

**METRO VANCOUVER REGIONAL DISTRICT  
CLIMATE ACTION COMMITTEE**

**MEETING**

**Thursday, June 13, 2024**

**9:00 am**

**28<sup>th</sup> Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia**

**Webstream available at <https://www.metrovancover.org>**

**A G E N D A<sup>1</sup>**

**A. ADOPTION OF THE AGENDA**

**1. June 13, 2024 Meeting Agenda**

That the Climate Action Committee adopt the agenda for its meeting scheduled for June 13, 2024 as circulated.

**B. ADOPTION OF THE MINUTES**

**1. May 9, 2024 Meeting Minutes**

That the Climate Action Committee adopt the minutes of its meeting held May 9, 2024 as circulated.

*pg. 3*

**C. DELEGATIONS**

**D. INVITED PRESENTATIONS**

**E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER**

**1. Air Quality Advisory Program and Preparedness for 2024**

That the MVRD Board receive for information the report dated June 4, 2024, titled "Air Quality Advisory Program and Preparedness for 2024".

*pg. 8*

**2. Residential Indoor Wood Burning Public Education Campaign**

That the Climate Action Committee receive for information the report titled Residential Indoor Wood Burning Public Education Campaign, dated May 31, 2024.

*pg. 19*

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<sup>1</sup> Note: Recommendation is shown under each item, where applicable.

**3. Research Trial of Ocean Alkalinity Enhancement** *pg. 22*  
That the MVRD Board receive for information the report dated May 14, 2024, titled “Research Trial of Ocean Alkalinity Enhancement”.

**5. Manager’s Report** *pg. 25*  
That the Climate Action Committee receive for information the report dated May 30, 2024, titled “Manager’s Report”.

**F. INFORMATION ITEMS**

**1. Metro 2050 Climate Policy Enhancement Study – Recommendations** *pg. 29*

**G. OTHER BUSINESS**

**H. RESOLUTION TO CLOSE MEETING**

**I. ADJOURNMENT**

That the Climate Action Committee adjourn its meeting of June 13, 2024.

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Membership:

- |   |                                    |  |
|---|------------------------------------|--|
| Dominato, Lisa (C) – Vancouver            | Carr, Adriane – Vancouver          | McNulty, Bill – Richmond                   |
| Johnstone, Patrick (VC) – New Westminster | Gu, Alison – Burnaby               | Pope, Catherine – North Vancouver District |
| Baillie, Tim – Langley Township           | Lahti, Meghan – Port Moody         | Ross, Jamie – Belcarra                     |
| Berry, Ken – Lions Bay                    | Marsden, Dennis – Coquitlam        | Ruimy, Dan – Maple Ridge                   |
| Bose, Mike – Surrey                       | McCutcheon, Jen – Electoral Area A | Wallace, Rosemary – Langley City           |

**METRO VANCOUVER REGIONAL DISTRICT  
CLIMATE ACTION COMMITTEE**

Minutes of the Regular Meeting of the Metro Vancouver Regional District (MVRD) Climate Action Committee held at 9:00 am on Thursday, May 9, 2024 in the 28<sup>th</sup> Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia.

**MEMBERS PRESENT:**

Chair, Director Lisa Dominato, Vancouver  
Vice Chair, Director Patrick Johnstone, New Westminster  
Councillor Tim Baillie, Langley Township  
Director Ken Berry, Lions Bay\* (arrived at 9:02 am)  
Director Mike Bose, Surrey  
Director Adriane Carr, Vancouver  
Councillor Alison Gu, Burnaby  
Director Meghan Lahti, Port Moody  
Director Jen McCutcheon, Electoral Area A  
Director Bill McNulty, Richmond  
Councillor Catherine Pope, North Vancouver District  
Director Jamie Ross, Belcarra  
Director Dan Ruimy, Maple Ridge  
Councillor Rosemary Wallace, Langley City

**MEMBERS ABSENT:**

Councillor Dennis Marsden, Coquitlam

**STAFF PRESENT:**

Heather McNell, Deputy Chief Administrative Officer, Policy and Planning  
Conor Reynolds, Director, Air Quality and Climate Action Services  
Catherine Grosson, Legislative Services Coordinator, Board and Information Services  
Erik Blair, Senior Planner, Air Quality and Climate Action Services  
Morgan Braglewicz, Air Quality Planner, Air Quality and Climate Action Services  
Laura Taylor, Senior Engagement Specialist, External Relations  
Lise Townsend, Division Manager, Air Quality and Climate Action Policy, Air Quality and Climate Action Services  
Marina Richter, Senior Air Quality Planner, Air Quality and Climate Action Services

\*denotes electronic meeting participation as authorized by the *Procedure Bylaw*

**A. ADOPTION OF THE AGENDA**

**1. May 9, 2024 Meeting Agenda**

**It was MOVED and SECONDED**

That the Climate Action Committee adopt the agenda for its meeting scheduled for May 9, 2024 as circulated.

**CARRIED**

**B. ADOPTION OF THE MINUTES**

**1. April 4, 2024 Meeting Minutes**

**It was MOVED and SECONDED**

That the Climate Action Committee adopt the minutes of its meeting held April 4, 2024 as circulated.

**CARRIED**

**C. DELEGATIONS**

No items present.

**D. INVITED PRESENTATIONS**

No items present.

**E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER**

**1. Reducing Regional Air Contaminant Emissions from Small Non-Road Equipment**

Report dated April 14, 2024 from Marina Richter, Senior Air Quality Planner, Air Quality and Climate Action Services and Laura Taylor, Senior Engagement Specialist, External Relations, seeking MVRD Board direction to proceed with engagement on a supportive framework and a potential requirement to reduce health-harming emissions from small non-road equipment used in landscaping and light industrial applications.

9:02 am Director Berry arrived at the meeting.

Marina Richter and Laura Taylor provided members with a presentation titled “Reducing Emissions from Small Non-Road Equipment” which outlined opportunities to transition fossil fuel powered small non-road equipment to lower carbon emissions alternatives.

In response to members’ questions, Conor Reynolds, Director, Air Quality and Climate Action Services, Marina Richter, and Laura Taylor provided members with the following information, Metro Vancouver:

- plans to engage with member jurisdictions, First Nations, industry, and equipment users;

- will explore various opportunities for engagement such as webinars and online feedback forms;
- is in discussions with the Provincial Government regarding expanding the CleanBC Go Electric Specialty-Use Vehicle Incentive to include small non-road equipment; and
- will focus engagement efforts on gaining an understanding from the equipment users about what types of transition supports they need.

**It was MOVED and SECONDED**

That the MVRD Board direct staff to engage with interested audiences on options for developing a supportive framework and potential requirements to reduce health-harming air contaminant emissions from small non-road equipment, as described in the report dated April 14, 2024, titled “Reducing Regional Air Contaminant Emissions from Small Non-Road Equipment”.

**CARRIED**

**2. BC Utilities Commission Decisions and Local Government Interests in the Energy Transition**

Report dated April 15, 2024 from Lise Townsend, Division Manager, Air Quality and Climate Action Policy, Air Quality and Climate Action Services, informing the MVRD Board of the outcomes of three BC Utilities Commission Proceedings that Metro Vancouver participated in as an Intervener, and potential implications for local government policy goals and interests in the energy transition.

Lise Townsend provided members with a presentation titled “BC Utilities Commission Decisions & Local Government Interests”.

Members discussed the importance of advocating for a long-term vision for clean energy sources and the value of this summary for member jurisdictions for that advocacy.

**Request of Staff**

Summarize key points from the BCUC decisions that are described in the report for reference, and circulate to members of the Climate Action Committee and MVRD Board.

**It was MOVED and SECONDED**

That the MVRD Board:

- Receive for information the report dated April 15, 2024, titled “BC Utilities Commission Decisions and Local Government Interests in the Energy Transition”; and
- Direct staff to forward a copy of the report dated April 15, 2024, titled “BC Utilities Commission Decisions and Local Government Interests in the Energy Transition” to the Mayors and Council Members of each Metro Vancouver member jurisdiction.

**CARRIED**

**3. Best Practices in Energy and Emissions Benchmarking and Reporting for Existing Large Buildings**

Report dated April 16, 2024 from Erik Blair, Senior Planner, Air Quality and Climate Action Services and Morgan Braglewicz, Air Quality Planner, Air Quality and Climate Action Services, informing the Climate Action Committee and MVRD Board on best practices in energy and emissions benchmarking and reporting programs, noting that this approach is used in many other jurisdictions to support building owners' decisions about building equipment and retrofits.

Erik Blair and Morgan Braglewicz provided members with a presentation titled "Best Practices in Energy and Emissions Benchmarking and Reporting for Existing Large Buildings".

In response to members' questions, Erik Blair and Morgan Braglewicz provided the following information:

- Zero Emissions Innovation Centre (ZEIC) has a number of program streams aimed at providing support for different sectors and building types such as large commercial buildings, multi-family residential strata buildings, and non-market rental buildings; and
- Metro Vancouver staff will request that ZEIC provide an information package for Climate Action Committee members and member jurisdictions with details about the programs and incentives that are in development to support building decarbonization.

**It was MOVED and SECONDED**

That the MVRD Board receive for information the report dated April 16, 2024, titled "Best Practices in Energy and Emissions Benchmarking and Reporting for Existing Large Buildings".

**CARRIED**

**4. Manager's Report**

Report dated April 19, 2024 from Conor Reynolds, Director, Air Quality and Climate Action Services, providing the Climate Action Committee with updates on matters related to air quality and climate action.

**It was MOVED and SECONDED**

That the Climate Action Committee receive for information the report dated April 29, 2024, titled "Manager's Report".

**CARRIED**

**F. INFORMATION ITEMS**

**It was MOVED and SECONDED**

That the Climate Action Committee receive for information the following reports dated:

- March 26, 2024, titled “Regional Food Systems Strategy – Project Launch”; and
- April 30, 2024, titled “Climate Impacts on the Water Supply Areas”.

**CARRIED**

**G. OTHER BUSINESS**

No items presented.

**H. RESOLUTION TO CLOSE MEETING**

**It was MOVED and SECONDED**

That the Climate Action Committee close its meeting scheduled for May 9, 2024 pursuant to section 226 (1) (a) of the *Local Government Act* and the *Community Charter* provisions as follows:

90 (2) A part of a council meeting must be closed to the public if the subject matter being considered relates to one or more of the following:

- (b) the consideration of information received and held in confidence relating to negotiations between the municipality and a provincial government or the federal government or both, or between a provincial government or the federal government or both and a third party.

**CARRIED**

**I. ADJOURNMENT**

**It was MOVED and SECONDED**

That the Climate Action Committee adjourn its meeting of May 9, 2024.

**CARRIED**

(Time: 10:33 am)

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Catherine Grosson,  
Legislative Services Coordinator

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Lisa Dominato,  
Chair

67826161

To: Climate Action Committee

From: Amy Thai, Senior Policy Analyst, Air Quality and Climate Action Services,  
Geoff Doerksen, Air Quality Planner, Air Quality and Climate Action Services

Date: June 4, 2024 Meeting Date: June 13, 2024

Subject: **Air Quality Advisory Program and Preparedness for 2024**

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### **RECOMMENDATION**

That the MVRD Board receive for information the report dated June 4, 2024, titled “Air Quality Advisory Program and Preparedness for 2024”.

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### **EXECUTIVE SUMMARY**

For over 50 years, the Metro Vancouver Regional District has had delegated authority under the *Environmental Management Act* to regulate the discharge of air contaminants in the region and protect air quality, and has been operating an air quality advisory program for more than 30 years. Metro Vancouver issues air quality advisories and bulletins for the Lower Fraser Valley to protect public health and safety when regional air quality degrades. Staff work closely with health authorities and other partners to deliver and continuously improve the program to ensure it meets residents’ needs. This year, staff modified the format and language of the air quality advisory to improve both clarity and accessibility.

The 2023 wildfire season was the most destructive in BC’s recorded history due to warmer and drier conditions. For 2024, forecasts suggest an active spring wildfire season is likely, and spring and summer could be warmer and drier than normal. Metro Vancouver is experiencing the impacts of a changing climate now, with wildfire smoke degrading regional air quality in seven of the last nine summers. This demonstrates the need to reduce greenhouse gas emissions, and the importance of a robust air quality advisory program to protect residents’ health.

### **PURPOSE**

To provide information about Metro Vancouver’s air quality advisory program, wildfire smoke preparedness, and advisory planning activities for the 2024 advisory season.

### **BACKGROUND**

The Climate Action Committee 2024 Work Plan includes a priority to provide a report on the air quality advisory program and preparedness for the 2024 season. This air quality advisory program began in 1993 and is operated through Metro Vancouver’s delegated authority to manage air quality in the Metro Vancouver region and through a shared service agreement for the Fraser Valley Regional District (FVRD).

### **RECAP OF THE 2023 AIR QUALITY ADVISORY SEASON**

According to the BC Wildfire Service, the 2023 wildfire season was the most destructive in BC’s recorded history (Reference 1). Wildfires burned over 2.84 million hectares of land, which is ten



times the 20-year average annual area burned. A warmer and drier than usual fall and spring led to an early start to the wildfire season in May. Summer was hot and dry, with record-breaking temperatures in many parts of the province in August, and warm and dry conditions persisted through September. In 2023, Metro Vancouver issued five air quality advisories, which were in effect for a total of ten days. On May 15, 2023, Metro Vancouver issued its earliest ozone advisory since the air quality advisory program began in 1993.

### **AIR QUALITY AND HEALTH IMPACTS**

Health-harming air contaminants that Metro Vancouver residents breathe directly impact their health and lifespan, and also have costs to society, including increased medical treatments and lost productivity. Using data from Health Canada, staff assessed the health benefits of the air quality actions in Metro Vancouver's *Clean Air Plan*, and found that the potential regional health benefits between 2020 and 2030 could be up to \$1.6 billion.

Health Canada estimates that air pollution from human sources and wildfires contributes to 1,900 premature deaths per year in British Columbia (Reference 2), and recent research on the health effects of wildfire smoke exposure has demonstrated that relatively low smoke concentrations can still lead to an increase in asthma-related physician visits (Reference 3).

### **METRO VANCOUVER AIR QUALITY ADVISORY PROGRAM**

Metro Vancouver operates one of the most comprehensive air quality advisory programs in Canada. Air quality advisories are issued by Metro Vancouver for the entire Lower Fraser Valley airshed, including Metro Vancouver and the FVRD, when air quality is degraded or expected to degrade. The advisory program is operated through Metro Vancouver's delegated authority to manage air quality in the Metro Vancouver region and through a shared service agreement for the FVRD. The program is delivered in collaboration with Environment and Climate Change Canada (ECCC), the BC Ministry of Environment and Climate Change Strategy, FVRD, Vancouver Coastal Health, Fraser Health Authority, First Nations Health Authority, and the BC Centre for Disease Control (BC CDC).

Data from Metro Vancouver's network of air quality monitoring stations is available in real time on Metro Vancouver's website at [AirMap.ca](https://airmap.ca) (Reference 4) and informs the air quality advisory program. Contaminants of primary concern for Metro Vancouver's air quality advisory program are those with greatest potential to reach levels in the region that may be harmful to human health: ground-level ozone (produced by a chemical reaction between nitrogen oxides and volatile organic compounds on hot and sunny days) and fine particulate matter (from sources including wildfire smoke, residential wood smoke, vehicle exhaust, industrial processes, and chemical reactions). These contaminants are measured against Metro Vancouver's ambient air quality objectives, which are benchmarks for acceptable air quality.

Metro Vancouver staff provide on-call coverage seven days a week from June to mid-September, when air quality has historically been degraded. The coverage is extended when needed. Staff use tools, such as data from the air quality monitoring network, air quality and wildfire smoke forecasts, and satellite imagery, to guide decisions about issuing an advisory, and regularly consult with advisory program partners. Although wildfire smoke or extreme heat typically impacts air quality in the Metro Vancouver region for only a few months of the year, staff work closely with partners

year-round to refine the air quality advisory program and are prepared to communicate health risks to residents due to degraded air quality at any time of year.

### **Communicating Air Quality Advisories and Enhancements for 2024**

When air quality is deteriorating or degraded, staff post summaries of conditions on Metro Vancouver's website (Reference 5) and email the summaries to a public subscription list (Reference 6). The summaries inform the public, municipalities, and emergency managers that Metro Vancouver is considering issuing an air quality advisory, which may help guide actions to protect public health, such as opening clean air spaces. This year, staff expanded the distribution of these summaries to Climate Action Committee members, the Board and Vice Chair, and the Corporate Planning Committee when the advisory outlook level is "high", indicating that an advisory is being considered.

Staff issue air quality advisories when regional air quality exceeds or is predicted to exceed thresholds defined by Metro Vancouver's air quality objectives. Air quality advisories are intended to reflect regional conditions and not localized air quality issues such as a small structure fire. When staff decide to issue an advisory, they notify Climate Action Committee members, the Board and Vice Chair, and other internal staff in advance by email. Staff then email the air quality advisory to media outlets, a public subscription list, health authorities, and other government agencies, and post the advisory on Metro Vancouver's website, AirMap.ca, and provincial and federal websites. ECCC amplifies the reach of the air quality advisory through a "special air quality statement" posted on their weather webpages.

Another tool staff use to inform the public of air quality conditions are air quality bulletins. Bulletins are issued when air quality may degrade in localized areas, whereas air quality advisories are issued for regional conditions. Air quality bulletins are typically issued during the cooler times of year (fall or winter) when weather conditions prevent dispersion of air pollutants. Historically, air quality bulletins have been issued due to the buildup of fine particulate matter associated with residential wood burning. However, an air quality bulletin was issued on January 21, 2024 in response to the incident at the Burnaby Refinery, operated by Parkland. Subsequent air quality bulletins were issued on January 22 and 24, 2024.

### **Air Quality and Health Messaging**

This year, staff worked closely with local health authorities to make the language in the air quality advisory easier to understand, resulting in more effective communication of key messages to a broader audience. Attachment 1 shows the new advisory format, using an advisory that was issued in 2023 as an example. The advisory contains information about the reason for the advisory being issued, where it is in effect, important information such as checking the Air Quality Health Index (AQHI) regularly, and other actions that residents can take to protect their health.

The AQHI is designed to help people understand how air quality can affect their health, and how they can protect themselves when air quality is degraded. It uses a scale of 1-10+ to indicate potential health risk and ratings are accompanied by health messages to guide decisions on outdoor activities. Air quality conditions can change quickly, and the AQHI is updated every hour on

AirMap.ca to reflect current air quality conditions based on data from the air quality monitoring network.

Metro Vancouver may also post information on social media before and during an advisory. Posts may include updates about current conditions, health advice, how to receive advisory notices, where to find information on local air quality conditions, and other resources. For more information about the health impacts of wildfire smoke and ways to reduce exposure, such as using air filtration, residents can visit the BC CDC website (Reference 7).

### **OUTLOOK FOR THE 2024 SEASON**

According to the BC Wildfire Service Spring 2024 Seasonal Outlook (Reference 8), most of the province was under drought conditions last fall. An exception was the Coastal Fire Centre, where the Metro Vancouver region is located, which received more rain than drought areas. Long-range forecasts suggest a high potential for an active spring wildfire season. At time of writing, in northeast BC the Parker Lake wildfire near Fort Nelson has already damaged a number of properties and has caused close to 5,000 people being placed on evacuation order.

Low snowpack can limit drought recovery heading into the summer. As of May 15, the snowpack across the province was below normal, averaging about 57 percent of normal levels (Reference 9). In Metro Vancouver, as of June 1, the snowpack levels in the watersheds were about 36 percent of normal levels. At this time last year, snowpack levels were 63 percent of normal.

Long-range weather forecasts are suggesting a warmer and drier than average spring and summer. Summer wildfire conditions across the province will depend on the amount of rain that falls in May and June, as the amount and duration of rain during these months influence the length and intensity of the wildfire season.

Holdover wildfires, which smolder under snow or the ground during the winter and are common in BC, can resurface in the spring when vegetation dries out. At the time of this report, there are several holdover fires throughout the province.

### **CLIMATE CHANGE IMPACTS ON AIR QUALITY**

With a changing climate, the region can expect warmer, drier summers, and longer periods of drought in the Metro Vancouver region, which can lead to more frequent and severe wildfire smoke impacts and elevated levels of ground-level ozone. These impacts are occurring now, with the region experiencing widespread wildfire smoke impacts in seven of the last nine summers.

The summer heat dome in 2021 saw a return to ground-level ozone levels not experienced since the 1980s, and on May 15, 2023, Metro Vancouver issued its earliest ozone advisory since the air quality advisory program began in 1993. Metro Vancouver's *Regional Ground-Level Ozone Strategy*, adopted in 2014 by the Metro Vancouver and Fraser Valley Regional District Boards, focused on managing emissions within the airshed that contribute to ground-level ozone. However, extreme temperatures and new sources of emissions, including wildfires, have necessitated an update to the Strategy, which is part of the Climate Action Committee's 2024 Work Plan.

Metro Vancouver's *Climate 2050* strategy has identified actions to help residents adapt to climate-related impacts on regional air quality, such as accelerating the use of electric heat pumps to cool homes while also reducing greenhouse gas emissions. The *Clean Air Plan* outlines strategies for continuous improvement in regional air quality, including actions to: provide better protection against wildfire smoke (such as public clean air spaces), develop resources to help residents and businesses manage indoor air quality, and provide high quality information to the public during air quality advisories.

## **ALTERNATIVES**

This is an information report. No alternatives are presented.

## **FINANCIAL IMPLICATIONS**

Staff time for the air quality advisory program is included in annual operating budgets, including overtime for evening and weekend work. Increased resource levels may be needed as wildfire activity continues to increase in the future and have been considered in long term financial planning.

## **CONCLUSION**

Metro Vancouver staff work closely with health authorities and other partners to continuously improve the air quality advisory program to protect public health. Forecasts are suggesting a warmer and drier than average spring and summer, and an active spring wildfire season. The region is experiencing the impacts of a changing climate now, with wildfire smoke degrading regional air quality in seven of the last nine summers. It is essential that Metro Vancouver continues to accelerate actions to reduce greenhouse gas emissions, adapt to a changing climate, and improve regional air quality.

## **ATTACHMENTS**

1. Example of Air Quality Advisory Format: Metro Vancouver Advisory issued on August 19, 2023.
2. Presentation re: Air Quality Advisory Program and Preparedness for 2024, dated June 13, 2024.

## **REFERENCES**

1. [BC Wildfire Service – 2023 Wildfire Season Summary](#)
2. [Health Impacts of Air Pollution in Canada: Estimates of morbidity and premature mortality outcomes – 2021 Report – Health Canada](#)
3. [The public health paradox of wildfire smoke – British Columbia Medical Journal](#)
4. [Metro Vancouver's Current Air Quality - AirMap](#)
5. [Metro Vancouver's Air Quality Data and Advisories webpage](#)
6. [Metro Vancouver Air Quality and Climate Action Mailing List – subscription link](#)
7. [BC Centre for Disease Control – Wildfire Smoke](#)
8. [BC Wildfire Service Spring 2024 Seasonal Outlook](#)
9. [BC Ministry of Water, Land and Resource Stewardship – Snow Survey and Water Supply Bulletin – May 15, 2024](#)

**Air Quality Advisory in Effect**

(August 19, 2023) Metro Vancouver Regional District has issued an Air Quality Advisory due to elevated **fine particulate matter** (air pollution particles) that is expected to last until there is a change in the weather. The Central and Eastern Fraser Valley are experiencing elevated concentrations of fine particulate matter. In Metro Vancouver, fine particulate matter concentrations are expected to become elevated this evening and into tomorrow (August 20) morning. This advisory will remain in effect until further notice.

Cause: The fine particulate matter is primarily due to smoke from wildfires burning throughout BC.

Smoke concentrations may vary widely across the region as winds, temperatures, and wildfire behaviour changes.

**Air Quality Advisory in effect for:**

- Metro Vancouver – Northwest
- Metro Vancouver – Southwest
- Metro Vancouver – Northeast
- Metro Vancouver – Southeast
- Central Fraser Valley
- Eastern Fraser Valley

**Important information:**

- **Outdoor Activities:** Consider postponing or limiting outdoor activities, especially for people at risk, including those with lung and heart conditions, diabetes, pregnant people, infants, children, and older adults. Take it easy and take frequent breaks if outdoor activities cannot be avoided.
- **Find Cleaner Air:** Use a portable HEPA air cleaner in one or more rooms at home. Keep windows and doors closed but ensure the space does not get too hot. If your home is too smoky or hot, spend time in community spaces that have air conditioning since they also tend to have better air quality. These can include community centres, libraries, and shopping malls.
- **Heat Safety:** Heat and air pollution can happen together. Heat is a bigger health concern for most people. Stay cool, drink plenty of water and spend time in spaces with air conditioning. Check with your municipality to see if cooling centres are available near you.
- **Monitor Your Symptoms:** Seek medical care for symptoms like chest discomfort, shortness of breath, severe coughing or wheezing, and dizziness. Check on family, friends, and neighbours often, and call 9-1-1 in the case of an emergency.
- **Check Air Quality Regularly:** Monitor the Air Quality Health Index (AQHI) rating nearest you at [airmap.ca](http://airmap.ca) and [gov.bc.ca/airqualitymap](http://gov.bc.ca/airqualitymap). Use the current health messages accompanying the rating to make decisions about your outdoor activities. Air quality can change throughout the day and by location so check the AQHI often. Sign up for Air Quality Advisory alerts and updates at [metrovancover.org/services/air-quality-climate-action/mailling-list](http://metrovancover.org/services/air-quality-climate-action/mailling-list).

**Other Actions to Protect your Health:**

- Take it easy and limit outdoor exercise, because the harder you breathe, the more air pollution you inhale.

- Run [portable air cleaners](#), such as those with HEPA filters or [do-it-yourself air cleaners](#), to reduce air pollution in your home. Make sure that the air cleaners are the right size for the spaces you are using them in, and to change filters regularly.
- Continue to manage pre-existing chronic health conditions such as asthma, COPD or other lung diseases, heart disease, and diabetes. Use symptom-management medications, such as inhalers, as needed. Seek medical attention if symptoms continue to be bothersome.
- Drink plenty of water. Staying hydrated can alleviate some respiratory symptoms.
- Special measures to protect outdoor workers and people who are unhoused are recommended. If possible, find alternate duties indoors or provide fitted masks and frequent breaks for outdoor workers. Support workers to monitor for symptoms and discontinue outdoor work if needed. Community spaces are encouraged to relax policies and allow unhoused people to shelter inside for as long as possible.
- Reduce indoor sources of air pollution such as smoking and vacuuming.
- If outdoor activities cannot be avoided, consider wearing a well-fitted mask labeled with letters and numbers like N95, KB95, or KF94. This can help reduce the amount of small particles in wildfire smoke that you breathe in. A cloth mask with three layers or a disposable medical mask can also give some protection. Masks with only one layer, along with bandanas, scarves, or t-shirts, won't protect you from small particles. Wearing a mask can make breathing more difficult, so always pay attention to how you are feeling and reduce or stop your activities if you feel unwell.
- Having a smoke readiness plan for buildings can help protect occupants. Plans may include actions to limit smoke entry into buildings and upgrading or adding supplemental air filtration during smoky periods.

## Background

- **Fine Particulate Matter:** Small airborne pollution particles, often referred to as PM2.5. These particles can come from many sources, including wildfire smoke, vehicle exhaust, industrial processes, and burning of materials. PM2.5 can enter the lungs and impact respiratory health. More information on the health effects of wildfire smoke and ways to reduce exposures, such as using air filtration, can be found at [bccdc.ca/health-info/prevention-public-health/wildfire-smoke](https://bccdc.ca/health-info/prevention-public-health/wildfire-smoke).
- Under provincial legislation, Metro Vancouver is responsible for monitoring air quality; controlling industrial, commercial, and some residential emissions; creating long-term plans; and conducting emission inventories for the Metro Vancouver region.
- To reduce air emissions throughout the Lower Mainland, Metro Vancouver works cooperatively with Fraser Valley Regional District, BC Ministry of Environment and Climate Change Strategy, Environment and Climate Change Canada, and other agencies to develop and implement emission-reduction programs for businesses and local residents, and to monitor and report out on air quality. Further information is found on Metro Vancouver's [website](#).

## Contacts:

### General Information:

[Metro Vancouver Information Centre](#)  
604-432-6200

### Media Inquiries:

[Metro Vancouver Media Relations](#)  
604-451-6107



# Air Quality Advisory Program and Preparedness for 2024

Geoff Doerksen, M.Sc.

Air Quality Planner, Air Quality and Climate Action Services

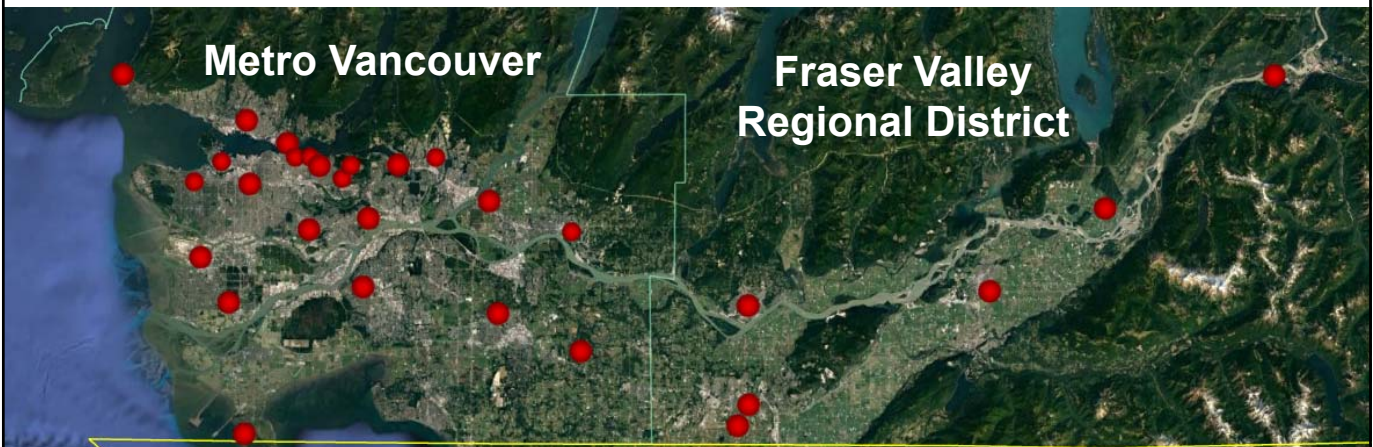
Climate Action Committee Meeting  
June 13, 2024

Ken Reid, M.Sc.

Superintendent, Environmental Sampling and Monitoring, Air Quality and Climate Action Services



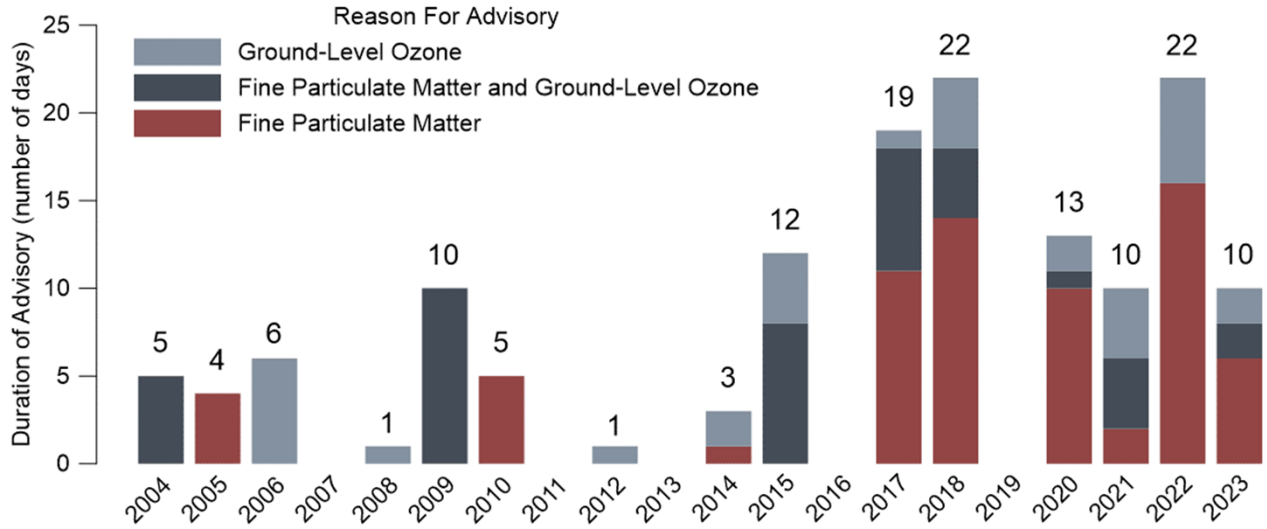
## METRO VANCOUVER AIR QUALITY ADVISORY PROGRAM



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# AIR QUALITY ADVISORIES 2004-2023



# KEY ENHANCEMENTS FOR 2024

- Modified the format and language of the air quality advisory notice:
  - Simplified language to make it more accessible to a broader audience
  - Listed the protective actions more clearly

**Air Quality Advisory in Effect**

(August 19, 2023) Metro Vancouver Regional District has issued an Air Quality Advisory due to elevated fine particulate matter (air pollution particles) that is expected to last until there is a change in the weather. The Central and Eastern Fraser Valley are experiencing elevated concentrations of fine particulate matter. In Metro Vancouver, fine particulate matter concentrations are expected to become elevated this evening and into tomorrow (August 20) morning. This advisory will remain in effect until further notice.

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- **Find Cleaner Air:** Use a portable HEPA air cleaner in one or more rooms at home. Keep windows and doors closed but ensure the space does not get too hot. If your home is too smoky or hot, spend time in community spaces that have air conditioning since they also tend to have better air quality. These can include community centres, libraries, and shopping malls.
- **Heat Safety:** Heat and air pollution can happen together. Heat is a bigger health concern for most people. Stay cool, drink plenty of water and spend time in spaces with air conditioning. Check with your municipality to see if cooling centres are available near you.
- **Monitor Your Symptoms:** Seek medical care for symptoms like chest discomfort, shortness of breath, severe coughing or wheezing, and dizziness. Check on family, friends, and neighbours often, and call 9-1-1 in the case of an emergency.
- **Check Air Quality Regularly:** Monitor the Air Quality Health Index (AQHI) rating nearest you at [airmap.ca](http://airmap.ca) and [gov.bc.ca/airqualitymap](http://gov.bc.ca/airqualitymap). Use the current health messages accompanying the rating to make decisions about your outdoor activities. Air quality can change throughout the day and by location so check the AQHI often. Sign up for Air Quality Advisory alerts and updates at [metrovancover.org/services/air-quality-climate-action/mailing-list](http://metrovancover.org/services/air-quality-climate-action/mailing-list).



## KEY ENHANCEMENTS FOR 2024

- Updated the format of the air quality updates and expanded distribution

metrovancover | AIR QUALITY & CLIMATE ACTION

Air Quality Update for April 29, 2024 1:41 PM

	Today	Tomorrow
Air Quality Advisory Outlook	high	low

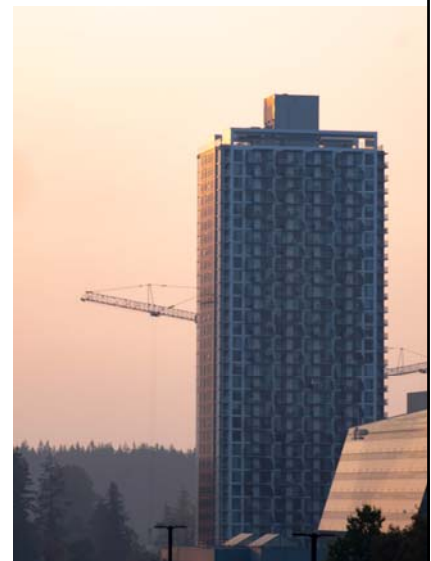
**Air Quality Update for Metro Vancouver And The Fraser Valley**

This is a test only. The wildfire in Minnehada Regional Park in Coquitlam continues to produce smoke. Wildfire smoke, high humidity, and low winds are contributing to hazy conditions throughout the region and elevated fine particulate matter (PM2.5) concentrations at some air quality monitoring stations. PM2.5 concentrations currently remain below advisory thresholds and it is unclear if advisory thresholds will be reached today. Staff continue to closely monitor conditions. Today, the Minnehada fire is expected to continue to contribute some smoke to the region. Smoke models are also forecasting light to medium intermittent ground-level smoke impacts today and tomorrow from wildfires burning near Chilliwack, Hope, and in Washington state. Smoke concentrations can be variable and subject to local influences and staff will be closely monitoring conditions. It is unclear if these smoke impacts will be significant and persistent enough to reach air quality advisory thresholds. Hazy conditions will likely continue today and tomorrow.

[More information](#)

## OUTLOOK FOR 2024 SEASON

- Forecasts suggest a warmer and drier than normal spring and summer
- Low snowpack can limit drought recovery heading into the summer
- 7 of 9 recent summers had widespread wildfire smoke
- Changing climate will increase frequency and severity of wildfire smoke and heat waves





Around Hawthorne Park, Surrey (2022)

Questions?

**metrovancouver**  
Together we make our region strong

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To: Climate Action Committee

From: Julie Saxton, Program Manager Enforcement and Regulation Air Quality,  
Environmental Regulation and Enforcement  
Jay Soper, Communications Specialist, External Relations

Date: May 31, 2024 Meeting Date: June 13, 2024

Subject: **Residential Indoor Wood Burning Public Education Campaign**

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### **RECOMMENDATION**

That the Climate Action Committee receive for information the report titled Residential Indoor Wood Burning Public Education Campaign, dated May 31, 2024.

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### **EXECUTIVE SUMMARY**

Wood smoke from residential indoor wood burning is the most significant source of emissions of fine particulate matter (PM<sub>2.5</sub>) in the region, contributing more than a quarter of the total annual regional PM<sub>2.5</sub> emissions. The *Metro Vancouver Regional District Residential Indoor Wood Burning Emission Regulation Bylaw No. 1303, 2020* (Bylaw 1303) is designed to reduce emissions of and exposure to PM<sub>2.5</sub> and the known health impacts by promoting the use of cleaner wood-burning practices and technologies, including the use of cleaner burning appliances and fuels. The final phase of requirements, for appliances in urban areas to be registered before use, comes into effect in September 2025.

A recent survey indicated that most Metro Vancouver residents are unaware of the requirements of Bylaw 1303. To build greater awareness, a public education campaign has been planned to start in the fall of 2024. It will focus on action-oriented messaging to ensure residential indoor wood burning appliance owners and users are informed about the actions they need to take to continue using their wood burning stoves and fireplaces after September 2025.

### **PURPOSE**

The purpose of this report is to provide information to the Climate Action Committee about a campaign beginning in fall 2024 to increase awareness of the requirements of Bylaw 1303 and provide public education about the health impacts of emissions from residential indoor wood burning.

### **BACKGROUND**

For more than 50 years Metro Vancouver has had delegated authority from the Province to regulate the emission of air contaminants in the region. In March 2020, after a comprehensive consultation process, the MVRD adopted Bylaw 1303 to reduce the health and environmental impacts of emissions from residential indoor wood burning. The bylaw brought in requirements in phases starting in 2020. Strategy 2.3 in the *Clean Air Plan* includes actions to continue implementation of Bylaw 1303 as well as to increase awareness of the region's regulatory

requirements for residents using residential indoor wood burning appliances, including wood stoves and fireplaces.

### **RESIDENTIAL INDOOR WOOD BURNING**

Wood smoke from residential indoor wood burning is the most significant source of emissions of fine particulate matter (PM<sub>2.5</sub>) in the region, contributing more than a quarter of the total annual regional PM<sub>2.5</sub> emissions, and is the second top source of toxic air pollutants in the region. Exposure to wood smoke is of particular concern in densely populated urban areas, due to the proximity of a single smoking chimney to multiple neighbours. Bylaw 1303 is designed to reduce exposure to PM<sub>2.5</sub> and the known health impacts by promoting the use of cleaner wood-burning practices and technologies, including the use of cleaner burning appliances and fuels. More stringent requirements in more densely populated areas seek to achieve emission reductions where they will have the greatest benefits for health protection.

The phasing in of requirements of Bylaw 1303 will culminate in September 2025 with a prohibition on the use of unregistered appliances within the Urban Containment Boundary, with some exceptions for emergency use, and equity provisions, to ensure that residents can heat their homes when necessary.

### **Current Awareness of Regulatory Requirements**

Recent survey work reported by BC Lung indicates that a majority of residents in Metro Vancouver support establishing emission control requirements through a local bylaw to reduce smoke emissions from residential indoor wood burning. However, only 16% of residents are aware that a bylaw already exists, and 5% are aware that the final phase of requirements is coming into effect in September 2025. More information on the survey can be found in the Manager's report in this same agenda package.

### **Bylaw Promotion to Date**

Since 2021, communications have been distributed about Bylaw 1303 both before and during the implementation of each phase of the bylaw. Communications efforts to date have focused largely on education and raising awareness among wood burners about the effects of residential indoor wood burning on public health, the requirements of Bylaw 1303, and encouraging compliance with appliance registration and declaration through Metro Vancouver's Online Registration System.

Communications materials have been shared through Metro Vancouver's owned channels (social media, e-newsletters, e-mail newsletters, media releases), print collateral (rack card mail-outs, door hanger distribution), and paid advertising (print ads in local and regional community papers, including several translated publications).

### **New Campaign Strategy**

The fall 2024 campaign will be in-market from October to early December. The campaign strategy focuses on action-oriented messaging to encourage indoor wood burning appliance owners to register their appliance and declare best wood burning practices (in compliance with Bylaw 1303 requirements).

Promotional considerations will include digital (banner ads, search ads), social media (Facebook, Instagram, X), broadcast (TV public service announcements, radio), out-of-home (billboards, transit advertising), and newsprint. These approaches will guide residential indoor wood stove and fireplace owners to Metro Vancouver's Online Registration System to register eligible wood stoves and fireplaces and declare their use of best burning practices. Lastly, member jurisdictions will receive the creative materials to further promote the bylaw through their social channels and websites.

### **ALTERNATIVES**

This is an information report. No alternatives are presented.

### **FINANCIAL IMPLICATIONS**

Funding for the activities comprising the residential indoor wood burning campaign was approved in the 2024 budget.

### **CONCLUSION**

Bylaw 1303 is designed to reduce emissions of and exposure to PM<sub>2.5</sub> and the known health impacts by promoting the use of cleaner wood-burning practices and technologies, including the use of cleaner burning appliances and fuels. A recent survey indicated that most Metro Vancouver residents are unaware of the requirements of Bylaw 1303.

The final phase of requirements, for appliances in urban areas to be registered before use, comes into effect in September 2025. To build greater awareness, a public education campaign has been planned to start in the fall of 2024. It will focus on action-oriented messaging to ensure residential indoor wood burning appliance owners and users are informed about the actions they need to take to continue using their wood burning stoves and fireplaces after September 2025. The report provides information about how and when the campaign will be conducted.

6899986

To: Climate Action Committee

From: Lillian Zaremba, Program Manager, Liquid Waste Services

Date: May 14, 2024 Meeting Date: June 13, 2024

Subject: **Research Trial of Ocean Alkalinity Enhancement**

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### **RECOMMENDATION**

That the MVRD Board receive for information the report dated May 14, 2024, titled “Research Trial of Ocean Alkalinity Enhancement”.

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### **EXECUTIVE SUMMARY**

Rising levels of carbon dioxide (CO<sub>2</sub>) in the atmosphere are pushing more CO<sub>2</sub> into the ocean, causing ocean acidification. Ocean alkalinity enhancement uses natural minerals to remove the CO<sub>2</sub> in seawater. A research trial using the Lions Gate Wastewater Treatment Plant outfall will evaluate the potential of ocean alkalinity enhancement to remove CO<sub>2</sub> from the water in Burrard Inlet, helping to combat both climate change and ocean acidification. The trial will be undertaken at no cost to Metro Vancouver; staff will support planning for the research and operation of the trial and will report back through Committees to the Board.

### **PURPOSE**

To inform the Climate Action Committee and MVRD Board of a planned research trial of ocean alkalinity enhancement using the Lions Gate Wastewater Treatment Plant (WWTP) outfall.

### **BACKGROUND**

The research trial supports actions identified in *Climate 2050*, which was endorsed by the MVRD Board in 2019 and is intended to guide climate change policy and action toward a carbon neutral and resilient region over the next 30 years. Under this strategy, ten roadmaps organized by issue area present pathways to reduce greenhouse gas (GHG) emissions and respond to the changing climate. The *Climate 2050 Nature & Ecosystems Roadmap* recognizes the potential benefits of carbon removal as a supplemental solution for reducing GHG emissions. Ocean carbon removal offers a solution that can support Metro Vancouver’s transition to a carbon neutral future while addressing the impacts of climate change in coastal and marine ecosystems.

### **OCEAN CARBON DIOXIDE REMOVAL**

Carbon dioxide (CO<sub>2</sub>) levels in the atmosphere are rising due to fossil fuel combustion, deforestation and other human activities. The CO<sub>2</sub> in the air transfers into the ocean, making it more acidic, which impacts the ability of shellfish and other marine life to build their shells and skeletons. Scientists are considering ways to remove CO<sub>2</sub> from the ocean, to combat climate change and ocean acidification.

### **The Ocean Alkalinity Enhancement Process**

Ocean alkalinity enhancement (OAE) uses finely-ground, slow-dissolving minerals that react with CO<sub>2</sub> in the ocean and convert it to other forms that sequester the carbon for hundreds of thousands

of years. This allows the ocean to draw more CO<sub>2</sub> from the atmosphere, while also counteracting acidification. OAE mimics the natural weathering process by which rivers erode rock and add alkaline minerals to the ocean, but OAE does this on a timescale of months rather than the millennia of geologic cycles. Research trials are needed to determine the potential benefits and impacts of OAE, and evaluate whether full-scale implementation might be feasible.

### **Research Trial at Lions Gate Wastewater Treatment Plant**

Planetary Technologies Inc. (Planetary) approached Metro Vancouver to conduct an OAE trial by using the Lions Gate WWTP outfall to add alkalinity to the ocean in a controlled manner. During the trial, alkaline minerals will be added to the treated effluent before it is discharged from the wastewater treatment plant. The research will explore whether this reduces the CO<sub>2</sub> in the surrounding seawater. A short trial is planned for spring 2025.

Planetary will lead the research trial. They will actively test and monitor the surrounding area, with independent validation and research by academic partners:

- Ocean Networks Canada will provide regional water property data through its data management system, Oceans 3.0, and provide scientific advice for the research trial.
- Oceanography researchers from the University of British Columbia (UBC) will monitor the water and sediment in Burrard Inlet before, during, and after the alkalinity dosing, and will model the circulation of the alkalinity and calculate the CO<sub>2</sub> removal.
- Social scientists from UBC's Institute of Resources, Environment and Sustainability will explore public support for potential longer-term deployment of OAE in the region.

Planetary is currently identifying a source of alkalinity, which will be lime (calcium hydroxide) or magnesium hydroxide; both are benign minerals. Before the trial begins, Planetary will test the safety of the specific alkalinity source to ensure there will be no negative impact on marine life. No regulatory approvals are required, as this is a process modification under the plant's Operational Certificate. Staff have informed the Ministry of Environment and Climate Change Strategy, the regulator of the Lions Gate WWTP, of the planned trial.

### **Future Potential**

The trial will help Planetary and Metro Vancouver evaluate whether longer-term, scaled-up OAE in the region has the potential to reduce climate change and ocean acidification. Future full-scale deployment would generate carbon credits and offer local employment opportunities.

### **ALTERNATIVES**

This is an information report. No alternatives are presented.

### **FINANCIAL IMPLICATIONS**

The research trial will be conducted at no cost to Metro Vancouver apart from staff time for reviewing preparatory materials, providing data, coordinating access to Lions Gate WWTP, and reviewing results. This work can be accommodated within the Liquid Waste Services departmental work plan. The trial is partially funded by the BC Center for Innovation and Clean Energy.

**OTHER IMPLICATIONS**

Metro Vancouver will lead engagement with First Nations, while Planetary will lead public engagement. Social acceptance of OAE may be mixed due to concerns about perceived environmental impacts in the ocean and in mining the alkaline minerals. Open and transparent engagement can address those concerns. Ensuring the safety of marine life and minimizing the lifecycle impacts of OAE will be paramount during the trial. This will be the third OAE trial undertaken by Planetary, after previous ones in Cornwall, UK and Halifax, NS.

While the primary purpose of this trial is to validate the safety and efficacy of OAE, it is expected to achieve a small amount of net carbon removal. Planetary will own any carbon credits that result from the trial.

**CONCLUSION**

Ocean alkalinity enhancement is a method for removing carbon dioxide from the ocean, to combat climate change and ocean acidification. This is an information report about a proposed research trial that will use the Lions Gate WWTP outfall to add alkalinity to Burrard Inlet. Independent researchers will monitor the trial and validate the results, which will help Metro Vancouver evaluate the long-term potential of ocean alkalinity enhancement in the region.

66524851



To: Climate Action Committee

From: Conor Reynolds, Director, Air Quality and Climate Action Services

Date: May 30, 2024 Meeting Date: June 13, 2024

Subject: **Manager's Report**

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### **RECOMMENDATION**

That the Climate Action Committee receive for information the report dated May 30, 2024, titled "Manager's Report".

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### **CLIMATE ACTION COMMITTEE 2024 WORK PLAN**

Attachment 1 sets out the Committee's Work Plan for 2024. The status of work plan priorities is indicated as pending, in progress, or complete. The work plan is updated, as needed, to include new priorities that arise, items requested by the Committee, and changes to the schedule.

### **PROVINCE EXPANDS HEAT PUMP INCENTIVES AND ADDS MIDDLE INCOME ELIGIBILITY**

On May 13, 2024, Minister Osborne, BC's Minister of Energy, Mines and Low Carbon Innovation, and Minister Heyman, BC's Minister of Environment and Climate Change Strategy, announced an investment of \$151 million to support low- and middle-income British Columbians to switch from fossil fuel heating equipment to electric heat pumps, for home heating and cooling. An additional federal investment of \$103.7 million will also be added from Canada's Low Carbon Economy Fund and the federal Oil to Heat Pump Affordability program. These changes to the existing CleanBC Better Homes Energy Savings Program are to take effect in June, 2024.

The press release states that the increase to incentive amounts is intended to make heat pumps more affordable for low- and middle-income households (Reference 1). These incentives are available primarily to residents of single detached and other low-rise and ground-oriented home types. Low and middle income households also make up a significant proportion of the multi-unit residential housing stock, which has historically been underserved by incentives and support services. Given the significant opportunity to reduce energy waste and costs, GHG emissions, and improve resiliency in higher density housing types, the government of BC may need to provide similar incentive enhancements in higher density housing types in the near future.

The changes to incentive levels and eligibility include:

- Expansion of the program to include middle income households (e.g., a 4-person household with a combined income up to \$185,620);
- Increasing maximum rebates from 95% up to 100% of the cost of heat pumps up to \$16,000 for the lowest income category; and,
- Increasing the maximum rebate amount from \$3,500 to \$5,000 for electrical service upgrades to install a heat pump, for the lowest income category.

The program is expected to facilitate up to 16,000 low carbon retrofits in low- and middle-income households, reducing an estimated 40,000 tonnes of GHG emissions in 2030.

### **RESIDENTIAL INDOOR WOOD BURNING SURVEY**

Metro Vancouver, in partnership with the BC Ministry of Environment and Climate Change Strategy and the BC Lung Foundation, recently commissioned a province-wide survey on the use of residential indoor wood-burning appliances. The survey sought to improve understanding of the incidence and frequency of use of wood-burning appliances across the province, and to gauge the extent to which Metro Vancouver residents are familiar with residential wood burning bylaw requirements.

The survey found that, across BC, approximately 15% of homes currently burn wood or wood pellets in a wood burning appliance, while in Metro Vancouver, approximately 5% of homes burn wood. The survey also identified that support for any action to reduce smoke from residential wood burning is highest in Metro Vancouver, with support for establishing emission control requirements through a local bylaw at 53%. When asked about Metro Vancouver's residential indoor wood burning bylaw, just 16% of Metro Vancouver residents were aware of the bylaw. However, awareness is considerably higher among wood-burning households in the region, with 29% aware of the bylaw. Among those aware of the Bylaw, the majority were also aware of the requirement to comply with best burning practices (75%) and the residential wood burning prohibition between May 15 and September 15 every year (60%). There was lower awareness of other bylaw requirements such as registration, declaration of best burning practices, and the upcoming prohibition on use of unregistered wood burning appliances.

Results from the survey will be used to guide outreach and education campaigns aimed at wood burning activities, and to improve data related to wood burning, such as estimates of regional emissions. See Reference 2 for a link to the survey.

### **GREENHOUSE GAS EMISSIONS FROM PEAT DECOMPOSITION DURING EXCAVATION**

At its February 2023 meeting, the Climate Action Committee received a report on Metro Vancouver's air quality regulatory role, and subsequently discussed opportunities to reduce greenhouse gas (GHG) emissions from landscaping equipment and the impacts on air quality during excavation processes. As part of the discussion, staff were requested to report back on GHG emissions associated with decomposition of peat during excavation processes.

Peatlands are classified as a terrestrial wetland ecosystem, where waterlogged conditions prevent the total decomposition of plant matter. While these conditions can result in methane (CH<sub>4</sub>) production, peatlands are also a large natural terrestrial carbon sink. Excavation of peatlands has been found to cause relatively low levels of direct, immediate GHG emissions, even when considering emissions from excavation equipment. Ongoing peatland excavation could lead to a longer term net increase of GHG emissions, which can be attributed to a combination of increased carbon dioxide (CO<sub>2</sub>) production and the reduced ability of the peatland to sequester carbon. Restoration of previously drained or damaged peatlands, including Burns Bog Conservation Area in Delta, has been found to successfully revert them back to carbon sinks; this has been the subject of several Sustainability Innovation Fund projects.

**ATTACHMENT**

1. Climate Action Committee 2024 Work Plan, dated May 30, 2024

**REFERENCES**

1. [News Release - Expanded Heat Pump Program Helps British Columbians Save on Home-Energy Costs](#)
2. [Inventory of Wood-burning Appliance Use in British Columbia – Report of Findings – February 2024 \(gov.bc.ca\)](#)

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**Climate Action Committee 2024 Work Plan**

Report Date: May 30, 2024

**Priorities**

<b>1<sup>st</sup> Quarter</b>	<b>Status</b>
Climate Action Committee meeting schedule and work plan	Complete
Climate 2050 priority implementation actions for 2024 to 2026	Complete
Next phase of engagement on large buildings GHG emission regulation	Complete
Climate 2050 engagement and public education priorities	Complete
Draft Climate 2050 Land Use and Urban Form Roadmap	In Progress
Metro 2050 climate policy enhancement project	In Progress
<b>2<sup>nd</sup> Quarter</b>	<b>Status</b>
Draft Climate 2050 Human Health and Well Being Roadmap	In Progress
Overview of air quality advisory program and preparedness for 2024 season	In Progress
Update on heavy-duty vehicle emission reduction approaches	Pending
Initiate engagement on emission regulation for small non-road engines	Complete
Update on Driving Down Emissions project	In Progress
Appointment of Assistant District Director and Enforcement Officers	Complete
Regional multi-hazard mapping project update	Complete
Agricultural Land Use Inventory	Pending
Update on Metro Vancouver Retrofit Accelerator	Pending
Update on outreach for Residential Indoor Wood Burning Bylaw	In Progress
Outcome of BC Utilities Commission proceedings	Complete
<b>3<sup>rd</sup> Quarter</b>	<b>Status</b>
Climate 2050 Annual Progress Report	Pending
Update to Regional Ground Level Ozone Strategy	Pending
Annual Air Quality Report	Pending
Update to internal carbon price policy	Pending
Amendments to boilers and process heaters emission regulation	Pending
<b>4<sup>th</sup> Quarter</b>	<b>Status</b>
Draft Climate 2050 Water and Wastewater Infrastructure Roadmap	Pending
Draft Climate 2050 Waste Roadmap	Pending
Regional air quality objectives	Pending
Update on Corporate Energy and GHG management	Pending
Metro Vancouver workplace and public electric vehicle charging strategy	Pending
Report on 2024 air quality advisory season	Pending
Update on ecosystem services on agricultural lands	Pending
Ecological Health Framework progress report	Pending
Update on regulatory review for reducing emissions from industrial sources	Pending
Annual budget and five-year financial plan	Pending

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To: Climate Action Committee

From: Edward Nichol, Senior Planner, Regional Planning and Housing Services

Date: May 31, 2024 Meeting Date: June 13, 2024

Subject: **Metro 2050 Climate Policy Enhancement Study – Recommendations**

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In response to MVRD Board direction, new and enhanced climate-related policy options for *Metro 2050* were prepared and recommended by Metro Vancouver staff. These draft recommendations were presented at a joint workshop with the Climate Action Committee and Regional Planning Committee in November 2023, and the feedback received was considered and applied to staff's final recommendations. The staff report highlights and provides details on the recommendations that emerged from the *Metro 2050* Climate Policy Enhancement Study. The recommendations represent policy changes that are actionable, effective, important for climate action, and closely connected to the intent and scope of *Metro 2050*.

At its meeting on May 10, 2024, the Metro Vancouver Regional Planning Committee received the attached report, titled "Metro 2050 Climate Policy Enhancement Study - Recommendations" (Attachment 1). The report was subsequently considered by the MVRD Board at its meeting on May 31, 2024.

At its May 31, 2024 meeting the MVRD Board adopted the following resolution:

*That the MVRD Board direct staff to prepare a bylaw to amend Metro 2050 for consideration based on the following recommendations and as described in Table 2 of the report dated March 13, 2024, titled "Metro 2050 Climate Policy Enhancement Study – Recommendations" to:*

- a) develop a revised definition for the regional Rural land use designation;*
- b) encourage the development of local hazard and risk data that meets key requirements;*
- c) add new climate-related performance monitoring metrics; and*
- d) increase intersection density and permeability of the urban street grid.*

Staff will undertake additional work and report back to the Regional Planning Committee on the following two recommendations that were deferred by the Committee:

- Add new policies to Strategies 1.4, 2.3, and 3.1 of Metro 2050 for Metro Vancouver to work with key partners to encourage the protection and restoration of trees and other natural ecosystems on lands with a non-urban regional land use designation (i.e., Rural, Agricultural, Conservation and Recreation), and on lands outside the Urban Containment Boundary; and
- Add a new policy to Section F of Metro 2050 requiring Metro Vancouver and member jurisdictions to include additional climate-focused analysis in Metro 2050 amendment

applications. This would be implemented by a) requiring Metro Vancouver to work with member jurisdictions to provide relevant environmental and climate change data and analysis and b) requiring member jurisdictions to demonstrate that the proposed amendment does not conflict with applicable commitments in OCPs / accepted Regional Context Statements pertaining to the following topic areas:

- Carbon storage levels in natural areas;
- Tree canopy cover;
- Impervious surfaces;
- Ecosystem protection, including Sensitive and Modified Ecosystems;
- Agricultural land; and
- Green infrastructure and ecosystem connectivity.

#### **ATTACHMENT**

1. Regional Planning Committee Report dated March 13, 2024, titled “Metro 2050 Climate Policy Enhancement Study - Recommendations”.

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To: Regional Planning Committee

From: Edward Nichol, Senior Planner, Regional Planning and Housing Services

Date: March 13, 2024 Meeting Date: April 5, 2024

Subject: **Metro 2050 Climate Policy Enhancement Study - Recommendations**

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### RECOMMENDATION

That the MVRD Board direct staff to prepare a bylaw to amend *Metro 2050* for consideration based on the following recommendations and as described in Table 2 of the report dated March 13, 2024, titled “*Metro 2050 Climate Policy Enhancement Study – Recommendations*” to:

- a) develop a revised definition for the regional Rural land use designation;
- b) encourage the protection and restoration of trees and other ecosystems on lands with a non-urban regional land use designations and lands outside the Urban Containment Boundary;
- c) require environmental and climate change-related analyses as part of all *Metro 2050* amendment applications;
- d) encourage the development of local hazard and risk data that meets key requirements;
- e) add new climate-related performance monitoring metrics; and
- f) increase intersection density and permeability of the urban street grid.

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### EXECUTIVE SUMMARY

In response to MVRD Board direction, new and enhanced climate-related policy actions have been developed for *Metro 2050*. An initial list of policy ideas was presented at two workshops with subject matter experts in early 2023, and the feedback received was used to inform six draft recommendations. These draft recommendations were presented at a joint workshop with the Climate Action Committee and Regional Planning Committee in November 2023, and the feedback received was considered and applied to staff’s recommendations. The six recommendations represent potential policy changes that are actionable, effective, important for climate action, and closely connected to the intent and scope of *Metro 2050*.

### PURPOSE

To provide the Regional Planning Committee and MVRD Board with recommendations to strengthen climate change policies in *Metro 2050*.

### BACKGROUND

At its meeting on January 29, 2021, the MVRD Board endorsed the recommendations of the *Metro 2040 Climate Change and Natural Hazards Policy Review* (Reference 1) as the basis for updating the climate change and natural hazard-related policies in the regional growth strategy. As a result, *Metro 2050* contains stronger climate change policies as compared to *Metro 2040* (Reference 2). Notwithstanding these stronger climate-related policies, at its meeting on March 25, 2022, while

considering first and second readings of the *Metro 2050* bylaw (Reference 3), the MVRD Board passed the following resolution:

*Given the urgent need to respond to climate change and prepare for extreme weather events, direct staff to undertake work and engagement with an aim to proposing an early amendment to Metro 2050 post-adoption to strengthen climate action language and policy including the intent to improve integration of climate action into other Metro 2050 priorities.*

At its May 27, 2022 meeting, the MVRD Board received a report titled “Process to Consider Stronger Climate Action Language and Policy for Metro 2050” (Reference 4). That report set out a high-level process for how staff would respond to the March 25, 2022 Board direction.

At its February 10, 2023 meeting, the Regional Planning Committee received a report titled “Metro 2050 Climate Policy Enhancement Study – Project Initiation” (Reference 5); the same report was provided to the Climate Action Committee for information at its meeting on March 9, 2023. That report provided greater detail on the proposed scope of work and the engagement process for the study. *Metro 2050* was adopted as bylaw by the MVRD Board on February 24, 2023.

At its November 2, 2023 meeting, the Climate Action Committee hosted a Joint Discussion with the Regional Planning Committee. Participants of this session received a Backgrounder on the *Metro 2050* Climate Policy Enhancement Study (Reference 6) and provided feedback that has been considered in the development of the final recommendations presented in this report.

## **POLICY APPROACHES OF METRO 2050 AND CLIMATE 2050**

### **Land Use Planning is Climate Action**

Land use planning decisions can significantly influence the spatial arrangements of communities, transportation systems, building typologies, and protect natural areas which, in turn, affect the amount of energy consumed, greenhouse gases (GHGs) emitted, and carbon stored. Land use planning can also be a powerful catalyst for enhancing resilience by ensuring that residents, property, infrastructure, and ecosystems are safeguarded from the impacts of climate change and natural hazards. Land use planning and decision making is foundational to advancing climate action and sustainability in the region over the long term.

### **Starting with a Strong Foundation**

*Metro 2050* contains regional GHG emission reduction targets that align with the global targets set by the Intergovernmental Panel on Climate Change and those of *Climate 2050*, as well as strategies and actions to help meet those targets. *Metro 2050* contains climate policies across all five goal areas and supports Metro Vancouver and its member jurisdictions in focusing projected growth in a network of transit-oriented urban centres, and building compact, complete communities that offer amenities close to home. This approach to focusing growth has three key GHG emission reduction benefits:

- 1) reduces development pressures in areas that naturally store carbon (such as the region’s agricultural and natural areas);



- 2) reduces emissions by supporting more sustainable, low carbon transportation options such as walking, cycling, and public transit and by reducing the distances people typically have to drive for essential trips; and
- 3) encourages multi-unit development forms which are generally more energy-efficient than single-detached homes.

Where and how the region accommodates growth also determines the degree to which residents, businesses, and infrastructure are exposed to the risks associated with climate change and natural hazards. To improve resilience, *Metro 2050* includes policy actions that:

- protect natural areas and other important lands that are essential to buffering communities from climate change impacts and natural hazards;
- establish a role for Metro Vancouver to develop and share information related to hazard, risk, and vulnerability; and
- encourage the protection of existing communities and discourage new growth in at-risk areas.

**Mutually Supportive Plans**

*Metro 2050* was developed in accordance with the provisions of the *Local Government Act* and sets out actions and directions for Metro Vancouver, member jurisdictions, and TransLink. The process to develop and approve a regional growth strategy necessitates a high degree of consensus and acceptance across the regional federation. Member jurisdictions demonstrate alignment between their local Official Community Plans and *Metro 2050* through the completion of Regional Context Statements.

*Climate 2050*, the regional climate action strategy, is intended to guide climate change policy and action for all stakeholders in the region over the next 30 years. It is implemented through a series of ten “Roadmaps” (organized by topic area) that are ultimately endorsed by the MVRD Board. The *Climate 2050 Land Use and Urban Form Roadmap* (LUUF), which is currently being developed, includes content related to land use planning, urban form, and growth management that is consistent and supportive of *Metro 2050*. Table 1 below outlines the rationale for land use-related policy ideas to be included in either: a) the Metro 2050 Climate Policy Enhancement Study recommendations, or b) the *Climate 2050 Land Use and Urban Form Roadmap*.

**Table 1. Rationale Used to Direct Policy Ideas**

<i>Metro 2050</i> Climate Policy Enhancement Study	<i>Climate 2050</i> LUUF Roadmap
<ul style="list-style-type: none"> <li>• Policies that do not require additional studies or research</li> <li>• Policies that could be implemented in the short-term as a result of a <i>Metro 2050</i> amendment</li> </ul>	<ul style="list-style-type: none"> <li>• Policies that are exploratory and study-focused, which could inform future amendments to <i>Metro 2050</i></li> </ul>
<ul style="list-style-type: none"> <li>• Policies that would be most effectively implemented in <i>Metro 2050</i> (e.g., by signatories)</li> </ul>	<ul style="list-style-type: none"> <li>• Policies that could be effectively implemented regardless of <i>Metro 2050</i></li> </ul>

<ul style="list-style-type: none"> <li>• New policies that strengthen the overall suite of climate change policies in <i>Metro 2050</i></li> </ul>	<ul style="list-style-type: none"> <li>• Includes context (non-policy) sections that communicate the climate change benefits of existing policies in <i>Metro 2050</i></li> <li>• Policies that are informed by, supportive of, and supplemental to the principles and actions of <i>Metro 2050</i></li> <li>• New policy directions, including a series of 'Big Moves'</li> </ul>
<ul style="list-style-type: none"> <li>• Policy changes within scope of a Type 2 or Type 3 amendment to <i>Metro 2050</i></li> </ul>	<ul style="list-style-type: none"> <li>• Policies and concepts that are exploratory, politically-sensitive, or less well-established</li> <li>• Policies that would not be appropriate for <i>Metro 2050</i> due to legislative or regulatory constraints</li> </ul>

**METRO 2050 CLIMATE POLICY ENHANCEMENT STUDY**

The *Metro 2050* Climate Policy Enhancement Study addresses the MVRD Board’s direction to bring forward stronger climate change policy options for consideration.

**Engagement Summary**

To avoid engagement fatigue and maximize efficiency, the *Metro 2050* Climate Policy Enhancement Study and the LUUF Roadmap project teams prepared a joint engagement plan. A policy idea shortlist developed by Metro Vancouver staff was presented at two workshops held in early 2023 to gather feedback about how to advance climate action through land use and growth management planning. Attendees of the workshops included staff from government agencies, other regional and non-governmental organizations, and youth. Local First Nations were also invited to participate in the two workshops, to meet directly with project staff separately, and to provide written input on the draft lists of actions and policies; funding was made available to support the involvement of First Nations. To date, Squamish Nation staff have met with project staff directly to provide feedback.

On November 2, 2023, staff presented the draft recommendations at a joint Climate Action and Regional Planning Committee meeting. Attendees expressed general support for the recommendations, and provided additional feedback for staff consideration.

**Recommendations**

During the engagement phase, many policy amendment options were considered and explored. Following engagement, staff refined the list of climate change policy option recommendations for *Metro 2050* into two categories. Table 2 below outlines the core (staff) recommendations, and Table 3 below outlines additional policy options for consideration to amend *Metro 2050* that could also advance climate action, but do not have as strong a connection with the goals and strategies of *Metro 2050*. Additional context and rationale related to the recommendations is included in each table.

**Table 2. Climate Policy Enhancement Study Recommendations**

<p>a)</p>	<p><b>That Metro Vancouver work collaboratively with member jurisdictions to develop an updated Metro 2050 definition, intent and appropriate uses for the Rural regional land use designation, to provide needed clarity and consistency, and articulate the importance of Rural lands for:</b></p> <ul style="list-style-type: none"> <li>• <b>Supporting regional urban containment objectives;</b></li> <li>• <b>Protecting the region’s ecosystems and agricultural lands;</b></li> <li>• <b>Sequestering and storing carbon; and</b></li> <li>• <b>Buffering the impacts of climate change and natural hazards.</b></li> </ul> <p><b>The intent of this recommendation is not to amend policy action 1.4.3 or 6.9.1.</b></p> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>While other regional land use designations are more clearly defined by specific criteria, Rural designated lands are ambiguously defined in Metro 2050;</i></li> <li>• <i>Rural designated lands are not intended for urban expansion, which is made clear in the policy directions of Metro 2050 that limit extension of regional sewer servicing outside the Urban Containment Boundary;</i></li> <li>• <i>The current ambiguity related to the definition and intent of Rural lands complicates the review of Metro 2050 amendment applications for lands with a Rural regional land use designation, confuses the assumption of their long-term purpose, and may work counter to the urban containment objectives and Guiding Principles of Metro 2050;</i></li> <li>• <i>A significant portion of the region’s Rural designated lands are within or adjacent to floodplains and steep slopes, support agricultural production, contain Sensitive Ecosystems with high carbon storage value, and have areas with high water tables and sensitive groundwater aquifers. Because of these characteristics, much of the region’s designated Rural lands are also unsuitable for urban forms of development, and protecting existing Rural lands for their current use is a cost-effective climate action given the ecosystem services they already provide and the implicit climate change benefits (reducing GHGs and enhancing resilience) associated with urban containment;</i></li> <li>• <i>Revising the definition of Rural designated lands and providing additional information in an Implementation Guideline would clarify the role and servicing intent of Rural lands, and will serve to reduce speculation and development pressures faced by member jurisdictions. The need for this clarity is critical, given that servicing needs and requirements are interrelated with development intensity; and</i></li> <li>• <i>Revising the definition of Rural designated lands will provide consistent messaging for member jurisdictions, landowners / developers, First Nations, agency partners, and the public, and will improve transparency.</i></li> </ul>
<p>b)</p>	<p><b>Add new policies to Strategies 1.4, 2.3, and 3.1 of Metro 2050 for Metro Vancouver to work with key partners to encourage the protection and restoration of trees and other natural ecosystems on lands with a non-urban regional land use designation (i.e., Rural, Agricultural, Conservation and Recreation), and on lands outside the Urban Containment Boundary.</b></p> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>Trees and other ecosystems provide important climate-related ecosystem services by storing carbon, providing shading and cooling, and absorbing stormwater runoff;</i></li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Metro 2050 contains a target for tree canopy cover within the Urban Containment Boundary but not for lands outside the UCB;</i></li> <li>• <i>Metro 2050 includes an ecosystem protection target for 50% of the region’s total land base;</i></li> <li>• <i>Agricultural, Rural, and Conservation and Recreation designated lands provide opportunities to protect natural ecosystems and increase tree canopy cover - this will be essential to supporting Metro 2050’s 50% protected areas target;</i></li> <li>• <i>70% of Sensitive and Modified Ecosystem loss between 2014 and 2020 occurred within the Agricultural, Conservation and Recreation, and Rural regional land use designations; and</i></li> <li>• <i>71% of Sensitive and Modified Ecosystem loss between 2014 and 2020 occurred on lands outside the Urban Containment Boundary.</i></li> </ul>
<p><b>c)</b></p>	<p><b>Add a new policy to Section F of <i>Metro 2050</i> requiring Metro Vancouver and member jurisdictions to include additional climate-focused analysis in <i>Metro 2050</i> amendment applications. This would be implemented by a) requiring Metro Vancouver to work with member jurisdictions to provide relevant environmental and climate change data and analysis and b) requiring member jurisdictions to demonstrate that the proposed amendment does not conflict with applicable commitments in OCPs / accepted Regional Context Statements pertaining to the following topic areas:</b></p> <ul style="list-style-type: none"> <li>• <b>Carbon storage levels in natural areas;</b></li> <li>• <b>Tree canopy cover;</b></li> <li>• <b>Impervious surfaces;</b></li> <li>• <b>Ecosystem protection, including Sensitive and Modified Ecosystems;</b></li> <li>• <b>Agricultural land; and</b></li> <li>• <b>Green infrastructure and ecosystem connectivity.</b></li> </ul> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>Policy action 3.2.2 a) of Metro 2050 establishes Metro Vancouver’s role to collect and report on the gains and losses for relevant environmental data;</i></li> <li>• <i>Policy action 3.2.7 of Metro 2050 requires member jurisdictions to report on tree canopy cover, protected areas, and sensitive ecosystems in Regional Context Statements;</i></li> <li>• <i>Implementing this recommendation will provide consistent messaging for member jurisdictions, landowners / developers, First Nations, agency partners, the public, etc., improve transparency on all Regional Growth Strategy amendment requests, and reinforce the connection between local planning and regional environment and climate change targets (and shared objectives) of Metro 2050;</i></li> <li>• <i>Implementing this recommendation would contribute towards Action 3.3 of the MVRD Board-endorsed Climate 2050 Nature and Ecosystems Roadmap and Action 1.7 of the MVRD Board-endorsed Climate 2050 Agriculture Roadmap;</i></li> <li>• <i>Implementing this recommendation would contribute towards Strategy 2.2 of the MVRD Board-adopted Ecological Health Framework; and</i></li> <li>• <i>Implementing this recommendation would support Metro 2050 performance monitoring.</i></li> </ul>
<p><b>d)</b></p>	<p><b>Update policy action 3.4.5 of <i>Metro 2050</i> to encourage member jurisdictions to develop local-scale hazard and risk datasets and, where they already exist, endeavour to:</b></p> <ul style="list-style-type: none"> <li>• <b>keep them up-to-date;</b></li> </ul>

	<ul style="list-style-type: none"> <li>• <b>include future climate change scenarios;</b></li> <li>• <b>include both probable and severe scenarios; and</b></li> <li>• <b>incorporate them into Official Community Plans, zoning, and other land use regulations, as appropriate.</b></li> </ul> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>While policy action 3.4.5 of Metro 2050 requires member jurisdictions to adopt Regional Context Statements that: a) minimize risks to existing communities and, b) discourage new development in at-risk areas, those decisions might not be made with current hazard and risk information;</i></li> <li>• <i>Based on results from surveyed municipalities, it is estimated that less than 50% of local hazard datasets in the Metro Vancouver region were developed in the last 10 years;</i></li> <li>• <i>International guidance – such as the Sendai Framework for Disaster Risk Reduction and the United Nations Disaster Resilience Scorecard for Cities – emphasize developing and periodically updating risk-based information (including risk maps), and incorporating risk scenarios that are regularly updated;</i></li> <li>• <i>International guidance materials – such as the United Nations Disaster Resilience Scorecard for Cities – note that risk scenarios should identify hazards, exposures and vulnerabilities in at least the “most probable” and “most severe” (i.e., “worst-case”) scenarios; and</i></li> <li>• <i>This recommendation aligns with the new Emergency and Disaster Management Act requirement to incorporate climate change information into local risk assessments.</i></li> </ul>
<p>e)</p>	<p><b>Add new climate-related performance monitoring metrics to Section G of Metro 2050 for:</b></p> <p><b>i. The percentage of new growth (dwelling units and employment) in known and unmitigated hazard areas</b></p> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>Introducing this new metric will improve performance monitoring for Goal 3 - Metro Vancouver currently has no performance monitoring metrics to track progress on Strategy 3.4 of Metro 2050 (to Advance land use, infrastructure, and human settlement patterns that improve resilience to climate change impacts and natural hazards);</i></li> <li>• <i>Table 4 of Metro 2050 stipulates that new or reclassified Urban Centres and FTDA's must not be located in known, unmitigated hazard areas, and policy action 3.4.5 of Metro 2050 discourages member jurisdictions from developing in current and future hazardous areas;</i></li> <li>• <i>Tracking this metric is a critical first step to setting a regional baseline of data, and to inform future Regional Growth Strategy policy changes pertaining to growth and development in hazardous areas;</i></li> <li>• <i>Tracking this metric will utilize Metro Vancouver’s regional multi-hazard mapping data; and</i></li> <li>• <i>Tracking this data will involve developing a shared definition of “known and unmitigated hazard areas”.</i></li> </ul> <p><b>ii. Percentage of lands within the Urban Containment Boundary that contain impervious surfaces</b></p>

	<p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>Imperviousness is a key indicator to measure progress related to green infrastructure implementation and flood resilience;</i></li> <li>• <i>Metro Vancouver currently gathers this data and it is made available on the Metro Vancouver open data portal, but it is not monitored and reported out as a performance indicator for any Metro 2050 policies;</i></li> <li>• <i>Policy action 3.2.2 a) of Metro 2050 identifies Metro Vancouver’s role to collect and maintain data related to imperviousness, and this data will be collected and updated every 5- 6 years; and</i></li> <li>• <i>Tracking this metric is a critical first step to setting a regional baseline of data, and to inform future policy changes to the Regional Growth Strategy.</i></li> </ul> <p><b>iii. New performance metrics within Urban Centres, Frequent Transit Development Areas, and Major Transit Growth Corridors including:</b></p> <ul style="list-style-type: none"> <li>• <b>Tree canopy cover;</b></li> <li>• <b>Impervious surfaces;</b></li> <li>• <b>Sensitive and Modified ecosystems;</b></li> <li>• <b>Walkability; and</b></li> <li>• <b>Cooling and clean air centres.</b></li> </ul> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>The proposed metrics could be utilized as indicators for successful climate action within Urban Centres and FTDas and considered when identifying a new (or reclassifying an existing) Urban Centre or FTDA; and</i></li> <li>• <i>The data could inform future policies related to new requirements for Urban Centres, FTDA’s, and MTGCs.</i></li> </ul>
<p><b>f)</b></p>	<p><b>Add a new policy action to Strategy 5.1 of Metro 2050 for member jurisdictions to develop strategies and policies that increase intersection density and permeability of their urban street grid.</b></p> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>Implementing this policy during neighbourhood planning and redevelopment projects will shorten trip distances, facilitate better bike and pedestrian connections, improve walkability, and reduce average block length.</i></li> </ul>

During the engagement phase many policy amendment options were considered and explored. Two additional policy options to amend *Metro 2050* received significant support. These are shown in Table 3 below. These action would also advance climate action, but they do not have as strong a connection with the goals and strategies of *Metro 2050*. If supported by the Regional Planning Committee and MVRD Board, these additional policy actions can be combined with the recommendations in Table 2 via Alternative 2 below.

**Table 3 – Additional Climate Policy Enhancement Study Recommendations for Consideration**

<p><b>g)</b></p>	<p><b>i. Amend Table 3 of <i>Metro 2050 (Guidelines for Urban Centres and Frequent Transit Development Areas)</i> to include cooling and clean air centres within the list of “General Expectations/Attributes” for all Urban Centres and FTDA; and</b></p> <p><b>ii. Add a new policy to Strategy 1.3 of <i>Metro 2050</i> requiring member jurisdictions to adopt Regional Context Statements that support cooling and clean air centres in appropriate locations that are accessible to more vulnerable populations.</b></p> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>Metro Vancouver’s Climate Projections indicate that the region will face considerably warmer temperatures year-round and an increase in wildfire risk by the year 2050;</i></li> <li>• <i>The 2021 heat dome event resulted in 619 heat-related deaths in British Columbia, the majority of which occurred inside people’s homes that lacked air conditioning and adequate ventilation or alternative place to go to cool down;</i></li> <li>• <i>68% of the region’s residential growth and 77% of the region’s employment growth is targeted to Urban Centres and FTDA by the year 2041, which will be in primarily multi-unit buildings;</i></li> <li>• <i>This direction supports Action 6.3 of the Climate 2050 Buildings Roadmap (Expand the Network of Public Buildings that can serve as Cool, Clean Air Centres) and supports the implementation of policy actions 3.4.2 c) and 3.4.7 of Metro 2050; and</i></li> <li>• <i>The Metro Vancouver Sustainable Innovation Fund Project AirCnC – Cooler ‘n’ Cleaner Air Centres, which will assist member jurisdictions in identifying and implementing cooling and clean air centres, can support implementation of this policy idea.</i></li> </ul>
<p><b>h)</b></p>	<p><b>Add a new policy action to Strategy 5.1 of <i>Metro 2050</i> for:</b></p> <p><b>i. Metro Vancouver to advocate to other levels of government for targeted funding to support zero-emission bus depot infrastructure;</b></p> <p><b>ii. TransLink to work with member jurisdictions to identify locations for zero-emission bus depots; and</b></p> <p><b>iii. Member jurisdictions to facilitate construction of these facilities with streamlined municipal approvals.</b></p> <p><u>Rationale/Anticipated Outcomes:</u></p> <ul style="list-style-type: none"> <li>• <i>The lack of zero-emission bus infrastructure and the length of time required for approvals and permitting is bottlenecking the region’s ability to expand and replace the fossil fuel bus fleet and meet our collective short and long-range GHG emission reduction targets.</i></li> </ul>

**ALTERNATIVES**

1. That the MVRD Board direct staff to prepare a bylaw to amend Metro 2050 for consideration based on the following recommendations and as described in Table 2 of the report dated March 13, 2024, titled “Metro 2050 Climate Policy Enhancement Study – Recommendations” to:
  - a) develop a revised definition for the regional Rural land use designation;

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- b) encourage the protection and restoration of trees and other ecosystems on lands with a non-urban regional land use designations and lands outside the Urban Containment Boundary;
  - c) require environmental and climate change-related analyses as part of all Metro 2050 amendment applications;
  - d) encourage the development of local hazard and risk data that meets key requirements;
  - e) add new climate-related performance monitoring metrics; and
  - f) increase intersection density and permeability of the urban street grid.
2. That the MVRD Board direct staff to prepare a bylaw to amend *Metro 2050* for consideration based on the following recommendations and as described in Tables 2 and 3 of the report dated March 13, 2024, titled “Metro 2050 Climate Policy Enhancement Study – Recommendations” to:
- a) develop a revised definition for the regional Rural land use designation;
  - b) encourage the protection and restoration of trees and other ecosystems on lands with a non-urban regional land use designations and lands outside the Urban Containment Boundary;
  - c) require environmental and climate change-related analyses as part of all *Metro 2050* amendment applications;
  - d) encourage the development of local hazard and risk data that meets key requirements;
  - e) add new climate-related performance monitoring metrics;
  - f) increase intersection density and permeability of the urban street grid;
  - g) support cooling and clean air centres in appropriate locations; and
  - h) support the development of zero-emission bus depots.
3. That the MVRD Board receive for information the report dated March 13, 2024 titled “Metro 2050 Climate Policy Enhancement Study - Recommendations” and provide alternate direction to staff.

**FINANCIAL IMPLICATIONS**

There are no financial implications associated with this report. All work was developed internally within the Regional Planning work program and was considered as part of the 2023 and 2024 Board-approved budgets. If the MVRD Board approves Alternative 1 or 2 below a *Metro 2050* amendment bylaw will be prepared for Board consideration. Other climate change-related studies and projects underway may consider some of these options and continue to inform future policy changes to *Metro 2050* over time.

**CONCLUSION**

As directed by the MVRD Board, Regional Planning staff have undertaken a *Metro 2050* Climate Policy Enhancement Study to explore opportunities to strengthen climate change policy in *Metro 2050*. Developed in close coordination with the process to develop the *Climate 2050 Land Use and Urban Form Roadmap*, a policy shortlist was presented at two workshops held in early 2023 to gather and refine ideas about how to advance climate action through land use and growth management planning. The feedback received from the workshops informed draft recommendations for new climate policies in *Metro 2050*, which were presented to attendees of the joint Climate Action and Regional Planning Committee meeting on the *Metro 2050* Climate



Policy Enhancement Study in November, 2023. Following that engagement, this report presents staff's revised recommendations for consideration. Staff recommend Alternative 1.

**ATTACHMENT**

1. Presentation re: Metro 2050 Climate Policy Enhancement Study - Recommendations

**REFERENCES**

1. [Metro 2040 Climate Change and Natural Hazards Policy Review – Recommendations](#)
2. [Comparison of Climate Related Policies of Metro 2040 and Metro 2050](#)
3. [Consideration of Metro Vancouver Regional District Regional Growth Strategy Bylaw No. 1339](#)
4. [Process to Consider Stronger Climate Action Language and Policy for Metro 2050](#)
5. [Metro 2050 Climate Policy Enhancement Study – Project Initiation](#)
6. [Climate Action Committee and Regional Planning Committee Joint Discussion on the Metro 2050 Climate Policy Enhancement Study](#)

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## Metro 2050 Climate Policy Enhancement Study - Recommendations

Edward Nichol

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Regional Planning Committee Meeting | April 5, 2024  
66030384

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### RECOMMENDATION A

#### Develop a revised definition for the regional Rural land use designation

- Work with member jurisdictions to update the definition, intent, and appropriate uses for lands
- Reinforce the importance of these lands for:
  - supporting urban containment objectives
  - protecting the region's ecosystems / agricultural lands
  - sequestering and storing carbon
  - buffering impacts of climate change / natural hazards



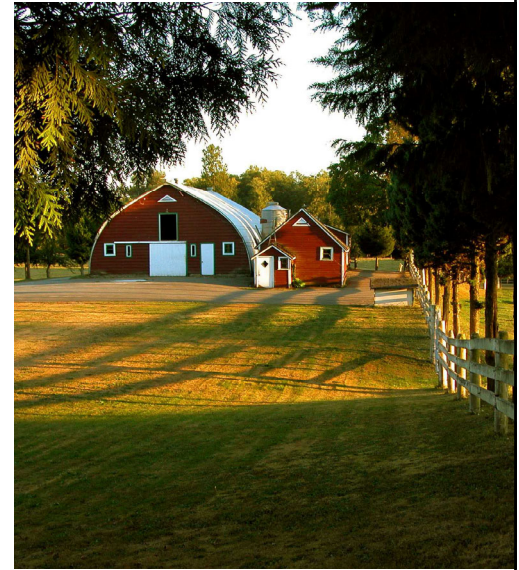
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## RECOMMENDATION B

### Encourage the protection and restoration of trees and other ecosystems

- Work with partners to encourage the protection and restoration of trees and other ecosystems in areas outside the Urban Containment Boundary



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## RECOMMENDATION C

### Require environmental / climate-related analyses for Metro 2050 amendment applications

- Demonstrate no conflict with applicable commitments in OCPs / accepted RCSs pertaining to:
  - Carbon storage levels in natural areas
  - Tree canopy cover
  - Impervious surfaces
  - Ecosystem protection
  - Agricultural land
  - Green infrastructure / ecosystem connectivity



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## RECOMMENDATION D

### Encourage the development of local hazard and risk data

- Develop hazard datasets, and where they already exist:
  - Keep them up-to-date
  - Include future climate change scenarios
  - Include both probable and severe scenarios
  - Incorporate them into OCPs, zoning, and other land use regulations



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## RECOMMENDATION E

### Add new climate-related performance metrics

- % of new growth in known and unmitigated hazard areas
- % of lands within the UCB that contain impervious surfaces
- In Urban Centres and FTDA's:
  - Tree canopy cover
  - Impervious surfaces
  - Sensitive and Modified ecosystems
  - Walkability
  - Cooling and clean air centres



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## RECOMMENDATION F

### Increase intersection density and permeability of the urban street grid

- Through strategies and policies



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## ADDITIONAL CONSIDERATIONS

### G) Require the identification of cooling and clean air centres:

- Include these within the list of “General Expectations / Attributes” for Urban Centres and FTDA’s
- Requiring member jurisdictions to identify, locate and support these in appropriate locations that are accessible to vulnerable populations

### H) Support zero emission bus depot infrastructure:

- MV to advocate to other levels of government for targeted funding
- TransLink to work with member jurisdictions to identify locations
- Member jurisdictions to support and facilitate construction with streamlined municipal approvals

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Thank you

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