

**METRO VANCOUVER REGIONAL DISTRICT
CLIMATE ACTION COMMITTEE**

MEETING

Thursday, October 3, 2024

9:00 am

28th Floor Committee room, 4515 Central Boulevard, Burnaby, British Columbia

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

A G E N D A¹

A. ADOPTION OF THE AGENDA

1. October 3, 2024 Meeting Agenda

That the Climate Action Committee adopt the agenda for its meeting scheduled for October 3, 2024 as circulated.

B. ADOPTION OF THE MINUTES

1. September 5, 2024 Meeting Minutes

That the Climate Action Committee adopt the minutes of its meeting held September 5, 2024 as circulated.

pg. 3

C. DELEGATIONS

D. INVITED PRESENTATIONS

E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER

1. 2025 – 2029 Financial Plan Overview

Verbal Update

Designated Speakers: Jerry W. Dobrovolny, Commissioner/Chief Administrative Officer and Harji Varn, Chief Financial Officer/General Manager, Financial Services

pg. 7

2. 2025 - 2029 Financial Plan – Air Quality and Climate Action

That the Climate Action Committee endorse the 2025 - 2029 Financial Plan for Air Quality and Climate Action as presented in the report dated September 26, 2024, titled “2025 - 2029 Financial Plan – Air Quality and Climate Action”, and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

pg. 21

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

- 3. Addressing Air Contaminant Emissions from Medium and Heavy Trucks** *pg. 51*
That the Climate Action Committee receive for information the report dated September 6, 2024, titled “Addressing Air Contaminant Emissions from Medium and Heavy Trucks”.
- 4. Public Education about Residential Indoor Wood Burning Requirements** *pg. 62*
That the MVRD Board receive for information the report titled “Public Education about Residential Indoor Wood Burning Requirements”, dated September 6, 2024.
- 5. Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects - Update** *pg. 71*
That the MVRD Board receive for information the report dated September 18, 2024, titled “Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects – Update”.
- 6. Manager’s Report** *pg. 79*
That the Climate Action Committee receive for information the report dated September 24, 2024, titled “Manager’s Report”.

F. INFORMATION ITEMS

G. OTHER BUSINESS

H. RESOLUTION TO CLOSE MEETING

I. ADJOURNMENT

That the Climate Action Committee adjourn its meeting of October 3, 2024

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 9:01 am on Thursday, September 5, 2024 in the 28th Floor Committee Room, 4515 Central Boulevard, Burnaby, British Columbia.

MEMBERS PRESENT:

Chair, Director Lisa Dominato, Vancouver
Vice Chair, Director Patrick Johnstone, New Westminister
Councillor Tim Baillie, Langley Township*
Director Ken Berry, Lions Bay (arrived at 9:28 am)
Councillor Mike Bose, Surrey*
Director Adriane Carr, Vancouver (arrived at 9:07 am)
Councillor Alison Gu, Burnaby
Director Meghan Lahti, Port Moody*
Councillor Dennis Marsden, Coquitlam
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

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

STAFF PRESENT:

Conor Reynolds, Director, Air Quality and Climate Action Services
Catherine Grosson, Legislative Services Coordinator, Board and Information Services
Heather McNell, Deputy Chief Administrative Officer, Policy and Planning
Lise Townsend, Division Manager, Air Quality and Climate Action Policy

A. ADOPTION OF THE AGENDA

1. September 5, 2024 Meeting Agenda

It was MOVED and SECONDED

That the Climate Action Committee adopt the agenda for its meeting scheduled for September 5, 2024 as circulated.

CARRIED

B. ADOPTION OF THE MINUTES

1. June 13, 2024 Meeting Minutes

It was MOVED and SECONDED

That the Climate Action Committee adopt the minutes of its meeting held June 13, 2024 as circulated.

CARRIED

C. DELEGATIONS

No items presented.

D. INVITED PRESENTATIONS

No items presented.

E. REPORTS FROM COMMITTEE OR CHIEF ADMINISTRATIVE OFFICER

1. BC Hydro’s “Distribution Extension Policy” and “2024 Rate Design” Applications to the BC Utilities Commission

9:07 am Director Carr arrived at the meeting.

Report dated August 22, 2024, from Lise Townsend, Division Manager, Air Quality and Climate Action Policy, seeking the MVRD Board’s direction to participate as an intervener in the BC Utilities Commission (BCUC) proceedings on BC Hydro’s “Distribution Extension Policy” and “2024 Rate Design” to support Metro Vancouver’s interests in the energy transition.

Lise Townsend provided members with a presentation titled “BC Hydro’s Applications to the BC Utilities Commission: Distribution Extension Policy: 2024 Rate Design”, which outlined Metro Vancouver’s recent involvement as an intervener with other local governments for BCUC proceedings; and the importance of BC Hydro’s proposed policy changes in the current proceedings to advance the transition to clean energy sources, and support affordability and housing.

9:28 am Director Berry arrived at the meeting

It was MOVED and SECONDED

That the MVRD Board direct staff to:

- a) participate as an intervener in the BC Utilities Commission proceedings for BC Hydro’s applications for “Distribution Extension Policy” and “2024 Rate Design”;
- b) analyze and provide input to the proceedings to align with Board-adopted policies and targets including for regional air quality, clean and renewable energy and GHG reduction, including submitting comments, evidence, and a final argument; and
- c) report back to the Climate Action Committee and Board on outcomes of the proceedings.

CARRIED

2. Appointment of Enforcement Officers

Report dated July 12, 2024, from Julie Saxton, Program Manager, Enforcement and Regulation Air Quality, Environmental Regulation and Enforcement, rescinding and appointing Metro Vancouver employees as Board-designated officers.

It was MOVED and SECONDED

That the MVRD Board:

- a) pursuant to the *Greater Vancouver Regional District Air Quality Management Bylaw 1082, 2008* and the *Environmental Management Act*:
 - i. rescind the appointment of Metro Vancouver employee Dave Ferguson as an officer; and
 - ii. appoint Metro Vancouver employees Loretta Tang and Sean Hronsky as officers; and
- b) pursuant to section 28 of the *Offence Act* for the purpose of serving summons for alleged violations under the *Greater Vancouver Regional District Air Quality Management Bylaw 1082, 2008*
 - i. rescind the appointment of Metro Vancouver employee Dave Ferguson; and
 - ii. appoint Metro Vancouver employees Loretta Tang and Sean Hronsky.

CARRIED

3. Manager’s Report

Report dated August 28, 2024, from Conor Reynolds, Director, Air Quality and Climate Action Services, providing an update on the Climate Action Committee Work Plan, and relevant programs and initiatives.

It was MOVED and SECONDED

That the Climate Action Committee receive for information the report dated August 28, 2024, titled “Manager’s Report”.

CARRIED

F. INFORMATION ITEMS

1. Delegation Summary and Presentation from the May 31, 2024 Meeting of the MVRD Board

Geoffrey K. Blair, MD, "Gas-Powered Lawn Equipment: Effects on Air Quality & Health"

2. Solid Waste Management Plan Vision and Guiding Principles

3. Waste-to-Energy Facility Environmental Monitoring and Reporting 2023 Update

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 September 5, 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 September 5, 2024.

CARRIED

(Time: 9:49 am)

Catherine Grosson,
Legislative Services Coordinator

Lisa Dominato,
Chair

70388269

To: Climate Action Committee

From: Jerry Dobrovlny, Commissioner/Chief Administrative Officer
Harji Varn, General Manager, Financial Services/Chief Financial Officer

Date: September 26, 2024 Meeting Date: October 3, 2024

Subject: **2025 - 2029 Financial Plan Overview**

This presentation introduces a high-level overview of the Metro Vancouver 2025-2029 budget.

ATTACHMENTS

1. 2025 - 2029 Financial Plan Overview Presentation

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Metro Vancouver Region

2025 – 2029 Financial Plan Overview

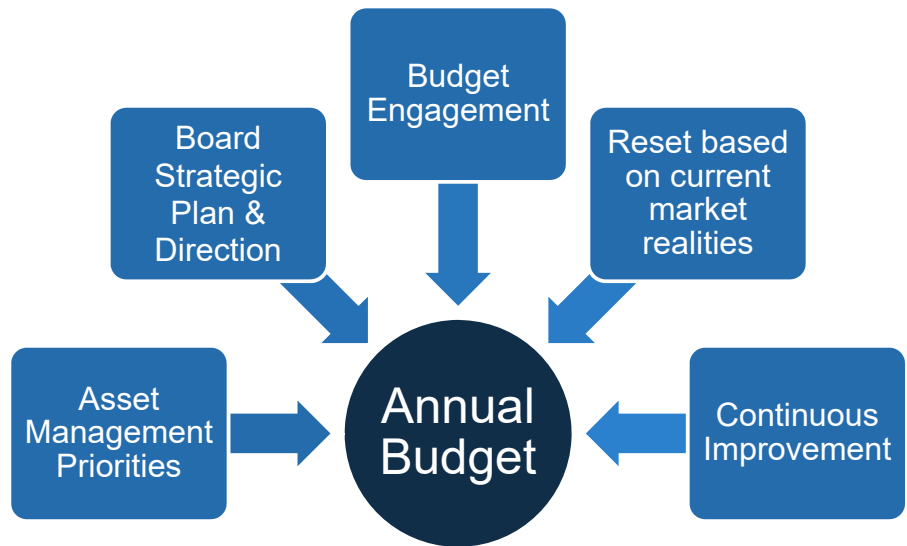
Jerry W. Dobrovolny, P. Eng, MBA
Commissioner / Chief Administrative Officer

Harji Varn
GM Financial Services / Chief Finance Officer

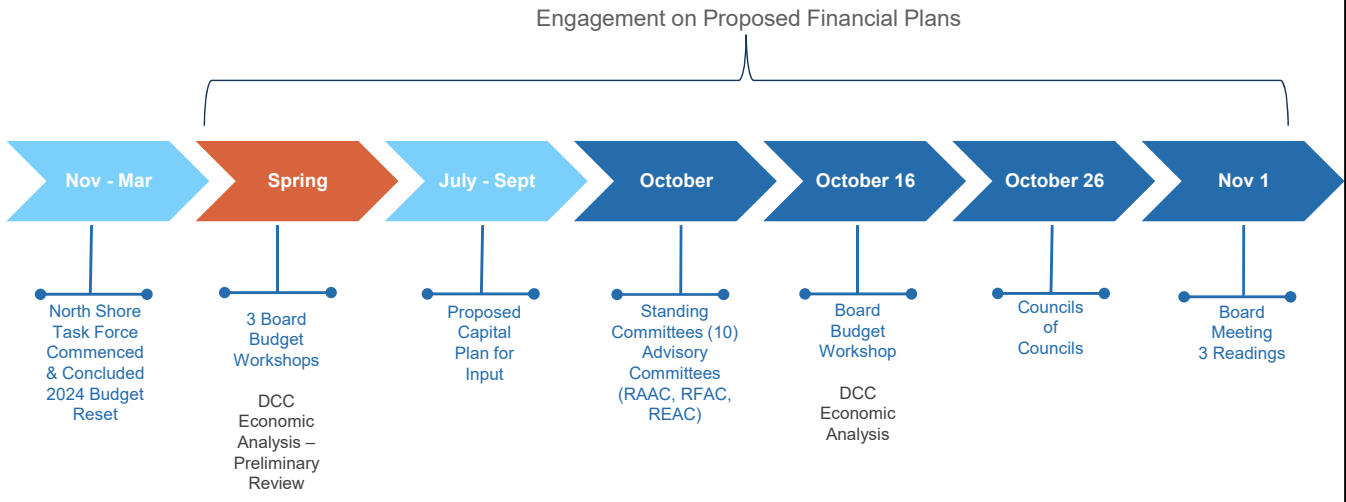


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METRO VANCOUVER BUDGET APPROACH



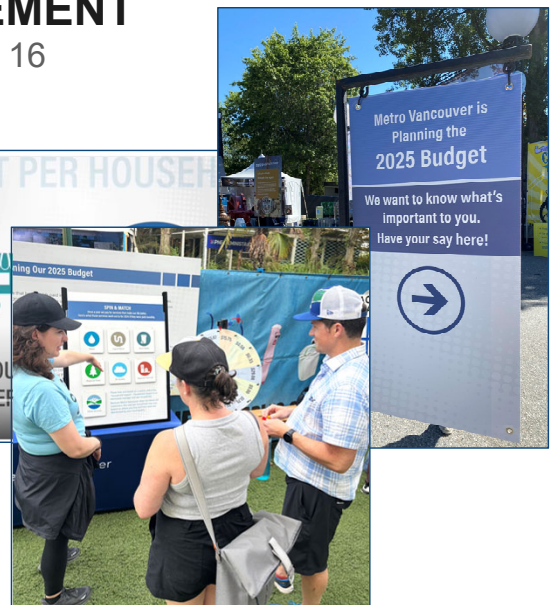
2025 BUDGET CYCLE TIMELINE



COMMUNICATIONS AND ENGAGEMENT

Public Engagement Period, July 31 – September 16

- 291,956+ budget video views
- 14 days at PNE (90,000 showcase visitors)
- 8,483 PNE budget game players
- 1,453 budget webpage visits
- 422 online survey responses
- 79 paper survey responses
- 36 promotional and educational posts on social



COMMUNICATIONS AND ENGAGEMENT

Overall Communications / Member Engagement

- Budget webpage with video
- Budget Overview one pager
- MetroUpdate newsletter article
- Live stream Committee and Board meetings
- Regional Advisory Committees
- Council of Council meetings
- Budget communications throughout the year

2024 Budget at a Glance

- \$2.4 billion: Total combined expenditures planned for 2024
- \$1.226 billion for operating
- \$1.173 billion for capital
- \$498: Approximate average household cost ("household impact") for all regional services (a 12% increase)
 - Less than previously projected 14.7% increase of \$711 for 2024
 - Over four years, increase reduced to only 5% increase
- 87% increase in household impact over 2023 (Water \$12, Liquid Waste \$10, Solid Waste \$1, MWD \$8)
- Major projects and initiatives include: Cogitlam Water Main and Supply Projects, wastewater treatment plant upgrades (Iona Island, North Shore, Northeast Langley, Arnic), affordable housing projects, parks expansion, reconstruction
- New development cost charge rates will support a principle that growth pays for growth

Service	Per Year	Per Month
Regional Planning	\$4	\$0.33
Air Quality Management	\$7	\$0.58
Regional Parks	\$60	\$5
Solid Waste Services	\$48	\$4.00
Liquid Waste Services	\$109	\$9.08

COMMITMENT TO CONTINUOUS IMPROVEMENT

- Continue culture of continuous improvement
- Continue to Monitor financial performance
- Continue to utilize data to drive decision making
- Continue to seek alternative funding strategies/sources
- Continue with long range planning and procurement strategies for multi-year programs and project delivery



CONTINUOUS IMPROVEMENT – 2024 COMPLETED OR ONGOING

Initiative	Outcomes
Cyber Resilience (CS)	<ul style="list-style-type: none"> Improve cyber security and resilience to proactively mitigate the risks posed by evolving cyber security threats
Weigh Scale Software Upgrade Implementation (SWS)	<ul style="list-style-type: none"> Range of new features: license plate readers, emailing bills, real-time customer feedback; system resilience.
Refined Environmental Management System (WS)	<ul style="list-style-type: none"> Revised the review and approval process for regulatory reporting, which is freeing up time for our frontline, engineering, and legal teams

CONTINUOUS IMPROVEMENT – 2025 NEW

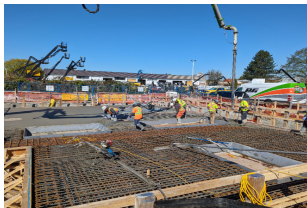
Initiative	Outcomes
Waste-to Energy District Energy (SWS)	<ul style="list-style-type: none"> Up to 70,000 tonnes GHG per year emissions reduction.
Biosolids Hauling de-carbonization (LWS)	<ul style="list-style-type: none"> Trials of low-carbon hauling vehicles (battery electric vehicles and hydrogen electric vehicles) for short to medium haul routes.
Project Quality Management (PD)	<ul style="list-style-type: none"> Consistent implementation of Project Quality Management and reduction of quality related risks. Efficiencies due to risk avoidance and streamlined processes.

MAJOR DRIVERS – CAPITAL PROGRAM

WHAT WE ARE DOING

- Long-term financial planning
- Cost estimating framework
- Reviewing scope and timing of over 300 projects
- Partnership funding

The image shows two overlapping spreadsheets. The top one is titled 'GREATER VANCOUVER WATER DISTRICT CAPITAL BUDGET AND 2024-2028 CAPITAL PLAN' and the bottom one is 'GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT CAPITAL BUDGET AND 2024-2028 CAPITAL PLAN'. Both tables list various projects with columns for project name, location, start year, end year, and budget amounts.



Fleetwood Reservoir Roof slab



Annacis WWTP Digesters



Widgeon Marsh Development

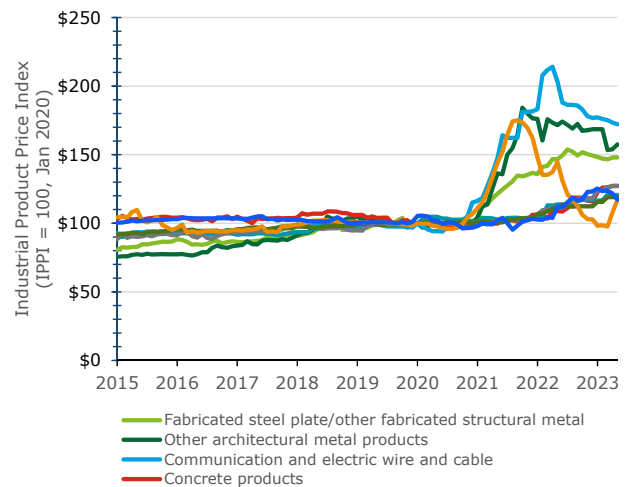


Central Surrey Recycling and Waste

MAJOR DRIVERS – INFLATION AND COST ESCALATION

WHAT WE ARE DOING

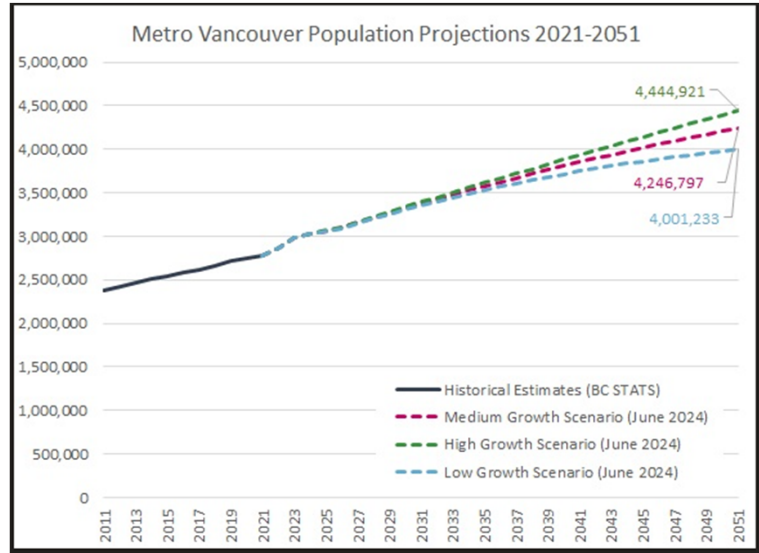
- Strengthening procurement strategies
- Examining revenue sources and partnerships
- Timing and scope of projects and programs



MAJOR DRIVERS - POPULATION GROWTH

WHAT WE ARE DOING

- Examining impacts to infrastructure
- Regular updates and review of DCCs
- Alignment with Province and member jurisdictions



MAJOR DRIVERS - CLIMATE CHANGE AND RESILIENCE

WHAT WE ARE DOING

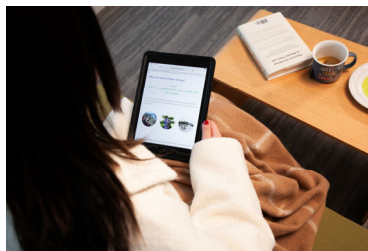
- Infrastructure resilience
- Metro 2050 Policy
- Climate action strategies and programs



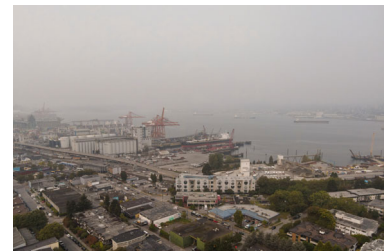
King tide in West Vancouver



Minnehada fire



Climate Literacy Program

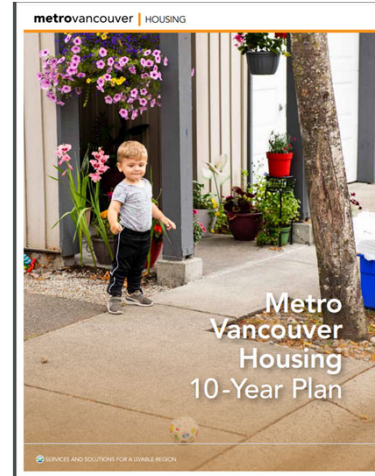


Smoky conditions in Metro Vancouver

MAJOR DRIVERS – BELOW MARKET RENTAL HOUSING

WHAT WE ARE DOING

- Metro Vancouver Housing development and renewal projects (2,100+ units underway)
- Partnerships with member jurisdictions, development community and others
- Historic funding agreement with Province; new federal program



APRIL 2023 BOARD BUDGET WORKSHOP DIRECTION

That the MVRD/MVHC/GVS&DD/GVWD Board at the April 19, 2023 Board Budget Workshop:

- a) *direct staff to proceed through the 2024 budget cycle with household impact targets as follows*
 - i. 2024 – 12%
 - ii. 2025 – 11%
 - iii. 2026 – 5%
 - iv. 2027 – 5%
- b) *direct staff to prepare the 2024–2028 Financial Plan with the following development cost charge (DCC) rate assumptions:*
 - i. *Liquid Waste Development Cost Charges moving to a 1% assist factor with interest as part of the 2024–2028 Financial Plan*
 - ii. *Water Development Cost Charges moving to a 1% assist factor with interest as part of the 2024–2028 Financial Plan; and*
 - iii. *Implementation of a Development Cost Charge for Regional Parks and move to a 1% assist factor within the 2024–2028 Financial Plan*

MARCH 2024 BOARD MEETING

- The DCC Bylaws received Provincial Inspector Approval in February 2024
- On March 22, 2024, the MVRD/ GVS&DD/ GVWD Board had 4th reading and final adoption of the 3 DCC Bylaws
- The DCC Bylaws have a 3-year phase-in January 1, 2025; January 1, 2026; and January 1, 2027

SPRING 2024 BOARD BUDGET WORKSHOPS DIRECTION

April 17 and May 17, 2024 Board Budget Workshops direction to staff was to continue with the direction from April 2023 which were to:

- Maintain the following HHI targets:
 - 2025 – 11%
 - 2026 – 5%
 - 2027 – 5%
 - 2028 – 5%
- Continue with Liquid Waste DCCs, Water DCCs, and Regional Parks DCCs to a 1% assist factor with interest as part of the financial plan

BOARD BUDGET WORKSHOP DIRECTION

May 2024 Board Budget Workshop Resolution

That the GVS&DD Board direct staff to prepare the 2025 Budget and 2025–2029 Financial Plan by allocating the \$2.8B required to complete the NSWWTP Program according to Option 3 from Table 6 in the report dated May 10, 2024, titled “2025 Budget and 5-Year Financial Plan Scenarios for Consideration.”

That the GVS&DD Board direct staff to prepare the 2025 Budget and 2025–2029 Financial Plan by allocating the \$2.8B required to complete the NSWWTP Program according to Option 4 from Table 7 in the report dated May 10, 2024, titled “2025 Budget and 5-Year Financial Plan Scenarios for Consideration.”

	2025	2026	2027	2028	2029
VSA	+\$150	-	-	-	-
NSSA	+\$118	+\$118	+\$118	+\$118	+\$118
LIWSA	+\$80	-	-	-	-
FSA	+\$90	-	-	-	-

2025–2029 FINANCIAL PLAN OVERVIEW

2025 Budget – Bottom Line

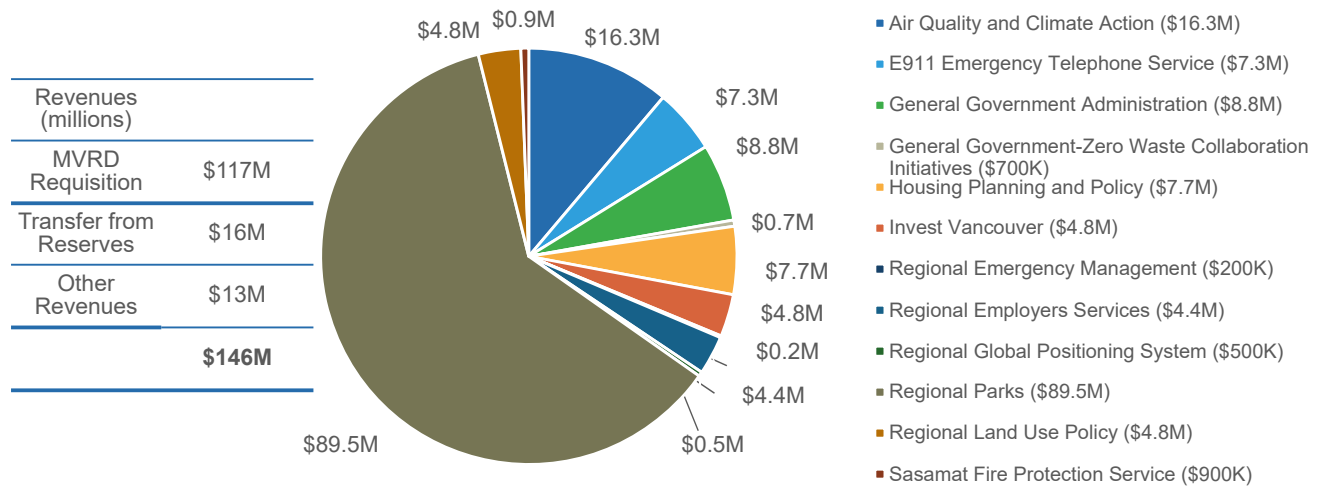
11.0%	Prior Projection for 2025
\$88	Increase for the average household in 2025 (Water: \$14, Liquid Waste: \$69, Solid Waste: \$3, MVRD: \$2)
\$884	Average annual cost for all Metro Vancouver services
9.9%	Proposed 2025 Budget
\$79	Increase for the average household in 2025 (Water: \$11, Liquid Waste: \$63, Solid Waste: \$3, MVRD: \$2)
\$875	Average annual cost for all Metro Vancouver services

OVERALL AVERAGE HOUSEHOLD IMPACT 2025–2029

	2024	NSWWTP Amended	2025	2026	2027	2028	2029
Water Services	\$189	\$189	\$200	\$211	\$215	\$218	\$218
Liquid Waste Services	\$349	\$447	\$510	\$549	\$587	\$627	\$672
Solid Waste Services	\$68	\$68	\$71	\$74	\$78	\$82	\$86
Regional District Services	\$92	\$92	\$94	\$84	\$85	\$86	\$87
Total Household Impact	\$698	\$796	\$875	\$918	\$965	\$1,013	\$1,063
Prior Year Forecast - amended			\$884	\$933	\$981	\$1,033	

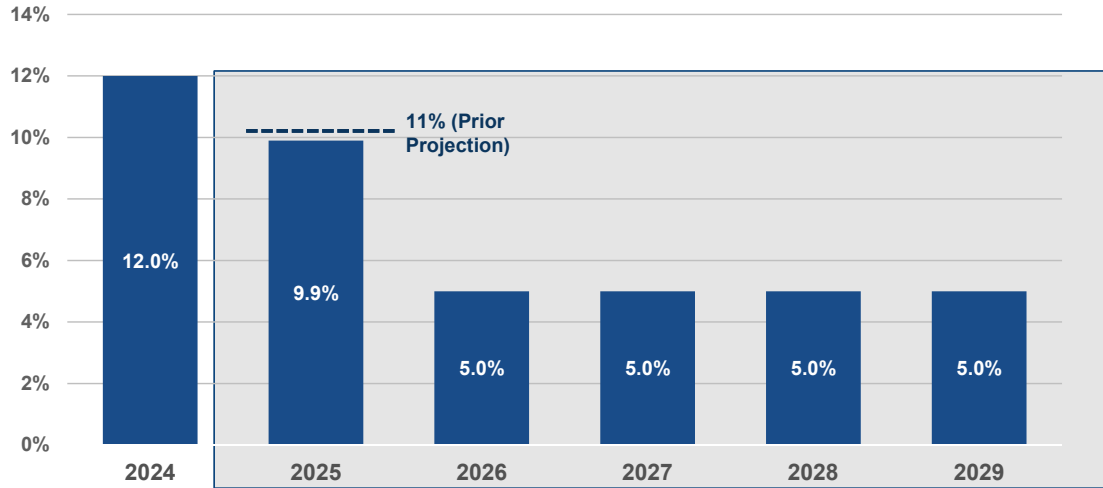
BUDGET OVERVIEW

2025 MVRD Budget



METRO VANCOUVER HOUSEHOLD IMPACT % CHANGE

Proposed 2025–2029 Financial Plan



METRO VANCOUVER OPERATING BUDGET

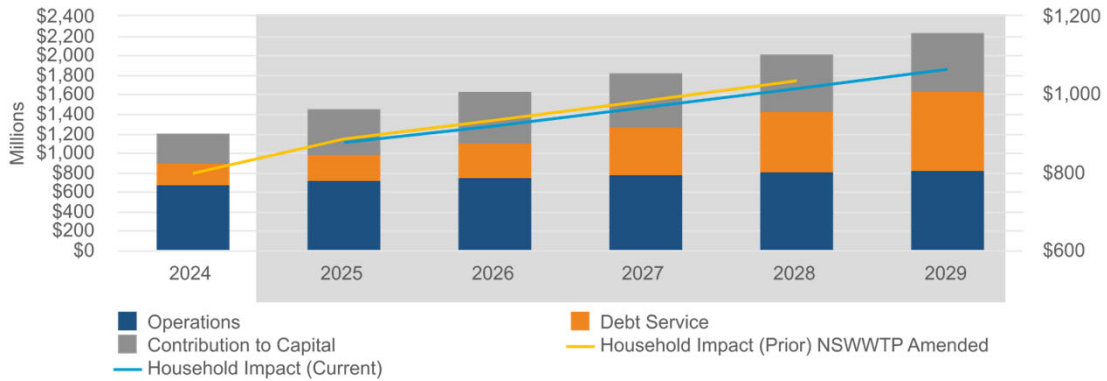
Expenditures

Overview:

- 2024 Operating Budget: \$1,216.0M
- 2025 Operating Budget: \$1,463.7M

Drivers:

- Operating Program is inflationary over the 5 years
- Funding capital program through debt service and contribution to capital in accordance with Board policy



METRO VANCOUVER OPERATING BUDGET

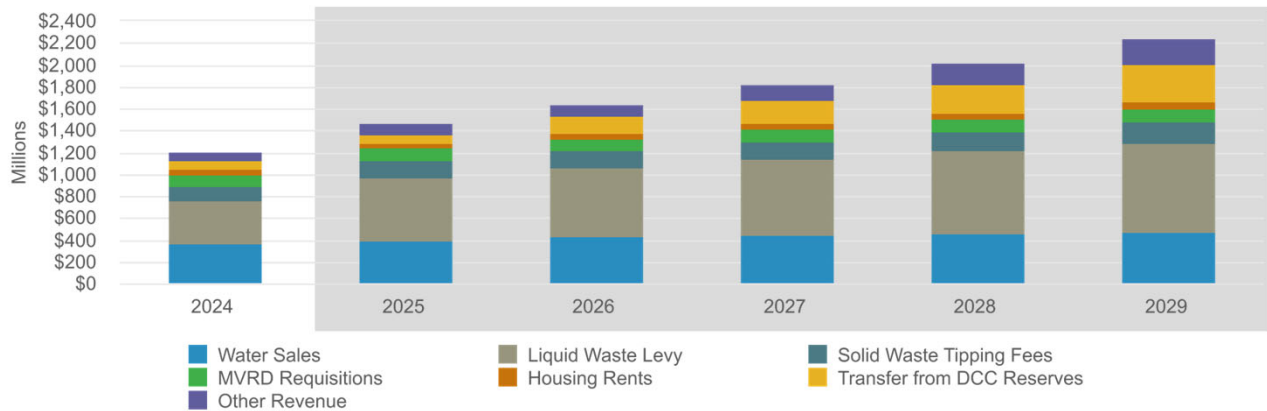
Revenues

Overview:

- Primary funding sources: water sales, sewer levy, tipping fees, rents, MVRD requisition
- Relative stability for primary sources

Drivers:

- Anticipated DCC revenues received and applied having downward pressure on HHI
- Continuously seeking partner funding for support



METRO VANCOUVER CAPITAL PLAN

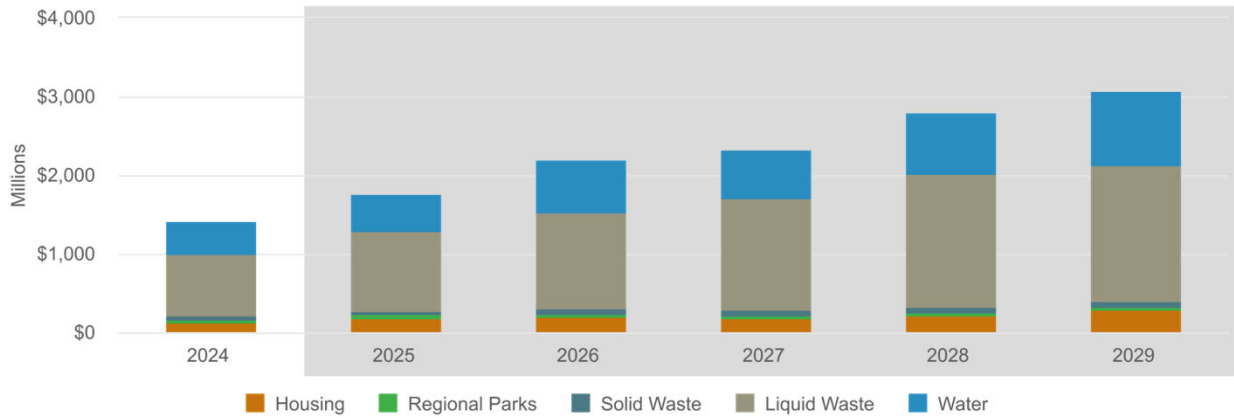
Expenditures

Overview:

- 2024 capital cash flow \$1.42B
- 2025 capital cash flow \$1.77B

Drivers:

- Continued activity on previously approved projects
- Regulatory upgrades and growth projects



Pacific Spirit Regional Park

Questions?

To: Climate Action Committee

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

Date: September 26, 2024 Meeting Date: October 3, 2024

Subject: **2025 - 2029 Financial Plan – Air Quality and Climate Action**

RECOMMENDATION

That the Climate Action Committee endorse the 2025 - 2029 Financial Plan for Air Quality and Climate Action as presented in the report dated September 26, 2024, titled “2025 - 2029 Financial Plan – Air Quality and Climate Action”, and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

EXECUTIVE SUMMARY

The 2025 - 2029 Metro Vancouver Financial Plan has been prepared following direction from the Financial Plan Task Force and from the Board at the Board Budget Workshops. The 2025 Budget has come under the household impact targets that were recommended by the Financial Plan Task Force and endorsed by the Board, which has resulted in an overall consolidated household impact for 2025 of 9.9%, down from the 11.0% projected for 2025 in the prior financial planning cycle.

In 2025, the operating budget for Air Quality and Climate Action is proposed to decrease by \$1.3 million (7.2%) for a total of \$16.3 million. The decrease is primarily due to ramping down several Sustainability Innovation Fund (SIF) projects. In 2025, almost half of the total budget amount will be covered by non-requisition revenues. The requisition is proposed to increase by \$15,136 (0.2%) to a total requisition of \$8.4 million, which represents a total of \$7 household impact to the average regional household (which compares to a previous forecast for 2025 of \$7).

Costs for developing and administering permits and regulations are recovered from authorized dischargers of air contaminants in accordance with the polluter pays principle. The *MVRD Air Quality Management Fees Bylaw No. 1330, 2021* will increase fee revenues in 2025 and minimize the impact on the tax requisition. The function’s operating budget is supplemented by the Sustainability Innovation Fund (SIF), partnerships, and external funding. The Board will consider proposed new SIF projects early in the new year.

PURPOSE

To present the 2025 - 2029 Financial Plan for Air Quality and Climate Action for consideration by the Committee.

BACKGROUND

Metro Vancouver’s annual budget process includes the development of detailed annual budgets and the updating of five-year financial plans for each of the four Metro Vancouver legal entities (Metro Vancouver Regional District, Metro Vancouver Housing Corporation, Greater Vancouver Water District and Greater Vancouver Sewerage and Drainage District).

Three Board Budget Workshops were held in the spring with the objective to seek direction for the preparation of the 2025 - 2029 Financial Plan. This has resulted in a plan that maintains the goals and objectives of Metro Vancouver while minimizing the impact on ratepayers through evaluation and optimizing the capital and operating programs.

This report focuses on the Air Quality and Climate Action function and presents the 2025 annual budget and the updated five-year plan for the years 2025 to 2029 for Committee consideration.

AIR QUALITY AND CLIMATE ACTION FUNCTION

Air Quality and Climate Action is a Metro Vancouver Regional District function established under the *Environmental Management Act* with the responsibility for managing air quality and regulating the discharge of air contaminants, including greenhouse gas emissions.

The Air Quality and Climate Action function comprises two programs:

- Air Quality and Climate Action Services, which includes the development and implementation of regional and corporate air quality and climate action plans and policies, development of bylaws and regulations, and supporting activities such as the operation of a network of air quality monitoring stations located throughout the Lower Fraser Valley airshed, emissions inventories, environmental assessments, and communications and outreach; and
- Air Quality Regulation, which includes the issuance and administration of air quality permits, implementation of Metro Vancouver air quality bylaws, and promotion of compliance with all of these air quality authorizations.

The provision of services by the Air Quality and Climate Action function is guided by direction in the *Board Strategic Plan*, as well as the *Clean Air Plan* and *Climate 2050*, both adopted by the Board. Specific targets and actions from these plans include:

Board Strategic Plan 2022-2026 – Overall Strategic Actions:

- Continue to develop and implement *Climate 2050 Roadmaps*, including critical climate adaptation actions, and to update roadmaps based on scientific advances and new opportunities;
- Prioritize climate action (greenhouse gas reduction and resilience to impacts) in all services, projects, and initiatives; and
- Strengthen restoration and protection of regional ecosystems, such as increasing forest canopies, to sequester carbon and enhance biodiversity.

Board Strategic Plan 2022-2026 – Priority Actions for Air Quality and Climate Action

- Protect public and environmental health and fight climate change by continuing to provide world-class air quality and greenhouse gas management services, including monitoring, emissions inventories, and air quality advisories;
- Expand the regional air quality monitoring network, including the new Tsawwassen First Nation station, and increase spatial coverage using small sensors;

- Introduce regulatory requirements to reduce greenhouse gas emissions from large and small buildings;
- Accelerate emission reductions from all types of vehicles through policies and regulations working in collaboration with regional partners;
- Promote transition to clean, renewable energy at the regional and corporate levels in collaboration with energy utilities and other partners;
- Lead by example by implementing corporate climate actions, including low- or zero-carbon policies for corporate fleet, travel, and procurement;
- Continue to develop policies and processes to integrate social equity into all air quality and climate policies; and
- Continue partnering with, and advocating to, other governments and agencies to implement initiatives that accelerate emission reductions in priority areas.

The *Clean Air Plan* is the regional plan for managing air quality and emissions (including GHGs) this decade. It includes key actions to effectively reduce health-harming air contaminants, to improve day to day air quality. The *Clean Air Plan* contains sector-specific emissions targets for air contaminant reductions.

Climate 2050 is a strategic framework adopted by the MVRD Board in 2019. *Climate 2050* is supported with issue-area roadmaps with actions to achieve these outcomes. To date, six roadmaps have been endorsed by the MVRD Board.

The MVRD Board adopted the following targets and commitments, which are stated in the *Clean Air Plan*, *Climate 2050* and *Metro 2050*:

- By 2030, reduce GHG emissions by 45% compared to 2010 levels;
- Achieve a carbon neutral region by 2050; and
- Ensure our infrastructure, ecosystems, and communities are resilient to the impacts of climate change.

WORK PLAN PERFORMANCE INDICATORS

High level performance indicators have been developed across the organization to evaluate trends, determine key actions for the coming year, and to assist in long-term planning. The 2025 Work Plan for the Air Quality and Climate Action Services program and the Air Quality Regulation program are presented in this report (Attachment 2).

Within these work plans, performance indicators have been developed and are being tracked, including:

- Days with air quality advisories in place;
- Reliability of air quality monitoring network;
- Number of inspections of non-road diesel engine sites, and permitted or regulated facilities and equipment;
- Cumulative number of Residential Indoor Wood Burning Best Burning Practices Declarations received;
- Cumulative number of non-road diesel engines retired since 2012;
- Regional GHG emissions from transportation and buildings;

- Corporate energy-related GHG emissions; and
- Corporate electricity consumption annually (kWh).

To maintain regional air quality, programs are focused on continuous improvement in reducing emissions and ambient concentrations of health-harming air contaminants and will respond to new challenges such as wildfire smoke events and extreme weather. Trends show that levels of most health-harming air contaminants have been improving over the last decade, although several summers have been impacted by wildfire smoke over that period. Regional GHG emissions trends have not shown the same improvement though. While on-road transportation GHG emissions have held steady in recent years and may be showing signs of a downward trend, GHG emissions from the buildings and industry sectors have yet to show the same decrease. Ongoing reporting of performance indicators will highlight these trends within the various sectors and for the region as a whole.

Metro Vancouver is making progress toward reducing organizational GHG emissions and energy waste in line with regional targets, through improvements to energy efficiency, utilization of waste streams to generate heat and/or energy, the use of clean electricity and low-carbon fuels, and the pursuit of new carbon capture and offset projects.

CONTINUOUS IMPROVEMENT

The Air Quality and Climate Action function continues to explore, evaluate and implement continuous improvement opportunities. The continuous improvement opportunities that are ongoing from 2024 and new in 2025 include the following:

- Create a five-year, high-resolution meteorological model database for the region to improve reliability of air quality assessments of existing and future facilities and projects resulting in better science-based decisions.
- Develop a Corporate Climate and Energy Management System, which includes corporate energy and greenhouse gas management coordination and support services for departments to ensure Metro Vancouver maintains its corporate climate leadership position.
- Conduct a gap analysis of the corporate energy and greenhouse gas emissions inventory and determine pathway to quantifying and setting targets for non-energy-related emissions (e.g., scope 3 emissions and process/fugitive emissions).
- Continue upgrades and enhancements to the regional air quality monitoring network, resulting in improvements and efficiencies in the collection of air quality data and dissemination to the public, especially during advisory events that are increasing in frequency due to climate change.
- Expand use of new analytical approaches and software to improve understanding and visualization of large datasets, to inform policy development and program implementation and to produce improved communications and outreach materials.
- Update and propose new regulations to drive continuous improvement in air quality, emissions reduction, and recover costs from regulated sources.
- Develop procedures and guidance for the issuance of administrative penalties.

- Enhance the transparency of the regulatory program to increase awareness of and compliance with bylaw requirements, and improve participation in Metro Vancouver processes.

2025 BUDGET AND 2025 - 2029 FINANCIAL PLAN

The five-year financial plans for this cycle have been updated to address five central priorities identified by the Metro Vancouver Board in its Strategic Plan to guide the development of plans and budgets. The five priorities are:

- Financial Sustainability and Regional Affordability
- Climate Action
- Resilient Services and Infrastructure
- Reconciliation
- Housing

Each Metro Vancouver function has an Annual Work Plan that includes strategic directions, performance indicators and key actions to guide the work for the coming year. Each function also has a “What’s Happening” summary that presents program highlights for the next five years.

The 2025 - 2029 Air Quality and Climate Action Financial Plan is included as Attachment 1. The 2025 Annual Work Plan for Air Quality and Climate Action Services and the Air Quality Regulation program areas presented in this report is included in Attachment 2, and the “What’s Happening” highlights for the years 2025 - 2029 are included in Attachment 3.

Planned Air Quality and Climate Action activities in 2025 include ongoing efforts to enhance regional air quality and reduce emissions to protect public health and the environment, including reducing greenhouse gas emissions (GHG) to mitigate climate change, and coordinating corporate GHG reduction and energy management across the organization. This includes promoting compliance with permits and air quality bylaws, implementing management and reporting systems, supporting policies and programs, collaborating with partners, and developing new bylaws. Priority actions in the *Clean Air Plan* and *Climate 2050* roadmaps remain a central focus in 2025.

Operating Budget Highlights

The Air Quality and Climate Action 2025 operating budget is proposed to decrease by \$1,267,210 for a total budget of \$16,293,920 (Attachment 1). The AQ Regulation program component of this budget has always been operated under the principle of cost-recovery, with user fees paying for most of the activities to promote compliance with our bylaws. In 2025, almost half of the total budget amount will be covered by non-tax requisition revenues. The 2025 budget includes previously approved studies and projects funded by the Sustainability Innovation Fund (SIF). Additional SIF projects will be brought forward for Committee and Board consideration as part of the annual application process, and some will be funded out of the SIF reserve funds in 2025. All SIF projects are expected to include a climate action theme. The decrease in SIF budget is partially offset by inflationary factors such as increments for salaries and benefits.

It should also be noted that, consistent with the Board-endorsed *Climate 2050* Roadmaps, additional climate action projects are funded in other areas, including the utilities, regional parks,

and housing, and that the funds in the Air Quality and Climate Action operating budget are used to leverage additional funding for projects with external partners.

The 2025 operating budget includes the following key actions, which are described in more detail in Attachment 2:

- Continue to implement priority actions from the *Clean Air Plan* and *Climate 2050*;
- Develop additional air quality monitoring and emissions assessment capabilities;
- Update and propose new air emission regulation bylaws and air quality objectives that protect human health and the environment;
- Work with partners to develop programs, share information, and provide support for residents, building owners, businesses, and others toward a carbon neutral region;
- Implement priority air quality regulation compliance and enforcement activities;
- Develop a coordinated and standardized approach to reduce corporate greenhouse gas emissions through an enhanced climate and energy management system; and
- Promote awareness of and compliance with emission regulation requirements;
- Bring unauthorized facilities into compliance with the *GVRD Air Quality Management Bylaw No. 1082, 2008*; and
- Improve public understanding of air quality and climate action, including outreach and the development of videos, web content, engagement activities, and other materials.

Over the next five years, expenditures are anticipated to increase by \$351,182, or an average of 0.5% per year.

Communications Program

The 2025 Air Quality and Climate Action Communications Program of \$295,000 is focused on outreach, communication and engagement on *Climate 2050*, *Clean Air Plan*, and air quality bylaws and regulations.

Reserve Funds

The financial plan for Air Quality and Climate Action includes the use of reserves to annually fund one-time initiatives. This is consistent with the *Operating, Statutory and Discretionary Reserves Policy*. The 2025 - 2029 Projected Reserves for Air Quality and Climate Action are included in Attachment 4.

APPROVAL PROCESS

The proposed 2025 - 2029 Financial Plan and Annual Work Plan is presented for consideration and endorsement before being forwarded to the Board for consideration. The next steps of the process are:

- The 2025 - 2029 Financial Plan and Annual Work Plan will be presented for consideration at the Metro Vancouver Board Budget Workshop on October 16, 2024.
- The Board will consider adoption of the 2025 Budget and endorsement of the 2025 - 2029 Financial Plan on November 1, 2024.

ALTERNATIVES

1. That the Climate Action Committee endorse the 2025 - 2029 Financial Plan for Air Quality and Climate Action as presented in the report dated September 26, 2024, titled “2025 - 2029 Financial Plan – Air Quality and Climate Action”, and forward it to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.
2. That the Climate Action Committee amend the 2025 - 2029 Financial Plan for Air Quality and Climate Action as follows: _____; and forward the amended Financial Plan to the Metro Vancouver Board Budget Workshop on October 16, 2024 for consideration.

FINANCIAL IMPLICATIONS

Pending the MVRD Board’s endorsement of the 2025 - 2029 Financial Plan for Air Quality and Climate Action, as presented under Alternative 1, in 2025 the Air Quality and Climate Action requisition will increase by \$15,136 (0.2%) for a total requisition of \$8,381,668. The review of the system of regulatory fees was completed in 2021, whereupon the Board adopted a new air quality fees bylaw (*MVRD Air Quality Management Fees Bylaw No. 1330, 2021*). Implementation of the bylaw resulted in increases in fee revenues of 11.6% and 9.9% from permits and regulations, and non-road diesel engines, respectively, compared to 2024, which reduces the tax requisition.

Over the term of the five-year plan, the annual Air Quality and Climate Action requisition is projected to decrease by an average of \$58,037 per year (0.6%). Revenues that will offset projected expenditures will be provided through other sources, including regulatory user fees, non-road diesel fees, the Sustainability Innovation Fund (SIF), air quality monitoring service agreements, partnerships, and external funding (e.g., provincial Local Government Climate Action Program). It is anticipated that the cost to the average regional household over the next five years for the Air Quality and Climate Action function will remain at \$7 in 2025 and will decrease to \$6 in 2027 to 2029.

Under Alternative 2, the Committee may wish to consider recommending amendments to the 2025 Budget and Five-Year Financial Plan for consideration at the Metro Vancouver Board Budget Workshop. Any changes to the plan may have an impact on the MVRD Financial Plan.

CONCLUSION

The 2025 Budget and Five-Year Financial Plan for Air Quality and Climate Action was prepared following direction received at the May 31, 2024 Metro Vancouver Board Budget Workshop and to respond to direction provided in the *Board Strategic Plan*. It is presented to Committee and Board members to provide overview information on activities and financial impacts for the years 2025 to 2029 for Air Quality and Climate Action.

The presentation of this year’s five-year financial plan for Air Quality and Climate Action provides the opportunity for Metro Vancouver to share with its member jurisdictions the proposed service related initiatives over the next five years. It is intended to be used as a guiding document for member jurisdictions in the development of their five-year financial plans and includes projections on household impact to demonstrate how the plan will remain affordable for residents while keeping pace with our critical requirements.

Staff recommend endorsing the 2025 - 2029 Financial Plan and Annual Work Plan for Air Quality and Climate Action as presented under Alternative 1.

ATTACHMENTS

1. "2025 - 2029 Financial Plan – Air Quality and Climate Action", dated September 26, 2024
2. 2025 Work Plans
 - a. "Air Quality and Climate Action Services Work Plan", dated September 26, 2024
 - b. "Environmental Regulation and Enforcement – Air Quality Regulation Work Plan", dated September 26, 2024
3. "2025 - 2029 – 'What's Happening' – Air Quality and Climate Action", dated September 26, 2024
4. "2025 - 2029 – Projected Reserves – Air Quality and Climate Action", dated September 26, 2024
5. Presentation re: "2025 - 2029 Financial Plan – Air Quality and Climate Action", dated September 26, 2024

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**METRO VANCOUVER REGIONAL DISTRICT
AIR QUALITY AND CLIMATE ACTION
2025 BUDGET REVIEW
2025 - 2029 FINANCIAL PLAN**

	2024 BUDGET	2025 BUDGET	% CHANGE	2026 FORECAST	% CHANGE	2027 FORECAST	% CHANGE	2028 FORECAST	% CHANGE	2029 FORECAST	% CHANGE
REVENUES											
Metro Vancouver Regional District Requisitions	\$ 8,366,532	\$ 8,381,668	0.2%	\$ 8,584,090	2.4%	\$ 7,904,816	(7.9%)	\$ 7,848,040	(0.7%)	\$ 8,076,347	2.9%
User Fees	3,000,000	3,200,000		3,700,000		4,200,000		4,700,000		4,800,000	
Non-Road Diesel Fees	1,316,250	1,690,000		2,055,000		2,895,000		2,890,000		2,890,000	
Other External Revenues	770,425	844,127		673,085		748,635		756,924		765,379	
Transfer from Sustainability Innovation Fund Reserves	2,037,923	230,000		-		-		-		-	
Transfer from Reserves	2,070,000	1,948,125		1,752,788		1,361,584		1,218,516		1,380,586	
TOTAL REVENUES	<u>\$17,561,130</u>	<u>\$16,293,920</u>	(7.2%)	<u>\$16,764,963</u>	2.9%	<u>\$17,110,035</u>	2.1%	<u>\$17,413,480</u>	1.8%	<u>\$17,912,312</u>	2.9%
EXPENDITURES											
Operating Programs:											
Ambient Air Quality Monitoring	\$ 2,709,224	\$ 2,846,336		\$ 3,158,042		\$ 3,044,756		\$ 2,923,374		\$ 3,118,928	
Regional Climate Action Policy	3,414,877	3,688,864		3,802,324		3,761,430		3,862,009		3,973,586	
Air Quality Bylaw and Regulation Development	1,319,732	1,361,201		1,394,864		1,435,174		1,476,860		1,524,057	
Corporate Climate Action Services	740,219	844,010		670,298		870,687		875,153		902,938	
Engineers in Training	49,308	61,653		63,593		65,593		67,654		69,784	
Regional Sustainability Initiatives	2,087,923	280,000		-		-		-		-	
Administration and Department Support	764,718	788,486		814,175		839,857		866,306		892,778	
	<u>\$11,086,001</u>	<u>\$ 9,870,550</u>	(11.0%)	<u>\$ 9,903,296</u>	0.3%	<u>\$10,017,497</u>	1.2%	<u>\$10,071,356</u>	0.5%	<u>\$10,482,071</u>	4.1%
Communications Program	445,000	295,000	(33.7%)	300,900	2.0%	306,918	2.0%	313,055	2.0%	319,317	2.0%
Environmental Regulation and Enforcement	4,719,554	4,932,148	4.5%	5,250,384	6.5%	5,532,675	5.4%	5,856,031	5.8%	6,012,063	2.7%
Allocation of Centralized Support Costs	1,310,575	1,196,222	(8.7%)	1,310,383	9.5%	1,252,945	(4.4%)	1,173,038	(6.4%)	1,098,861	(6.3%)
TOTAL EXPENDITURES	<u>\$17,561,130</u>	<u>\$16,293,920</u>	(7.2%)	<u>\$16,764,963</u>	2.9%	<u>\$17,110,035</u>	2.1%	<u>\$17,413,480</u>	1.8%	<u>\$17,912,312</u>	2.9%

AIR QUALITY AND CLIMATE ACTION WORK PLAN

Description of services

For more than 50 years, Metro Vancouver has provided the service of air quality management and air contaminant emissions reduction for the region. Air Quality and Climate Action is a Metro Vancouver Regional District function established under the *Environmental Management Act* with the responsibility for managing air quality and regulating the discharge of air contaminants including greenhouse gas emissions. The service develops and implements management plans that recognize the strong connections between air quality, public health, and climate change. Actions aim to reduce emissions of air contaminants, including greenhouse gases, across the region, while improving resilience to climate impacts.

The Air Quality and Climate Action function comprises two programs: Air Quality and Climate Action Services (AQCAS) and the Air Quality Regulation program under Environmental Regulation and Enforcement (ER&E). This work plan focuses on the AQCAS program, whereas the Air Quality Regulation program work plan is presented separately.

The AQCAS program includes development and implementation of management plans for emissions reduction. These plans are based on evidence, particularly from the regional network of air quality monitoring stations, the regional emissions inventory, and other indicators to measure performance and identify priority areas for action. Emissions reduction actions involve both regulatory initiatives, such as air emissions bylaws and regulations, and non-regulatory projects and initiatives. Additionally, the AQCAS program includes development and implementation of a standardized and systematic approach to manage energy and greenhouse gas emissions for Metro Vancouver's corporate assets and facilities.

Strategic directions and high level goals supported

Guided by Metro Vancouver's Board-adopted *Clean Air Plan*, AQCAS works to manage and improve regional air quality, and mitigate threats to public health and the environment, by:

- Improving understanding of air quality issues in the region by expanding air quality monitoring capacity;
- Identifying and assessing sources of air contaminants in the region, identifying priorities, and pursuing effective actions to reduce emissions; and
- Working with partners to advance solutions for mitigating public health impacts of exposure to air contaminants.

The *2022-2026 Board Strategic Plan* identifies Climate Action as one of the Board's five strategic directions. Guided by actions in the *Clean Air Plan* and *Climate 2050*, AQCAS develops and implements climate action policy for the Metro Vancouver region. Key responsibilities of AQCAS include:

- Leading the development of regional climate action policy, coordinated across all relevant Metro Vancouver departments, including both GHG reduction and adaptation to impacts;

- Working with partners, advancing implementation of actions toward meeting regional GHG emissions targets through projects, partnerships, and advocacy to other orders of government;
- Supporting regional climate resilience through coordination, planning, and collaboration internally and with external partners; and
- Coordinating and supporting corporate climate action to demonstrate Metro Vancouver's commitment to leadership as an organization, providing examples of best practices in greenhouse gas reduction and climate resilience.

Further, guided by the above plans, AQCAS works to strengthen awareness among and engagement with the public, member jurisdictions, other orders of government, and stakeholders in the implementation of the *Clean Air Plan* and *Climate 2050*, and foster regional coordination to achieve the long-term targets in air quality and GHG reduction.

High level performance indicators have been developed to evaluate trends and assist in short- and long-term planning. These indicators for 2025 are shown in Table 1. Trends for total regional emissions and sectors additional to on-road transportation and buildings are currently being finalized and will be reported, along with additional performance indicators for *Climate 2050*, in the pending *Climate 2050* Annual Report. Performance indicators for corporate GHG emissions are reported in the Annual Corporate Energy and GHG Emissions Management Report.

Table 1. Metro Vancouver Performance Indicators Relevant to AQCAS

Indicator	Historical and/or industry benchmark	Current performance	2025 expected performance
Days with air quality advisories in place due to emission sources located within the airshed	2011: zero days	2019-2023 average: 3.25 days	< 3 days
Reliability of air quality monitoring network (% of annual hours with monitoring data available for priority pollutants)	2015: 96%	2019-2023 average: 97%+	> 95%
Regional GHG emissions for on-road transportation and buildings (tonnes of carbon dioxide equivalent, tCO ₂ e)	On-road Transportation 2010: 6.6M tCO ₂ e Buildings 2010: 4.1M tCO ₂ e	On-road Transportation 2022: 6.5M tCO ₂ e Buildings 2022: 4.7M tCO ₂ e	On-road Transportation ~6.3M tCO ₂ e Buildings ~5.0M tCO ₂ e

Indicator	Historical and/or industry benchmark	Current performance	2025 expected performance
Corporate energy-related greenhouse gas emissions (tonnes of carbon dioxide equivalent, tCO ₂ e)	2012: 22,422 tCO ₂ e	2023: 28,048 tCO ₂ e	26,200 tCO ₂ e
Corporate electricity consumption efficiency (GWh per year, including purchased, contracted, and self-generated)	2014: 208 GWh Electricity Self-Generated 2014: 20%	2023: 237 GWh Electricity Self-Generated 2023: 13%	243 GWh Electricity Self-Generated: 18%

AQCAS anticipates undertaking the following initiatives in 2025 in support of implementing *Climate 2050* and the *Clean Air Plan* (Table 2).

Table 2. 2025 Key Actions

- Continue to implement the “Big Moves” in the Clean Air Plan and Climate 2050, prioritizing actions that reduce regional emissions and improve air quality.
- Develop additional air quality monitoring and emissions assessment capabilities to provide the evidence basis and performance measurement for the air quality program, and provide air quality advisory services.
- Advance proposals for new and amended air quality bylaws and regulations, to protect human health and the environment and support continuous improvement in air quality.
- Explore opportunities to reduce air contaminant emissions from medium and heavy trucks, with partners.
- Update regional health risk assessment for toxic air contaminants.
- Update the Regional Ground-Level Ozone Strategy and continue to implement targeted actions to reduce impacts of ground-level ozone on regional air quality.
- Continue analysis, policy and program design to support affordability, equity and fairness.
- Continue to engage with energy utilities and the Province on regional and provincial energy and climate policy and regulatory processes, in collaboration with member jurisdictions.
- Continue analysis of emissions reduction options for priority sectors, including transportation, buildings and industrial facilities, with consideration of partnerships, policies, supports, education, and advocacy.
- Undertake analysis of policy opportunities and spatial planning to support the energy transition regionally, including expanded use of distributed energy such as waste heat and solar energy.
- Work with partners to explore supportive programs and policies for EV charging in multi-unit residential buildings, workplaces and public realm.

- In coordination with the Province, review emissions reduction policies for industrial facilities in the region.
- Continue to support implementation of the BC Retrofit Accelerator in the region.
- Report out on the finalized Lower Fraser Valley emissions inventory for all sectors and air contaminants, and continue reporting the annual greenhouse gas emissions inventory for the region.
- Leverage the Sustainability Innovation Fund to advance development of new and innovative climate actions, including new GHG reduction policies and programs, energy efficiency, renewable energy, and engagement and outreach.
- Develop and implement a corporate climate and energy management system based on the core principles of ISO 50001 to standardize Metro Vancouver's approach to greenhouse gas emissions reduction.
- Improve public understanding of regional air quality and climate change actions, for example through the annual Air Quality Summary and the *Climate 2050* Annual Report.
- Ongoing annual reporting on performance and progress towards targets.

ENVIRONMENTAL REGULATION AND ENFORCEMENT WORK PLAN

AIR QUALITY REGULATION

Description of Services

The Air Quality and Climate Action function comprises two programs: Air Quality and Climate Action Services (AQCAS) and the Air Quality Regulation program under Environmental Regulation and Enforcement (ER&E). This section of the ER&E work plan describes the Air Quality Regulation program, including the Non Road Diesel Engine Regulation program, which enables economic activity while advancing Metro Vancouver’s air quality goals through the issuance of site-specific authorizations and promoting compliance with those authorizations and Metro Vancouver air quality bylaws. Bylaws include regulations to control emissions from non-road diesel engines; gas- and wood-fired boilers; gas stations and gasoline storage facilities; automotive re-finishing facilities; concrete facilities; open burning; and residential indoor wood burning. The Air Quality Regulatory Program also manages a 24-hour public complaint service that annually handles 2,000 to 3,000 complaints, mostly about odours, smoke and dust.

Strategic Directions and High-Level Goals Supported

The Air Quality Regulatory Programs support Metro Vancouver’s 2022-2026 Board Strategic Plan, the Clean Air Plan, and Climate 2050:

- Protect public and environmental health
- Authorize emissions and promote compliance to reduce impacts of air contaminants
- Accelerate emission reductions from industrial facilities
- Reduce non-road diesel emissions and support early adoption of zero-emission non-road equipment
- Implement requirements for higher-emitting wood-burning appliances
- Reduce emissions from open-air burning
- Improve processes to engage First Nations on regulatory tools to improve air quality
- Respond to air quality complaints

Performance Indicators

Air Quality Indicator	Historical and/or Industry Benchmark (2023)	Current Performance (2024 YTD – Jun 5)	2025 Performance Objective
Number of inspections of permitted facilities	79	29	55
Number of inspections of regulated facilities	105	34	115
Number of inspections of NRDE sites	590	457	600
Number of Residential Indoor Wood Burning Best Burning Practices Declarations received (cumulative)	2035	2129	15000

Air Quality Indicator	Historical and/or Industry Benchmark (2023)	Current Performance (2024 YTD – Jun 5)	2025 Performance Objective
Cumulative number of Non Road Diesel Engines Retired since 2012	353	359	365

2025 Key Actions

Air Quality

- Bring unauthorized facilities into compliance with the Air Quality Management Bylaw
- Promote continuous improvement and reduction in PM, NOx, VOC and GHG emissions by large emitters
- Promote awareness of prohibition of use of unregistered residential indoor wood-burning appliances located within UCB in 2025
- Promote awareness of and compliance with requirements of the Non-Road Diesel Engine Emission Regulation Bylaw 1329
- Increase awareness of non-road diesel engine retirement rebates
- Promote awareness of and compliance with Open Burning Emission Regulation Bylaw
- Update public notification process for air permit applications, to be more transparent and inclusive
- Implement procedures for issuance of administrative penalties

LIQUID WASTE REGULATION

Description of Services

The Liquid Waste Regulation program enables economic activity while advancing Metro Vancouver’s liquid waste management goals through the issuance of authorizations and promoting compliance with those authorizations and Metro Vancouver liquid waste bylaws.

Strategic Directions and High-Level Goals Supported

The Liquid Waste Regulation program supports Metro Vancouver’s Integrated Liquid Waste and Resource Management Plan by:

- Issuing authorizations that limit the discharge of non-domestic waste to sewer
- Promoting compliance with liquid waste authorizations and regulations.

Performance Indicators

Liquid Waste Indicator	Historical and/or Industry Benchmark (2023)	Current Performance (2024 YTD – June 10)	2025 Performance Objective
Number of regulated sites inspected per year*	311	106	608
Number of unregulated sites inspected per year*	48	35	30
Number of permits or permit amendments issued per year	32	22	40

***These numbers do not include sites that are actively regulated by City of Vancouver staff**

2025 Key Actions

Liquid Waste

- Continue to support efforts by Liquid Waste Services to modernize liquid waste bylaws.
- Incorporate Notices of Bylaw Violation into enforcement activities.
- Identify and pursue unauthorized discharges posing threats to the liquid waste management system and infrastructure, workers, biosolids quality and the environment.
- Work with the hospital sector on submission and review of pollution prevention plans and required updates to comply with the Hospital Pollution Prevention Plan Bylaw requirements. Inspect these facilities to verify compliance.
- Continue implementation of the Trucked Liquid Waste and Sani-dump Bylaws by issuing authorizations, conducting compliance inspections and addressing requests for authorization to bring out-of-region waste to Metro Vancouver facilities.
- Continue to pursue efficiencies in the industrial and groundwater liquid waste permitting processes.
- Complete a preliminary design study for the replacement of the Annacis Instrument Shop

SOLID WASTE REGULATION

The Solid Waste Regulation program enables economic activity while advancing Metro Vancouver’s solid waste management goals through the issuance of licences and promoting compliance with those licences and Metro Vancouver solid waste bylaws.

Strategic Directions and High-Level Goals Supported

The Solid Waste Regulatory Program supports Metro Vancouver’s Integrated Solid Waste and Resource Management Plan by:

- Issuing licences to private municipal solid waste and recyclable materials facilities
- Ensuring compliance with the licences and solid waste regulatory bylaws

Performance Indicators

Solid Waste Indicator	Historical and/or Industry Benchmark (2023)	Current Performance (2024 YTD – June 10)	2025 Performance Objective
Number of Active Licences at Period End	41	38	40
Number of inspections completed at licensed facilities per year	290	98	280
Number of inspections completed at unlicensed or unauthorized facilities	203	80	220

2025 Key Actions

<p>Solid Waste</p> <ul style="list-style-type: none"> • Promote compliance with solid waste licences issued under the <i>GVS&DD Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996</i>. • Identify and bring into compliance unauthorized facilities that require a licence under the <i>GVS&DD Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996</i> (Bylaw 181). • Incorporate Notices of Bylaw Violation (NBV) into enforcement activities if amendments to the <i>GVS&DD Notice of Bylaw Violation Enforcement and Dispute Adjudication Bylaw No. 378, 2024</i> are adopted. • Implement an updated disposal fee invoicing and statement process to better align with Bylaw 181 requirements. • Implement an updated licence application process to better align with Bylaw 181 public notification requirements. • Promoting awareness of and compliance with the amended <i>GVS&DD Tipping Fee and Solid Waste Regulation Bylaw No. 306, 2017</i>, if adopted by the Board.

Air Quality and Climate Action Services

2025 to 2029 – WHAT’S HAPPENING

Below is a summary of the significant initiatives to be undertaken by Air Quality and Climate Action over the next 5 years:

Initiative	Description	Theme
2025		
Air Quality Monitoring	<ul style="list-style-type: none"> • Ongoing operation of the air quality advisory program and public outreach and communication enhancements. • Implement new continuous fine particulate monitoring instruments at air quality monitoring network stations. • Add a new air quality monitoring station to the Metro Vancouver network at Tsawwassen First Nation. • Develop the use of small air quality sensor technology to augment the air quality monitoring network, improve monitoring coverage, and better understand neighbourhood-level air quality. • Conduct short-term air quality monitoring studies using the MAMU (mobile air monitoring unit) and portable monitoring instruments. 	Environmental Health
Air Quality and Climate Policy	<ul style="list-style-type: none"> • Reporting out on emissions inventory of health-harming air contaminants and GHGs for the region. • Complete regional health risk assessment for toxic air contaminants. • Explore opportunities to reduce emissions from medium and heavy trucks, with partners. • Support implementation of the BC Retrofit Accelerator. • Ongoing analysis, policy and program design supporting affordability, equity and fairness. • Ongoing engagement with energy utilities and Province on energy and climate policy. • Policy analysis and spatial planning for distributed energy including waste heat. • Supportive programs and policies for EV charging in multi-unit residential buildings. • In coordination with the Province, review of GHG reduction policies for industrial facilities in the region. • Ongoing annual reporting on performance and progress towards targets. 	Environmental Health Climate Action Social Equity and Human Health Collaboration and Strong Partnerships
Bylaw and Regulatory Development	<ul style="list-style-type: none"> • Propose amendments to the Boilers and Process Heaters Emission Regulation to reduce health-harming emissions. • Propose new program to reduce emissions from small, gas-powered equipment based on outcomes of engagement in 2024. 	Regulatory and Legislative Environment Social Equity and Human Health Climate Action

Initiative	Description	Theme
Air Quality Regulation	<ul style="list-style-type: none"> • Implementation of new and amended emission regulations, including: <ul style="list-style-type: none"> ▪ Advertise the September 2025 prohibition on using unregistered indoor wood-burning appliances within the Urban Containment Boundary; ▪ Enforce bylaw requirements for Tier 3 non-road diesel engines; and ▪ Promote compliance with requirements for open burning of vegetative debris. • Promote continuous improvement and emissions reduction by large emitters. • Enhance communication to improve transparency about permitting processes. • Implement a system for issuing Administrative Monetary Penalties. • Incorporate First Nations into the air permit application notification process. 	Regulatory and Legislative Environment Financial Sustainability Continuous Improvement
Corporate Climate Action Services	<ul style="list-style-type: none"> • Development a Corporate Climate & Energy Management System that standardizes the approach to reducing corporate GHG emissions and increasing energy efficiency. • Implementation of an updated external corporate report on progress to climate action targets. • Complete emissions inventory gap analysis with a pathway of scope 1, 2, and 3 emissions. • Review and update of corporate climate action policies with implementation plans. • Development of departmental strategic energy management plans with specific actions to meet corporate climate action targets. • Continuous support for departmental projects and reporting. 	Climate Action Data Management Financial Sustainability Continuous Improvement

Initiative	Description	Theme
2026		
Air Quality Monitoring	<ul style="list-style-type: none"> • Move Metro Vancouver’s Air Quality Instrument Shop’s office and work space to a new facility. • Ongoing operation of the air quality advisory program and public outreach and communication enhancements. • Ongoing use of small air quality sensor technology to augment the air quality monitoring network. • Conduct short-term air quality monitoring studies using the MAMU (mobile air monitoring unit) and portable monitoring instruments. 	Environmental Health

Initiative	Description	Theme
Air Quality and Climate Policy	<ul style="list-style-type: none"> • Ongoing implementation of projects and actions based on <i>Clean Air Plan</i> and <i>Climate 2050</i>. • Annual reporting on performance and progress toward targets. • Annual update of GHG emissions inventory. • Ongoing collaboration with member jurisdictions. • Ongoing provincial policy review, partnerships and advocacy. 	Climate Action Environmental Health Social Equity and Human Health
Bylaw and Regulatory Development	<ul style="list-style-type: none"> • Engagement on reducing emissions from wood product manufacturing and other priority sources. 	Environmental Health Climate Action
Air Quality Regulation	<ul style="list-style-type: none"> • Ongoing implementation of permit and regulatory fees to recover costs and provide incentives to reduce emissions and impacts. • Inclusion of GHG requirements in permits. • Implementation of new and amended emission regulations. 	Regulatory and Legislative Environment
Corporate Climate Action Services	<ul style="list-style-type: none"> • Implementation of the Corporate Climate & Energy Management System. • Development of a Measurement & Verification methodology based on international standards. • Establishment of targets for non-energy related emissions, including process/fugitive emissions. • Continuous support for departmental projects and reporting. 	Climate Action Data Management Financial Sustainability Continuous Improvement
2027 - 2029		
Air Quality Monitoring	<ul style="list-style-type: none"> • Ongoing operation of the air quality advisory program and public outreach and communication enhancements. • Conduct short-term air quality monitoring studies using the MAMU (mobile air monitoring unit) and portable monitoring instruments. 	Environmental Health
Air Quality and Climate Policy	<ul style="list-style-type: none"> • Ongoing implementation of projects and actions based on <i>Climate 2050 Roadmaps</i> and <i>Clean Air Plan</i>. • Annual reporting on performance and progress toward targets. • Annual update of GHG emissions inventory. • Ongoing collaboration with member jurisdictions. • Ongoing provincial policy review, partnerships and advocacy. • Undertake the mid-point review of the <i>Clean Air Plan</i> and <i>Climate 2050 Roadmaps</i>. 	Climate Action Environmental Health Social Equity and Human Health

Initiative	Description	Theme
Bylaw and Regulatory Development	<ul style="list-style-type: none"> • Development of new and amended emission regulations for priority sources. 	Environmental Health Climate Action
Air Quality Regulation	<ul style="list-style-type: none"> • Ongoing implementation of new and amended emission regulations. • Continue promotion of emission reduction by large emitters. • Continue integrating GHG requirements into permits. • Promote and prepare for 2029 Tier 4 non-road diesel engine bylaw requirements (2028/2029). • Review of emission and other fees for regulated facilities and equipment. 	Regulatory and Legislative Environment
Corporate Climate Action Services	<ul style="list-style-type: none"> • Implementation and continuous improvement of the Corporate Climate & Energy Management System, including Measurement & Verification, and internal communications and engagement. • Completion of comprehensive Energy Management Information System • Continuous support for departmental projects and reporting. 	Climate Action Data Management Financial Sustainability Continuous Improvement

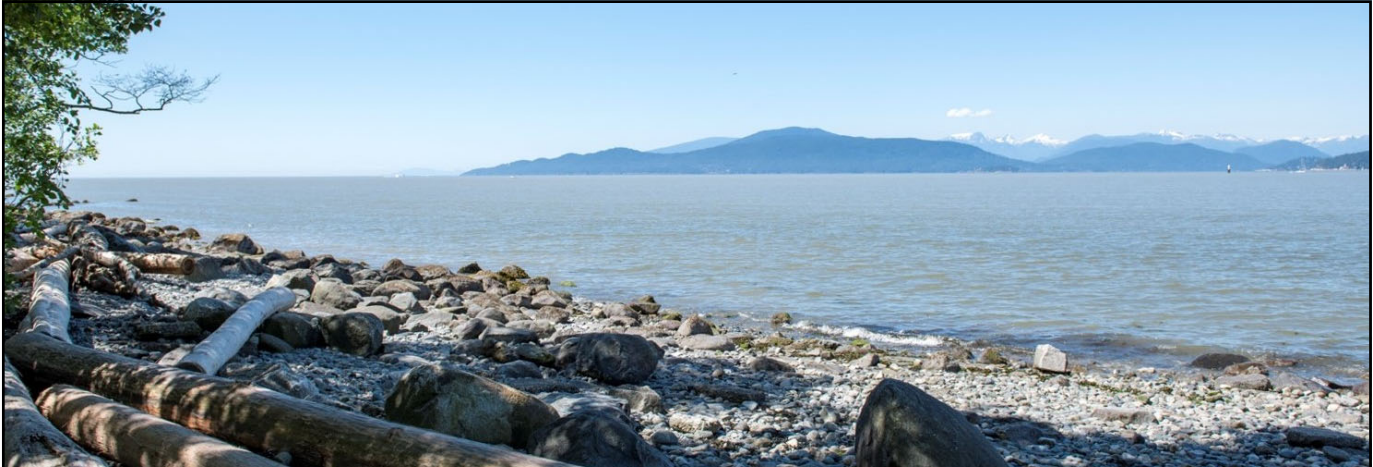
METRO VANCOUVER DISTRICTS
2025 - 2029 PROJECTED RESERVES - AIR QUALITY AND CLIMATE ACTION

OPERATING RESERVES

	2024 ENDING BALANCE	2025 OPENING BALANCE	CONTRIBUTION	WITHDRAWALS	INTEREST	2025 ENDING BALANCE	2026 ENDING BALANCE	2027 ENDING BALANCE	2028 ENDING BALANCE	2029 ENDING BALANCE
Air Quality	\$ 882,099	\$ 882,099	\$ -	\$ -	\$ 22,052	\$ 904,151	\$ 926,755	\$ 949,924	\$ 973,672	\$ 998,014

DISCRETIONARY RESERVES

	2024 ENDING BALANCE	2025 OPENING BALANCE	CONTRIBUTION	WITHDRAWALS	INTEREST	2025 ENDING BALANCE	2026 ENDING BALANCE	2027 ENDING BALANCE	2028 ENDING BALANCE	2029 ENDING BALANCE
Air Quality General Reserve	\$ 3,626,453	\$ 3,626,453	\$ 800,000	\$ (1,948,125)	\$ 76,310	\$ 2,554,638	\$ 1,653,806	\$ 1,126,547	\$ 730,963	\$ 161,394



Pacific Spirit Regional Park

2025 – 2029 FINANCIAL PLAN

METRO VANCOUVER REGIONAL DISTRICT – AIR QUALITY AND CLIMATE ACTION

Conor Reynolds

Director, Air Quality & Climate Action Services

October 3, 2024
68633130

Julie Saxton

Program Manager, Enforcement and Regulation - Air Quality,
Environmental Regulation and Enforcement



AIR QUALITY AND CLIMATE ACTION FUNCTION OVERVIEW

Air Quality, Climate Action, and Environmental Regulation & Enforcement over the next 5 years

- **Measure and report** emissions to track progress and inform policies and actions
- **Develop and enforce** air quality regulations to protect human health and environment
- **Implement** the *Clean Air Plan* and *Climate 2050*, in support of Board-adopted targets
- **Coordinate and support** organization-wide corporate climate and energy management

50+ YEARS OF CLEANER AIR

- Air quality critical for human health protection
- Metro Vancouver responsible for air quality and reducing air contaminant emissions since 1972
- 10 air quality regulations and about 150 permits and approvals



Vancouver, 1939

3

BOARD STRATEGIC PLAN

Air Quality and Climate Action

- Provide world-class air quality management services
- Introduce measures to reduce emissions from key sectors
- Promote transition to clean, renewable energy
- Implement corporate climate action
- Integrate social equity into air quality and climate policies



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PERFORMANCE METRICS

Air Quality and Climate Action

Key Performance	Past Performance (Average)	Expected Performance 2025
Days under an air quality advisory (Emission sources located within airshed)	2019-2023 avg: 3.2 days	< 3 days
Reliability of air quality monitoring network (% of annual data available)	2019-2023 avg: 97%+	> 95%
Cumulative number of non-road diesel engines retired since 2012	2023: 353	365
Number of inspections of equipment and permitted or regulated sites	Non-road diesel engines • 2023: 590 Permitted and regulated sites • 2023: 184	600 170

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PERFORMANCE METRICS

Air Quality and Climate Action

Key Performance	Past Performance (Average)	Expected Performance 2025
Regional GHG emissions (On-road transportation and buildings)	On-road Transportation • 2022: 6.5 MtCO ₂ e	~6.3 Mt CO ₂ e
	Buildings • 2022: 4.7 Mt CO ₂ e	~5.0 Mt CO ₂ e
Corporate energy-related GHG emissions (Direct and contracted sources)	2022: 28,048 t CO ₂ e	26,200 t CO ₂ e

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CONTINUOUS IMPROVEMENT – 2024 COMPLETE OR ONGOING

Air Quality and Climate Action

Initiative	Outcomes
New five-year, high-resolution meteorological model database	<ul style="list-style-type: none"> Improved air quality assessments of existing and future facilities and projects Lower cost dispersion modelling procedures (with BC Government)
Establish Corporate Climate Action Services program	<ul style="list-style-type: none"> Lead by example Integrate energy and GHG management across all functions
Enhanced transparency of regulatory program	<ul style="list-style-type: none"> Increased awareness of (and compliance with) bylaw processes and requirements

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CONTINUOUS IMPROVEMENT – 2025 NEW

Air Quality and Climate Action

Initiative	Outcomes
Enhancements to Air Quality Monitoring Network	<ul style="list-style-type: none"> Improvements in communication to the public and partner agencies, especially during advisory events that are more frequent due to climate change
New analytical approaches and software for large datasets	<ul style="list-style-type: none"> Improved understanding and visualization of air quality, energy, and emissions data to inform policy development and program implementation
Establish Corporate Climate & Energy Management Framework	<ul style="list-style-type: none"> Systematic and standardized approach to climate action across functions Clear metrics to monitor and report on progress

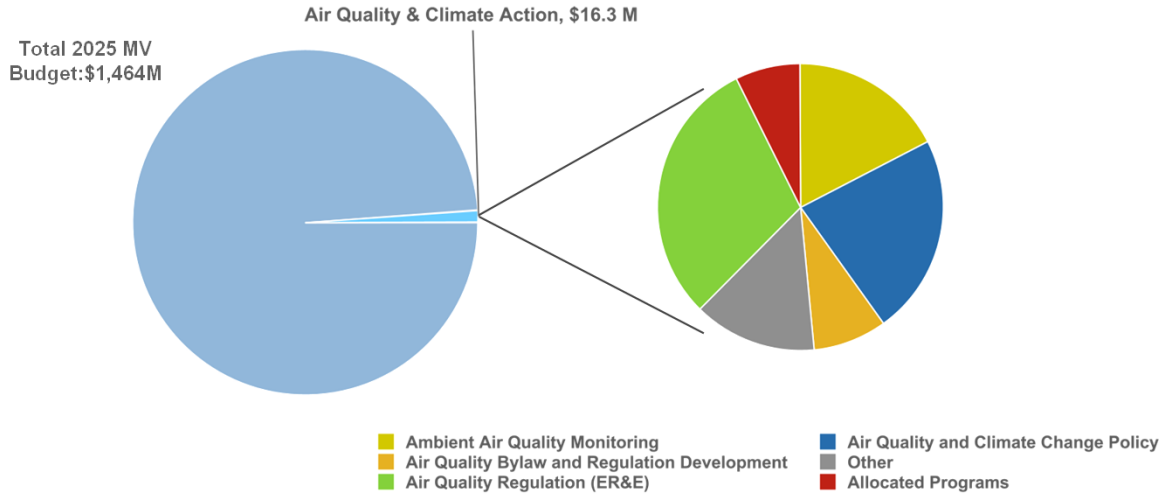
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BUDGET OVERVIEW

Air Quality and Climate Action Financial Plan

2025 Operating Budget Breakdown – Air Quality and Climate Action



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OPERATING EXPENDITURES

Air Quality and Climate Action Financial Plan

Overview:

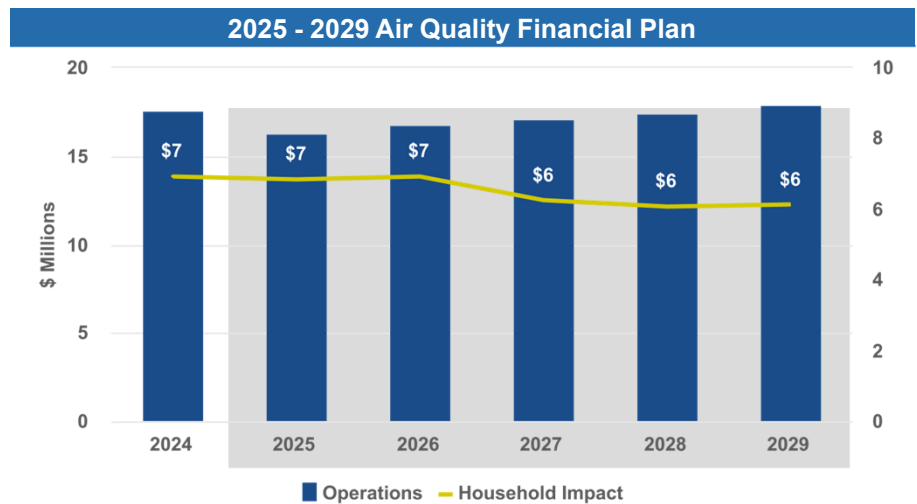
2024 Operating Budget: **\$17.6M**

2025 Operating Budget: **\$16.3M**

7.2% decrease

Drivers for Change:

- Operations increase is largely inflationary
- 46% paid by fees and grants
- 2025 SIF project proposals not included (considered by MVRD Board in Q1 2025)
- Air Quality Instrument Shop replacement planned for 2026



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OPERATING FUNDING

Air Quality and Climate Action Financial Plan

Overview:

2024 Operating Budget: **\$17.6M**

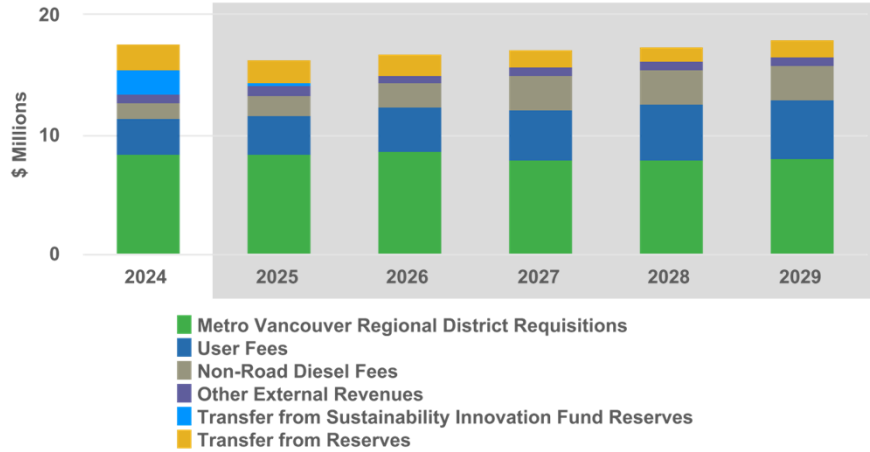
2025 Operating Budget: **\$16.3M**

7.2% decrease

Drivers for Change:

- Amendments to air quality fees bylaw (2021) resulting in improved cost recovery from regulated and permitted sources
- Provincial funding for climate action (~\$250k in 2025, 2026) through Local Government Climate Action Program
- Fees from AQ monitoring service agreements (~\$450K in 2025)

2025 - 2029 Air Quality Financial Plan



OPERATING HIGHLIGHTS

Air Quality and Climate Action 2025

Budget	Initiative	Description
2025	Continue to implement the "Big Moves" in the <i>Clean Air Plan</i> and <i>Climate 2050</i>	Prioritize actions that improve air quality and that reduce regional emissions
	Develop additional air quality monitoring and emissions assessment capabilities	Leverage air quality data for performance measurement; reflect climate impacts in advisory services
	Update and develop emission regulation bylaws	Advance regulatory policy options that reduce emissions to protect human health and environment
	Implement priority air quality regulation and enforcement activities	Advertise 2025 residential indoor wood-burning requirements; enforce expanded Non-road Diesel Engine bylaw
	Establish Corporate Climate & Energy Management Framework	Develop systematic and standardized approach to corporate GHG emissions reduction, energy management, and resilience/adaptation

OPERATING HIGHLIGHTS

Air Quality and Climate Action 2026 - 2029

Budget	Initiative	Description
2026 - 2029	<i>Clean Air Plan and Climate 2050</i>	Accelerate implementation of priority Big Moves; annual reporting and emissions inventory updates
	Implement Corporate Climate & Energy Management System	Ongoing implementation of system to continuously improve energy management and emissions reductions across functions
	Sustainability Innovation Funds	Undertake innovative air quality and climate action projects
	Air Quality Regulation & Enforcement	Promote compliance with permits, and new and updated emission regulations

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AIR QUALITY FINANCIAL PLAN SUMMARY

Air Quality and Climate Action 2024 - 2029

	2024	2025	2026	2027	2028	2029
Total Expenditures	\$17.6	\$16.3	\$16.8	\$17.1	\$17.4	\$17.9
% Change		(7.2%)	2.9%	2.1%	1.8%	2.9%
MVRD Requisitions (\$ Millions)	\$8.4	\$8.4	\$8.6	\$7.9	\$7.8	\$8.1
Household Impact (\$)	\$7	\$7	\$7	\$6	\$6	\$6
% Change		(1.0%)	1.0%	(9.7%)	(2.6%)	1.0%
Prior Cycle Household Impact Change (%)	8.1%	(0.4%)	(6.4%)	(10.8%)	(3.1%)	N/A

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SUMMARY

Air Quality and Climate Action

- Clean air is vital for human health
- 50+ years of air quality management and emissions reduction
- Managing air quality challenges due to climate-related heat and wildfire smoke events
- Air Quality Regulation program operates under principle of cost recovery



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TOGETHER
WE MAKE OUR REGION
STRONG

Questions?

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16

To: Climate Action Committee

From: John Lindner, Air Quality Planner, Air Quality and Climate Action Services
Sara Muir, Air Quality Planner, Air Quality and Climate Action Services

Date: September 6, 2024 Meeting Date: October 3, 2024

Subject: **Addressing Air Contaminant Emissions from Medium and Heavy Trucks**

RECOMMENDATION

That the Climate Action Committee receive for information the report dated September 6, 2024, titled “Addressing Air Contaminant Emissions from Medium and Heavy Trucks”.

EXECUTIVE SUMMARY

Medium and heavy trucks emit 10 per cent of diesel particulate matter emissions and 12 per cent of nitrogen oxides emissions in the region, according to Metro Vancouver’s emissions inventory. Diesel particulate matter and nitrogen dioxide (the primary component of nitrogen oxides) are two of the air contaminants with the largest health impacts in our region. Metro Vancouver’s Board adopted *Clean Air Plan* and *Climate 2050 Transportation Roadmap* include multiple actions that aim to reduce emissions from this sector. This report outlines current policies targeting these emissions, and identifies potential opportunities to further reduce emissions based on policies in other jurisdictions.

Current policies are already helping to reduce air contaminants from these vehicles, primarily by supporting vehicle owners to transition to cleaner vehicles and use renewable fuels. Additional effort is needed to sustain and accelerate these reductions to meet regional targets. Metro Vancouver is working with the BC Government, TransLink, and the Port of Vancouver to evaluate potential policies to further reduce emissions from medium and heavy trucks, focusing on minimizing tampering with emission controls. Metro Vancouver is also working on several projects to reduce corporate trucking-related emissions: converting fleet vehicles to electric vehicles, and exploring zero emission vehicles for waste hauling.

PURPOSE

To provide an update to the Climate Action Committee about approaches to reducing emissions from medium and heavy trucks in the Metro Vancouver region, in particular health-harming air contaminants.

BACKGROUND

For more than 50 years, Metro Vancouver has provided the service of air quality management for the region. Under the BC *Environmental Management Act*, Metro Vancouver is responsible for managing the discharge of air contaminants from regional sources, which include medium and heavy trucks (MHTs). Metro Vancouver’s *Clean Air Plan* and *Climate 2050 Transportation Roadmap* both include a long-term goal that “all medium and heavy trucks and rail locomotives operating within the region use zero emission technologies powered by clean, renewable energy”. Metro

Vancouver and its partners are working to implement actions and strategies to reduce truck emissions and support the adoption of zero emission MHTs. The Climate Action Committee 2024 Work Plan directs staff to provide an update on emission reduction approaches for medium and heavy trucks – this report responds to that direction.

MANAGING EMISSIONS AND IMPACTS FROM MEDIUM AND HEAVY TRUCKS

Over 60,000 medium and heavy trucks drive on roads in the Metro Vancouver region¹, mostly for goods movement. While these trade activities support the regional economy, MHTs collectively are a significant regional source of air contaminants, including both health-harming air contaminants and greenhouse gases (GHGs).

MHTs account for 10 per cent of diesel particulate matter emissions and 12 per cent of nitrogen oxides emissions in the region, according to Metro Vancouver's emissions inventory. Diesel particulate matter and nitrogen dioxide (the primary component of nitrogen oxides) are two of the air contaminants with the largest health impacts in our region.

Near-road air quality monitoring conducted by Metro Vancouver and its partners shows that emissions from MHTs contribute disproportionately to air quality impacts along major roads in the region (Reference 1). Over one million Metro Vancouver residents live near a major road, increasing their exposure to and health risk from health-harming air contaminants from transportation sources. Children, the elderly and people with pre-existing conditions are most at risk.

MHTs are also a significant source of GHG emissions (about five percent of the regional total). The emissions inventory indicates that these emissions are not expected to change over the next 15 years with current policies, in contrast to GHG emissions from personal vehicles (cars, light trucks and SUVs), which are expected to reduce significantly over the next 15 years.

Current policies and programs are helping to reduce some emissions from MHTs. Additional effort is needed from governments and others to sustain and accelerate these reductions, to meet regional MHT emission targets and improve public health.

Solutions and Challenges to Reduce Emissions from Medium and Heavy Trucks

Evidence and experience from other jurisdictions have shown that there are three primary ways to reduce air contaminant emissions from MHTs:

1. Transition to vehicles that emit less (i.e., new engines) or zero emission (i.e., battery-electric and hydrogen fuel cell vehicles);
2. Switch to vehicles that use renewable fuel (primarily renewable diesel); and
3. Shift truck trips to lower emission modes (e.g., rail, short-sea shipping, cargo bikes).

Governments and other organizations have adopted (or are considering) policies and programs that implement these solutions within the region, including:

¹ Medium and heavy trucks include on-road vehicles in weight classes 3-8 (gross vehicle weight rating above 10,000 pounds); in the region, most are semi-tractors and box/cube trucks.

- Current engine emission and fuel economy standards (adopted by the Government of Canada) set increasingly stringent emission limits for new medium and heavy trucks;
- Current clean fuel or low carbon fuel standards (adopted by the Governments of Canada and BC) increase the renewable content of fuels and reduce their aggregate climate impact;
- Future zero emission vehicle (ZEV) sales requirements (under consideration by the Governments of Canada and BC) would increase the availability of zero emission MHTs;
- Current incentive and rebate programs (provided by the Governments of BC and Canada) reduce the cost of cleaner trucks, including zero emission trucks;
- Current inspection and registration programs (operated by the Government of BC and the Port of Vancouver) help reduce emissions from some in-use medium and heavy trucks; and
- Current outreach campaigns and certifications programs (provided by governments and the trucking industry) help fleets and companies adopt lower emission trucking practices.

The key challenges to reducing regional emissions from this sector include the low availability, and relatively high cost, of zero emission vehicles and renewable fuels, and the lack of charging and hydrogen refueling infrastructure for MHTs. Another challenge is the growing evidence that some truck owners or operators are tampering with their vehicle’s engine emission controls, which significantly increases emissions of health-harming air contaminants. If tampering proves to be widespread, Metro Vancouver’s emission inventory likely underestimates emissions of health-harming air contaminants from MHTs. Tables 1 and 2 describe the pathways, current policies, and challenges in more detail.

Table 1: Solutions and Barriers to Reduce Emissions from Medium and Heavy Trucks

Emissions Reduction Solutions	Barriers to Solutions
<p>Transition to new, cleaner engines and zero emission vehicles</p> <ul style="list-style-type: none"> • Newer engines emit less air contaminants and are more fuel efficient than older engines. Zero emission vehicles such as battery-electric and hydrogen fuel cell vehicles and vehicles emit no tailpipe emissions. 	<ul style="list-style-type: none"> • Low supply and higher costs for cleaner and zero emission vehicles • Limited availability of charging stations and hydrogen refueling facilities • Tampering with emission controls in existing vehicles
<p>Switch to renewable fuels</p> <ul style="list-style-type: none"> • Replace diesel (most common fuel used in medium and heavy trucks) with renewable diesel and related renewable fuels, which have a lower carbon intensity per litre combusted 	<ul style="list-style-type: none"> • Low supply and higher cost of renewable diesel (and other renewable fuels)
<p>Shift some truck trips to lower emissions modes</p> <ul style="list-style-type: none"> • Shift to rail and marine for longer distances and largest loads • Increase use of cargo and electric bikes for smaller loads and last-mile deliveries 	<ul style="list-style-type: none"> • Lack of available rail lines • Lack of port terminals in region designed to enable short-sea shipping

Table 2: Summary of Regulations Targeting Emissions from Medium and Heavy Trucks

Policy or Program	Lead Agency(ies)	Metro Vancouver's Role(s)	Solutions Pathways Supported
<p>Engine and fuel economy emission standards. These standards, which have been getting more stringent for 20 years, set maximum emission and fuel economy limits for new engines used in medium and heavy trucks. These standards will become more stringent in 2027.</p>	Government of Canada	Technical advice and advocacy	Increase availability of cleaner engines and zero emission vehicles
<p>Low carbon and clean fuel standards. These standards use financial incentives to encourage greater availability of renewable fuels, such as renewable diesel, ethanol and renewable natural gas. Renewable fuels have a lower lifetime carbon content. Under current regulations, by 2030, diesel sold in BC would include 19% renewable content.</p>	Governments of BC and Canada	Technical advice and advocacy	Increase supply of renewable fuels
<p>Zero emission vehicle sales requirements. The Governments of BC and Canada are consulting on establishing zero emission vehicle sales requirements for medium and heavy trucks (both already have similar sales requirements for cars, light trucks and SUVs). The sales requirements would require automakers to sell an increasing proportion of new zero emission trucks. In BC, the sales targets would not come into effect until after 2026.</p>	Governments of BC and Canada	Technical advice and advocacy	<p>Increase availability of zero emission vehicles</p> <p>Reduce cost of zero emission vehicles</p>
<p>Trucking Licensing System (TLS). The Port of Vancouver's TLS program establishes maximum emission levels from existing heavy trucks serving its port terminals. The Port of Vancouver is exploring options to further reduce emissions from this sector, after pausing their Rolling Truck Age Program in 2023.</p>	Port of Vancouver	Technical advice and advocacy	Increase the use of new, cleaner engines
<p>Clean Carrier Program. Certification program promotes lower emission trucking practices among trucking companies based in BC. To be certified, companies must use newer vehicles and adopt various emission reduction practices, such as fuel and idle management practices, and use of renewable fuels.</p>	BC Trucking Association	Member of program technical advisory committee	<p>Increase use of new, cleaner engines and zero emission trucks</p> <p>Improve fuel efficiency and increase use of renewable fuels</p>

Policy or Program	Lead Agency(ies)	Metro Vancouver's Role(s)	Solutions Pathways Supported
<p>Incentive, rebate, and education programs. These programs provide energy assessments and best practices guidance, and support fleets with retrofits and engine re-powers. The programs also provide rebates to offset the cost of purchasing new engines and zero emission vehicles (including charging and fueling infrastructure costs).</p>	<p>Governments of BC and Canada, working with trucking industry</p>	<p>Advocacy</p>	<p>Reduce cost of new, cleaner engines and zero emission trucks, and related infrastructure</p> <p>Improve fuel efficiency</p>

Metro Vancouver Initiatives to Reduce Emissions from Medium and Heavy Trucks

As identified in the *Clean Air Plan* and *Climate 2050 Transportation Roadmap*, Metro Vancouver helps to advance the policies described in Table 2 by advocating for proven policy solutions, convening regional partners when needed, participating in program advisory committees, and providing technical advice and feedback. In addition to supporting the policies and programs of others, Metro Vancouver is leading other regional and corporate initiatives to help reduce emissions from MHTs. These include:

- Purchasing electric vehicles (including electric MHTs as they become available) and installing charging infrastructure at Metro Vancouver sites through the corporate MetroFleet emission reduction plan;
- Working with member jurisdictions on a zero emissions hauling project to develop the business case and explore the cost benefits of shifting municipal solid waste hauling to zero emission vehicles; and
- Working with the BC Government, TransLink and the Port of Vancouver to evaluate potential policies or programs that could further reduce emissions from MHTs, focusing on minimizing the impact of tampering on air quality in the region. Recommendations will identify potential roles for project partners, which could include Metro Vancouver. Staff plan to report back to the CAC with these recommendations in the latter half of 2025.

Table 3 describes these projects in more detail.

Table 3: Metro Vancouver Projects to Reduce Corporate and Regional Emissions from Medium and Heavy Trucks

Project	Partner Agency(ies)	Project Status / Timing
<p>MetroFleet's emission reduction plan. Plan aims to reduce corporate fleet GHG emissions by 65% by 2030. MetroFleet is replacing gas and diesel vehicles with 300 electric vehicles (EVs), to be purchased by</p>	<p>n/a</p>	<p>Corporate fleet currently includes 68 light-duty EVs</p> <p>Begin procuring and</p>

<p>2030. Metro Vancouver is also building the required infrastructure to enable purchase of medium and heavy duty EVs.</p>		<p>installing appropriate chargers for medium and heavy duty EVs in 2024</p>
<p>Zero emission hauling: Leading the way to clean transportation. This project is exploring the business cases and cost benefit analyses of transitioning to zero emission vehicles for hauling solid waste, drinking water treatment residuals, and biosolids.</p>	<p>Member jurisdictions</p> <p>Hauling companies</p>	<p>Exploring ways for quicker zero emission vehicle transition for municipal solid waste trucks</p> <p>Creating a scalable transition model for all member jurisdictions</p>
<p>Policy options to reduce trucking emissions. Policy evaluation project will explore scale of air contaminant emissions from the BC and regional trucking sector, and will develop recommendations of new or modified regulatory policies that the project partners could implement to address these emissions. A key focus of the project is the increasing incidence of tampering with emission controls.</p>	<p>BC Government</p> <p>TransLink</p> <p>Port of Vancouver</p>	<p>Consultant to be hired in Fall 2024</p> <p>Staff to bring report to CAC in latter half of 2025</p>

Next Steps

Metro Vancouver will continue to engage with partners to explore and advocate for stronger emissions reduction policies and programs for medium and heavy trucks. Staff will continue to assess the impacts of this sector, through monitoring and analysis. Staff will report back to the Committee and MVRD Board on the above projects at a later date, including any results, recommendations, and potential roles for Metro Vancouver.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Funding for the projects described in this report was included in Board-approved 2024 budgets for Air Quality and Climate Action Services and related program areas.

CONCLUSION

Medium and heavy trucks are a significant source of air contaminants that harm human health and the environment. Metro Vancouver works with partners to support and implement policies that help vehicle owners to transition to cleaner vehicles and renewable fuels, as well as shift trips to lower emission modes where possible. Staff are working with key partners (including member jurisdictions, the BC Government, TransLink, and the Port of Vancouver) on collaborative projects to evaluate emission reduction options, and will report back with results at a later date.

ATTACHMENT

1. Presentation re: Medium and Heavy Duty Trucks: Current Actions and Future Opportunities to Address Emissions.

REFERENCE

1. [Metro Vancouver Near-Road Air Quality Monitoring Study Summary - November 2019](#)

66652157



Electric Truck for Waste Collection at BC Trucking Association Expo

Medium and Heavy Truck Emissions

CURRENT ACTIONS AND FUTURE OPPORTUNITIES TO REDUCE EMISSIONS

John Lindner

Air Quality Planner, Air Quality and Climate Action Services

Sara Muir

Air Quality Planner, Air Quality and Climate Action Services

Climate Action Committee, October 3, 2024
69528939

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MEDIUM AND HEAVY TRUCKS

Categories

- Class 3 to Class 8 vehicles
- Weight rating above 4,536 kg (10,000 lbs)
- Over **60,000 MHTs** operate in the Metro Vancouver region



Image Source: Examples of Trucks adapted from Fact #707: December 26, 2011
[Illustration of Truck Classes](#) Vehicle Technologies Office

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2

HEALTH AND ENVIRONMENTAL IMPACT

Medium and Heavy Trucks

- Contributes 10% diesel particulate matter and 12% nitrogen oxides emissions in region
- Contribute to air quality impacts along major roadways
- Potential exposure risk for over one million residents
- Significant contributions to greenhouse gas emissions (about 5% of regional total)



SOLUTIONS PATHWAYS

Medium and heavy trucks' emissions reductions

- Transition to new, cleaner engines and zero emission vehicles
- Switch to renewable fuels
- Shift truck trips to lower emission modes



Photo Credit: © Copyright AB Volvo 2024

MAIN POLICIES

Medium and heavy truck emissions reductions policies

- Engine emission and fuel economy standards (Government of Canada)
- Clean fuel and low carbon fuel standards (Governments of BC and Canada)
- Zero emission vehicle sales requirements (Governments of BC and Canada)
- Incentives and rebate programs (Governments of BC and Canada)
- Inspection and registration programs (BC Government and Port of Vancouver)
- Outreach campaigns and certification programs (governments and industry)

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WHAT METRO VANCOUVER IS DOING

Corporate and Collaborative Initiatives

- Corporate MetroFleet Emission Reduction Plan
- Zero Emissions Hauling Project
- Trucking Emission Study (collaboration with the BC Government, TransLink and the Port of Vancouver)



Photo Credit: Jake Romphf/Goldstream News Gazette

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6



Industrial lands in Richmond and Vancouver

Questions or Comments

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7

To: Climate Action Committee

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

Date: September 6, 2024 Meeting Date: October 3, 2024

Subject: **Public Education about Residential Indoor Wood Burning Requirements**

RECOMMENDATION

That the MVRD Board receive for information the report titled “Public Education about Residential Indoor Wood Burning Requirements”, dated September 6, 2024.

EXECUTIVE SUMMARY

Wood smoke from residential indoor wood burning is the most significant source of emissions of fine particulate matter (PM_{2.5}) in the region, contributing more than a quarter of the total annual regional PM_{2.5} emissions, and is the second top source of toxic air pollutants. 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_{2.5} and its known health impacts by promoting the use of cleaner wood-burning practices and technologies.

A recent survey indicated that most Metro Vancouver residents are unaware of the requirements of Bylaw 1303. To build greater awareness of the requirements of Bylaw 1303, a public education campaign is scheduled for October through December 2024. It will help residential indoor wood burning appliance owners and users understand the actions they need to take to continue using their wood burning stoves and fireplaces after the final phase of Bylaw 1303 comes into effect in September 2025.

PURPOSE

The purpose of this report is to provide information to the Climate Action Committee and MVRD Board about the *Metro Vancouver Regional District Residential Indoor Wood Burning Emission Regulation Bylaw No. 1303, 2020* (Bylaw 1303), and how it will be promoted via a public education campaign.

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, Metro Vancouver adopted Bylaw 1303 to reduce the health and environmental impacts of emissions from residential indoor wood burning (Reference 1). The bylaw brought in requirements in phases starting in 2020. 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. This report provides additional information about Bylaw 1303 and the public

education initiative introduced in the information report presented to the Climate Action Committee on June 13, 2024.

RESIDENTIAL INDOOR WOOD BURNING

Bylaw 1303 Context

Wood smoke from residential indoor wood burning is the most significant source of emissions of fine particulate matter (PM_{2.5}) in the Metro Vancouver region, contributing more than a quarter of the total annual regional PM_{2.5} emissions, and is the second top source of toxic air pollutants. 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 was adopted in 2020 after an extensive consultation process and review of the regulatory approaches taken in other jurisdictions, including the City of Montreal (Reference 2), Puget Sound Clean Air Agency (Reference 3), and Northwest Clean Air Agency (Reference 4). It is designed to reduce emissions of harmful air contaminants, and so reduce exposure and the known health impacts (Reference 5).

Bylaw Implementation

Bylaw 1303 applies to indoor wood burning appliances, e.g., wood stoves and fireplaces, in all residences within Metro Vancouver, with more stringent requirements in more densely populated areas to achieve emission reductions where they will have the greatest benefits for health protection. The continued implementation of requirements addresses emissions of the harmful air contaminants from residential indoor wood burning appliances by promoting the use of cleaner wood-burning practices and technologies, including the use of cleaner burning appliances and fuels.

The requirements to use Best Burning Practices (Reference 6) came into effect immediately on adoption of Bylaw 1303, strengthening measures that existed in the *GVRD Air Quality Management Bylaw No. 1082, 2008*. Subsequently, in May 2021 the seasonal prohibition came into effect, which prohibits the use of residential indoor wood burning appliances such as wood stoves and fireplaces, between May 15 and September 15 every year unless they are the sole source of heat in a home, in an off-grid rural home, or during an emergency. Most recently, since September 2022, residents are required to declare that they use Best Burning Practices and to register eligible appliances that are located within the Urban Containment Boundary. Implementation will culminate in September 2025 with a prohibition on the use of unregistered appliances located within the Urban Containment Boundary, with some exceptions for emergency use, and equity provisions to ensure that residents can heat their homes when necessary.

Survey work reported by the BC Lung Association indicates that although a majority of residents in Metro Vancouver support establishing emission control requirements to reduce smoke emissions from residential indoor wood burning, only a small minority of residents are aware that a bylaw already exists, and that the final phase of requirements is coming into effect in September 2025 (Reference 7).

Public Education Campaign Research

Earlier this year, Metro Vancouver conducted focus groups with residents who actively use wood-burning devices in their homes. Key findings were:

- Participants have an emotional attachment to their fireplaces.

- Use of the term “appliance” caused confusion for residents in this context.
- Participants were skeptical of statistics and claims that wood smoke from indoor wood burning is the leading source of fine particulate matter (PM_{2.5}) in the region, often leading them to dismiss the rest of the message.
- Participants identified positively with images of children, families, and neighbourhoods that emphasized a community health message and responsibility.
- Participants reacted positively to upfront messaging about the upcoming deadlines to declare and register.

Public Education Campaign Strategy

The campaign will focus on positive and action-oriented messaging while leveraging concepts of community and family health to reinforce the call-to-action (see Attachment 1 for examples).

The campaign will run from October 21 to December 30, 2024 and will aim to:

- Increase awareness of Bylaw 1303 and actions residents need to take so that they can continue to use wood burning stoves and fireplaces after September 2025;
- Ensure indoor wood-burning device owners and operators understand how to comply with Bylaw 1303, including registering their devices and declaring that they will use "Best Burning Practices";
- Educate residents on the health and environmental impacts associated with wood smoke emissions; and
- Direct residents to Metro Vancouver’s online declaration and registration system.

The primary target audience is residents who own or operate wood burning fireplaces, stoves, and furnaces in the Metro Vancouver region, particularly those aged 34 to 74, with a 75% skew towards homeowners. Secondary audiences include multi-unit building owners and managers, stratas, Landlord BC, the Condo Homeowners Association, and wood retailers, which are groups that will be reached outside of the media buy.

Promotion

A combination of broad awareness efforts and highly focused media placements will be used to reach the target audience and encourage declarations and device registrations. Promotions meant to increase awareness will appear in radio, Amazon Prime video, newsprint, and Facebook and Instagram video. Promotions intended to drive traffic to the registration page include digital display banner ads, and Facebook Feed and Marketplace image ads. Additionally, community outreach is being considered in areas that receive the highest wood smoke complaints.

Campaign materials will be made available to all Metro Vancouver members, including social media content, and video. Members will have the option to create co-branded assets (e.g., posters, newsprint).

Measurement

Campaign performance will be determined by:

- Media performance
- Website analytics

- Earned media coverage
- Social media engagement
- Completed declarations and registrations during the campaign period

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. The total budget for this work, which includes focus group research, planning, and execution of the 2024 campaign, is \$150,000.

CONCLUSION

Bylaw 1303 is designed to reduce emissions of and exposure to PM_{2.5} 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. Building on implementation of Bylaw 1303 to date, the final phase of requirements coming into effect in September 2025 restricts use of appliances in urban areas to those that are registered, unless exempt from registration.

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 October 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, fireplaces and furnaces after September 2025. The report provides information about how and when the campaign will be conducted.

ATTACHMENTS

1. Sample Creative for Residential Indoor Wood Burning Requirements Public Education Campaign, dated September 6, 2024
2. Presentation re: 2024 Residential Indoor Wood Burning Public Education Campaign

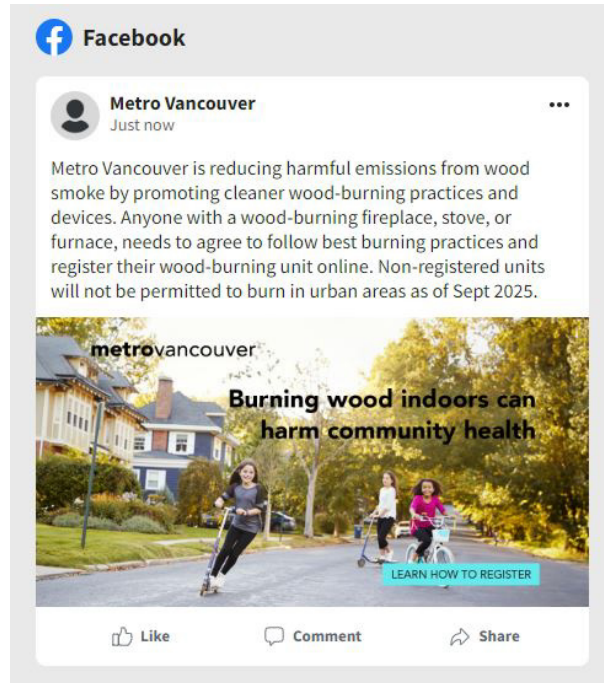
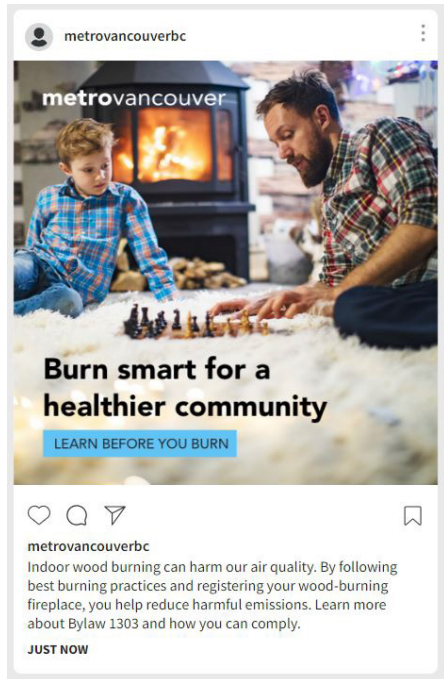
REFERENCES

1. [Metro Vancouver - About the Residential Indoor Wood Burning Bylaw](#)
2. [City of Montreal - Requirements for Solid Fuel-Burning Stoves and Fireplaces, dated February 24, 2023](#)
3. [Puget Sound Clean Air Agency - Solid Fuel-burning Device Requirements](#)
4. [Northwest Clean Air Agency - information About Wood Heating Requirements](#)
5. [BC Lung Foundation - Wood Smoke & Lung Health](#)
6. [Metro Vancouver - Bylaw 1303 Best Burning Practices information](#)
7. [BC Lung Foundation - Wood Burning Provincial Survey, dated February 2024](#)

**Sample Creative for Residential Indoor Wood Burning Requirements Public Education Campaign
September 6, 2024**

Please note that sample creative shown here is draft. Stock photography will be replaced to include photos representing a more diverse audience and average neighbourhood.

Social Media



Newsprint Ad





Residential Indoor Wood Burning Bylaw 1303

2024 PUBLIC EDUCATION CAMPAIGN UPDATE

Jay Soper

Communications Specialist, Corporate Communications

Climate Action Committee Meeting, October 3, 2024
70257274

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RESIDENTIAL INDOOR WOOD BURNING

- Residential indoor wood burning bylaw adopted in 2020
 - Over a quarter of fine particulate matter emissions
 - Second top source of toxic air pollutants
- Majority of residents support a bylaw
- Final phase of requirements come into effect in 2025



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RESEARCH

Focus Group

What we heard:

- Emotional attachment to fireplaces
- Confusion over the term “appliance”
- Skepticism about the impact of indoor wood smoke emissions in the region
- Positive reception of community health messages
- Clear deadlines for registration well-received

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Protect Our Health. Burn Responsibly.

Burning wood harms respiratory health.
Metro Vancouver reduces wood smoke emissions by promoting cleaner wood-burning practices and technologies.

Protect our communities' health by registering your wood-burning appliances and agree to follow best burning practices.

Register today: scan the QR code or visit metrovancover.org (search: 'Residential Wood Burning')

Questions?
604-451-6677 riwb@metrovancover.org

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Burning wood indoors harms community health

That's why Metro Vancouver is taking steps to reduce wood-smoke emissions.

If you have a wood-burning fireplace, register it today and agree to follow best burning practices. Non-registered appliances will not be permitted in urban areas as of Sept 2025.

Together we can keep our air clean.

Register online using the QR code or visit metrovancover.org (search: 'Residential Wood Burning')

Questions?
604-451-6677 riwb@metrovancover.org

Draft materials shared during focus groups

CAMPAIGN STRATEGY

In-Market Dates

- October 21 – December 30, 2024

Objectives

- Increase awareness of Bylaw 1303 and the actions residents need to take
- Ensure residents understand how to comply with Bylaw 1303
- Educate residents on the health and environmental impacts associated with wood smoke emissions
- Direct residents to Metro Vancouver’s online declaration and registration system

Audience

- Primary: Residents who own/operate wood-burning devices
- Secondary: MURB owners and managers, stratas, CHOA, wood retailers

PROMOTIONAL STRATEGY

Driving awareness

- Radio (incl. Punjabi, Cantonese, Mandarin)
- Video (streaming, non-skippable)
- Facebook and Instagram ads (video)
- Newsprint

Driving traffic to web page

- Display banner ads (incl. geo-target firewood retailers)
- Facebook Marketplace ads (target people searching for wood)

DRAFT CREATIVE

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Burn smart for a healthier community

LEARN BEFORE YOU BURN

metrovancoverbc

Indoor wood burning can harm our air quality. By following best burning practices and registering your wood-burning fireplace, you help reduce harmful emissions. Learn more about Bylaw 1303 and how you can comply.

JUST NOW

Facebook

Metro Vancouver

Just now

Metro Vancouver is reducing harmful emissions from wood smoke by promoting cleaner wood-burning practices and devices. Anyone with a wood-burning fireplace, stove, or furnace, needs to agree to follow best burning practices and register their wood-burning unit online. Non-registered units will not be permitted to burn in urban areas as of Sept 2025.

Burning wood indoors can harm community health

LEARN HOW TO REGISTER

Like Comment Share

metrovancover

Burning wood indoors harms community health

That's why Metro Vancouver is taking steps to reduce wood-smoke emissions.

If you have a wood-burning fireplace, stove, or furnace, make sure you can keep using it by agreeing to follow best burning practices and registering it online. Non-registered devices will not be permitted in urban areas as of September 2025.

Together we can keep our air clean.

Register using the QR code or visit metrovancover.org (search "Residential Wood Burning")

Questions?
604-451-6677 riwb@metrovancover.org

CAMPAIGN PERFORMANCE

Measurement

- Media performance
- Website analytics
- Earned media coverage
- Social media engagement
- Completed declarations and registrations

Reporting

- Results will be provided to the Committee in early 2025

Metro Vancouver residents must register indoor wood burning fireplaces, stoves by next year

A report to Metro's climate action committee Thursday suggests launching a campaign to remind people to register their wood burning appliances.

Tiffany Crawford

Published Jun 13, 2024 • Last updated Jun 13, 2024 • 3 minute read

105 Comments



Questions?

To: Climate Action Committee

From: Derek Jennejohn, Lead Senior Engineer, Air Quality and Climate Action Services
Marcin Pachcinski, Division Manager, Electoral Area and Implementation Services

Date: September 18, 2024 Meeting Date: October 3, 2024

Subject: **Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects – Update**

RECOMMENDATION

That the MVRD Board receive for information the report dated September 18, 2024, titled “Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects – Update”.

EXECUTIVE SUMMARY

Metro Vancouver, through staff, routinely participates in provincial and federal environmental assessment processes on projects that may impact Metro Vancouver’s plans, assets, infrastructure, and legislated responsibilities. Staff also provide updates to Metro Vancouver Standing Committees and Boards at key process milestones, as this report does for the Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects.

In July 2024, the Tilbury Marine Jetty Project, comprising new liquefied natural gas (LNG) berthing and loading facilities on Tilbury Island in the Fraser River in Delta, received its final environmental assessment approval from the federal government. This project had already received provincial approval in March 2024, so can now proceed subject to the conditions set out in both approvals, which include requirements to develop air quality and greenhouse gas management plans in consultation with Metro Vancouver.

FortisBC’s Tilbury Phase 2 LNG Expansion Project, which entails adding more storage and vaporization capabilities to an existing facility on Tilbury Island, is going through a provincial environmental assessment process with federal involvement that if successful would grant it approvals from both levels of government. The Project is still in the application development and review phase of the assessment process, and FortisBC expects to submit an application for review in fall 2024, which will be reviewed by the BC Environmental Assessment Office and process participants, including Metro Vancouver.

PURPOSE

To provide the Climate Action Committee and MVRD Board with an update regarding the Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects.

BACKGROUND

At its July 29, 2022 meeting, while considering a Main Motion that was put forward by the Climate Action Committee (see Reference 1), the MVRD Board passed the following motion:

"That the MVRD Board refer the Main Motion together with the report dated July 8, 2022, titled "Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects" back to staff to report back to the Board with additional information on the Tilbury Marine Jetty environmental assessment once it has been concluded and at the appropriate time for the Phase 2 development."

This report provides a status update on both projects now that:

1. The provincial and federal environment assessments for the Tilbury Marine Jetty Project have concluded; and
2. An application to the BC Environmental Assessment Office (EAO) has been submitted for the Tilbury Phase 2 LNG Expansion Project.

TILBURY MARINE JETTY PROJECT

The Tilbury Marine Jetty Project will see a new marine jetty constructed on Tilbury Island in the Fraser River in Delta to provide berthing and loading facilities for LNG carriers and bunker vessels with a carrying capacity of up to 100,000 cubic metres. The proposed LNG fueling jetty will be used to fill carrier ships exporting LNG and bunkering vessels that then refuel ships in other locations. The project will be supplied from the existing FortisBC Tilbury LNG Plant nearby.

In the Assessment Report for the Tilbury Marine Jetty Project (Reference 2), it was noted that the Tilbury Marine Jetty Project is a distinct project from the Tilbury Phase 2 LNG Expansion Project, which will require a separate Environmental Assessment Certificate. The Tilbury Jetty Limited Partnership confirmed that the Tilbury Marine Jetty Project does not require approval of the Tilbury Phase 2 LNG Expansion Project to proceed.

Provincial Approval and Conditions

On March 27, 2024, the Government of British Columbia announced its approval of the Tilbury Marine Jetty Project. An Environmental Assessment Certificate subject to 22 conditions was issued to the Tilbury Jetty Limited Partnership (Reference 3).

The provincial approval conditions include explicit requirements for the Tilbury Jetty Limited Partnership to consult with Metro Vancouver on environmental management (conditions 10 and 11), river bed monitoring (condition 13), air quality management (condition 19), and greenhouse gas emissions (condition 20).

With respect to greenhouse gas emissions, the conditions include development of a Greenhouse Gas Reduction Plan (GGRP) for the project during operations in the Marine Terminal Area, in consultation with Metro Vancouver and others. The GGRP must include an estimation of projected annual greenhouse gas (GHG) emissions, total GHG emissions for operations, GHG emissions over the life of the project, consideration of emission reduction targets and schedules, an analysis of how municipal, provincial, national, or international mandatory GHG regulations or objectives will be achieved and an analysis of best available technologies to minimize GHG emissions.

Federal Approval and Conditions

On July 3, 2024, the Government of Canada issued the final environmental assessment decision allowing the Tilbury Marine Jetty Project to proceed. The federal project approval conditions listed in the Minister's Environmental Assessment Decision Statement include measures to reduce impacts to Indigenous Peoples' current use of lands and resources for traditional purpose, Indigenous cultural heritage, fish and fish habitat, and species at risk including the Southern Resident Killer Whale (see Reference 4).

With respect to air quality, the conditions include a requirement for the proponent to develop, in consultation with Metro Vancouver and other relevant authorities, an air quality management plan (condition 6.3) that includes mitigation measures to reduce and control air emissions, as well as a follow up program to verify the accuracy of the environmental assessment as it pertains to effects on air quality as it relates to the health of Indigenous peoples (condition 6.4).

With provincial and federal approvals granted, the Tilbury Marine Jetty Project is now able to proceed subject to the various approval conditions, including development of an air quality management plan in consultation with various levels of government, including Metro Vancouver.

TILBURY PHASE 2 LNG EXPANSION PROJECT

In December 2020, FortisBC filed a Certificate of Public Convenience and Necessity (CPCN) with the BC Utilities Commission (BCUC) to add additional storage and vaporization capabilities at the existing Tilbury LNG facility, while also replacing its 50-year old Tilbury Base Plant. As outlined in FortisBC's 2022 Long-Term Gas Resource Plan (LTGRP), the expansion of this facility is intended to improve resilience of their system to disruptions and would allow for increased LNG storage.

The proposed Tilbury Phase 2 LNG Expansion Project is undergoing a substituted Environmental Assessment (EA) review under the federal *Impact Assessment Act* and the *British Columbia Environmental Assessment Act, 2018*. The BC EAO is leading the review under the *Environmental Assessment Act (2018)*, which consists of seven phases (Reference 5).

The Tilbury Phase 2 LNG Expansion Project entered the environmental assessment (EA) review process on February 27, 2020, and is currently in the fourth stage of the EA review, i.e., the Application Development and Review phase. During the Application Development stage, the proponent works with participating Indigenous nations and EA participants to develop their Application for an Environmental Assessment Certificate. This is followed by the Application Review stage where the BC EAO, participating Indigenous nations, Technical Advisory Committee, and Community Advisory Committee review the Application and direction is provided to the proponent on revisions that should be reflected in their revised Application. FortisBC has three years from the date of the issuance of the Process Order (i.e., June 13, 2022) to submit their Application and the Application Review stage of the EA process has a 180-day review timeline. FortisBC expects to submit an application for review in fall 2024, which will be reviewed by the BC Environmental Assessment Office and process participants, including Metro Vancouver.

The BCUC issued its decision on FortisBC's 2022 LTGRP in March 2024. While the BCUC accepted the overall plan, it rejected the Resiliency Plan component of the LTGRP, noting deficiencies in the

Resiliency Plan that had been identified earlier in its review of the Tilbury LNG Storage Expansion Project. However, as FortisBC has already committed to preparing a more robust and comprehensive Resiliency Plan for its next LTGRP, the rejection of the plan is not anticipated to materially affect the review process at this time.

Metro Vancouver staff will continue to participate in the environmental assessment process for the project and provide input relative to Metro Vancouver's plans, assets, infrastructure, and legislated responsibilities. Staff will also monitor for any relevant implications for this project that may arise from the BCUC's decision on FortisBC's LTGRP (e.g., investments in LNG, as described in the Tilbury Marine Jetty project above), or future proceedings, as appropriate.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

CONCLUSION

The Tilbury Marine Jetty Project has received its necessary provincial and federal approvals, and Metro Vancouver staff will be engaged with the project team to develop the air quality management and greenhouse gas reduction plans for the various phases of the project. For the Tilbury Phase 2 LNG Expansion Project, Metro Vancouver staff will continue to review and provide comments on the application as it moves through the provincial environmental assessment process.

ATTACHMENT

1. Presentation re: Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects

REFERENCES

1. ["Tilbury Marine Jetty and Tilbury Phase 2 LNG Expansion Projects", dated July 8, 2022](#)
2. [BC Environmental Assessment Office - Assessment Report for Tilbury Marine Jetty Project, dated October 7, 2022](#)
3. [Provincial Environmental Assessment Certificate – Table of Conditions](#)
4. [Federal Minister's Environmental Assessment Decision Statement re the Tilbury Marine Jetty Project, dated July 3, 2024](#)
5. [BC Environmental Assessment Process, dated January 24, 2024](#)

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FortisBC Tilbury LNG Plant along the Fraser River in Delta

Tilbury Marine Jetty and Phase 2 LNG Expansion

PROJECT UPDATES

Derek Jennejohn

Lead Senior Engineer, Air Quality and Climate Action Services

Marcin Pachcinski

Division Manager, Electoral Area and Implementation Services

Climate Action Committee, October 3, 2024
70707014



TILBURY MARINE JETTY PROJECT

Will be supplied from the existing FortisBC Tilbury LNG Plant

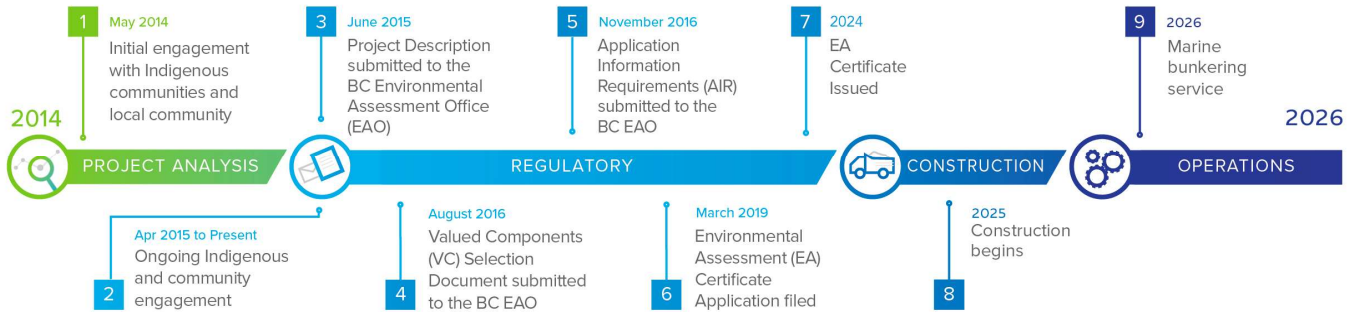


New marine jetty will provide berthing and loading facilities for LNG carriers and bunker vessels



TILBURY MARINE JETTY PROJECT

Timeline



TILBURY MARINE JETTY PROJECT

Project Approval Conditions

- **Provincial:** must consult with Metro Vancouver on plans for environmental management (Conditions 10, 11), river bed monitoring (Condition 13), air quality management plan (Condition 19), and greenhouse gas reduction (Condition 20).
 - Plans developed for operations in the Marine Terminal Area
- **Federal:** must develop, in consultation with Metro Vancouver, an air quality management plan.
- Proponent expected to begin consultation as early as November 2024.

TILBURY PHASE 2 LNG EXPANSION PROJECT

EXISTING

PROPOSED (RENDERING)



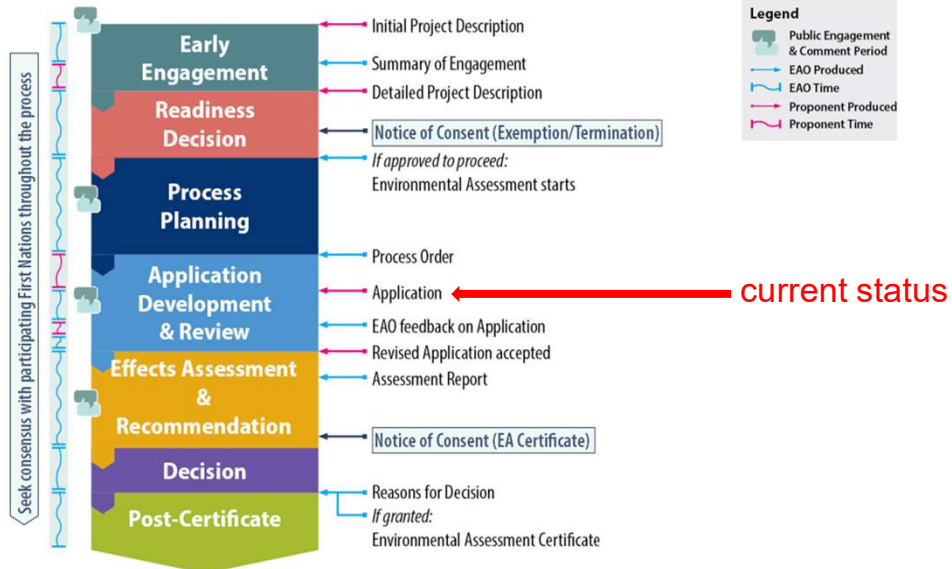
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TILBURY PHASE 2 EXPANSION PROJECT

Timeline

Environmental Assessment Process



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TILBURY PHASE 2 LNG EXPANSION PROJECT

Application Development – Air Quality and Greenhouse Gases

- Application will include assessment of impacts on air quality and greenhouse gas emissions.
- GHG assessment to describe:
 - emission estimates; impact on federal reduction efforts; mitigation measures; 2050 net-zero plan
- Staff will continue to provide input relative to Metro Vancouver's responsibilities.



To: Climate Action Committee

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

Date: September 24, 2024 Meeting Date: October 3, 2024

Subject: **Manager's Report**

RECOMMENDATION

That the Climate Action Committee receive for information the report dated September 24, 2024, titled "Manager's Report".

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.

2023 ANNUAL AIR QUALITY SUMMARY

Metro Vancouver's 2023 Annual Air Quality Summary (Reference 1) provides an overview of the data measured by Metro Vancouver's air quality monitoring network, compares the data to air quality objectives, summarizes notable air quality and weather events in 2023, and describes air quality trends over the past decade. New for 2023, this summary includes an overview of Air Quality Health Index data for the year and shows the frequency of each health risk category.

Notable points about 2023:

- On May 15, Metro Vancouver issued its earliest ground-level ozone (smog) advisory since the air quality advisory program began in 1993. This was due to unusually warm weather.
- 2023 was the worst wildfire season in recorded history for both Canada and BC based on area burned.
- The average global temperature in 2023 was the warmest on record.

Climate projections suggest that the region will increasingly experience hotter, drier summers. This would likely increase the frequency and duration of wildfire smoke in the region, and increase the frequency of smog impacts during hot weather.

The summary complements the comprehensive annual Lower Fraser Valley Air Quality Monitoring Reports (Reference 2), which include more detailed analyses of data from Metro Vancouver's air quality monitoring network, and are typically released at a later stage. The summary also complements the *Climate 2050 Annual Report 2023/2024*, which provides status updates on the implementation of the *Climate 2050 Roadmaps*. The *Climate 2050 Annual Report 2023/2024* will be presented to the Climate Action Committee at a later meeting. Together, the *2023 Annual Air Quality Summary* and *Climate 2050 Annual Report 2023/2024* help track Metro Vancouver's progress towards improving regional air quality and working towards a carbon neutral, climate-resilient region.

NEW PROGRAMS TO ACCELERATE LOW-CARBON RETROFITS IN MULTI-UNIT RESIDENTIAL BUILDINGS

The BC Retrofit Accelerator (Reference 3) officially launched on September 17, 2024, aiming to drive energy efficiency upgrades in buildings throughout British Columbia in support of regional and provincial climate action goals. This \$20 million program from the Zero Emissions Innovation Centre (ZEIC) is kick-starting climate and energy upgrades across hundreds of the province's commercial and residential buildings.

A key component of the Retrofit Accelerator is the BC Strata Energy Advisor Program (Reference 4), which connects strata councils with qualified energy advisors. These advisors provide tailored guidance to help strata corporations navigate the complexities of energy upgrades. By offering expert recommendations, the program empowers building owners to make informed decisions that not only improve energy efficiency but also lead to cost savings, improved comfort, and a host of other benefits.

The BC Retrofit Accelerator received seed funding from Metro Vancouver's SIF program, demonstrating a collaborative effort to promote sustainability and innovation in the region. This funding has been essential for launching and expanding the program, enabling more buildings to benefit from energy-efficient technologies and practices.

In the same week, the Province and BC Hydro together announced the Multi-Unit Residential Building Retrofit Program (Reference 5), which extends substantial rebates for equipment upgrades in multi-unit residential buildings. This program aligns directly with the BC Strata Energy Advisor Program by targeting high-impact areas such as heating, cooling, and water heating systems. Building owners can receive rebates for implementing advanced technologies that significantly reduce energy consumption, opening up additional clean electricity for electrification projects.

These programs represent important strides in advancing actions in Metro Vancouver's *Climate 2050 Buildings Roadmap* and *Clean Air Plan*, and are expected to stimulate the local economy by creating jobs in the energy efficiency sector.

ATTACHMENT

1. Climate Action Committee 2024 Work Plan, dated September 24, 2024

REFERENCES

1. [Metro Vancouver - 2023 Annual Air Quality Summary](#)
2. [Metro Vancouver - Air Quality Reports](#)
3. [Zero Emissions Innovations Centre \(ZEIC\) - BC Retrofit Accelerator](#)
4. [Zero Emissions Innovations Centre \(ZEIC\) - BC Retrofit Accelerator - Strata Energy Advisor](#)
5. [BC Hydro Power Smart - Rebates for Equipment Upgrades in Multi-unit Residential Buildings](#)

Climate Action Committee 2024 Work Plan

Report Date: September 24, 2024

Priorities

1st Quarter	Status
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	Complete
2nd Quarter	Status
Draft Climate 2050 Human Health and Well Being Roadmap	In Progress
Overview of air quality advisory program and preparedness for 2024 season	Complete
Update on heavy-duty vehicle emission reduction approaches	In Progress
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	Complete
Outcome of BC Utilities Commission proceedings	Complete
3rd Quarter	Status
Climate 2050 Annual Progress Report	In Progress
Update to Regional Ground Level Ozone Strategy	Pending
Annual Air Quality Report	In Progress
Update to internal carbon price policy	Pending
Amendments to boilers and process heaters emission regulation	Pending
4th Quarter	Status
Draft Climate 2050 Water and Wastewater Infrastructure Roadmap	Pending
Draft Climate 2050 Waste Roadmap	Pending
Regional air quality objectives	In Progress
Update on Corporate Energy and GHG management	In Progress
Metro Vancouver workplace and public electric vehicle charging strategy	Pending
Report on 2024 air quality advisory season	In Progress
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	In Progress