 2018, the MVRD Board adopted the *Climate 2050 Strategic Framework* and directed staff to initiate the development of the *Climate 2050 Roadmaps*. The *Strategic Framework* sets the vision, lays out the guiding principles, and describes a dynamic and adaptive approach for ongoing climate action and maintaining progress towards targets. The *Strategic Framework* and the *Roadmaps* are key components of Metro Vancouver’s overarching *Climate 2050* strategy.

ELEMENTS OF A CLIMATE 2050 ROADMAP

Metro Vancouver has been enacting climate change policy and taking climate action for over 20 years. Building on this work, and informed by the *Climate 2050 Strategic Framework*, Metro Vancouver is developing the *Climate 2050 Roadmaps* to accelerate climate action in the region. The *Roadmaps* will outline the path to a low carbon, resilient region referencing the climate initiatives of governments, residents, and businesses.

The *Roadmaps* will help integrate climate change considerations into all Metro Vancouver’s decisions and policies affecting the region and will support communication of a cohesive and comprehensive climate change strategy to stakeholders and the public. The *Roadmaps* will link to the climate goals, strategies and actions in Metro Vancouver’s existing and future management plans, thus helping to integrate Metro Vancouver’s response to climate change across its roles and functions. The

Roadmaps will evolve dynamically in response to new technologies and innovation, policies of senior governments, and other emerging factors.

Organized around ten issue areas, the *Climate 2050 Roadmaps* will include existing regional and corporate goals, strategies, actions, and performance metrics that move Metro Vancouver towards the vision adopted in the *Strategic Framework*. Each *Roadmap* will consist of the following elements:

- **Background information:** Data and information describing emissions, climate impacts, best practices, and case studies.
- **Roles and responsibilities:** Definition of Metro Vancouver's authority and mandate in addressing climate change and the roles and responsibilities of others. Description of the essential partnerships and collaboration with member jurisdictions, other orders of government and the private sector.
- **Linkages to other plans:** Description of linkages to relevant climate actions in Metro Vancouver's management plans and policies, as well as the climate plans and policies of other orders of government that influence climate action in the Metro Vancouver region.
- **Goals and Targets:** Identification of the end points that represent a low carbon and resilient future for each issue area.
- **Strategies and actions:** Description of the strategies and actions by Metro Vancouver and others that are necessary to achieve the climate goals for each issue area.
- **Performance metrics:** Measurement of progress towards the *Roadmap* goals and targets.

Roadmaps Development Process

Metro Vancouver will be developing the *Climate 2050 Roadmaps* during 2019 and 2020. The timelines for development of individual *Roadmaps* will be staggered, with early emphasis on *Roadmaps* for the Buildings, Industry, and Transportation issue areas. Staff will provide more detailed timelines for each of the *Roadmap* development processes at future meetings.

A phased approach to *Roadmap* development is planned, and will be guided by the following questions.

- **What is happening now?** Conduct research and analysis to gather evidence on opportunities, challenges, and best practices for the issue area.
- **Where do we want to go?** Formulate goals and targets that will include detailed descriptions of the desired climate outcomes for each issue area. Define performance metrics that will measure progress toward a low carbon, resilient region.
- **What do we want to do?** Explore potential actions, identify alternatives and linkages to other processes including cross-cutting strategies, actions, and initiatives between the *Roadmaps*, Metro Vancouver's management plans and policies, and the plans and policies of other orders of government.
- **What should we do?** Identify strategies and actions that Metro Vancouver will implement to help achieve the climate resilience and greenhouse gas reduction goals, by assessing the potential impact of actions, trade-offs, co-benefits, and taking into account roles and responsibilities.

- **How will we do it?** Guided by the goals, strategies, and actions in the *Roadmaps*, staff will identify implementation projects as part of Metro Vancouver's annual and 5-year work planning and budgeting processes.
- **Are we doing it?** Monitor and report progress towards the goals through the *Climate 2050* website and the annual climate reporting.

Links to Other Processes and Plans

The *Roadmaps* are intended to be iterative, integrated and aligned with the review processes for related Metro Vancouver management plans, as well as other external processes that are in progress or upcoming in the next few years. For example, the Buildings, Industry, and Transportation *Roadmaps* development are interlinked with processes to update the Metro Vancouver's Integrated Air Quality and Greenhouse Gas Management Plan and TransLink's Regional Transportation Strategy.

CLIMATE 2050 ROADMAPS ENGAGEMENT APPROACH

In its role as a regional forum, Metro Vancouver builds and facilitates collaborative processes which engage the public and build partnerships to address significant regional issues like climate change. Metro Vancouver recognizes that the direction and recommendations built into the *Climate 2050 Roadmaps* will generate new opportunities and create changes across the region, and is therefore committed to delivering a transparent and equitable stakeholder engagement program to support their development.

An approach to stakeholder engagement is being developed for the *Roadmaps* to learn about stakeholder issues and interests related to each issue area. The engagement process will involve internal staff across Metro Vancouver functions as well as external stakeholders, at both the advisory and strategic level, and the technical level. Engagement will include approaches such as small group meetings, new website content, input from member jurisdictions, notifications, information sessions, webinars, and e-updates. Information obtained during engagement will inform the *Roadmaps* and be reported back to the Climate Action Committee as well as any decision-making committee related to specific actions.

Staff will provide additional details on the engagement approach to the *Climate 2050 Roadmaps* in upcoming Committee meetings.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Staff will continue to develop the *Climate 2050 Roadmaps*, including stakeholder engagement, within the 2019 budget allocation, which includes \$50,000 for coordination of the *Climate 2050 Roadmaps* development process. The development process of the *Climate 2050 Roadmaps* is planned for 2019-2020, and any resource implications for 2020 will be brought back to the Committee as part of budget approval processes. Implementation of proposed climate actions will be incorporated into annual and 5-year work plans and long term financial planning within each of Metro Vancouver's legal entities, as appropriate.

SUMMARY

Climate 2050 is an overarching climate action strategy that describes Metro Vancouver's role in taking action on climate change, and provides strategic direction on how Metro Vancouver can integrate climate change considerations into decisions and policies affecting the region. The *Roadmaps* development process will use an engagement approach that will provide a platform for Metro Vancouver to engage with the public and stakeholders and to explore potential integration of climate resilience and greenhouse gas reduction efforts with various partners and its member jurisdictions. Staff will provide additional details on the overall engagement approach and on the engagement plans for individual *Roadmaps* in upcoming Climate Action Committee meetings.

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To: Climate Action Committee

From: Julie Saxton, Air Quality Planner, Planning and Environment Department

Date: February 27, 2019 Meeting Date: March 15, 2019

Subject: **Consultation on a Cannabis Production Emission Regulation for Metro Vancouver**

RECOMMENDATION

That the MVRD Board:

- a) Receive for information the report titled “Consultation on a Cannabis Production Emission Regulation for Metro Vancouver”, dated February 27, 2019; and
 - b) Direct staff to proceed with consultation on the proposed approach to regulating air emissions from cannabis production, based on the bylaw development discussion paper attached to the report titled “Consultation on a Cannabis Production Emission Regulation for Metro Vancouver”, dated February 27, 2019.
-

PURPOSE

To seek MVRD Board approval for staff to proceed with consultation on proposals to regulate air emissions from cannabis production and processing operations.

BACKGROUND

In July 2018, the MVRD Board endorsed the *Odour Management Policy Development Plan* to enhance the management of emissions of odorous air contaminants. With the legalization of recreational cannabis use in October 2018, and concerns about the rapid expansion of commercial cannabis production in the Metro Vancouver region, cannabis production operations were identified in the policy development plan as a sector for which developing a new emission regulation may be appropriate in order to control emissions of air contaminants.

The development of new mechanisms to manage emissions from cannabis production is described as a key action in the Climate Action Committee’s 2019 work plan. This report brings forward a bylaw development discussion paper and seeks Board approval to initiate consultation with stakeholders.

POTENTIAL IMPACTS OF CANNABIS PRODUCTION IN METRO VANCOUVER

Metro Vancouver’s 2011 *Integrated Air Quality and Greenhouse Gas Management Plan* commits to protecting public health, to be achieved in part by reducing levels of ground-level ozone and fine particulate matter. Emissions from cannabis production include volatile organic compounds (VOC) that have the potential to contribute to the formation of ground-level ozone and fine particulate matter. The *Regional Ground-level Ozone Strategy for the Canadian Lower Fraser Valley*, adopted by the Board in 2014, identifies reduction of VOC, particularly in the western part of the Lower Fraser Valley, as a strategic direction to guide the reduction of ground-level ozone.

The VOC emissions from cannabis production can be odorous. Metro Vancouver and member municipalities have received complaints about odorous emissions from cannabis production.

Many new cannabis production facilities in the region are operating in greenhouses formerly used for the production of food crops, which do not have adequate controls designed for emissions from cannabis production and processing. In addition, the boilers and engines used to provide heat and to meet energy demands for high intensity lamps, air conditioners, and dehumidifiers for the indoor production of cannabis can emit particulate matter, and nitrogen oxides, which are precursors to the formation of ground-level ozone.

Information from other jurisdictions where cannabis is being produced suggests that there may be impacts for other Metro Vancouver services as the sector grows, including solid waste management, water consumption and wastewater discharges. Staff are assessing these potential impacts outside the scope of the initiative described in this report, which addresses air emissions.

LEGISLATIVE FRAMEWORK FOR REGULATING EMISSIONS FROM CANNABIS PRODUCTION

Federal, provincial, regional, and municipal governments have a role in regulating cannabis production in the Metro Vancouver region, including on agricultural land.

The federal government has established the national framework for regulating the production of cannabis, which includes setting standards for health and safety, and for licensing facilities producing and testing cannabis. Regulations under the *Cannabis Act* allow cannabis production in enclosed indoor facilities, in greenhouses, and outdoors. The regulations state that “the building or part of the building where cannabis is produced, packaged, labelled, and stored must be equipped with a system that filters air to prevent the escape of odours”.

The *BC Cannabis Control and Licensing Act* includes limits on production for personal use. The provincial government amended the *BC Agricultural Land Reserve Use, Subdivision and Procedure Regulation* on July 13, 2018 to clarify that lawful production of cannabis cannot be prohibited on the Agricultural Land Reserve (ALR) if cultivation takes place in an open field, a structure with a soil base, or an existing structure or structure under construction by July 13, 2018 for the purpose of growing crops. The *BC Farm Practices Protection (Right to Farm) Act* is intended to protect normal farm practices from nuisance complaints when conducted on land in the ALR and in other areas where farm use is allowed; however, to be protected, agricultural operations conducting normal farm practices must comply with the *BC Environmental Management Act* (EMA) and regulations under EMA, such as the *GVRD Air Quality Management Bylaw No. 1082, 2008*.

Under Section 31 of EMA, Metro Vancouver has delegated authority for air pollution control and air quality management within the Metro Vancouver region, including on industrial and agricultural land. The proposed regulatory approach for cannabis production, pursuant to that authority, is described in the next section.

PROPOSED REGULATORY APPROACH

Metro Vancouver utilizes two mechanisms to regulate emissions from sources within the region – site-specific permits that authorize emissions from individual facilities, and emission regulations that apply to groups of sources. Permits are required for activities and complex facilities with significant levels of emissions that may have the potential for high impacts on the environment and public

health. Emission regulations apply air emissions control requirements to a group of facilities or activities that share similar characteristics. One example of an emission regulation is the *GVRD Agricultural Boilers Emission Regulation Bylaw No. 1098, 2008*. Bylaw 1082 prohibits any person from discharging air contaminants so as to cause pollution.

Permits

Staff have been directing new cannabis production operations, including those on agricultural land, to apply for permits to authorize the controlled discharge of air contaminants. Within Metro Vancouver's regulatory system, permits are generally used for complex facilities that may have higher potential for impacts on the environment or human health, or because of other unique circumstances. Large facilities, such as large retrofitted greenhouses, may be more suited to having their discharge of air contaminants authorized under a site-specific permit to reduce the potential air quality impacts. However, the use of site-specific permits for all cannabis production operations would be resource-intensive for applicants and Metro Vancouver. The purpose of introducing an emission regulation for cannabis production is to establish effective requirements that will protect the public and the environment, and be implemented in an efficient manner.

Emission Regulation

It is anticipated that the proposed regulation would require facilities to operate in compliance with best practices and use best available control technologies to limit emissions. Purpose-built facilities that have the ability to employ sophisticated air emission capture and treatment mechanisms are well suited for authorization under the proposed emission regulation. Retrofitted facilities that are able to capture and treat emissions could potentially be authorized under the proposed emission regulation, if the facility can demonstrate that the potential impacts will be reduced through effective management of air contaminants. Smaller facilities are expected to handle fewer plants and produce fewer emissions. To date, cannabis production facilities operating on industrial land have been smaller than most facilities on agricultural land.

The proposed regulation seeks to authorize controlled emissions from operations conducting indoor cultivation, outdoor cultivation, cultivation by several individuals in cooperatives, cannabis processing operations such as drying and harvesting of cannabis plant material, extraction of oils, and manufacturing of derived products. The priority is on controlling discharges during periods of high VOC emissions from cannabis production and processing, which occur during plant flowering, harvesting, drying and curing, and potentially during packaging or handling of products.

Key features of the proposed regulation include:

- Requiring the enclosure within structures of: all cannabis processing activities; and cannabis waste management activities, including composting.
- Equipping those structures with rapidly closing doors or a double door system that provides a barrier to the escape of air contaminants from inside the structure.
- Requiring the collection and routing of facility air through activated carbon filters for VOC emission control on all structures used for cultivation, processing, or waste management of cannabis, such that recognizable odorous air contaminants associated with the VOC emissions from facility activities cannot be detected beyond the property boundary.

- Requiring temporary containment, collection, and treatment of VOC emissions from outdoor cultivation during periods of peak VOC production generally coinciding with flowering.
- Submission of a comprehensive air emissions management plan certified by a qualified professional to control odorous air contaminants and other emissions.
- Avoiding the outdoor use of odour masking agents and odour neutralizing agents.
- Avoiding the uncontrolled release of emissions or the bypassing of emission controls, unless authorized by the District Director.
- Avoiding the release of emissions that bypass emission controls when an air quality advisory is in effect anywhere within the Metro Vancouver and Fraser Valley Regional Districts.
- Restricting emissions to be discharged no closer than 200 metres to land zoned for residential use, hospitals, schools, daycares, playgrounds, and senior care facilities.
- Possibly limiting the size of facilities that can be authorized under the proposed regulation to an operational area of less than 50,000 m² or a cannabis production or processing capacity of less than 50,000 kg per year.

It is anticipated that other sources of air contaminants from cannabis production and processing operations, such as equipment used for heating and energy production, will continue to be authorized through existing emission regulations, such as *GVRD Agricultural Boilers Emission Regulation Bylaw No. 1098, 2008* and *GVRD Boilers and Process Heaters Emission Regulation Bylaw No. 1087, 2008*, or through a permit for large equipment.

CONSULTATION PROCESS AND TIMELINES

Staff would lead a targeted consultation on the proposed emission regulation between April and May 2019. The objective of the consultation is to inform stakeholders and the public of the proposed requirements to be included in an emission regulation and to obtain feedback, as outlined in the Discussion Paper (Attachment 1).

The consultation process would be conducted in accordance with the Board Policy on Public Engagement and would include targeted engagement methods to ensure that information about the proposed regulation reaches key audiences. Proposed methods include:

- Meetings with licensed cannabis producers and processors operating in the Metro Vancouver region;
- Meetings with government staff from member jurisdictions and senior orders of government;
- Presentations to representatives of potential future businesses operating in the cannabis production and processing sectors;
- An informational webinar and presentations to relevant professional and industry associations;
- Webinar events to gather detailed feedback on the potential regulation from the public; and
- A survey of the potentially affected public will be conducted if the preliminary feedback received through meetings and online feedback forms reveals polarized perspectives.

Information would be made available online and in hard copy. A website would be created for this regulatory initiative, and pamphlets would be distributed to member jurisdictions for information

and display in public areas. Outreach materials could feature an infographic showing Health Canada's licence classes and Metro Vancouver's proposed requirements (Attachment 2).

ALTERNATIVES

1. That the MVRD Board:
 - a) Receive for information the report titled "Consultation on a Cannabis Production Emission Regulation for Metro Vancouver", dated February 27, 2019; and
 - b) Direct staff to proceed with consultation on the proposed approach to regulating air emissions from cannabis production, based on the bylaw development discussion paper attached to the report titled "Consultation on a Cannabis Production Emission Regulation for Metro Vancouver", dated February 27, 2019.
2. That the MVRD Board receive for information the report titled "Consultation on a Cannabis Production Emission Regulation for Metro Vancouver", dated February 27, 2019 and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

Under Alternative 1, staff will proceed with consultation on a potential bylaw to regulate emissions from cannabis production and processing. The resources needed, including staff time and other costs associated with the consultation program and subsequent development of a proposed regulation, have been approved within program budgets for 2019.

Under Alternative 2, the Committee and Board may wish to provide alternate direction to staff on how to address emissions from cannabis production. As noted earlier, in the absence of an emission regulation, more facilities would need to be authorized under site-specific permits, which would be more resource-intensive.

SUMMARY / CONCLUSION

The legalization of recreational cannabis use in October 2018 has spurred the growth of this sector in the Metro Vancouver region. Both Metro Vancouver and member municipalities have received complaints about odorous emissions from cannabis production operations. The uncontrolled discharge of odorous air contaminants and precursors of ground-level ozone and fine particulate matter from facilities producing and processing cannabis may have impacts on air quality. Regulating air emissions from cannabis production and cannabis processing operations provides a mechanism to protect public health and the environment.

Staff recommend Alternative 1, to proceed with consultation on the proposed approach to regulating air emissions from cannabis production as described in the attached discussion paper titled, "A Proposed Emission Regulation for Cannabis Production and Processing Operations." Consultation with the public, businesses, member jurisdictions, senior orders of government and other stakeholders is intended to provide any person who may be affected by a potential emission regulation with sufficient opportunity to learn about the proposals and provide feedback.

Attachments *(Doc #28848205)*

1. Discussion Paper: "A Proposed Emission Regulation for Cannabis Production and Processing Operations in Metro Vancouver".
2. Infographic: Health Canada's Cannabis Production Licence Classes and Air Quality Requirements for Cannabis Production in the Metro Vancouver Region.

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A Proposed Emission Regulation for **Cannabis Production and Processing Operations** in Metro Vancouver

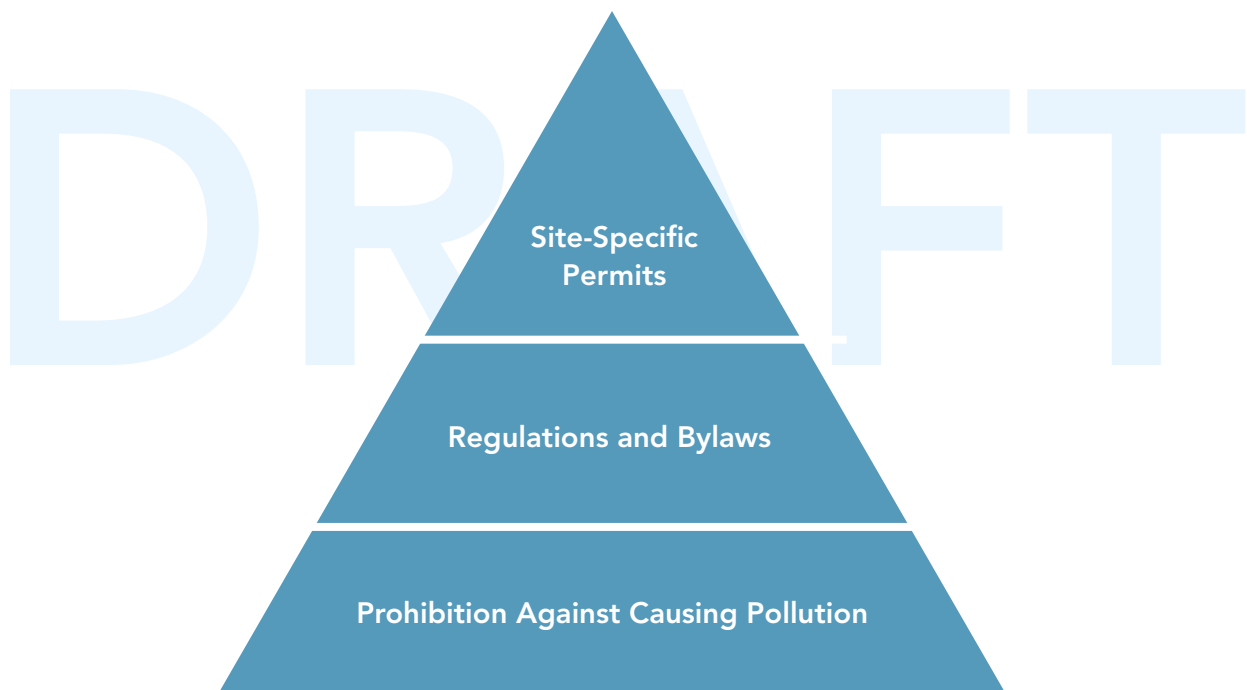
DRAFT

INTRODUCTION

Metro Vancouver Regional District (MVRD, operating as Metro Vancouver) is responsible for managing and regulating air quality in the region under authority delegated from the provincial government in the *BC Environmental Management Act*. Metro Vancouver protects public health and the environment through a tiered approach to managing the discharge of air contaminants that applies the use of site-specific permits, sectoral emission regulations, and provisions in the *Greater Vancouver Regional District (GVRD) Air*

Quality Management Bylaw No. 1082, 2008 (Bylaw 1082). Permits are required for activities and complex facilities with significant levels of emissions that may have the potential for high impacts on the environment and public health. Regulations apply air emissions control requirements to a group of facilities or activities that share similar characteristics. Bylaw 1082 prohibits any person from discharging air contaminants so as to cause pollution.

TIERED APPROACH TO REGULATING AIR CONTAMINANTS IN METRO VANCOUVER.

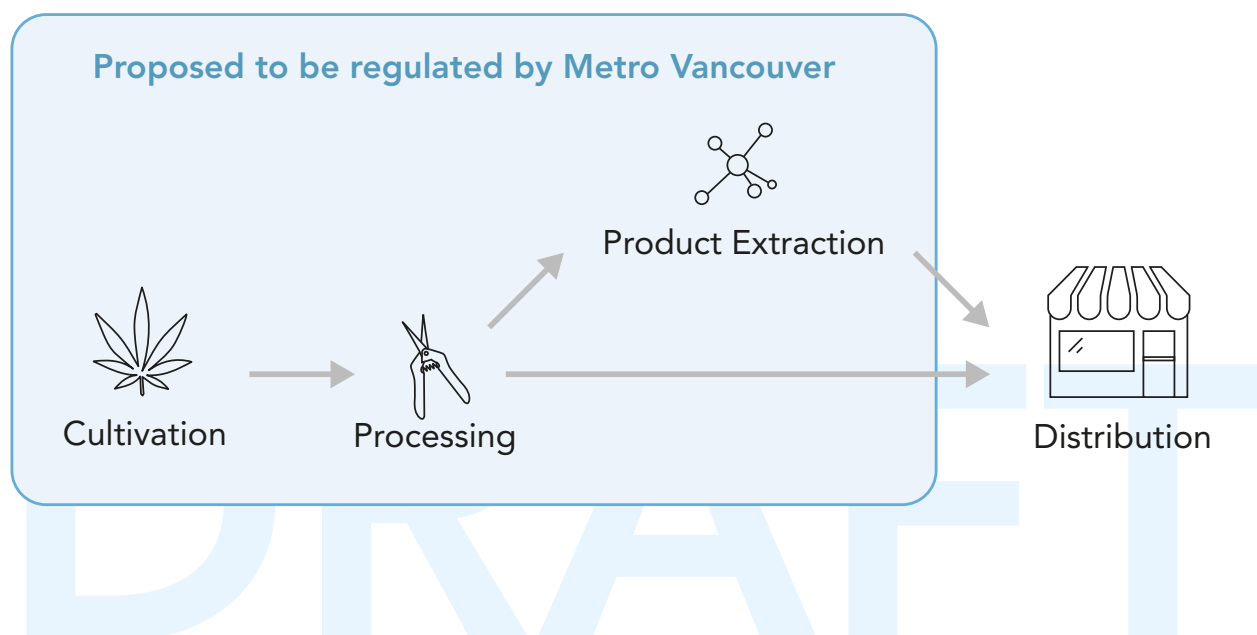


The following sections outline regulatory proposals to control air emissions from cannabis production and processing operations.

PURPOSE

This discussion paper provides information about the potential environmental impacts from cannabis production and processing operations and summarises potential regulatory proposals to reduce air emissions from the cultivation, harvesting, and processing of cannabis plants. Facilities that would be subject to the proposed regulation include operations conducting indoor cultivation, outdoor cultivation,

cultivation by several individuals in cooperatives, and cannabis processing operations such as drying and harvesting of cannabis plant material. Facilities carrying out the extraction of oils from cannabis and manufacturing derived products are also proposed to be addressed within the regulation.



This discussion paper may be of interest to:

- Businesses that produce and process cannabis in Metro Vancouver indoors or outdoors, as well as associations representing these parties;
- Consultants, manufacturers, and suppliers that provide services such as air emission control;
- Businesses involved in the design and construction of cannabis production or processing operations;
- Persons holding a Health Canada licence to produce or process cannabis in the Metro Vancouver region;
- Metro Vancouver's member jurisdictions;
- Public health experts;
- Members of the public affected by emissions from cannabis production and processing operations; and
- Other interested parties affected by potential regulatory proposals related to cannabis production and processing operations or by air quality in the Metro Vancouver region.

A consultation program will allow Metro Vancouver to inform interested parties and the public of the proposals for regulating emissions from facilities that produce and process cannabis described in this discussion paper, and to receive feedback. Representatives of interested parties and the public will be invited to provide feedback in person and online between April and May 2019.

DEFINING THE PROBLEM

The legalization of recreational use of cannabis in October 2018 has led to the rapid expansion of commercial cannabis production in the Metro Vancouver region and caused concerns about the potential resulting impacts to the environment and public health. In the Metro Vancouver region, a number of greenhouses formerly used for vegetable production have been retrofitted for cannabis production, yet were not designed or constructed to collect and treat air contaminants. Metro Vancouver as well as member municipalities have received complaints about odorous emissions from cannabis production operations.

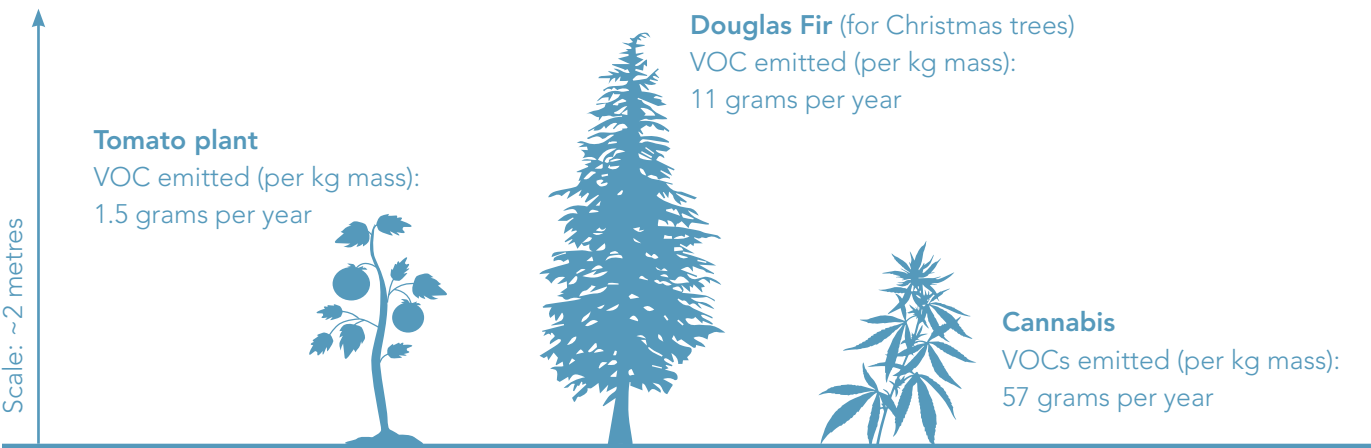
Information from other jurisdictions in which cannabis is produced suggests that potential environmental impacts related to air quality, solid waste management, water consumption, and wastewater discharges could occur. While these impacts will be addressed as part of Metro Vancouver’s broader efforts related to this sector, this discussion paper focuses on regulatory proposals for managing air emissions from cannabis production.

Cannabis production has the potential to cause negative air quality impacts if emissions are not adequately controlled.

- Odorous air contaminants emitted during cannabis production and processing are volatile organic compounds (VOC) that may contribute to the formation of harmful ground-level ozone and fine particulate matter through reactions with other substances and sunlight in the lower atmosphere. Emissions most notably occur during the flowering and harvesting phases, during which high levels of a group of VOC called terpenes can be produced. Terpenes are known for their strong odour and involvement in the production of secondary air contaminants.
- Odour masking agents introduce an alternative fragrance to reduce the ability of the human nose to detect odorous air contaminants. They contain VOC and may also create particulate matter.
- The power production equipment needed to meet the requirements for heating, lighting and suitable growing environment for the indoor production of cannabis generates emissions of nitrogen oxides and may emit particulate matter, depending on the fuel.

A number of technologies are available to control VOC in general (see text box on page 5), but these may not all be suitable for cannabis production operations in the Metro Vancouver region.

EXAMPLE VOC EMISSIONS FOR SOME OF THE PLANTS GROWN COMMERCIALY IN THE METRO VANCOUVER REGION



AVAILABLE CONTROL TECHNOLOGIES

Carbon Filters

Activated carbon filters are widely used to control VOC and reduce odours. Carbon filters can be effective and reliable when properly maintained and replaced at appropriate intervals. These filters have relatively large surface areas that adsorb and remove VOC.

Biofilters

A biofilter is a filtration system that employs biological activity to remove odorous contaminants from an air stream. The microorganisms responsible for removing the odorous air contaminants may include bacteria and fungi.

Odour neutralizers

Plant-based odour neutralizers use natural plant oils that interact with and alter VOC emitted by cannabis so they are no longer odorous. VOC reduction can vary from 20% to 90% depending on product and contact time. Odour neutralizers may also contain odour-masking agents.

Thermal oxidation

A thermal oxidizer applies high levels of heat to decompose VOC to waste products that are without odour, typically carbon dioxide and water.

Ozone generators

These generators are used for disinfection and sometimes used in industrial settings to control strong odours. Ozone generators are potentially harmful to crops and human health because they produce ozone by design.

GUIDING PRINCIPLES

A regulation to address emissions from cannabis production operations in Metro Vancouver would aim to:

- Emphasize prevention and control of emissions through best management practices and continuous improvement;
- Minimize emissions of volatile organic compounds which can contribute to the formation of ground-level ozone and fine particulate matter, and lead to odour impacts;
- Address concerns expressed by members of the public about impacts from emissions of cannabis production operations; and
- Align with the goals and strategies of management plans adopted by Metro Vancouver including:
 - the Integrated Air Quality and Greenhouse Gas Management Plan,
 - the Regional Ground-Level Ozone Strategy, and
 - the Odour Management Policy Development Plan.

Metro Vancouver is enhancing its odour management framework, which relies on five broad approaches that can be applied, either alone or in combination, through bylaws and permits to reduce impacts from emissions of odorous air contaminants. These approaches could be applied to a potential regulation for managing emissions from cannabis production and processing operations:

- Setting criteria for levels of odorous air contaminants outside the boundary of the facility;
- Setting criteria for levels of odorous air contaminants emitted at the facility;
- Requirements related to technology and facility management practices;
- Economic instruments to encourage reductions in emissions; and
- Clearly defined terms related to odour management.

WORKING WITHIN THE LEGISLATION

With the adoption of Bill C-45 (the *Cannabis Act*), recreational marijuana became legal in Canada on October 17, 2018. Federal, provincial and local governments, including Metro Vancouver and its member jurisdictions, have roles in the regulation of legal cannabis production and processing.

The federal government is responsible for establishing and maintaining the national framework for regulating the production of cannabis, which includes setting standards for health and safety, and for licensing production and processing facilities. Regulations under the *Cannabis Act* allow cannabis production in enclosed indoor facilities, in greenhouses, and outdoors, provided that security requirements can be met. The new regulations brought into force in 2018 state that if produced in a building, “the building must be equipped with a system that filters air to prevent the escape of odours”. All processing activities must be conducted indoors.

Provinces and territories are responsible for determining how cannabis is distributed and sold within their jurisdictions, and can restrict consumption and possession. The *BC Cannabis Control and Licensing Act* describes requirements and restrictions developed to support public safety, including limits on production for personal use. In addition, the provincial government amended the *BC Agricultural Land Reserve Use, Subdivision and Procedure Regulation* on July 13, 2018. The amendment clarified that the lawful production of cannabis cannot be prohibited on the Agricultural Land Reserve (ALR) if cultivation takes place in an open field, a structure with a soil base, or an existing structure or structure under construction by July 13, 2018 for the purpose of growing crops.

Under Section 31 of the *BC Environmental Management Act* (EMA), Metro Vancouver has delegated authority for air pollution control and air quality management within the Metro Vancouver region, including industrial and agricultural land. EMA states that the Metro Vancouver Board “may, by bylaw, prohibit, regulate and otherwise control and prevent the discharge of air contaminants”. Under *GVRD Air Quality Management Bylaw No. 1082, 2008* (Bylaw 1082), Metro Vancouver exercises its air quality regulatory authority with a system of permits that apply to individual facilities, and emission regulations that apply to types of operations and activities with similar characteristics. For example, Metro Vancouver regulates air emissions from agricultural sources within the region through permits and regulations such as the *GVRD Agricultural Boilers Emission Regulation Bylaw No. 1098, 2008*.

Bylaw 1082 prohibits the discharge of air contaminants by an industry, trade or business unless the discharge is conducted in accordance with a Metro Vancouver emission regulation or permit. The release of air contaminants, including VOC and odorous air contaminants, has the potential to cause air pollution if present in a way that substantially alters or impairs the usefulness of the environment. Bylaw 1082 prohibits any person from discharging, or allowing or causing the discharge of any air contaminant so as to cause pollution. Metro Vancouver can set emission regulations for emissions of air contaminants in the region that are more stringent compared to other parts of the province.

Metro Vancouver’s member jurisdictions are responsible for land-use zoning and business licensing, which can impose conditions on the location and conduct of cannabis production and processing to the extent allowed under provincial legislation such as the *Community Charter* and the *BC Agricultural Land Reserve Use, Subdivision and Procedure Regulation*.

PROPOSED REGULATORY APPROACH

The objective of introducing an emission regulation for cannabis production and processing operations is to set requirements that will efficiently protect the public and enable the operation of environmentally responsible facilities. Facilities can choose to have their emissions authorized under an emission regulation, if they meet all the requirements, or under a permit.

Proposed Requirements to Control Emissions

It is anticipated that the proposed regulation would apply to facilities that can operate in compliance with best practices and use best available control technologies to control emissions.

Facilities suitable to be authorized under the emission regulation would:

- Enclose all cannabis processing in structures;
- Enclose all cannabis waste management activities, including composting, in structures when conducted on a property where cannabis is produced or processed;
- Equip structures with rapidly closing doors or a double door system that provides a barrier to the escape of air contaminants from inside the structure;
- Draw facility air through activated carbon filters for VOC emission control in all structures used for cultivation, processing, or waste management of cannabis;
- Use temporary containment, collection, and treatment of VOC emissions from outdoor cultivation using activated carbon filters during periods of peak VOC production generally coinciding with flowering;
- Use activated carbon filters alone or in combination with particulate filters, such as HEPA filters;
- Prevent the escape of insufficiently treated emissions and fugitive emissions from structures and from temporary containment of outdoor cultivation, so recognizable odorous air contaminants associated with the VOC emissions from facility activities cannot be detected beyond the property boundary;
- Submit a comprehensive air emission management plan certified by a qualified professional to control odorous air contaminants and other emissions;
- Avoid outdoor use of odour masking agents and odour neutralizing agents (odour masking agents would be allowed to be used in enclosed areas within a facility, such as in office spaces, provided there is no escape of untreated emissions to the environment);
- Avoid the uncontrolled release of emissions or the bypassing of emission controls, unless authorized by the District Director;
- Avoid the uncontrolled release of emissions or the bypassing of emission controls when an air quality advisory is in effect anywhere within the Metro Vancouver and Fraser Valley Regional Districts; and
- Be located more than 200 metres from land zoned for residential use, hospitals, schools, daycares, playgrounds, and senior care facilities.

Thresholds of applicability may be proposed in the emission regulation. For example, the regulation may apply to facilities with an operational area of less than 50,000 m² or a cannabis production or processing capacity of less than 50,000 kg per year. Larger facilities may be more suited to having their discharge of air contaminants authorized under a permit.

In addition to requirements under the proposed regulation to control emissions from cannabis production and processing, boilers and heaters used by a facility would need to comply with the applicable regulations. For facilities with a capacity of 50 MW or less, boilers can register under the *GVRD Agricultural Boilers Emission Regulation Bylaw No. 1098, 2008* for

facilities in the Agricultural Land Reserve, or under the *GVRD Boilers and Process Heaters Emission Regulation Bylaw No. 1087, 2008*, as amended, for facilities not in the Agricultural Land Reserve.

Metro Vancouver intends to regulate emissions from reciprocating engines through permits. Facilities using reciprocating engines as a power source, but that would otherwise meet the requirements of the proposed regulation, could choose to apply for a permit authorizing emissions from the entire facility or from the reciprocating engine only.

If the facility is not able to comply with all of the emission regulation requirements, or if the facility employs unique technologies in its emission controls that are not authorized in the regulation, the facility may seek authorization for air discharges through the Metro Vancouver permitting process.

Emission management plans

The proposed regulation could require that a comprehensive odour and VOC emission management plan, certified by an appropriately qualified professional, be submitted for each facility producing or processing cannabis and be approved by Metro Vancouver. The plan would be required to include the following elements as a minimum:

- A description of the odour mitigation system and engineering controls in place to prevent impacts from odorous air contaminants arising from activities associated with producing or processing cannabis;
- An operational processes and maintenance plan, including a description of how intervals between air filter changes will be determined and inspection activities that will be undertaken to ensure the odour mitigation system remains functional and capable of preventing the discharge of VOC to the environment;

- Documentation that emission controls, including filtration systems, are sufficient to effectively remove the VOC associated with cannabis production and processing activities;
- Monitoring conducted by the facility to verify that no recognizable odorous air contaminants can be detected beyond the boundary of the property; and
- Management of waste such that odorous air contaminants associated with the waste cannot be detected beyond the property boundary.

Metro Vancouver expects odour mitigation systems and odour and VOC emission management plans to be consistent with accepted best available technologies and applicable best management practices. Metro Vancouver will provide references to published information on best practices and technologies as the information becomes available.

Monitoring

Assessment of the presence of recognizable odorous air contaminants beyond the property boundary that can be attributed to the facility on the balance of probabilities could be conducted by an approved person through a standard procedure using the human nose or other instruments.

Record Keeping

The proposed bylaw would describe the records a facility would need to maintain to demonstrate compliance with the emission regulation. Records would include testing, inspection and maintenance procedures on equipment used for controlling and treating emissions, routine tests of filtration systems used for removing VOC, concentrations and amounts of VOC discharged from a facility, and events such as bypasses of control systems. The record keeping requirements would include details about the extent and frequency of emissions reporting.

EXAMPLES OF BEST PRACTICES

Full enclosure ensures that emissions can be captured and directed to suitable control technologies. Enclosed areas should be fitted with rapidly closing doors, or an air-lock system with double doors for entry and exit.

Odour control equipment should be sized and serviced according to the manufacturer's recommendations, and undergo cleaning and filter replacements as often as required.

Air circulation systems should be maintained in accordance with manufacturer recommendations.

Waste must be regularly transferred, stored, and disposed of in order to minimize the development of odours.

Administration of the Emission Regulation

Metro Vancouver's regulatory system includes a system of user fees which are intended to provide recovery of the costs of developing and administering permits and regulations, following a 'discharger pay' principle. The costs associated with administering the emission regulation are intended to be covered by registration and annual fees.

The proposed registration fee of \$2,000 would cover the cost of the registration process, the review of applications including odour and VOC emission management plans, and an initial inspection. The annual fee for facilities operating under the proposed regulation would be a composite comprising a fixed fee portion of \$250 and an additional variable air contaminant emissions fee portion calculated using the emission fee per tonne of VOC established in the *GVRD Air Quality Management Fees Regulation Bylaw No. 1083, 2008*, as amended. This variable fee portion could be determined using measured VOC emissions, estimated emissions, or a proxy for estimated emissions, based on the size of the operational area of the facility, the number of plants grown, or the amount of cannabis produced or processed.

The proposed regulation would also specify supplemental increases based on inflation that would occur on an annual or other fixed schedule to reflect increases in administration costs. The fees would come into effect upon implementation of the emission regulation.

Definitions would also be included in the emission regulation to ensure a common understanding of applicable terminology.

Providing Comments on the Potential Regulatory Initiative

Metro Vancouver is seeking input about proposals to regulate air emissions from cannabis production and processing from stakeholders representing different perspectives, and will consider all input in the development of a proposed emission regulation. The MVRD Board will receive a summary of the input received.

Metro Vancouver welcomes feedback with respect to the regulatory initiative outlined in this discussion paper. Metro Vancouver will carefully consider all feedback when considering potential proposals for managing emissions from cannabis production operations in the region.

Metro Vancouver staff and contractors will treat comments received with confidentiality; please note that comments you provide and information that identifies you as the source of those comments may be publicly available if a freedom of information (FOI) request is made under the *Freedom of Information and Protection of Privacy Act*. If you have any questions or comments regarding the consultation process, please call 604-432-6200.

Metro Vancouver invites you to provide feedback by May 31, 2019 to AQBylaw@metrovancouver.org. Feedback will be considered until the MVRD Board adopts an emission regulation bylaw for managing emissions from cannabis production operations.

Thank you for taking the time to consider and provide input on potential regulatory proposals for cannabis production operations in Metro Vancouver.



Infographic: Cannabis Production Operations

Examples of Jurisdiction Roles and Responsibilities

Federal	Provincial/Territorial	Municipal	Metro Vancouver
Cannabis production Standards for health and safety Cannabis possession limits Trafficking Advertising Minimum age limits (18) Oversight of medical cannabis regime, including personal cultivation registration	Regulation for the protection of human health and the environment, for example, through the <i>BC Environmental Management Act</i> Discretion to set more restrictive limits for: <ul style="list-style-type: none"> • minimum age for consumption • possession amount • personal cultivation, including number of plants and where cannabis can be cultivated Wholesale and retail distribution of cannabis Selection of retail distribution model Workplace safety Regulations around public consumption	Zoning (density, location) Retail locations Home cultivation Business Licensing Building Codes Nuisance Smoking restrictions Nuisance odours Municipal workplace safety Enforcement of local government bylaws Municipal cost considerations related to local policing	Managing and regulating air contaminants in the Metro Vancouver region Regulating air emissions through emission permits or emission regulations Addressing air quality complaints Enforcement of Metro Vancouver bylaws, including air quality, solid waste, liquid waste

Adapted from the Federation of Canadian Municipalities *Municipal Guide to Cannabis Legalization*:
<https://fcm.ca/sites/default/files/documents/resources/guide/municipal-guide-cannabis-legalization.pdf>

Production and Processing Licenses

The regulations under the *Cannabis Act* require a Health Canada licence in order to grow cannabis for sale (on a large or small scale, or for starting materials, e.g., seeds and plants) and make cannabis products (on a large or small scale).

License Type	Restrictions	Notes
Standard Cultivation	No restrictions	Cultivation may be conducted indoors or outdoors
Micro-Cultivation	Surface area in which plants are contained cannot exceed 200 m ² (including any vertically stacked surfaces)	Cultivation may be conducted indoors or outdoors
Nursery	For seed production, total surface area of no more than 50 m ² must contain all the parts of budding or flowering plants, and maximum of 5 kg of flowering heads harvested from plants with the exception of seeds	Cultivation may be conducted indoors or outdoors
Standard Processing	No restrictions	All activities must be conducted indoors
Micro-processing	Maximum of 600 kg of dried cannabis in one calendar year <i>Note: If licence holder also holds a micro-cultivation licence for the same site and the cannabis comes exclusively from that site, this maximum quantity does not apply.</i>	

Adopted from the Health Canada *Cannabis Licensing Application Guide Appendix B: Cannabis licence classes and subclasses*:

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/industry-licensees-applicants/licensing-summary/guide.html#b>

To: Climate Action Committee

From: Erik Blair, Senior Policy and Planning Analyst
Planning and Environment Department

Date: February 12, 2019 Meeting Date: March 15, 2019

Subject: **Metro Vancouver's Electric Vehicle Public Outreach Programs**

RECOMMENDATION

That the MVRD Board receive for information the report dated February 12, 2019, titled "Metro Vancouver's Electric Vehicle Public Outreach Programs".

PURPOSE

To provide an update on Metro Vancouver's current outreach activities to increase the adoption of electric vehicles (EVs), and present a preliminary 2019 schedule of events for the Emotive, EVWorkplace.ca and EVCondo.ca programs.

BACKGROUND

This report responds to an action in the 2019 Climate Action Committee work plan to report on current EV outreach initiatives and provide a schedule of upcoming outreach events.

The *Board Strategic Plan 2015-2018* and *Integrated Air Quality and Greenhouse Gas Management Plan* include strategies to raise awareness of actions that the public and businesses can take to reduce greenhouse gas (GHG) emissions. On-road transportation is a key element of those actions, and moving forward, the *Climate 2050 Transportation Roadmap* will build on the successes of the existing EV outreach programs.

METRO VANCOUVER ELECTRIC VEHICLE PUBLIC OUTREACH PROGRAMS

Metro Vancouver has been conducting public outreach to increase EV uptake in this region since 2012, including three campaigns designed to engage specific audiences and lower key barriers to owning an electric vehicle: Emotive - The Electric Vehicle Experience, EVCondo.ca, and EVWorkplace.ca. These outreach programs, supported by incentive and incoming regulatory programs, address the most significant barriers to EV ownership in the region.

CONSUMER PREFERENCES AND BARRIERS TO EV OWNERSHIP

Metro Vancouver's outreach work on EVs to date has relied on a strong understanding of the characteristics of the general public when purchasing vehicles and the barriers faced by prospective EV buyers. Informed by research conducted by Simon Fraser University in 2017, Metro Vancouver's outreach programs are designed to address the following three key barriers:

- **Low awareness of EVs:** SFU's 2017 research shows that eight in every ten respondents were aware of at least one specific EV model, but less than half understood basic EV technology. Direct experience with EVs also remains very low, with less than 5 percent of respondents

having driven or been a passenger in an EV. Low awareness and understanding of electric vehicles through lack of direct experience contributes to slow uptake.

- **Limited access to charging at home and work:** Reliable and secure access to charging is critical to owning an EV. This is especially challenging for residents of multi-family dwellings due to the retrofit costs to install EV charging, and low understanding and capacity on the part of strata councils to determine cost-effective and equitable approaches to providing EV charging. While solutions are being developed for the majority of condo dwellers, access to public and workplace charging are critical to owning an EV.
- **Higher cost of EVs and charging equipment:** Electric vehicles have a higher capital cost than equivalent internal combustion vehicles. Over a ten-year ownership period, the operating cost of an EV can be significantly lower than a gasoline vehicle which reduces the total cost of owning an EV, but for many the added initial capital cost remains a barrier.

METRO VANCOUVER'S EV PUBLIC OUTREACH PROGRAMS

Since 2012, Metro Vancouver has conducted education and outreach programming to address the barriers of awareness, cost, and access to charging. To target messaging and specific audiences, Metro Vancouver now delivers three outreach programs:

1. Emotive: The Electric Vehicle Experience (emotivebc.ca)

Emotive is designed to address the barrier of low awareness and direct experience with EVs. The campaign is supported by a network of delivery partners that includes municipalities, non-profit organizations and individual EV owners, known as "EV Ambassadors". Metro Vancouver leads the delivery of Emotive in the region.

Emotive staff attend various events across the region to convey to the public the practical, economic and environmental benefits of driving an EV. Staff are also trained to discuss issues such as: EV availability, cost, public charging infrastructure, vehicle technology, and incentive programs. Participants are also able to gain direct experience driving an EV through test drive events, which has been shown to be an effective method for increasing EV interest.

2. EVCondo.ca

A key barrier to EV uptake is availability of charging infrastructure. Most charging (80-90%) in the region currently takes place at home; however, for many Metro Vancouver residents, particularly those who live in multi-family dwellings or who park on the street (known as "garage orphans"), home-based charging may not be available or may be difficult to install.

EVCondo is an online resource designed to assist potential and existing EV owners, strata councils and property managers with resources, information and advice on installing EV charging in multi-unit residential buildings. The website also features an interactive map of "EV-friendly stratas" that have successfully installed EV charging.

3. EVWorkplace.ca

Metro Vancouver launched the EV Workplace website and outreach campaign in early 2018. After home charging, the second longest dwell time for many vehicles is at work. Workplace charging plays an important role in the region's EV infrastructure network, particularly for those who do not have access to reliable charging at home. EVWorkplace.ca is designed to

provide employers with information, resources and direct experience with EVs to encourage the installation of EV charging for employees and customers. Through this program, staff typically engage employees through information sessions and at public events.

Preliminary 2019 Schedule of Events

Staff are currently planning EV outreach events for 2019. A preliminary schedule of events is included as an attachment to this report, and includes 51 event days in the 2019 operating season, (there were 45 event-days in 2018), bringing events to 14 member jurisdictions.

Staff will bring the Emotive exhibit to regional events such as the BCTECH Summit, the Vancouver International Auto Show, ElectraFest 2019, and the UBCM Summit. Emotive will also attend a number of well-known community events such as Hats Off Day, Car Free days, and Party for the Planet.

EV Outreach Supports Metro Vancouver's GHG Reduction Goals

Vehicles are responsible for one-third of the region's greenhouse gas (GHG) emissions and one-fifth of the smog-forming pollutants. EVs present an opportunity to significantly reduce GHGs today, without negatively impacting lifestyle or cost of living. Metro Vancouver's EV outreach programs focus on messaging that encourages the public to switch to EVs to reduce GHG emissions.

While it is not possible to directly measure the impact of outreach campaigns on GHG emission reductions, Metro Vancouver uses other indicators to evaluate the impact that the programs have in supporting an increase in EV ownership, such as: number and quality of conversations with the public, total vehicle test drives, and number of event days attended.

ELECTRIC VEHICLE INCENTIVES

Metro Vancouver's outreach programs are designed to raise awareness of EVs and EV charging by providing information and solutions to the region's residents. Recognizing the initial capital cost barrier noted above, the ability to identify available incentives and services is critical to support interested public to take the next step towards owning an EV. As part of the recently announced *CleanBC* plan, the Province has committed to continue providing incentives to EV buyers. Metro Vancouver works in collaboration with the Province and other organizations such as the Fraser Basin Council to ensure that our outreach programs co-promote the following programs:

- **Clean Energy Vehicle Program (CEVforBC):** The Province of BC currently offers a point-of-purchase incentive of \$5,000 for new Battery Electric Vehicles, and \$2,500 for new Plug-In Hybrid Electric Vehicles. (See: cevforbc.ca).
- **BC SCRAP-IT Program:** In February 2019, the BC SCRAP-IT Program announced new incentives of \$6,000 towards the purchase of a new EV or \$3,000 towards the purchase of a used EV, with the scrapping of an existing vehicle. This incentive is offered over and above the CEVforBC incentive. (See: scrapit.ca).
- **BC Charging Solutions and Incentives Program (CSI):** In March 2018, the Province launched the CSI program, which is administered by the Fraser Basin Council. It provides rebates towards the cost of EV charging equipment and provides support services for the planning

and installing of EV chargers in multi-unit residential buildings, workplaces and single-family homes. The CSI program is now fully subscribed due to high demand. The 2019 provincial budget has allocated \$5 million to support the installation of home and workplace charging stations. (See: pluginbc.ca/incentives/charging-solutions-incentives/).

PROVINCIAL ZERO EMISSIONS VEHICLE (ZEV) STANDARD

The *CleanBC* plan provides an overarching strategy to reduce GHGs and build BC's economy across multiple sectors. *CleanBC* includes a commitment to create a Zero Emissions Vehicle (ZEV) standard, which will require automakers to meet escalating annual new light-duty ZEV sales targets, set at 10% by 2025, 30% by 2030, and 100% by 2040. The proposed legislation is expected to be based on legislation already in place in Quebec, California, and nine other U.S. states, with modifications for BC as necessary.

The ZEV Standard will help to bring an increase in model choice and volume of clean vehicles to the BC market, making them more affordable and accessible to the public. Metro Vancouver's EV outreach programs will support the ZEV Standard through messages about increased EV availability and model choices that suit a broader public audience in the region.

CLIMATE 2050 TRANSPORTATION ROADMAP

Following adoption of the *Climate 2050 Strategic Framework* in September 2018, a *Climate 2050 Transportation Roadmap* is being developed for the region, which will identify goals, strategies, actions, and performance metrics for reducing GHG emissions from this sector. Through this process, staff will be engaging the public and other stakeholders on the long term objectives of EV initiatives, including the evolution of our existing EV outreach programs.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Metro Vancouver's 2019 EV outreach programs include staff resources as well as a budget of \$20,000 for events and materials.

SUMMARY / CONCLUSION

Using research that identifies key barriers to EV uptake, Metro Vancouver has designed three public EV outreach programs to increase EV ownership in the region, using messaging that is integrated with existing incentives aimed at reducing the up-front cost of vehicles and charging infrastructure. Metro Vancouver's EV programs will also integrate messaging to support the incoming provincial ZEV Standard, which will increase EV supply to meet market demand. As part of the *Climate 2050 Transportation Roadmap*, staff will be identifying EV outreach campaigns as a current strategic approach to reducing transportation-related GHG emissions in the region, and will be considering the long term evolution of these programs to reflect a rapidly changing transportation landscape.

Attachment

1. Preliminary 2019 Schedule of Events for Metro Vancouver EV Outreach Programs (*Doc #28654582*)

Preliminary 2019 Schedule of Events for Metro Vancouver EV Outreach Programs					
Status	Start Date	# of days	Program	Name of Event	Event Location
Complete	January 29 2019	1	EVWorkplace	City of Richmond EV 101	City of Richmond
Complete	February 8 2019	1	EVWorkplace	City of Surrey EV 101	City of Surrey
Confirmed	March 12 2019	3	Emotive	BC Tech Summit Ride and Drive	City of Vancouver
Confirmed	March 19 2019	6	Emotive	VIAS 2019	City of Vancouver
Confirmed	April 7 2019	1	EVWorkplace	Vancity Ride and Drive	City of Vancouver
Confirmed	April 13 2019	1	Emotive	Party for the Planet	City of Surrey
Confirmed	April 17 2019	1	EVWorkplace	BC Hydro Ride and Drive	City of Burnaby
Confirmed	April 18 2019	1	EVWorkplace	Spartan Controls EV 101	City of Burnaby
Confirmed	April 25 2019	1	Emotive	Uhill Elementary Earth Day	Electoral Area A
Confirmed	April 27 2019	1	Emotive	University Neighbourhoods Assoc. Earth Day	Electoral Area A
Confirmed	May 3 2019	3	Emotive	Ridge Meadows Home Show	City of Maple Ridge
Tentative	May 4 2019	1	Emotive	Gleneagles Springfest	District of West Vancouver
Tentative	May 11 2019	1	Emotive	Richmond Public Works Open House	City of Richmond
Tentative	May 20 2019	1	Emotive	May Day Fort Langley	Township of Langley
Tentative	May 25 2019	1	Emotive	Burnaby Environment Festival	City of Burnaby
Confirmed	June 1 2019	1	Emotive	Hats Off Day Burnaby	City of Burnaby
Confirmed	June 2 2019	1	Emotive	Blueridge Community Day	City of North Vancouver
Confirmed	June 5 2019	1	EVCondo	Ocean Park Library EV 101	City of Surrey
Confirmed	June 9 2019	1	Emotive	Richmond Sockeye Car Run	City of Richmond
Tentative	June 15 2019	1	Emotive	Lynn Valley Days	District of North Vancouver
Tentative	June 16 2019	1	Emotive	Car Free Day Main St	City of Vancouver
Confirmed	July 1 2019	1	Emotive	Canada Day Langley Events Center	Township of Langley
Tentative	July 1 2019	1	Emotive	Canada Day City of Richmond	City of Richmond
Tentative	July 7 2019	1	Emotive	Commercial Drive Car Free Day	City of Vancouver
Tentative	July 19 2019	3	Emotive	Ribfest Port Moody	City of Port Moody
Tentative	August 5 2019	1	Emotive	Tsawwassen Sun Festival- WW	City of Delta
Tentative	August 9 2019	3	Emotive	Abbotsford Airshow	Abbotsford
Tentative	August 18 2019	1	Emotive	Car Free Day Port Moody	City of Port Moody
Confirmed	August 24 2019	1	All	ElectraFest 2019	City of Vancouver
Confirmed	September 7 2019	1	Emotive	Richmond World Festival	City of Richmond
Confirmed	September 14 2019	2	Emotive	Country Celebration	Township of Langley
Tentative	September 21 2019	1	Emotive	Riverfest	City of New Westminster
Tentative	September 22 2019	1	Emotive	World Rivers Day	City of Langley
Tentative	September 23 2019	1	Emotive	UBCM	City of Vancouver
Tentative	October 5 2019	1	Emotive	Cranberry Festival Langley	Township of Langley
Tentative	October 7 2019	2	Emotive	Eco City convention	City of Vancouver
		51 Event days			

To: Climate Action Committee

From: Ray Robb, Division Manager, Environmental Regulation and Enforcement
Planning and Environment Department

Date: February 21, 2019 Meeting Date: March 15, 2019

Subject: **Staff Appointments for the Purpose of Serving Summons under the *Offence Act***

RECOMMENDATION

That the MVRD Board appoint, for the purpose of serving summons under section 28 of the *Offence Act* for alleged violation of MVRD air quality management bylaws, all Metro Vancouver staff currently appointed as officers under the *Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008*.

PURPOSE

To appoint existing MVRD officers for the additional purpose of serving a summons in respect of alleged offences under MVRD air quality management bylaws.

BACKGROUND

MVRD-appointed officers could more efficiently enforce MVRD air quality bylaws if they were also provided with the power to serve summons related to MVRD air quality bylaw infractions. This report seeks MVRD Board authorization to appoint officers under the *Offence Act* for the purpose of serving summons for bylaw infractions.

SERVING SUMMONS UNDER THE *OFFENCE ACT*

The *Offence Act* requires that only peace officers or enforcement officers may serve summons. The *Offence Act* allows regional districts to appoint bylaw enforcement officers for the purpose of serving summons for bylaw violations.

While MVRD-appointed officers have numerous inspection powers for the enforcement of MVRD bylaws, currently they must retain the services of a peace officer to serve a summons related to enforcement of MVRD air quality bylaws. In addition to delays and additional time required to brief local police officers, it takes these officers away from their other duties.

MVRD bylaw enforcement officers, if appointed for that purpose, may serve a summons in respect of alleged offences under a MVRD air quality bylaw, pursuant to section 28 of the *Offence Act*. To increase efficiencies, it would be beneficial for all Metro Vancouver staff currently appointed as officers under the *Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008* to also be appointed for the purposes of serving a summons in respect of alleged offences under an air quality bylaw.

Ten summons have been served since 1990 for violation of MVRD air quality bylaws.

ALTERNATIVES

1. That the MVRD Board appoint, for the purpose of serving summons under section 28 of the *Offence Act* for alleged violation of MVRD air quality management bylaws, all Metro Vancouver staff currently appointed as officers under the *Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008*.
2. That the MVRD Board receive for information the report dated February 21, 2019 titled “Staff Appointments for the Purpose of Serving Summons under the *Offence Act*” and provide alternate direction to staff.

FINANCIAL IMPLICATIONS

There are no significant financial implications for expenditures as the appointments are for existing Metro Vancouver employees and positions.

SUMMARY / CONCLUSION

Staff recommend that the MVRD Board appoint, for the purpose of serving summons under the *Offence Act* for alleged violation of MVRD air quality management bylaws, all Metro Vancouver staff currently appointed as officers under the *Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008*. Appointing these officers under section 28 of the *Offence Act* will promote more efficient enforcement of Metro Vancouver air quality management bylaws.

Staff recommend Alternative 1.

28065582

To: Climate Action Committee

From: Roger Quan, Director, Air Quality and Climate Change
Planning and Environment Department

Date: February 22, 2019 Meeting Date: March 15, 2019

Subject: **Manager's Report**

RECOMMENDATION

That the Climate Action Committee receive for information the report dated February 22, 2019, titled "Manager's Report".

Climate Action Committee 2019 Work Plan

The attachment to this report sets out the Committee's Work Plan for 2019. The status of work program elements is indicated as pending, in progress, or complete. The listing is updated as needed to include new issues that arise, items requested by the Committee, and changes to the schedule.

British Columbia Lung Association Air Quality and Health Workshop

On February 6, 2019, the British Columbia Lung Association hosted its 16th annual Air Quality and Health Workshop, with a theme of "Wildfire Smoke: A Growing Threat to Air Quality and Public Health". The workshop program included a wide range of experts from Canada and the United States, and was attended by over 150 air quality, public health and medical professionals. Experts discussed the role of climate change in increasing forest fire risk, and emphasized that large fires are likely to be a regular occurrence going forward. Smoke from recent fires has caused wide-ranging impacts on air quality across British Columbia, as well as measureable impacts on health, particularly in sensitive populations such as asthmatics and those with heart conditions. In response to these increasing health risks from wildfire smoke, experts emphasized the importance of community smoke preparedness, including clear and consistent public messaging on smoke health impacts and how they can be managed. The workshop was well attended by local media, who reported on it in a number of news stories, including:

- Global News: <https://globalnews.ca/video/4933498/researchers-gather-to-study-lingering-effects-of-wildfire-smoke>
- CBC News: <https://www.cbc.ca/news/canada/british-columbia/sarah-coefield-air-filters-wildfires-1.5008640>

The impacts of wildfire smoke and the need for responses is resulting in a number wildfire smoke related meetings. Metro Vancouver staff are presenting at the Air and Waste Management Association "Impacts of Wildfires on Air Quality and Health Conference" in Santa Rosa, California on February 13 and 14, and the Manitoba Health - Disaster Management & Health Canada "Canadian Symposium on Wildfire Smoke Communication" in Winnipeg, Manitoba on April 25 and 26.

Air Quality Monitoring Requirements for Centerm Expansion Project

As an outcome of a review by the BC Environmental Assessment Office (EAO), a set of conditions have been established for the Centerm Expansion Project, including development of an air emissions monitoring program associated with the project.

The Centerm Expansion Project, proposed by the Vancouver Fraser Port Authority (VFPA), includes construction of a series of improvements to the existing Centerm container terminal on the south shore of Burrard Inlet, as well as to off-terminal road and rail. The expansion to container capacity and related off-terminal improvements are intended to meet anticipated near-term demand for containers to be shipped through Vancouver.

The project was subject to review and approval under VFPA's Project and Environmental Review Process in 2016 and 2017, during which public comments were sought. Metro Vancouver staff provided several sets of comments during the preliminary review stage and application review phases, including comments on the air quality assessment. The VFPA issued a permit for the project in April 2018. The BC Environmental Assessment Office (EAO) subsequently undertook a review to determine whether there were any significant adverse effects anticipated from the project, and whether an environmental assessment under the *BC Environmental Assessment Act* was required. On January 29, 2019, the EAO issued notification that an environmental assessment certificate would not be required for the project, and indicated that the project must be carried out in accordance with a number of conditions set for the project, both by VFPA and the EAO.

One of the requirements set by the EAO is the establishment of an air emissions monitoring program related to operation of the project. The monitoring program must be developed in consultation with Metro Vancouver, Vancouver Coastal Health Authority and Indigenous groups, including consultation on location of a monitoring station, monitoring methods and reporting. Metro Vancouver staff were consulted by the EAO during development of the requirements for the program.

Marine vessels, industrial equipment, rail operations and road traffic are significant contributors to regional emissions, and in areas with increasing activity, can result in degraded localized air quality. Improving air monitoring capabilities in areas like those near the Centerm facility will help provide enhanced air quality information and allow for appropriate program responses.

Air Quality Regulatory Program Decisions in 2018 and 2019

The Air Quality Regulatory Program promotes compliance with Metro Vancouver's Air Quality Management Bylaw 1082, 2008 (the Bylaw) and the associated emission regulations, such as the Non-Road Diesel Emission Regulation. The discharge of air contaminants by an industry trade or business is prohibited in the region unless it is done in compliance with a valid Metro Vancouver permit or Metro Vancouver emission regulation. The Bylaw authorizes the District Director to issue permits with conditions he considers advisable for the protection of the environment. Officers have several compliance and enforcement tools available; however, they will typically start by educating businesses about the requirements of the Bylaw. If this is not sufficient to promote compliance they may issue a notice of bylaw violation (NBV) or municipal ticket information (MTI). For particularly serious contraventions of the bylaw where it is considered to be in the public interest to send a strong

message and there is a high likelihood of conviction, prosecution may be the best means of dealing with the issue.

In 2018, four new air permits were issued to:

- FortisBC Energy Inc. for a liquefied natural gas production, storage, and truck loading facility,
- Enviro-Smart Organics for an aerobic composting facility,
- Ebco Metal Finishing L.P. for a hot dip zinc galvanizing facility, and
- CORE Energy Recovery Solutions Inc. for a membrane and energy recovery ventilator manufacturing plant.

Also in 2018, one significant permit amendment was issued to Columbia Containers Ltd. (for a grain receiving, storage, and loading facility) and ten minor permit amendments were issued. As of February 20, one minor permit amendment and five open burning approvals have been issued in 2019.

Attachment

1. Climate Action Committee 2019 Work Plan (*Doc # 28574198*)

28580542

5.6 ATTACHMENT

Climate Action Committee 2019 Work Plan

Report Date: February 22, 2019

Priorities

1 st Quarter	Status
Climate 2050 - work plans and engagement strategy for roadmaps	In Progress
SIF (Sustainability Innovation Fund) - 2019 proposals	Complete
Electric vehicle outreach program - schedule for 2019	In Progress
Air Quality - cannabis production - discussion paper for potential regulations	In Progress
Air Quality - proposed amendments to ticketing bylaws	Complete
Air Quality - odour management - community outreach for enhanced management options	In Progress
Metro 2040 - environment policy review scoping	Pending
Participate in environmental assessment processes as required	In Progress
2 nd Quarter	
Climate 2050 - strategy and roadmap update	In Progress
Air Quality Management Plan - discussion paper	In Progress
Ambient Air Quality - intentions paper on new objectives for nitrogen dioxide	Pending
Ambient Air Quality - intentions paper on new objectives for ground level ozone	Pending
Air Quality - 8 th annual Caring for the Air report	In Progress
Air Quality - automotive refinishing emissions regulation - outcomes of consultation	In Progress
Air Quality - indoor residential wood burning - proposed bylaw	In Progress
Air Quality - outdoor burning - discussion paper for potential bylaw	Pending
SIF - progress report on Strata Energy Advisor Program	Pending
Metro Vancouver's Carbon Price Policy implementation Update	Pending
SIF - status report on previously approved Sustainability Innovation Fund Projects	Pending
Air Quality - discussion paper on odour management framework	Pending
Air Quality - outreach program on updated non-road diesel engine bylaw	Pending
Ecological Health - invasive species - best management practices	In Progress
Ecological Health - Sensitive Ecosystem Inventory - update and implications	Pending
Ecological Health - regional ecosystem carbon storage	Pending
30 year financial Plan - Air Quality function	Pending
Participate in environmental assessment processes as required	Pending
3 rd Quarter	
Climate 2050 - strategy and roadmap update	Pending
Metro Vancouver's climate actions and carbon neutral progress for 2018	Pending
SIF - prototype design for public display of air quality monitoring data	Pending
SIF - outcomes of National Industrial Symbiosis Program pilot	Pending
SIF - results of DC fast charger project at Metro Tower III	Pending
Review of user fees related to air quality permits and regulations	In Progress
Air Quality - proposed amendments to automotive refinishing emissions regulation	Pending
Metro 2040 - environment policy forum results	Pending

Ecological Health - tree canopy and landscape imperviousness monitoring	Pending
Ecological Health - regional ecosystem connectivity index	Pending
Participate in environmental assessment processes as required	Pending
4th Quarter	
Climate 2050 - strategy and first set of draft Climate 2050 roadmaps	Pending
Annual budget and 5 year financial plan	Pending
Draft Air Quality Management Plan and phase 2 engagement strategy	Pending
Ambient Air Quality - proposed objectives for nitrogen dioxide	Pending
Ambient Air Quality - proposed objectives for ground level ozone	Pending
SIF - Strata Energy Advisor pilot program preliminary outcomes	Pending
SIF - results of Air Aware citizen science air quality monitoring	Pending
Ambient Air Quality - review of monitoring network	Pending
Electric vehicle outreach program outcomes for 2019	Pending
Air Quality - indoor residential wood burning – public outreach plan	Pending
Metro 2040 - environment policy review - update	Pending
Ecological Health Framework - update	Pending
Participate in environmental assessment processes as required	Pending

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