
To: Indigenous Relations Committee

From: Marino Piombini, Program Manager, Indigenous Relations

Date: June 27, 2022 Meeting Date: July 6, 2022

Subject: **Quarterly Report on Reconciliation Activities**

RECOMMENDATION

That the Indigenous Relations Committee receive for information the report dated June 27, 2022, titled "Quarterly Report on Reconciliation Activities."

EXECUTIVE SUMMARY

This report provides information on reconciliation events and activities undertaken by Metro Vancouver over the past several months as well as information on upcoming events and activities over the next few months. Details of the events and activities are included as charts, which appear in this report as attachments.

PURPOSE

To provide the committee with a quarterly report and update on reconciliation activities undertaken by Metro Vancouver.

BACKGROUND

This quarterly report on regional and local reconciliation activities and opportunities is part of the Indigenous Relations Committee's annual work plan. This information report is intended to identify opportunities for Committee and MVRD Board members to learn about, and engage in, reconciliation activities in the region, and includes:

- Reconciliation events and activities that have been undertaken by Metro Vancouver over the past four months (Attachment 1), and
- Upcoming opportunities over the next few months for engaging in such activities (Attachment 2).

The charts in Attachment 1 and Attachment 2 are based on the four objectives established by the Metro Vancouver Board in October 2015 in its review of the Truth and Reconciliation Commission's (TRC) *Calls to Action*:

- Liaising with the TRC and Reconciliation Canada
- Raising Awareness of Indian Residential Schools
- Providing Cultural Competency Training, and
- Strengthening Relationships with First Nations.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The various Metro Vancouver activities identified in 2022 have been included in the Indigenous Relations budget. There are no additional financial implications with respect to the items identified in this information report.

CONCLUSION

This report provides a quarterly update on reconciliation activities involving Metro Vancouver and local governments as per the Committee's recommendations and for members' information.

Attachments

1. Reconciliation Activities Undertaken: April 2022 to June 2022
2. Some Upcoming Reconciliation Activities: July 2022 to September 2022

**Reconciliation Activities Undertaken:
April 2022 to June 2022**

Objectives	Activity / Date	Notes
Providing Training Sessions for Staff	Training course for Metro Vancouver staff: “Building Relations with Indigenous Nations”, facilitated by Indigenous Relations staff April 7, 2022 on Zoom	Indigenous Relations staff facilitated a 3-hour training session on building relations with Indigenous Nations for Metro Vancouver staff from various departments.
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting April 7, 2022	Metro Vancouver and Tsleil-Waututh Nation staff met to discuss Indigenous Interpretation Opportunities
Strengthening Relationships with First Nations	Metro Vancouver-Squamish Nation Meeting April 19, 2022	Metro Vancouver and Squamish Nation staff met to discuss Indigenous Interpretation Opportunities.
Strengthening Relationships with First Nations	Regional Parks Plan Meeting with First Nations April 20, 2022 on Zoom	Metro Vancouver staff facilitated a workshop with First Nations to discuss the Regional Parks Plan.
Providing Training Sessions for Staff	Archaeological Chance Find Training April 22, 2022 on Zoom	Indigenous Relations staff provided chance find training to Regional Parks staff.
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting April 27, 2022 on Zoom	Metro Vancouver and Tsleil-Waututh Nation staff met to discuss project referrals.
Strengthening Relationships with First Nations	Metro Vancouver-Kwikwetlem First Nation Technical Working Group Meeting May 3, 2022 on Zoom	Metro Vancouver and Kwikwetlem First Nation staff met to discuss upcoming Metro Vancouver projects in Kwikwetlem First Nation territory.

Objectives	Activity / Date	Notes
Strengthening Relationships with First Nations	Metro Vancouver-Squamish Nation Meeting May 4, 2022 on Zoom	Metro Vancouver and Squamish Nation staff met to discuss a project on the North Shore.
Providing Training Sessions for Staff	Archaeological Chance Find Training May 9, 2022 on Zoom	Indigenous Relations staff provided chance find training to Liquid Waste Services staff.
Raising Awareness	Moose Hide Campaign Day May 12, 2022	Indigenous Relations staff prepared an Intranet article for staff to learn about the National Moose Hide Campaign Day and made Moose Hide pins available to all interested staff. Additional information on the Moose Hide campaign and to obtain free lapel pins, please visit the official campaign website: https://moosehidecampaign.ca/
Strengthening Relationships with First Nations	Metro Vancouver-Kwikwetlem First Nation Meeting May 13, 2022 on Zoom	Metro Vancouver and Kwikwetlem First Nation staff met to discuss a project in Kwikwetlem First Nation territory.
Providing Cultural Competency Training	Metro Vancouver Lunch and Learn Session with Len Pierre May 16, 2022 on Zoom	Len Pierre, a Cultural Safety Practitioner, Public Speaker, and Member of Katzie First Nation, provided a lunch and learn session to Metro Vancouver staff and elected officials on Cultural Safety and Humility. The session was attended by 275 participants.
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting May 20, 2022 on Zoom	Metro Vancouver and Tsleil-Waututh Nation staff met to discuss interpretive design elements.
Strengthening Relationships with First Nations	Metro Vancouver-Tsawwassen First Nation Meeting May 25, 2022 on Zoom	Metro Vancouver and Tsawwassen First Nation staff met to discuss ongoing communications and relationships at the staff and organizational levels.
Strengthening Relationships with First Nations	Metro Vancouver-Kwantlen First Nation Meeting May 31, 2022 on Zoom	Metro Vancouver and Kwantlen First Nation staff met to discuss an upcoming Liquid Waste project.

Objectives	Activity / Date	Notes
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting June 2, 2022 on Zoom	Metro Vancouver and Tsleil-Waututh Nation staff met to discuss ongoing communications and relationships at the staff and organizational levels.
Strengthening Relationships with First Nations	Metro Vancouver-Kwantlen First Nation Meeting June 8, 2022 on Zoom	Metro Vancouver and Kwantlen First Nation staff met to discuss a water utility project.
Providing Cultural Competency Training	Training Session with Nahanee Creative Inc. June 14, 2022 on Zoom	Metro Vancouver staff are scheduled to receive a four-hour pilot training session on Decolonization 101 and Decolonization Practices from Michelle Nahanee of Nahanee Creative Inc., a Squamish Nation company that provides cultural competency training. The session was attended by 30 participants.
Providing Training Sessions for Staff	Training Course for Metro Vancouver Procurement Staff: "Building Relations with Indigenous Nations" facilitated by Indigenous Relations staff June 14, 2022 on Zoom	Indigenous Relations staff facilitated an hour-long training session on building relations with Indigenous Nations for Metro Vancouver Procurement staff.
Strengthening Relationships with First Nations	Metro Vancouver-Musqueam Indian Band Meeting June 17, 2022 on Zoom	Metro Vancouver and Musqueam Indian Band staff met to discuss a project in Musqueam territory.
Raising Awareness	National Indigenous Peoples Day events June 21, 2022: TBA	Metro Vancouver Indigenous Relations staff prepared an Intranet article to inform Metro Vancouver staff about the importance of National Indigenous Peoples Day in Canada.
Providing Training Sessions for Staff	Municipal Technical Advisory Committee (MTAC) on Indigenous Relations June 22, 2022 on Zoom	As part of a regular MTAC meeting, municipal staff and Metro Vancouver staff received a presentation on "Cumulative Effects" from a consultant/practitioner on this topic. In addition, a staff representative from the Union of BC Municipalities (UBCM) provided a brief update on its Indigenous Relations initiatives.

Objectives	Activity / Date	Notes
Providing Cultural Competency Training	Metro Vancouver Lunch and Learn Session from Dr. Sheryl Lightfoot on the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) June 23, 2022 on Zoom	On June 23, 2022, in recognition of National Indigenous Peoples Day, Metro Vancouver and Fraser Basin Council collaborated on an online Lunch and Learn session for staff and elected officials on the topic of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). The session was attended by 177 participants.
Providing Training Sessions for Staff	Archaeological Chance Find Training June 23, 2022 on Zoom (2 sessions)	Indigenous Relations staff provided chance find training to Metro Vancouver staff in two different sessions.
Strengthening Relationships with First Nations	Metro Vancouver-Kwikwetlem First Nation Meeting June 23, 2022 on Zoom	Metro Vancouver and Kwikwetlem First Nation staff met to discuss a project in the Coquitlam Watershed.
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting June 24, 2022 on Zoom	Metro Vancouver and Tsleil-Waututh Nation staff met to discuss a Water-related project in the Nation's territory.
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting June 24, 2022 on Zoom	Metro Vancouver and Tsleil-Waututh Nation staff met to discuss a Water-related initiative in the Nation's territory.
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting June 27, 2022 on Zoom	Metro Vancouver and Tsleil-Waututh Nation staff met to discuss a Water-related initiative in the Nation's territory.

**Some Upcoming Reconciliation Activities:
July 2022 to September 2022**

Objectives	Activity / Date	Notes
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting July 4, 2022 on Zoom	Metro Vancouver and Tsleil-Waututh Nation staff will meet to discuss interpretive design elements.
Strengthening Relationships with First Nations	Metro Vancouver-Kwantlen First Nation Meeting July 6, 2022 on Zoom	Metro Vancouver and Kwantlen First Nation staff will meet to discuss ongoing communications and relationships at the staff and organizational levels.
Strengthening Relationships with First Nations	Metro Vancouver-Tsleil-Waututh Nation Meeting July 14, 2022 on Zoom	Metro Vancouver and Tsleil-Waututh Nation staff will meet to discuss Water-related initiatives within the region's territory.
Raising Awareness	National Indigenous Peoples Day events: TBA September 30, 2022	Metro Vancouver Indigenous Relations staff will prepare an Intranet article to inform staff about the importance of National Truth and Reconciliation Day in Canada
Providing Cultural Competency Training	Metro Vancouver Reconciliation Activity: TBA Prior to September 30, 2022 on Zoom	Metro Vancouver will help put together a session (e.g. Lunch and Learn) to commemorate National Truth and Reconciliation Day in Canada.

Summary of Presentation from Village of Lions Bay CAO

- What is at stake?
 - The right of a Municipality to interpret its own OCP
 - Why “rural” vs. “urban”? Metro’s own criteria
 - Public consultation results
- Metro 2040, Strategy 1.3: Protect Rural Areas from Urban Development
 - What is Metro’s role?
 - What is the Municipality’s role?
 - Policies protecting Lions Bay’s vision of “rural”
- Village of Lions Bay (VoLB) by the numbers
 - Housing Needs Assessment Report
 - Timing did not mesh with RCS timing
 - Metro has a copy despite not attached to RCS – easily remedied
- Comparability of VoLB data with other rural communities
- Low Density Residential = Residential Rural (VoLB; Metro 2050)
- Sustainability Objectives (Environmental, Economical & Social) applicable for “rural” too
 - Efficient use of limited resources (eg: land for housing) not same as “urban dev’t”
 - Metro 2040, Strategy 4.2: Complete communities with access to a range of services and amenities exist *at different scales across the region*. An appropriate measure for complete communities has not yet been developed for the region.
- The “Slippery Slope” argument – Clearly, Metro staff do not consider VoLB’s RCS request as having merely procedural deficiencies.
 - Metro 2040, Strategy 1.3 puts the ability to define what “rural” means in the hands of the Municipality.
 - The Regional District is attempting to undercut the right of a Municipality to define what constitutes acceptable “rural development”; it will be up to Lions Bay to flesh out what that means for Lions Bay.
- Mapping deficiency easily remedied – Metro 2040 1.1.3(a): Map 2 is a Metro RGS map (VoLB RCS Map 1 considered the bold line as the boundary of the rural designation – not the UCB, which is inapplicable to all rural areas)
- VoLB respects the objectives of Metro 2040 (& 2050) documents – Metro needs to respect VoLB’s right to alter and then further flesh out its own land use designation in due course
- We respectfully request that you recommend to the Board acceptance of the Village of Lions Bay’s amended Regional Context Statement. Thank you.

DELEGATION EXECUTIVE SUMMARY

Name or Organization: Marcus Reuter

Subject: Village of Lions Bay Regional Context Statement

Presenting to: Regional Planning Committee

Date of Meeting: July 6, 2022

- Summary:

I would like to speak to the staff report and its recommendations that the amended RCS for Lions Bay be declined or subject to a full OCP review.

I am a resident of Lions Bay, and in June of 2021 I delivered a petition to our Council, signed by over 200 residents, asking our Council to move us outside of Metro's Urban Containment Boundary and recognize our community as a Rural community. Our Councillors heard our voices and engaged in robust public consultation with residents: 91% of 535 respondents agreed that we are a rural community and should be outside the UCB. We also had a well attended Town Hall event in which there was a healthy exchange of ideas and public engagement. We moreover had very capable senior Metro staff attend our Council meetings, answer questions and explain the necessary steps to achieve our goals. It seems to me that our Council has followed the road-map provided with extraordinary diligence--especially with regard to satisfying the requirement by Metro that this initiative reflects the will of our community.

I do not believe that the staff report and recommendations are consistent with or reflect the wishes of our community. We have always seen ourselves as a rural community, and should be recognized as such with urgency. We have engaged in a healthy consultation on this matter, unlike the circumstances that occurred when Metro accepted our RCS in 2015--where public consultation consisted in a so-called Town Hall with about a dozen residents, split down the middle. It is also important to note that when the rural designation became an option during Metro 2040 there was NO consultation with the community. The resolution passed by the then Council in 2011 did not reflect the newly reviewed OCP (2008). I believe that we have been ill-served by poor decisions made in the past, and that this Council is seeking to right this historical wrong--and should be supported by Metro in this endeavour.

It is also worth noting that there is a strong sentiment in our community that the circumstances and challenges of living in our small village are not well understood or appreciated at the Metro level--that there is a lack of understanding of our lifestyle and how we live, which is of course remarkably different from our urban neighbours. To deny us this request, after all the work that has gone into it and considering the overwhelming public support for it, causes many of us to wonder whether our relationship with Metro is a healthy and productive one.

Finally, formal recognition and acceptance of our community's rural character and amended RCS, as submitted, would be entirely consistent with the vision of both Metro 2040 and Metro 2050. It seems to us that it is the judicious delineation of the Urban Containment Boundary and the preservation of rural areas that breathes life into and sustains, in no small measure, the urban environment. It is for these reasons that I am proud to be a member of this small—and I hope, soon to be recognized as such—Rural community.

NOTE: would you be so kind as to forward me the information and link whereby I can electronically join into and speak at this meeting?

Thank you for your consideration, and kind regards,

Marcus Reuter

To: Climate Action Committee

From: Amy Thai, Senior Policy Analyst
Parks and Environment Department

Date: June 13, 2022 Meeting Date: July 8, 2022

Subject: **Air Quality and Climate Action Initiatives in Caring for the Air 2022**

RECOMMENDATION

That the Climate Action Committee receive for information the report dated June 13, 2022, titled “Air Quality and Climate Action Initiatives in *Caring for the Air 2022*”.

EXECUTIVE SUMMARY

Caring for the Air is Metro Vancouver’s annual plain language publication on regional climate action and air quality initiatives. The 2022 edition showcases innovative solutions to air quality and climate challenges, and describes projects supported by Metro Vancouver’s Sustainability Innovation Fund and the University of British Columbia’s Sustainability Scholar program. Whereas previous editions of *Caring for the Air* focused on the development of climate and air quality plans such as the *Climate 2050 Roadmaps* and *Clean Air Plan*, this year’s edition shifts the focus to how Metro Vancouver will implement actions outlined in those plans, which will be critical for meeting Board-adopted climate action and clean air targets.

A strong social media promotion of last year’s 10th anniversary edition (*Caring for the Air 2021*) reached more than twice as many people as the 2020 promotion. A new online format that allowed staff to track the number of views for individual articles, rather than the entire publication, provided insight on which articles were the most popular.

PURPOSE

To present the 2022 edition of the annual *Caring for the Air* publication and provide information about outreach conducted for the 2021 edition to raise awareness about climate change and air quality initiatives in the Lower Fraser Valley airshed.

BACKGROUND

The *Metro Vancouver Board Strategic Plan* strongly emphasizes taking leadership on climate action through *Climate 2050*, and improving air quality by mitigating threats to public health and the environment. *Caring for the Air* has been published annually since 2012, and is Metro Vancouver’s key branding document that promotes awareness of climate action and air quality initiatives. Written in plain language, it describes actions being taken by Metro Vancouver and partner agencies as well as activities that individuals can carry out to reduce greenhouse gas emissions, protect against the effects of climate change, improve air quality, and protect public health. Each edition of *Caring for the Air* also summarizes the previous year’s air quality measurements and compares the data to applicable objectives.

The Climate Action Committee 2022 Work Plan identifies the development of the 11th annual *Caring for the Air* as a priority for the second quarter of the year.

INSIDE CARING FOR THE AIR 2022

Caring for the Air 2022 focuses on innovative solutions that support Metro Vancouver's commitment to a carbon neutral region as well as to improve and protect regional air quality. Previous editions highlighted the development of Metro Vancouver's climate and air quality strategies and plans, such as the *Climate 2050 Roadmaps* and the *Clean Air Plan*. The 2022 edition now shifts the focus from the development of these plans to how Metro Vancouver will implement them.

The 2022 edition summarizes some of Metro Vancouver's recent Sustainability Innovation Fund projects that use novel approaches and technologies to tackle air quality and climate change issues. *Caring for the Air 2022* also describes Metro Vancouver's participation in the University of British Columbia's Sustainability Scholar internship program, which demonstrates the importance of collaborating with youth and other organizations to reach shared climate goals.

This year's edition also examines how climate change can influence extreme weather events that can lead to degraded air quality, such as the heat dome in 2021, and how residents can protect themselves from wildfire smoke.

Other topics in *Caring for the Air 2022* include:

- Guidance on how to follow residential indoor wood burning requirements in Metro Vancouver.
- Updates on the development of bylaws for open-air burning and cannabis.
- Changes to air contaminant fees for industrial facilities and the non-road diesel engine emission regulation.
- A pilot project that investigates how to integrate small air quality sensors into Metro Vancouver's air monitoring network.
- Updates on the development of the *Climate 2050* roadmaps and highlights from the finalized roadmaps on buildings and transportation.
- Results from Metro Vancouver's first consumption-based emissions inventory, assessing embodied GHG emissions.
- A summary of air quality data for 2021 and trends in key air contaminant levels since 2008.

Caring for the Air 2022 will be promoted through traditional media, social media, at relevant events, and through other agencies and organizations.

DISTRIBUTION AND PROMOTION OF CARING FOR THE AIR 2021

For last year's edition (*Caring for the Air 2021*), a social media promotion, including promoted posts via Metro Vancouver's Facebook channel and organic posts via Twitter, LinkedIn, and Instagram, was used to reach out to potential audiences between May and December 2021. Posts highlighted the range of topics covered by articles in the publication and provided links to the online version of *Caring for the Air 2021*. Analytics indicate that *Caring for the Air* social media posts reached over 29,000 people, resulting in over 2,000 clicks through to the newly created online version of the publication. The new online format allowed individual articles to be shared on social media, and in total, the new

online format resulted in over 2,700 page views to the various articles in the publication. The most popular articles in the online version were 'A Decade of Caring for the Air', 'Opening the Door to Greener Condos and Townhouses', and 'How the Air Quality Health Index Can Protect You'.

As 2021 was the 10th anniversary of *Caring for the Air*, staff also created a promotional video featuring interviews with Metro Vancouver representatives and testimonials from air quality and health professionals on how *Caring for the Air* supports and encourages residents to protect our air quality and climate. The video received over 1,600 views through various online platforms.

A link to the online version was also sent to a *Caring for the Air* email list, with over 500 subscribers, and to the Northwest Air Quality Communicators mailing list, which includes air quality organization representatives in western Canada and the United States. Copies of *Caring for the Air* 2021 were circulated to municipal offices and libraries in the region, and additional copies were provided on request. About 2,600 rack cards highlighting the purpose and content of *Caring for the Air* 2021 were distributed to community centres and health units in the region. Copies of *Caring for the Air* 2021 were also made available at the Metro Vancouver Information Centre and library. At the time of writing, there have been over 440 views of the static (pdf) electronic version of *Caring for the Air* 2021.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Caring for the Air 2022 describes projects and programs that were undertaken within approved budgets and work plans or funded through the Regional District Sustainability Innovation Fund. The report also provides information about work relevant to Metro Vancouver's air quality and climate action interests that were conducted by and entirely the responsibility of external organizations, supported by their own resources.

CONCLUSION

Caring for the Air makes information about Metro Vancouver's climate change and air quality initiatives accessible to a wide range of readers. It helps to increase public understanding of air quality and climate change issues and encourage public engagement and personal actions. *Caring for the Air* complements other outreach activities and publications, such as the *State of the Air* report produced by the BC Lung Foundation, which describes air quality programs throughout British Columbia, and Metro Vancouver's annual technical air quality monitoring report, the *Lower Fraser Valley Air Quality Monitoring Report*.

Attachment

Caring for the Air 2022

metrovancover

Caring for the Air 2022

In this issue

Innovative solutions
to climate challenges

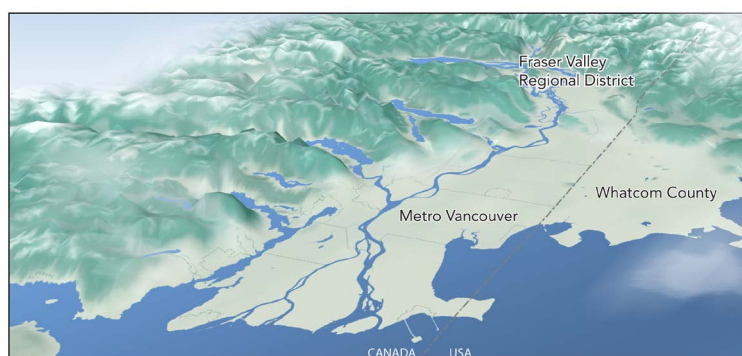
Extreme weather and air quality

Roadmaps to carbon neutral
transportation and zero
emissions buildings



Contents

Message from the Chair	1
<i>Clean Air Plan</i> : Making Big Moves to Reduce Emissions	2
Extreme Weather Brings the Effects of Climate Change to Metro Vancouver	3
Preparing for Wildfire Smoke Season	4
With Great Climate Goals Come Great Innovation	5
A 'Flying Lab' Takes to the Sky	6
LumiAir: Your Air Quality is Lit!	6
Lights, Camera, Climate Action!	7
Bylaw and Regulation Updates	8
New Air Contaminant Fees for Industrial Emissions	9
Expansion of the Non-Road Diesel Engine Emission Regulation	10
How to Follow Residential Indoor Wood Burning Requirements in Metro Vancouver	11
Climate 2050 Roadmaps are Guiding us Towards a Resilient and Carbon Neutral Region	12
Climate 2050 Transportation Roadmap: A Pathway to Carbon Neutral Transportation	13
Climate 2050 Buildings Roadmap: A Pathway to Zero Emissions and Resilient Buildings	14
How Greenhouse Gas Emissions Can Provide Insight into Consumption Behaviours	16
Air Quality in 2021	17
Air Quality Trends	17
Air Quality in 2021: Data Summary	18
Small Air Sensors Team Up With Big Monitoring Networks	20
Network News	21
Metro Vancouver's Air Quality Program Turns 50	21



The Lower Fraser Valley Airshed

Air pollutants can travel between Metro Vancouver and surrounding areas. Managing air quality successfully requires effective collaboration with our neighbours and other levels of government, and participation from businesses, public institutions, non-government organizations, and residents. Articles in this publication reflect this cooperation.

Message from the Chairs



Last year's *Caring for the Air* celebrated our 10th edition. This year marks another anniversary – 50 years of the air quality service in the Metro Vancouver region.

The air quality program has evolved

over 50 years, always striving for an evidence-based approach to assessing regional air quality, tracking the success of our programs, and identifying new priorities, all while responding to new challenges.

Clean air continues to be a key priority in making our region such a desirable place to live, work, and play. One of the common threads over 50 years has been collaboration, and we acknowledge our member jurisdictions, regional, First Nation, and provincial staff and partners who work with us to keep our air clean and to respond to the climate change challenge.

Sav Dhaliwal
Chair, Metro Vancouver Board



2021 demonstrated that climate change impacts are increasing in severity, and highlighted the urgency for action. Over 140 days, we saw a dramatic shift from droughts and a heat dome — with

associated impacts in the form of wildfires and smoke, ground-level ozone concentrations not seen since the 1980s, and devastating health and infrastructure impacts — to an atmospheric river event and significant flooding.

In this year's edition, you will read about ongoing actions to respond to climate change and continue to improve regional air quality, including implementation of the *Clean Air Plan* and the *Climate 2050 Roadmaps*, and how we build innovation into our programs and policies.

Adriane Carr
Chair, Metro Vancouver Climate Action Committee

Climate Action Committee Membership:

Carr, Adriane (C) – Vancouver	Hocking, David – Bowen Island	Patton, Allison – Surrey
Dhaliwal, Sav (VC) – Burnaby	Kruger, Dylan – Delta	Royer, Zoë – Port Moody
Arnason, Petrina – Langley Township	McCutcheon, Jen – Electoral Area A	Steves, Harold – Richmond
Baird, Ken – Tsawwassen First Nation	McIlroy, Jessica – North Vancouver City	Wilson, Chris – Coquitlam
Dupont, Laura – Port Coquitlam	McLaughlin, Ron – Lions Bay	Yousef, Ahmed – Maple Ridge

Metro Vancouver acknowledges that the region's residents live, work, and learn on the shared territories of many Indigenous peoples, including 10 local First Nations: Katzie, Kwantlen, Kwikwetlem, Matsqui, Musqueam, Qayqayt, Semiahmoo, Squamish, Tsawwassen, and Tsleil-Waututh.

Metro Vancouver respects the diverse and distinct histories, languages, and cultures of First Nations, Métis, and Inuit, which collectively enrich our lives and the region.



Clean Air Plan:

Making Big Moves to Reduce Emissions

In 2021, the Metro Vancouver Board approved the *Clean Air Plan*, which includes actions to reduce regional greenhouse gas (GHG) emissions and yield air quality health benefits estimated at up to \$1.6 billion. This plan is strongly linked to Metro Vancouver's *Climate 2050 Strategy*: both plans aim to reduce GHG emissions, while the *Clean Air Plan* also focuses on improving day to day air quality.

Metro Vancouver and member jurisdictions have been improving and protecting the region's air quality and climate for decades, and staff are now accelerating actions to meet the aggressive emission targets laid out in the *Clean Air Plan*. There are major impacts to inaction: extreme weather is already becoming more frequent and intense with rising global temperatures. In 2021, wildfires, record-breaking heatwaves, rainfall, and flooding demonstrated that climate change is happening here and now, with potentially catastrophic effects.

So how can we ensure that we are doing our part to reduce global emissions and the potential impacts of climate change? First, we need to work together. The *Clean Air Plan* was strengthened with public feedback and equity is key to the plan's success. This spirit of collaboration, with residents, businesses, and other governments, must continue as we implement actions to reach our targets.

The *Clean Air Plan* is organized around six topics, such as transportation, industry, and buildings. Each topic contains "Big Moves" that are the foundational actions needed to support significant emission reductions.

Some of the Big Moves that would be led by Metro Vancouver include:



Develop GHG performance standards for buildings: Existing buildings would need to meet GHG emission performance targets, which would reach zero carbon emissions before 2050.



Develop emission requirements for passenger vehicles: Requirements could include low or zero emission zones or a vehicle emissions levy with rebates for replacing older vehicles.



Integrate GHGs into regulations and permits: Current air emission regulations and permits address air contaminants only. Adding limits or fees for GHGs could encourage industrial facilities to consider transitioning to cleaner energy.

Now is the time for everyone to do their part to keep our air clean and reduce our contribution to global climate change.



Extreme Weather Brings the Effects of Climate Change to Metro Vancouver

The heat dome, wildfire smoke, and floods experienced in Metro Vancouver in 2021 show that climate change is already impacting our lives. These extreme weather events emphasize the need for action now to reduce emissions and increase resilience in the coming years.

Air quality in the region has been severely degraded by wildfire smoke in five of the last seven summers. The unprecedented heat dome in June 2021 was associated with 740 excess deaths across BC and triggered an early start to an extremely active wildfire season, especially in the BC Interior. The heat dome also set temperature records across BC and exceeded what some climate models are projecting for 2050, such as the number of days with overnight temperatures above 20°C.

As a result of the heat, ground-level ozone concentrations reached levels not recorded since the late 1980s, despite programs and regulations implemented over the last two decades to reduce air contaminants that form ground-level ozone. This shows how extreme weather can erode emission reductions already realized. High ground-level ozone concentrations also add another health threat during already dangerous heat waves.

Experts predict that the Metro Vancouver region will continue to experience increases in both the severity and frequency of extreme weather events in the coming decades. These could range from more intense atmospheric rivers, like the one experienced in November 2021 which led to catastrophic flooding and landslides, to drier and hotter conditions leading to more wildfires and air quality impacts.

Although significant progress has been made over the last few decades to reduce regional air contaminant emissions, more aggressive action is required. The high ozone concentrations experienced in June show how extreme weather associated with climate change can compromise decades of progress, so we must continue to adapt and find innovative solutions as threats emerge.

Read more about climate actions in Metro Vancouver's *Climate 2050 Roadmaps* on pages [12 to 15](#) and how Metro Vancouver supports innovative projects on pages [5 to 7](#).

Preparing for Wildfire Smoke Season

Wildfire smoke can impact your health, especially if you have asthma, chronic obstructive pulmonary disease, or other underlying conditions. You can minimize your health risk by preparing for smoke before it arrives.

Some people are more likely to experience health effects from smoke exposure than others. Anyone who has a disease with a management plan should speak with their doctor about adapting it for smoky conditions. People who use rescue medications such as inhalers should ensure they have an ample supply in the summer, particularly when traveling.

Think about how best to limit the amount of smoke that gets into your home or bedroom. Tips include keeping windows closed and running forced air systems to recirculate air indoors. Consider purchasing a portable air cleaner or building a box fan air filter to reduce smoke particles in the air. Wildfires often occur when it is hot outside. Make sure that your plan does not result in overheating, as being too hot is a bigger risk than breathing smoke for many people.



Example of a homemade box fan air filter

Keep masks stocked at home. Well-fitted N95 (or KN95) respirators provide the best protection from wildfire smoke, but well-fitted three-layer disposable and cloth masks can also help. Remember – the air must pass through the material of the mask, not around it! You can stay up-to-date on smoke risks by monitoring forecasts, by signing up for air quality alerts, or by downloading air quality apps. Finally, talk about your smoke readiness plans with others in your family and community and help them to develop their own plans.

More Resources

Visit bccdc.ca/wildfiresmoke to learn more about:

- Preparing for wildfire smoke
- The health effects of wildfire smoke
- Portable air cleaners
- DIY box fan air filters
- Masks for smoke

Visit canada.ca and search 'combined wildfire smoke and heat'

For air quality alerts in Metro Vancouver visit [Airmap.ca](https://airmap.ca)

For smoke forecasts visit firesmoke.ca

Courtesy of BC Centre for Disease Control

With Great Climate Goals Come Great Innovation

The ambitious goals in Metro Vancouver's *Clean Air Plan* and *Climate 2050* are supported by innovative solutions to help meet the rising urgency for accelerated action to meet air quality and climate targets.

Sustainability Innovation Fund

Metro Vancouver's Sustainability Innovation Fund supports projects that demonstrate an innovative approach to advancing the region's sustainability while encouraging partnerships with other organizations. Projects span the breadth of Metro Vancouver's service areas and could explore uncertain or higher risk areas, such as new technologies or services. Many recent projects have focused on greenhouse gas (GHG) reduction, air quality, and energy efficiency.

gas reduction targets. It will connect building owners to available resources and provide tailored solutions on how to meet any future regional GHG regulations.

Sustainability Scholars

Metro Vancouver participates in the University of British Columbia's Sustainability Scholars program, a paid internship for UBC graduate students that offers them real world experience in advancing sustainability in the region. The scholars' projects can also help Metro Vancouver develop new policies and programs.

**project
spotlight**

Hydrothermal Processing – Biofuel Demonstration Facility

Hydrothermal processing is an emerging technology that can produce low carbon transportation fuels from wastewater biomass. This project involves the design, fabrication, implementation, and testing of a demonstration-scale facility at the Annacis Island Wastewater Treatment Plant.

**project
spotlight**

Exploring the Effects of Climate Change on Forest Health

Three different scholars undertook projects in 2016, 2019, and 2020 to understand how climate change affects forest health, with each building on the previous scholar's work. These projects expand our understanding of forest ecosystems so Metro Vancouver can monitor disturbances to forest health, recognize early signs of stress, and adapt or intervene if needed. This way, we can ensure that forest ecosystems continue to provide environmental services such as the removal and storage of carbon dioxide.

**project
spotlight**

Metro Vancouver Large Building Retrofit Accelerator

The regional retrofit accelerator program will create a resource hub to support owners of large buildings and increase the number of deep carbon building retrofits required to successfully meet greenhouse

Learn more about the Sustainability Scholars program and other projects at sustain.ubc.ca/teaching-applied-learning/ubc-sustainability-scholars-program.

Learn About Other SIF Projects

Visit metrovancover.org and search 'sustainability innovation program' for a summary of projects that accelerate action to meet air quality and climate targets and look out for this symbol to find other Sustainability Innovation Fund projects in this issue of *Caring for the Air*.





LumiAir: Your Air Quality is Lit!

If you visited the Pacific National Exhibition during the summer of 2021, you might have met LumiAir, Metro Vancouver's latest addition to the air quality toolbox. LumiAir is an interactive display that shows real-time air quality data from the closest Metro Vancouver air monitoring station. You can compare that data to cities around the world or to scenarios such as days with wildfire smoke or a ground-level ozone advisory. LumiAir also shows historical air quality data from decades ago and highlights programs and policies that have helped improve the region's air quality.

LumiAir aims to make air quality data more accessible to communities and will be touring the region, making stops at community centres, libraries, and other public spaces and events.



A 'Flying Lab' Takes to the Sky

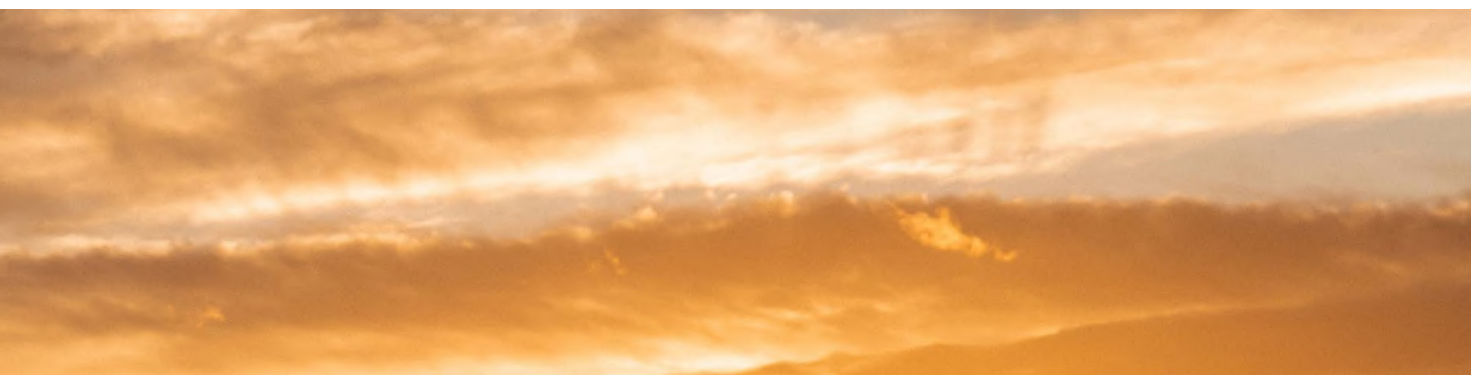
Metro Vancouver tested a 'flying lab' of small sensors mounted on a drone in the summer of 2021. The sensors collected air quality measurements over a large area at varying heights.

The equipment was tested at three sites with different types of emissions: Annacis Island, the

Coquitlam Water Supply Area, and a construction site in Surrey. The sensors collected data for several air contaminants including particulate matter (tiny particles suspended in the air) and various gases (nitrogen dioxide, total volatile organic compounds, and sulphur dioxide).

Lights, Camera, Climate Action!

This project will identify alternative clean and modular power sources to replace portable diesel generators in the film industry. Portable diesel generators create greenhouse gases, other air contaminants such as diesel particulate matter, and noise pollution. The film industry has recognized the need to transition to cleaner sources of mobile power. Metro Vancouver will be supporting this transition by analyzing the feasibility of different clean power opportunities for the film industry and similar users, and recommending cleaner modular options. The project will also pilot a clean power source in one of Metro Vancouver's parks to demonstrate its applicability and report on lessons learned.



The flights were part of a project to assess drone technology for potential air quality measurement applications like detecting hotspots of poorer air quality, assessing fugitive emissions (emissions that are not from a controlled stack or vent), and enhancing understanding of emissions from industrial sources. The results offered an exciting glimpse of the potential for collecting detailed

spatial information. Although the technology is not quite ready to be used for routine air quality measurements, using drones could provide a novel and unique tool to improve air quality management and regulation. Work is continuing with these small sensors to better understand how they can help Metro Vancouver's air emissions monitoring activities.

Bylaw and Regulation Updates

Simplifying Open Burning Authorization

Open burning is any burning outside of a structure and that does not vent through a chimney or stack. Emissions from burning vegetative debris, such as leaves and branches, in the open air are currently authorized through site-specific [approvals or permits](#). In 2021 and early 2022, Metro Vancouver engaged residents, businesses, First Nations, member jurisdictions, and other government organizations

on a proposed regulation to manage these emissions. The [proposed regulation](#) will continue to protect public health and the environment while offering a simpler, more efficient, and less costly authorization process.

To learn more, visit metrovancover.org and search 'open burning.'



Reducing Emissions from Open Burning

Open burning of vegetative material generates air contaminants. A project completed in 2021 compared emissions from open burning of agricultural vegetative debris to alternative disposal methods, such as chipping or composting. The project also looked at barriers to using alternatives, and created a guide to help reduce those barriers.

The alternative methods produced lower emissions of greenhouse gases and particulate matter compared to conventional open burning, even when considering both direct emissions (for example, from chipping) and indirect emissions (such as those from transporting the chipper to the site). In spite of this, alternatives are not always used because of factors such as cost, availability, feasibility, and concerns about spreading diseases and pests. The guide is expected to be available on Metro Vancouver's website by the end of 2022. It will provide information about how to reduce emissions, where to find equipment, and how to use the byproducts of the vegetative material.

This work complements the development of an open burning emission regulation (see above), by promoting alternatives that can eliminate burning while producing useful byproducts.

Cannabis Production and Processing Emission Regulation

Metro Vancouver began seeking feedback on a proposed regulation for managing emissions from commercial cannabis production and processing operations. Emissions from cannabis facilities include volatile organic compounds that can contribute to the formation of harmful ground-level ozone and fine particulate matter.

The second phase of public engagement concluded in February 2022. Based on feedback received during two phases of engagement, staff are preparing a proposed emission regulation that will be presented to the Metro Vancouver Regional District Board by early 2023.



New Air Contaminant Fees for Industrial Emissions

In 2022, Metro Vancouver will be increasing air quality permit and regulatory fees. The new fees reflect updated information on the health costs of air contaminants and support the additional resources needed to manage and protect regional air quality.

Metro Vancouver charges fees for permits that specify the maximum amount and types of air contaminants a facility is authorized to emit. These fees encourage facilities to reduce emissions, but also recover the costs of air quality regulatory services like inspections and enforcement. The fees were last updated in 2008, and since that time costs for regulatory services have dramatically increased, partly due to more information requests, appeals, and complaints. The new fees will help to ensure that Metro Vancouver can continue to reduce emissions, improve air quality, and protect public health.

Who Pays Fees for Emissions?

All businesses with permits to emit air contaminants in Metro Vancouver, and those that fall under Metro Vancouver's air emission regulations, pay fees for air emissions. A public opinion survey commissioned by Metro Vancouver showed strong support for this "polluter pay" approach, and that fees should be higher for the more harmful contaminants.

The changes will be phased in between 2022 and 2028.

To learn more, visit metrovancover.org and search 'air quality fees.'

Key Changes to Air Quality Fees



Increasing fees for air contaminants:

New health research demonstrates that public health costs from air contaminants are greater than previously thought, so existing fees for air contaminants, including the more harmful ones such as fine particulate matter, photoreactive volatile organic compounds, and nitrogen oxides, are increasing. New fees for greenhouse gas emissions have also been established, except where the provincial carbon tax already applies.



New fees for odorous air

contaminants: Managing odorous emissions is one of the reasons why costs for regulatory services are going up. Over 80 per cent of complaints received are related to odour, but Metro Vancouver previously did not charge fees for odorous air contaminants. New fees for odorous air contaminants should discourage emissions, as well as offset the costs of managing them.



Expansion of the Non-Road Diesel Engine Emission Regulation

Metro Vancouver's Non-Road Diesel Engine Emission Regulation has been in place since 2012. The regulation protects air quality and public health by reducing emissions from non-road diesel engines, which can worsen heart and respiratory diseases and contribute to cancer.

Between November 2020 and April 2021, Metro Vancouver invited feedback from the public, businesses, First Nations, member jurisdictions, and government organizations on a proposed expansion of this regulation. In October 2021, the Metro Vancouver Regional District Board adopted a new bylaw with enhanced requirements.

Non-Road Diesel Engines

Non-road diesel engines are used in a wide range of construction, industrial, commercial, and stationary equipment such as excavators, bulldozers, and forklifts. These engines are generally not intended for use on public roads.

The bylaw does not apply to engines less than 25 horsepower, normal farm practices, or personal recreational machines.

New Requirements

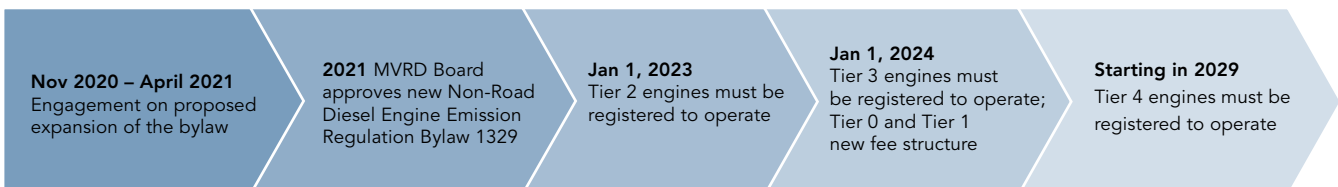
Non-road diesel engines are categorized by tiers, depending on their size and year of manufacture. Tier 0 are the oldest, highest emitting engines and Tier 4 are modern engines with more emission controls. The previous bylaw covered only Tier 0 and Tier 1 engines. The expanded bylaw recognizes that while the newer tiers of non-road diesel engines are cleaner, they still contribute to health and environmental impacts. The new bylaw includes Tier 2 starting in 2023, Tier 3 in 2024, and Tier 4 in 2029. Regulating Tier 4 engines is intended to encourage electrification and other decarbonization options that will reduce health and climate impacts.

Other changes include updated fees and rebates to promote further reduction of harmful diesel particulate matter and nitrogen oxides, prohibiting use of higher emitting engines near sensitive receptors such as hospitals, community care facilities, and elementary schools, as well as adding requirements for emergency generators.

The Vancouver Fraser Port Authority also has a non-road diesel engine emission reduction program. Metro Vancouver collaborates with the port authority to align the requirements of both programs.

To learn more, visit metrovancover.org and search 'non-road diesel.'

Registration Requirements for Different Non-Road Diesel Engine Tiers in Metro Vancouver



How to Follow Residential Indoor Wood Burning Requirements in Metro Vancouver

Everyone in Metro Vancouver who is responsible for a residential indoor wood burning appliance, including a fireplace or woodstove, must comply with best burning practices (see [Schedule B](#) of Bylaw 1303). Indoor wood burning is also prohibited (with some exceptions) between May 15 and September 15 every year.

Starting September 15, 2022, anyone who intends to use a residential indoor wood burning appliance will need to submit a best burning practice declaration to Metro Vancouver. Residents within Metro Vancouver's [Urban Containment Boundary](#) will also need to register eligible appliances starting September 15, 2022, before using the appliance, and renew and confirm declarations and registrations at least every three years.



Does the Residential Indoor Wood Burning Bylaw 1303 apply to me?

If you own, operate, or are otherwise responsible for a woodstove, a fireplace, or another type of residential indoor wood burning appliance, then Bylaw 1303 applies to you.

How do I submit a declaration of compliance with best burning practices?

Metro Vancouver is creating an online declaration system. Visit metrovancover.org and search 'residential wood burning' for more information about submitting your declaration.

Where can I find out more?

Metro Vancouver's [website](#) has more information, links to videos, and will provide access to the declaration and registration systems. You can also call 604-451-6677 for more information.

Am I inside or outside Metro Vancouver's Urban Containment Boundary?

The Urban Containment Boundary designates the area in the region within which urban development may occur. Wood burning appliances within this area have stricter requirements because there is higher population density and smoke could impact more people. Use this tool (gis.metrovancover.org/mvmaps/ucb) to check if your address is inside the Urban Containment Boundary.

How do I register my appliances?

Metro Vancouver is creating an online registration system. Visit metrovancover.org and search 'residential wood burning' for more information about registering an appliance.

Who do I contact if I am concerned about wood smoke in my neighbourhood?

Call 604-436-6777 or use the [online form](#) at metrovancover.org, search 'air quality form.'

More questions about Bylaw 1303? Connect with Metro Vancouver staff at riwb@metrovancover.org.





Climate 2050 Roadmaps are Guiding us Towards a Resilient and Carbon Neutral Region

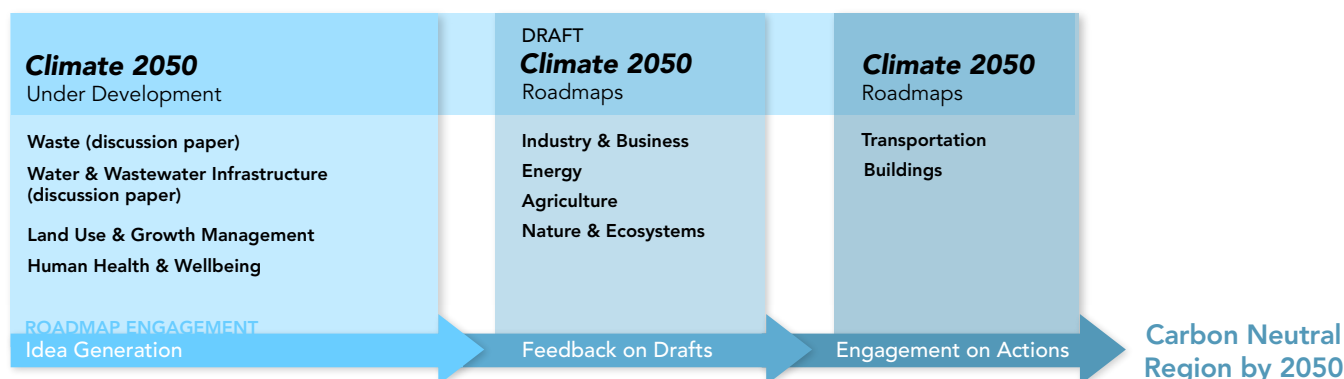
Metro Vancouver has committed to becoming a resilient and carbon neutral region by 2050, but how will we get there? The answers lie in the *Climate 2050 Strategic Framework and Roadmaps* which will guide the region's policies and actions to reduce greenhouse gas emissions and ensure that the region is resilient to climate change impacts. Each of the ten roadmaps will focus on a different topic, such as buildings or transportation, and will describe goals, targets, strategies, and actions to help us meet our commitments.

Developing the roadmaps is a collaborative and evolving task spanning several years. In 2021, the first two roadmaps were completed, and there are more to come.

Learn more about the *Transportation Roadmap* on [page 13](#) and the *Buildings Roadmap* on [page 14](#).

For the most up-to-date information about the roadmaps, visit metrovancover.org/climate2050.

Climate 2050 Roadmaps Status: June 2022





Climate 2050 Transportation Roadmap: A Pathway to Carbon Neutral Transportation

The *Climate 2050 Transportation Roadmap* outlines a pathway to a regional transportation system that is carbon neutral and resilient to the impacts of a changing climate by 2050. Although transportation is currently the largest source of regional greenhouse gas emissions, it also presents some of the best opportunities to start reducing emissions, particularly for personal transportation.

The *Transportation Roadmap* describes a vision where movement of goods and people produces no greenhouse gas emissions, with almost all vehicles powered by electricity or hydrogen. In order to realize this vision, we must implement the actions in the *Transportation Roadmap* as soon as possible.

Extreme flooding and landslides in 2021 caused extensive damage to road and rail networks in and out of the region. These extreme events demonstrated that reducing emissions isn't the only action needed to address climate change. We must also develop a transportation network that is resilient to the impacts of a changing climate. The first step in this process will be developing a better understanding of the vulnerability of our regional transportation system to climate change.

Taking Action Now: Exploring Curbside Charging in the City of Vancouver

The BC Government has announced that by 2035, all new vehicles sold in the province will be zero emissions — meaning they will run entirely on electricity, on electricity supplemented with gasoline, or on hydrogen. This transition means residents and businesses that park on-street will need access to electric vehicle (EV) charging.

In 2019, the City of Vancouver completed a pilot project to explore siting, access, and licensing of curbside EV chargers for residents and businesses. The pilot concluded that licensing fixed outlets on the curb for residential applications was not a viable solution, owing to high installation costs and scalability. However, in January 2022, the non-residential licence was renewed as a permanent program for businesses to install EV charging on the public right-of-way in front of their building. In the short term, the residential program has been replaced with a lower cost licence to allow the use of extension cords and cord covers to charge vehicles on-street. Other options like under-sidewalk and near-home off-street charging are also being explored.

Climate 2050 Buildings Roadmap: A Pathway to Zero Emissions and Resilient Buildings

Buildings emit one quarter of the greenhouse gases in the Metro Vancouver region. Most of this comes from burning natural gas, a fossil fuel, for space and hot water heating.

The *Climate 2050 Buildings Roadmap* envisions a future where residents live in healthy, resilient, zero emissions buildings. To get there, this means first reducing how much energy the home needs for

heating or cooling, followed by using zero emissions equipment that is powered by BC's low carbon and renewable electricity. Lastly, to keep energy costs lower, smart home features can optimize building systems. These actions can also keep occupants healthier, more comfortable, and safer from extreme weather caused by climate change, like higher temperatures and heavy rain events.

Taking a Whole Building Approach to Reach Zero Emissions

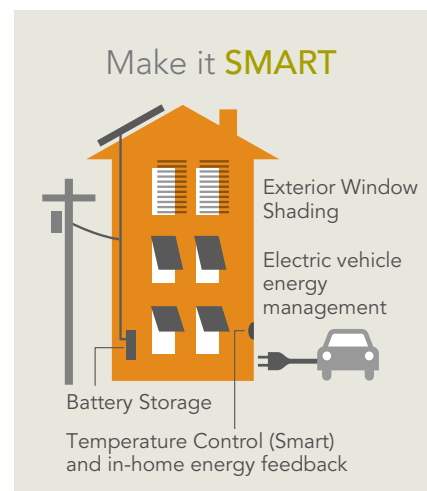
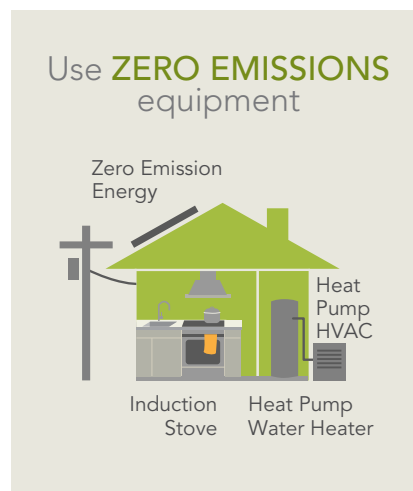
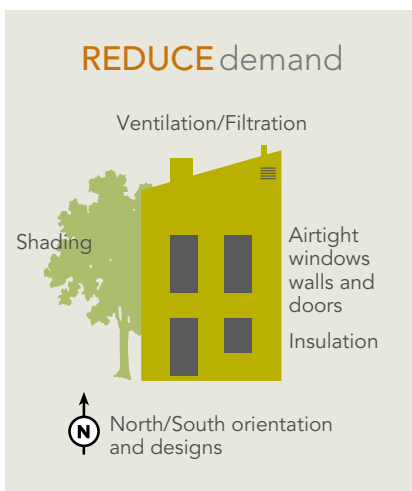




Photo courtesy of H.W. Flesher Housing Co-op

Taking Action Now: Heat Pump Installation at H.W. Flesher Housing Co-op, Vancouver

This co-op's meeting hall was too cold in the winter and too hot in the summer. The head of maintenance had learned from a resident about heat pumps, which can heat and cool a home, so he had one installed in the hall in 2018. Residents immediately noticed the warmth, and as a bonus, the damp smell from excess moisture was gone.

Building on the success and excitement around the meeting hall's heat pump, the co-op voted to replace the electric baseboards with heat pumps in all of the townhouses.

The retrofit was completed in 2021. It took five months and cost about \$400,000 for 87 units, but the co-op received over a third of the money back in energy efficiency rebates from BC Hydro. The co-op anticipates they will be using about a third less energy compared to heating with electric baseboards, and importantly, will be able to stay cool during dangerous heat waves.

We already have all the tools we need to make every home and building in the region healthy, resilient, and produce zero emissions. Many residents and building owners are already shifting to low emissions buildings, but thousands more low carbon renovations will be needed every year to reach our climate goals. The *Buildings Roadmap* aims to reduce barriers, such as higher costs and

low awareness of heat pumps and other solutions, so no one will be left behind in the transition to zero emissions buildings.

Learn more at metrovancover.org, search 'buildings roadmap.'

How Greenhouse Gas Emissions Can Provide Insight into Consumption Behaviours

To help understand the emissions related to our activities, such as consuming products and services, Metro Vancouver completed a consumption-based emissions inventory (CBEI) for the region. The CBEI complements Metro Vancouver's 'in-region' inventory, which accounts for greenhouse gas (GHG) emissions that occur within the region. The CBEI also accounts for 'embodied' emissions that occur outside the region's geographical boundary, but are associated with goods and services consumed within the region.

A CBEI helps guide and evaluate regional emission reduction programs. It also underscores the importance of strategies that reduce GHG emissions while avoiding unintended consequences of actions that might reduce GHG emissions within the region, only to push those emissions outside the region.

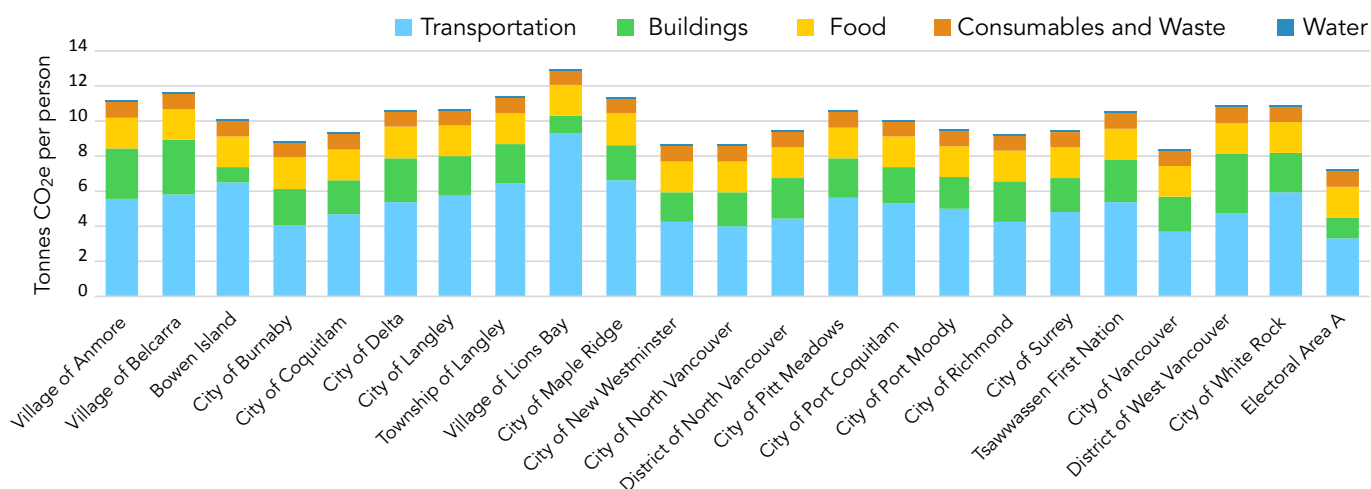
- The CBEI also reports emissions by community. Generally, larger communities such as Vancouver or Surrey have higher emissions due to their larger populations. Lower density communities with larger homes or those that rely more on vehicles showed higher emissions per person (see graph).

Findings from the Consumption-Based Emissions Inventory

- Metro Vancouver's consumption-based GHG emissions are 58 per cent higher than the in-region inventory, showing that the region relies more on imported goods than local goods.
- The 'transportation' and 'buildings' categories had the highest embodied GHG emissions, mirroring the results of the in-region inventory.

This is the first CBEI prepared for the Metro Vancouver region. Metro Vancouver plans to improve the CBEI and to continue providing this important foundational data for use in implementing future emission reductions.

Learn more at metrovancover.org, search 'consumption-based emissions inventory.'



Consumption-based emissions inventory of GHG emissions (tonnes CO₂e) per person by Metro Vancouver Community, 2015

Air Quality in 2021

In 2021, extreme heat and wildfire smoke led to four air quality advisories in the Lower Fraser Valley. In total, the region was under an advisory for 10 days.

The first air quality advisory of the season was issued by Metro Vancouver for ground-level ozone and fine particulate matter (PM_{2.5}) during a record-breaking heat dome in late June. A second ozone advisory was issued in late July.

In 2021, the temperatures measured inland in Abbotsford and Mission broke all-time high temperature records. In contrast, temperatures at the Vancouver International Airport near the coast did not break any all-time high temperature records, but did set a new record

for the highest temperature recorded in June.

The heat dome kicked off a very active wildfire season in BC, with an above average number of wildfires and area burned during the summer. Fortunately, the Metro Vancouver region was spared until later in the summer. Wildfire smoke from fires in the BC Interior and Washington seeped into the region in August, triggering two separate advisories: one in early August for PM_{2.5} and one in mid-August for PM_{2.5} and ozone.

Metro Vancouver generally has good air quality, but extreme weather associated with climate change could threaten the region's clean air. See [page 3](#) to learn more.

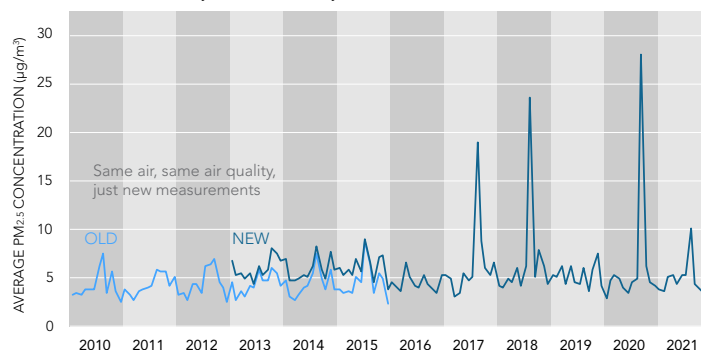
Air Quality Trends

Trends charts (right) illustrate the change in average air quality across the region over time. Measurements from monitoring stations from Horseshoe Bay to Hope are averaged to represent the outdoor air quality typically experienced in the region.

Trends show that most air pollutant levels have been improving over the last decade, even while the region's population has grown. Since 2015, several summers, including the summer of 2021, experienced elevated particulate matter concentrations due to wildfire smoke. Highest average concentrations were measured in 2017, 2018, and 2020. Most gaseous pollutants generally continued to decrease. Improvement of sulphur dioxide levels have been dramatic, mainly due to strict lower sulphur requirements for marine fuels. Average levels of ground-level ozone have slightly increased despite reductions in some pollutants that create it. This is partly due to an increase in ozone formed outside Canada coming into our region. Peak ground-level ozone levels (not shown), which occur during hot and sunny summer afternoons, are generally better now than in the 1980s and early 1990s.

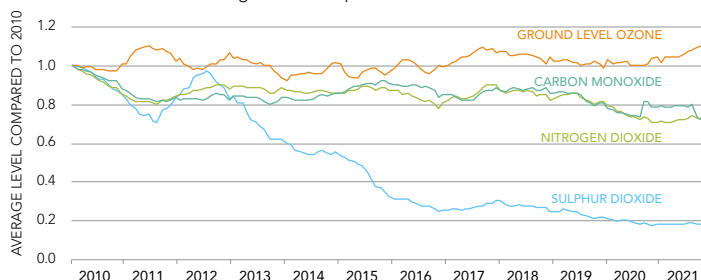
Fine Particulate Matter

In editions of *Caring for the Air* before 2022, this graph showed concentrations averaged over the previous 12 months. The graph now shows average concentrations for each month to better illustrate years influenced by wildfire smoke.



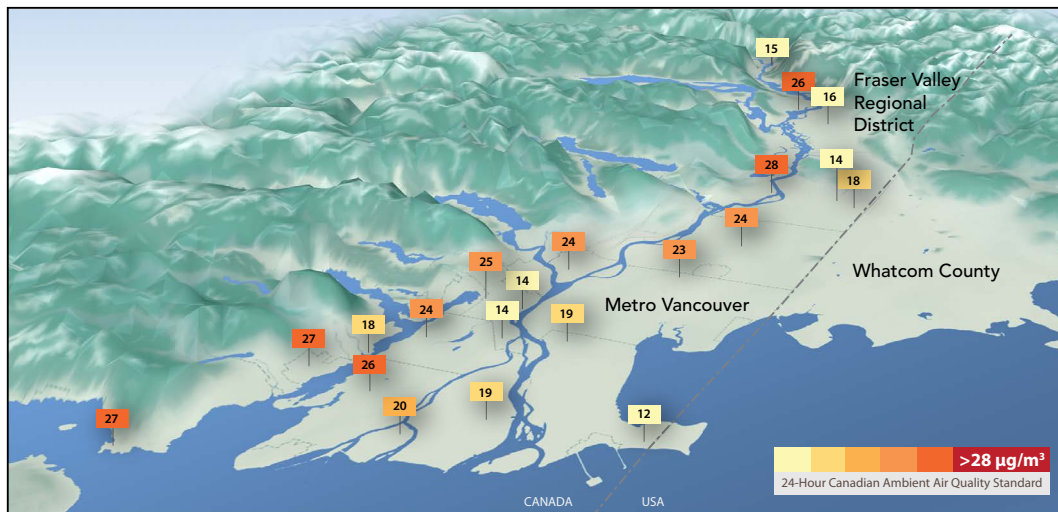
Gas Phase Pollutants

Concentrations averaged over the previous 12 months



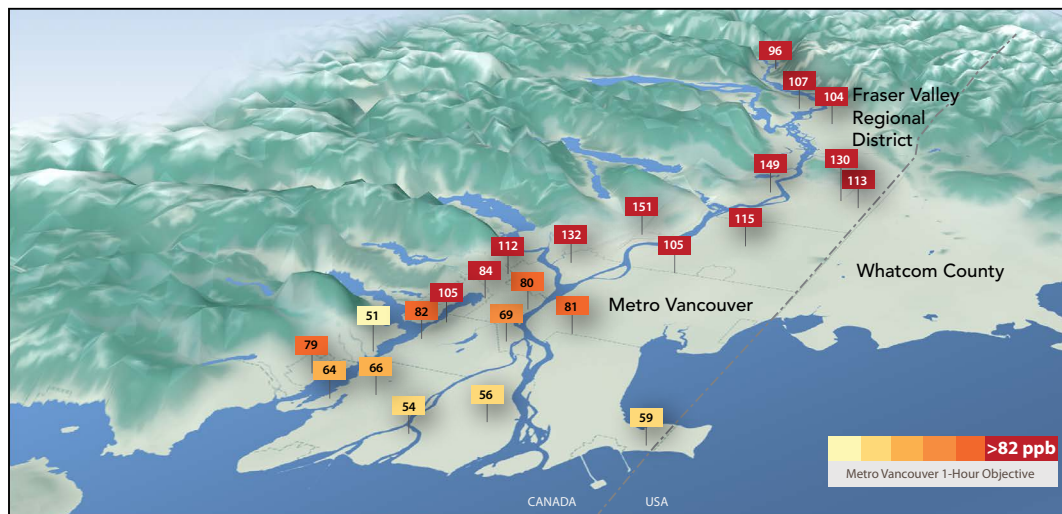
Air Quality in 2021: Data Summary

FINE PARTICULATE MATTER IN 2021



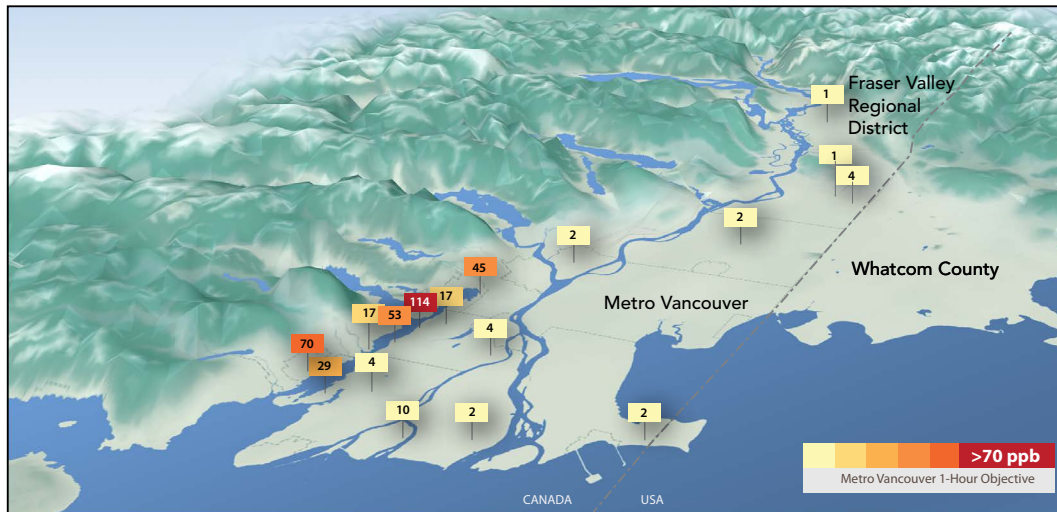
In 2021, fine particulate matter (PM_{2.5}) levels throughout the region met the 24-hour PM_{2.5} Canadian Ambient Air Quality Standard (calculated using data from 2019, 2020, and 2021) at all monitoring stations (see map above). Measurements averaged over 2021 were within Metro Vancouver's annual objective. Peak levels based on the highest 24-hour average were worse than the short-term objective (25 µg/m³) at all stations in 2021. Some PM_{2.5} exceedances occurred in June and July, followed by widespread exceedances throughout the network in August due to wildfire smoke.

GROUND-LEVEL OZONE IN 2021



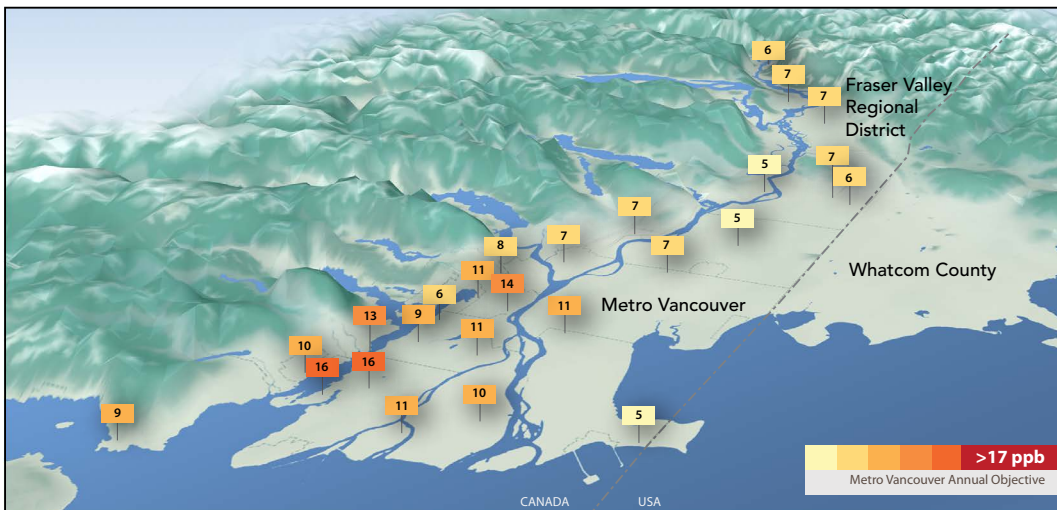
Ground-level ozone forms when nitrogen oxides and volatile organic compounds react in the air in the presence of sunlight. In 2021, elevated levels of ground-level ozone were experienced in June, July, and August with more than half of the monitoring stations exceeding Metro Vancouver's 1-hour ground-level ozone objective (see map above). Over the last two decades, air quality programs and regulations have reduced the frequency and severity of ground-level ozone advisories. However, an extreme heat wave in late June 2021 resulted in unusually high ozone concentrations, reaching levels not seen since the late 1980s. Metro Vancouver's 8-hour objective and the Canadian Ambient Air Quality Standard for ozone were not exceeded in 2021.

SULPHUR DIOXIDE IN 2021



Peak levels based on the highest 1-hour average are shown on the map above. These levels were better than Metro Vancouver's 1-hour objective of 70 ppb at all stations in 2021, with the exception of Capitol Hill in Burnaby where the objective was exceeded for two hours in December. Peak levels at Capitol Hill are mainly influenced by the nearby oil refinery. Average concentrations of sulphur dioxide were below Metro Vancouver's annual objective of 5 ppb at all stations in 2021.

NITROGEN DIOXIDE IN 2021



Nitrogen dioxide concentrations were better than Metro Vancouver's long-term objective (17 ppb) at all monitoring stations. Annual averages are shown on the map. The highest average nitrogen dioxide concentrations were measured in highly urbanized areas near busy roads. More than half of the regional emissions of nitrogen oxides (which includes nitrogen dioxide) come from transportation sources. In 2021, nitrogen dioxide concentrations were better than Metro Vancouver's short-term objective (60 ppb) at all monitoring stations, with the exception of North Vancouver-Second Narrows which exceeded the objective. Short-term measurements of nitrogen dioxide at North Vancouver-Second Narrows were influenced by local construction activity near the station in 2021.

Small Air Sensors Team Up With Big Monitoring Networks



In 2021, Metro Vancouver completed a review of its network of air quality monitoring stations and equipment. The network continuously monitors air quality conditions and is used for air quality planning for the region and issuing public advisories when air quality is degraded, such as during wildfire smoke events. The review found that Metro Vancouver operates a world-class air quality monitoring network and provided recommendations to further improve it.

One recommendation was to integrate small air sensors into the network. These sensors are cheaper and easier to install than traditional air monitoring equipment. They have the potential to increase air monitoring coverage across the region and collect data at higher spatial resolution than Metro Vancouver's existing network. The benefits of small sensors may have tradeoffs, such as lower data quality and reliability, which need to be considered when setting up small sensor networks.

Smart Cities:

Hyperlocal Air Quality Monitoring

A project starting in 2022, "Smart Cities: Hyperlocal Air Quality Monitoring," will investigate how to deploy a dense small sensor network to supplement data already being collected by the Metro Vancouver network. The project proposes to install dozens of small sensors in concentrated areas, such as a single neighbourhood, providing high spatial resolution data to better understand how air quality may change across just a few city blocks. Hyperlocal monitoring could help identify impacts from major transportation routes and industrial emitters, inequities in air quality experienced at the neighbourhood level, the effectiveness of emission reduction strategies, and a better understanding of localized health outcomes related to air quality.



Network News

New Ambient Air Monitoring at the Waste-to-Energy Facility

Metro Vancouver's Waste-to-Energy Facility operates well within environmental standards. In 2020, facility emissions represented less than one percent of the regional airshed totals for nitrogen oxide, fine particulate matter, and greenhouse gas emissions.

In fall 2020, Metro Vancouver installed a new air quality monitoring station beside the facility to measure hydrogen chloride, sulphur dioxide, and nitrogen oxides. A hydrogen chloride monitor was also added to the nearby Burnaby South monitoring station.

Data collected to the end of 2021 shows ambient concentrations of hydrogen chloride and sulphur dioxide are less than eight per cent of ambient air quality objectives. Monitoring will continue for at least two years.

Metro Vancouver's monitoring stations had not measured hydrogen chloride before, so learnings from this study will be important for future regional air monitoring strategies and advancement in monitoring technology.

Monthly ambient air monitoring reports are posted online at metrovancover.org, search 'waste-to-energy reports.'

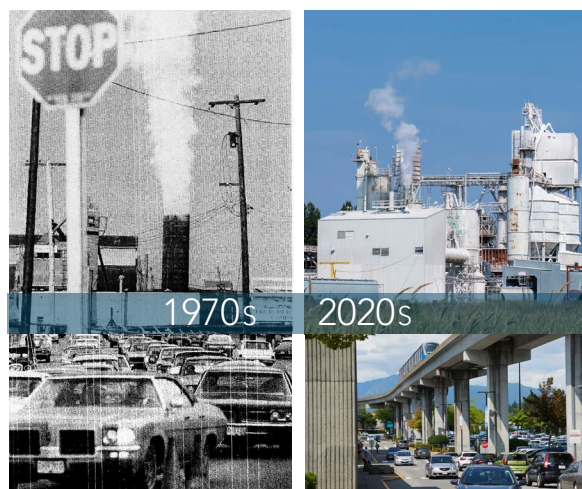
Tsleil-Waututh Nation Air Monitoring Study Complete

Metro Vancouver's Mobile Air Monitoring Unit was stationed at Tsleil-Waututh Nation's Burrard Inlet IR 3 Lands in 2018 and 2019 to better understand sulphur dioxide concentrations and emission sources in the area, such as an oil refinery and marine vessels. The study showed that air contaminant concentrations were below Metro Vancouver's air quality objectives during the study, with the exception of fine particulate matter during a wildfire smoke event in 2018. Air quality levels at the Tsleil-Waututh Reserve Lands compared favourably to other areas of the region, with some of the lowest average levels of air contaminants measured.

The full report is posted online at metrovancover.org, search 'Tsleil-Waututh study.'

Metro Vancouver's Air Quality Program Turns 50

2022 marks the 50th anniversary of Metro Vancouver's air quality program. In 1972, a series of legislative changes was completed which formalized the provincial government's delegation of authority to manage and regulate air quality in the region to Metro Vancouver (known as the Greater Vancouver Regional District at the time). Since then, Metro Vancouver has been protecting and improving our air quality and will continue to respond to threats to human health and the environment, such as climate change.





Metro Vancouver is a federation of 21 municipalities, one electoral area and one treaty First Nation that collaboratively plans for and delivers regional-scale services. Its core services are drinking water, wastewater treatment and solid waste management. Metro Vancouver also regulates air quality, plans for urban growth, manages a regional parks system, and provides affordable housing. The regional district is governed by a Board of Directors of elected officials from each local authority.

If you have questions or comments about *Caring for the Air*,
please contact us at **AQinfo@metrovancover.org** or 604-432-6200.

Electronic copies of this and previous editions of *Caring for the Air* can be found on **metrovancover.org**

To: Climate Action Committee

From: Johann Zerbe, Policy Analyst
Parks and Environment Department

Date: June 8, 2022

Meeting Date: July 8, 2022

Subject: **Metro Vancouver Climate 2050 Snapshot 2021/2022**

RECOMMENDATION

That the Climate Action Committee receive for information the report dated June 8, 2022, titled "Metro Vancouver Climate 2050 Snapshot 2021/2022".

EXECUTIVE SUMMARY

Recognizing the need for urgent and transformative action, Metro Vancouver is taking an 'action while planning' approach, implementing climate actions at the same time as it is progressing with development of the *Climate 2050 Roadmaps*. The *Climate 2050 Snapshot 2021/2022* Report is intended to meet Metro Vancouver's commitment to regular and transparent reporting on the development and implementation of the *Climate 2050 Roadmaps*. The *Climate 2050 Snapshot* report presents highlights of Climate 2050 implementation work throughout 2021 and as of mid-2022. As work on *Climate 2050* shifts from planning to implementation, the *Climate 2050 Snapshot* will evolve to include key performance indicators to track and measure progress on roadmap implementation.

PURPOSE

To inform the Climate Action Committee of the *Climate 2050 Snapshot 2021/2022* report which provides an overview of *Climate 2050* roadmap development and implementation in 2021 and 2022 year-to-date. The snapshot report is the first annual report on *Climate 2050*.

BACKGROUND

In September 2018, the MVRD Board adopted the *Climate 2050 Strategic Framework* and directed staff to initiate development of the *Climate 2050 Roadmaps*. Climate 2050 is an overarching long-term strategy that will guide our region's policies and collective actions to transition to a carbon neutral and resilient region over the next 30 years. *Climate 2050* is being implemented through ten issue area Roadmaps, which will describe long-term goals, targets, strategies and actions to reduce regional greenhouse gases and ensure that this region is resilient to climate change impacts. Implementation of the Roadmaps will be driven by Metro Vancouver's management plans and other policies including the Clean Air Plan.

Climate 2050 also includes public outreach with regular reporting on progress. The Climate Action Committee 2022 Work Plan identifies reporting on Metro Vancouver's progress on *Climate 2050* roadmap implementation as a priority for the year. The *Climate 2050 Snapshot 2021/2022* is intended to be the first annual report to communicate progress on *Climate 2050* roadmap implementation, to provide information on specific roadmap actions being advanced, and other climate action projects at Metro Vancouver.

METRO VANCOUVER'S CLIMATE 2050 SNAPSHOT REPORTING

The *Climate 2050 Snapshot 2021/2022* is one of several reports that provides the public with updates and progress on climate action initiatives by Metro Vancouver. Metro Vancouver has historically reported corporate and community climate actions through publications such as *Caring for the Air*, as well as the *Climate Action Revenue Incentive Program* (CARIP) report, both of which have been prepared annually. With the cancellation of CARIP in 2021, and the announcement of a new provincial climate action funding and reporting program in May 2022 (*the Local Government Climate Action Program, or LGCAP*), Metro Vancouver will be meeting the similar reporting obligations through public reporting in summer/fall 2022. A breakdown of Metro Vancouver's corporate carbon emissions will be included in this forthcoming report.

While much work to date on *Climate 2050* has been focused on development and engagement on the various *Climate 2050* roadmaps, Metro Vancouver also progressed and completed numerous climate action initiatives, reflecting our 'Action while Planning' approach. *The Climate 2050 Snapshot 2021/2022* intends to communicate these actions, and be a practical resource for current and ongoing climate action initiatives for elected officials, residents and other stakeholders in the region. As work on *Climate 2050* shifts from planning to implementation, the *Climate 2050 Snapshot* will evolve to focus on reporting key performance indicators identified in each roadmap to track and measure progress on roadmap implementation and targets. Examples could include: number of new buildings with low-carbon energy systems or proportion of new vehicle sales that are zero emissions.

INSIDE THE CLIMATE 2050 SNAPSHOT 2021/2022 REPORT

The *Climate 2050 Snapshot 2021/2022* provides readers with an overview of the *Climate 2050* strategy, and context on the climate change challenge facing our region. It provides a status update on the development and implementation of the *Climate 2050 Roadmaps*, and progress towards roadmap actions and Metro Vancouver's established climate targets. For each of the 10 *Climate 2050* issue areas, the report covers:

- Highlights on key roadmap actions and climate action projects implemented during 2021;
- Progress and actions as of 2022;
- An update on roadmap development.

A full list of climate action projects implemented in 2021 can be found in the *Metro Vancouver 2021 Climate Action Project List*, which in addition to more information on *Climate 2050*, can be found on Metro Vancouver's website, which will be kept current.

CLIMATE 2050 IMPLEMENTATION HIGHLIGHTS

Projects and actions are highlighted in the following ways in the report:

- **Big Move:** Actions which are foundational to achieving the 2030 targets set out in *Climate 2050*, and which should lead to the most significant emission reductions.
- **Corporate Leadership:** Actions implemented by Metro Vancouver in its corporate operations to demonstrate leadership and support regional actions.
- **GHG reduction:** Actions which reduce greenhouse gas (GHG) emissions.

- Adaptation & Resilience: Actions which will support adaption and resilience in a changing climate.

ROADMAP PROGRESS

In 2021, Metro Vancouver finalized the [Climate 2050 Buildings Roadmap](#) and [Climate 2050 Transportation Roadmap](#). Four *draft* roadmaps were under development during 2021: [Agriculture](#); [Nature & Ecosystems](#); [Energy](#); and [Industry & Business](#), and each of these is now undergoing engagement in 2022. Metro Vancouver is currently working on the drafts of four additional roadmaps: [Waste](#); [Water & Wastewater Infrastructure](#); [Land Use & Growth Management](#); and [Human Health & Wellbeing](#).

As work on *Climate 2050* shifts from roadmap development to focus on implementation, Metro Vancouver will continue to track and report on progress through the *Climate 2050 Snapshot* report. Information will be shared through the annual report, as well as through an online reporting platform on Metro Vancouver's Climate 2050 webpage. Progress on action implementation will be tracked and reported through a series of Key Performance Indicators, as laid out in the *Climate 2050* roadmaps.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The resources to develop the *Climate 2050 Snapshot*, as well as to maintain an ongoing web presence, are approved within current program budgets.

CONCLUSION

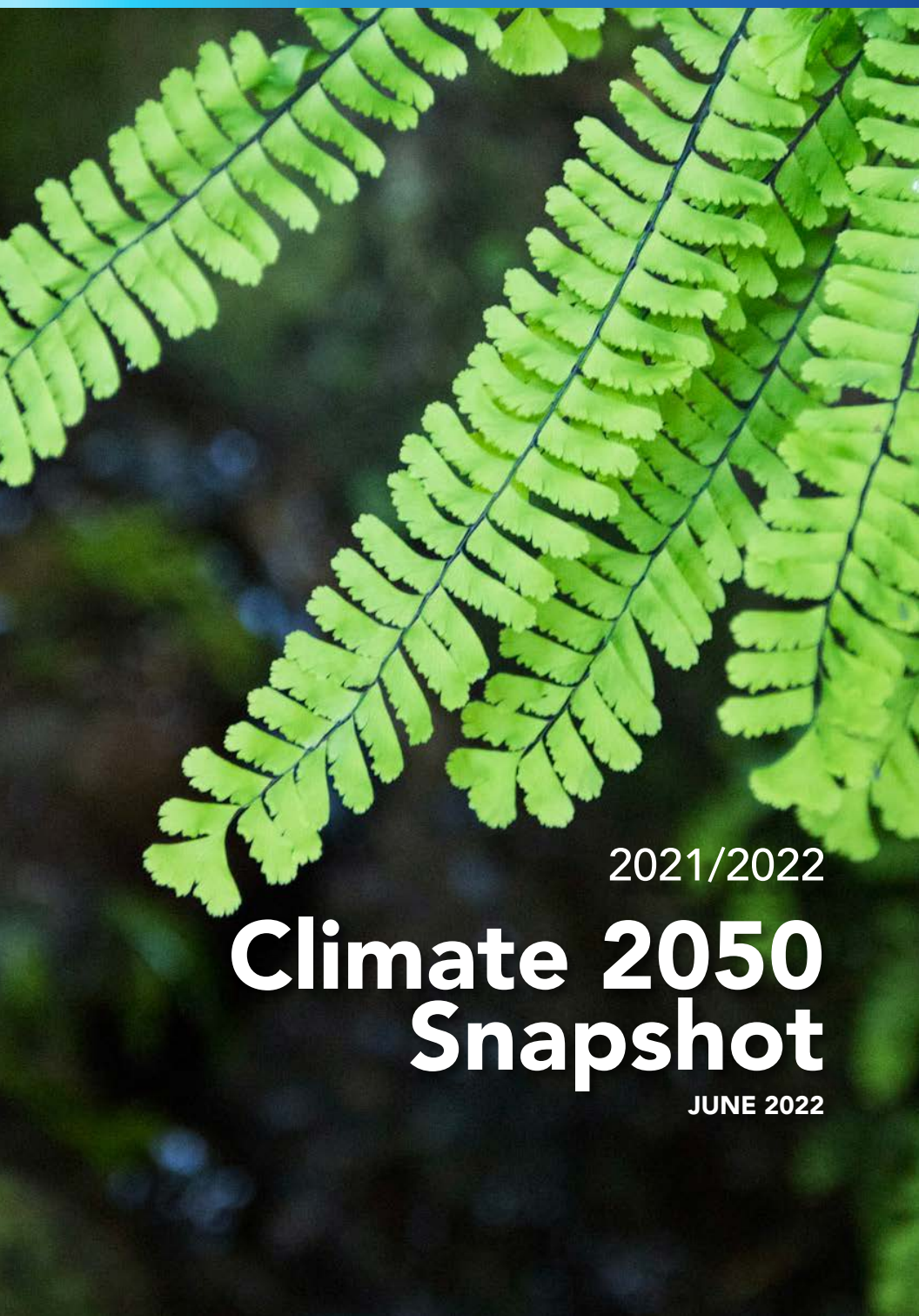
The *Climate 2050 Snapshot 2021/2022* provides an overview of *Climate 2050* roadmap development and implementation in 2021 and 2022 year-to-date, including updates on key actions and projects that support progress towards the *Climate 2050* objective of a carbon neutral, resilient region. As work on *Climate 2050* shifts from roadmap development to implementation, the *Climate 2050 Snapshot* and online reporting tool will evolve to track and report progress on actions and Key Performance Indicators as outlined in the various roadmaps.

Attachment

Metro Vancouver Climate 2050 Snapshot 2021/2022 Report

References

1. *Climate 2050 Roadmaps*: <http://www.metrovancouver.org/services/air-quality/climate-action/climate2050/regional-priorities/discussion-papers/Pages/default.aspx>
2. *Clean Air Plan*: <http://www.metrovancouver.org/services/air-quality/AirQualityPublications/Clean-Air-Plan-2021.pdf>



2021/2022

Climate 2050 Snapshot

JUNE 2022

About Metro Vancouver

Metro Vancouver is a federation of 21 municipalities, one electoral area and one treaty First Nation that collaboratively plans for and delivers regional-scale services. Metro Vancouver's core utility services include drinking water, sewage treatment, and solid waste management, along with regional services like regional parks, affordable housing, regional land use planning and air quality and climate action that help keep the region one of the most livable in the world.

Indigenous Territorial Recognition

Metro Vancouver acknowledges that the region's residents live, work, and learn on the shared territories of many Indigenous Peoples, including 10 local First Nations: Katzie, Kwantlen, Kwikwetlem, Matsqui, Musqueam, Qayqayt, Semiahmoo, Squamish, Tsawwassen, and Tsleil-Waututh.

Metro Vancouver respects the diverse and distinct histories, languages, and cultures of First Nations, Métis, and Inuit, which collectively enrich our lives and the region.

Table of Contents

Climate 2050 Snapshot 2021/2022	4
Climate 2050	7
Climate 2050 Roadmaps	8
Progress on Climate 2050	10
Buildings	12
Transportation	14
Energy	16
Industry & Business	18
Nature & Ecosystems	20
Agriculture	22
Water and Wastewater Infrastructure	24
Waste	26
Human Health & Well-Being	28
Land Use & Growth Management	30



Fraser River

Climate 2050 Snapshot 2021/2022

Climate change is both a global and a local challenge, and it is already affecting our planet and our region in profound ways, making our summers hotter and drier, our winters warmer and wetter, and increasing the frequency of extreme weather events. Recognizing the need for urgent and transformative action, Metro Vancouver takes an 'action while planning' approach, implementing climate actions in 2021 and 2022, while at the same time progressing on development of the *Climate 2050 Roadmaps*, which lay out the strategies and actions needed to reach Metro Vancouver's commitment to a low carbon, resilient region.

The *Climate 2050 Snapshot 2021/2022* is Metro Vancouver's first annual update on implementation progress of the *Climate 2050 Roadmaps*. It is intended to meet Metro Vancouver's commitment to regular and transparent reporting on *Climate 2050 Roadmap* progress, and progress towards Metro Vancouver's established climate commitments and targets. As work on *Climate 2050* shifts from planning to implementation, the *Climate 2050 Snapshot* will evolve to focus on reporting key performance indicators to track and measure progress on roadmap implementation.



For each of the ten *Climate 2050 Roadmap* issue areas, the *Climate 2050 Snapshot 2021/2022* highlights progress on roadmap actions, and other projects with climate benefits implemented during 2021. It also provides progress as of mid-2022 for certain actions and *Climate 2050 Roadmap* development.

For a complete list of climate action projects implemented in 2021, see [the Metro Vancouver 2021 Climate Action Project List](#).



Boundary Bay Regional Park

Climate 2050

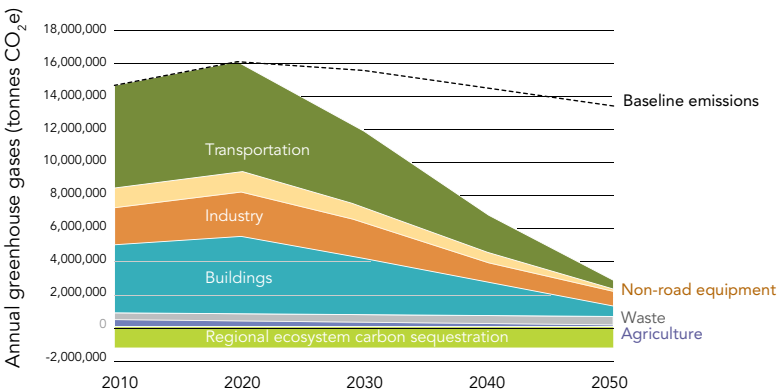
Metro Vancouver and its 23 member jurisdictions have been enacting climate policy and taking climate action for over 20 years. In 2018, the Metro Vancouver Board of Directors endorsed *Climate 2050*, a regional climate strategy. *Climate 2050* commits to bold leadership in responding to climate change, ensuring that our infrastructure, ecosystems, and communities are resilient to the impacts of climate change. It includes the following commitments:

- Metro Vancouver is a carbon neutral region by 2050
- Infrastructure, ecosystems, and communities are resilient to the impacts of climate change
- Climate 2050 also sets an interim target of 45% reduction in regional greenhouse gas emissions from 2010 levels, by 2030.



Achieving a carbon neutral region by 2050 will require unprecedented greenhouse gas reductions across most sectors. Many sectors must become “zero emissions”, and any remaining greenhouse gas emissions will need to be balanced with ecological and technological carbon removal approaches. Initial modeling as a part of Metro Vancouver’s [Carbon Neutral Modeling Study](#) shows us that the 2020s needs to be a decade of significant action on climate solutions.

Achieving a Carbon Neutral Region by 2050



Climate 2050 Roadmaps

Climate 2050 is organized around ten issue areas, intended to provide logical groupings of climate goals, strategies, and actions. They reflect the functions and responsibilities under Metro Vancouver's mandate and the range of climate related challenges and initiatives affecting the region. For each issue area, Metro Vancouver is developing a *Climate 2050 Roadmap* which outlines regional and corporate goals, strategies, actions, and performance metrics. Once all ten *Climate 2050 Roadmaps* are completed, they will provide a comprehensive view of the path towards a low carbon, resilient region.

Climate 2050 Issue Areas



Nature and
Ecosystems



Human Health
and Well-Being



Transportation



Infrastructure



Buildings

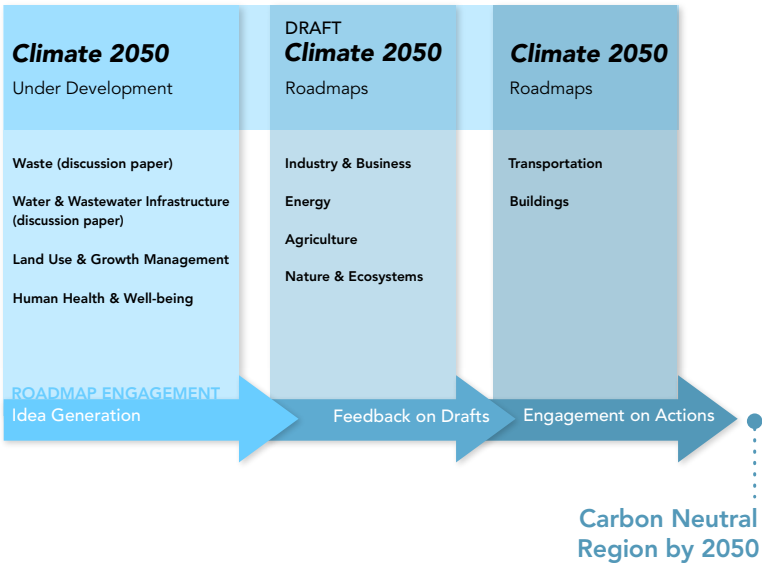
The *Climate 2050 Roadmaps* are being developed by Metro Vancouver, and include a call to action for key stakeholders across the region including: member jurisdictions, residents, businesses, academic institutions, First Nations and other regional partners and orders of government. Metro Vancouver will take a strategic approach to assessing fairness, equity and affordability in the *Climate 2050 Roadmaps*.



Progress on Climate 2050

In 2021, Metro Vancouver finalized the *Climate 2050 Buildings Roadmap* and *Climate 2050 Transportation Roadmap*. Four draft roadmaps were under development during 2021: *Agriculture*; *Nature & Ecosystems*; *Energy*; and *Industry & Business*, and each of these is undergoing engagement during 2022. Metro Vancouver is currently developing drafts of four additional roadmaps: *Waste*; *Water & Wastewater Infrastructure*; Land Use & Growth Management; and Human Health & Well-being.

Climate 2050 Roadmaps Status: June 2022



Reflecting our 'Action while Planning' approach, in 2021, Metro Vancouver implemented actions to reduce GHG emissions and support climate adaptation and resilience across the region and in Metro Vancouver's own corporate operations.

For each of the ten Climate 2050 issue areas, the *Climate 2050 Snapshot- 2021/2022* highlights progress on:

1. roadmap development
2. implementation of roadmap actions, and other climate action projects.

The icons below indicate the types of actions included in the highlights:



Actions which are foundational to achieving the 2030 targets set out in Climate 2050, and which should lead to the most significant emission reductions or significant progress on resilience and adaptation



Actions implemented by Metro Vancouver in its corporate operations to demonstrate leadership and support regional actions

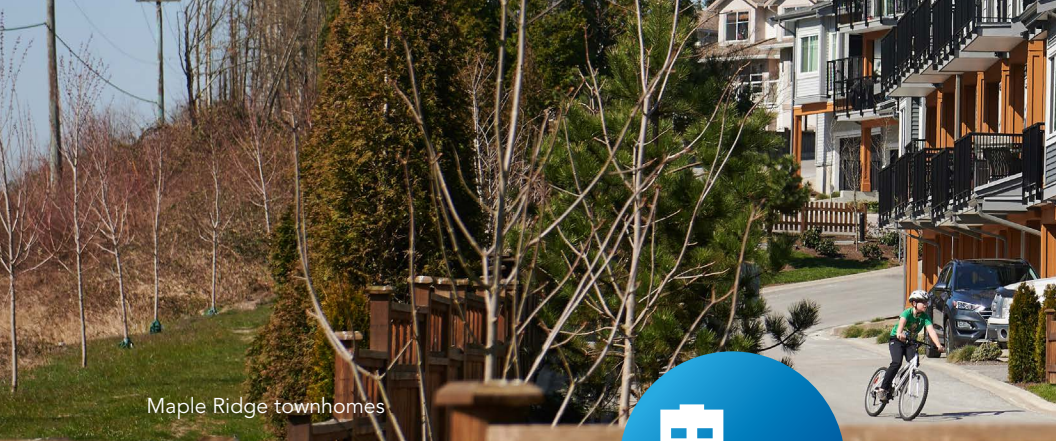


Actions which reduce greenhouse gas (GHG) emissions



Actions which will support adaptation and resilience in a changing climate

For a complete list of climate action projects implemented in 2021, see [the Metro Vancouver 2021 Climate Action Project List](#).



Maple Ridge townhomes



Buildings

Buildings will help shape our low-carbon future by using clean and renewable energy, becoming highly energy efficient, and supporting human health through design and location.

2021 Implementation Highlights:



Installed low-carbon mechanical systems at MVHC buildings, including at the Net-Zero Welcher Avenue Redevelopment, currently under construction, in support of Metro Vancouver Housing Corporation (MVHC) GHG reduction goal of 45% over the next 10 years.



Replaced natural gas hallway make up air supply units at MVHC's Meridian Village site with electric heat pump systems that feature cooling capacity, where previous systems only had heating, in support of Metro Vancouver Housing Corporation (MVHC) GHG reduction goals. This will be important both for GHG reductions, as well as improving the resilience of Metro Vancouver's housing facilities to more frequent extreme heat events in the region.



2022 In Progress:



Greenhouse Gas Performance Requirements for Existing Large Buildings (Action 1.1)

As of mid- 2022, the MVRD Board authorized initial engagement to develop an approach to manage GHG emissions from large buildings, which will take place over the summer and fall of 2022.



Decision Support Tools for Low Carbon Upgrades (Action 2.2)

In early 2022, the MVRD Board approved \$850,000 in funding over three years to develop a Metro Vancouver Large Building Retrofit Accelerator that will serve as a regional resource hub that provides technical support and resources to building owners and managers to implement low- and zero-emission retrofits.



Strengthen Metro Vancouver's Corporate Sustainable Design Requirements (Action 4.5)

In 2022, initiated a pilot to test a Design Guide on a full-scale infrastructure project at three Water Services buildings.

Climate 2050 Roadmap Development: [Climate 2050 Buildings Roadmap](#) endorsed by the Metro Vancouver Board in November 2021.



Transportation

Transportation will help shape our low-carbon future by prioritizing zero-emission vehicles, managing the demand for roads, and making improvements that increase system resilience.

2021 Implementation Highlights:



Enhance and Improve Regional Transit (Action 1.1)

Worked with TransLink to align GHG reduction targets and strengthen climate action on TransLink's long range regional transportation strategy, Transport 2050.



Electric Vehicle Outreach Programs (Action 2.7)

Worked with member jurisdictions and other regional partners to promote electric vehicles, through outreach programs including Emotive and EV Condo.



Transition the Corporate Fleet to Zero Emissions (Action 2.9)

**Corporate
LEADERSHIP**

In 2021, initiated a feasibility study to assess Electric Vehicle charging infrastructure at our Lake City/ Production Way Operations Centre. The study will consider emergency backup power requirements to ensure fleet resiliency during periods of grid power loss.



Active Transportation in Metro Vancouver



Initiated development of E-bikes and Micro-mobility in Regional Parks Policy, which will support active/ alternative transportation in Metro Vancouver parks and greenways, and reduce emissions.

2022 In Progress:



Use Pricing to Reduce Driving and Emissions (Action 1.2) and Develop Regional Emissions Requirements for Passenger Vehicles (Action 2.2)

In early 2022, the MVRD Board approved \$455,000 in funding over two years for Driving Down Emissions: Working with Key Partners to Develop a Regional Pathway to Accelerate Transportation Emission Reductions, to develop a policy package that will dramatically reduce emissions from light duty vehicles to achieve the sectoral target of 65% reduction by 2030 while considering cost and equity implications.

Climate 2050 Roadmap Development: [Climate 2050 Transportation Roadmap](#) endorsed by the Metro Vancouver Board in November 2021.



Energy

Energy will help shape our low-carbon future through reduced energy use, enhanced energy efficiency and transitioning to clean, renewable energy.

2021 Implementation Highlights:

Corporate LEADERSHIP



Metro Vancouver as a Regional Clean, Renewable Energy Provider (Action 3.9)

Finalized an agreement to provide up to 10 megawatts of heat from Metro Vancouver's Waste-to-Energy Facility to Vancouver's River District community starting in 2025. Once fully built out, energy from the Waste-to-Energy District Energy Facility will reduce up to 45,000 tonnes of GHGs per year by offsetting natural gas usage.



Implemented an Alternative Fuel and Recyclables Recovery Project, which reduces emissions by using small load waste-based alternative fuel in place of conventional fossil fuel in a local cement plant. The initiative is projected to process an estimated 60,000 tonnes of small load waste, reducing regional GHG emissions by up to 20,000 tonnes.



Lulu Island Renewable Natural Gas Recovery Facility

2022 In Progress:



Regional Hydrogen Hub (Action 3.3)

Working with the B.C. Hydrogen Office and the B.C. Centre for Innovation and Clean Energy on the establishment of a hydrogen hub in Metro Vancouver.

Corporate LEADERSHIP



Metro Vancouver as a Regional Clean, Renewable Energy Provider (Action 3.9)

Received federal and provincial funding under the CleanBC Communities Fund for the installation of a heat recovery system at Lulu Island Wastewater Treatment Plant, which will increase renewable natural gas production at the Plant.

Climate 2050 Roadmap Development: Draft [Climate 2050 Energy Roadmap](#) approved for engagement April 2022.



Industry & Business

Industry will help shape our low-carbon future by reducing emissions with better technology, using clean and renewable energy, and setting high standards for products and their manufacturing processes.

2021 Implementation Highlights:



Carbon Capture in the Metro Vancouver Region (Action 3.1)

In 2021, initiated project and explored potential opportunities through coordination with the Provincial government, academia, and industrial facilities.



2022 In Progress:



Integrate Greenhouse Gases into Emissions Regulations and Permits (Action 1.2)

In early 2022, the MVRD Board approved \$150,000 funding over two years starting in 2022 to initiate work on exploring innovative approaches to integrate GHG requirements into permits and regulations.



"Lights, Camera, Climate Action!": An initiative to support the transition of the film industry, and similar user groups away from diesel generators and towards cleaner power alternatives. In 2022, initiated a feasibility study on the viability of clean energy alternatives for the film industry.

Climate 2050 Roadmap Development: Draft [*Climate 2050 Industry & Business Roadmap*](#) approved for engagement in February 2022.



Nature & Ecosystems

Nature and ecosystems will help shape our low-carbon future by capturing carbon, cooling our streets, and enhancing livability.

2021 Implementation Highlights:



**Corporate
LEADERSHIP**

Protect, Restore, and Enhance Natural Areas at the Regional Scale (Action 1.2)

As part of the Regional Parks Land Acquisition 2050 Strategy, acquired 76.7 hectares of land in 2021 to expand Codd Wetland Ecological Conservancy Area and Kanaka Creek Regional Park, protecting land threatened by development, and supporting ecological conservation and restoration, as well as carbon sequestration.



Regional Parks Ecological Restoration Program

Completed 26 ecosystem restoration projects in 15 regional parks, adding 13,477 native plants to restore degraded sites, to enhance biodiversity and promote ecosystem resilience.



Kanaka Creek Regional Park



Corporate LEADERSHIP

Incorporate Climate Change Planning into Protected Area Management (Action 1.4)

Conducted a Flood Protection Assessment at Minnekhada Regional Park, to assess the sources and impacts of flooding and identify options to improve drainage within the park with considerations of climate change and sea level rise.



Achieve 40% Tree Canopy Cover Within the Region's Urban Areas (Action 4.1)

Completed the [Metro Vancouver Tree Regulations Toolkit](#), which supports tree protection in communities in the region by identifying regulatory tools and approaches that can help to preserve trees and increase tree canopy cover.

2022 In Progress:

Proposed strengthened priorities related to nature and ecosystems as part of [Metro 2050](#), the regional growth strategy update, and enhanced climate change policies in the draft [Regional Parks Plan](#).

Regional Parks Alternative Transportation Study Part 2: Access to Regional Parks was completed, which will guide work to improve access to regional parks by public transit, biking, and walking.

Climate 2050 Roadmap Development: Draft [Climate 2050 Nature & Ecosystems Roadmap](#) approved for engagement in February 2022.



Boundary Bay Dairy Farm



Agriculture

Agriculture will help shape our low-carbon future by using clean and renewable energy and using regenerative farming practices. We all need to protect agricultural land for future food production and carbon storage.

2021 Implementation Highlights:



Proposed strengthened priorities to protect and increase resilience of agricultural land for sustainable food production as part of Metro 2050, the regional growth strategy update.



Assessed air emissions emitted as a result of management of agricultural vegetative debris, to support development of alternatives to open burning, including assessing solutions such as composting.



2022 In Progress:

Review of Benefits of Ecosystem Services on Agricultural Land

Agricultural Land Use Inventory for South of Fraser member jurisdictions with agricultural land.

Climate 2050 Roadmap Development: Draft [Climate 2050 Agriculture Roadmap](#) published October 2021 and engagement underway in 2022 for feedback.



Water and Wastewater Infrastructure

Water and wastewater infrastructure will help shape our low-carbon future by protecting and conserving water resources, generating low-carbon energy, and planning for resilience across the region.

2021 Implementation Highlights:



We Love Water public education campaign, which promotes residential water conservation for Metro Vancouver's water supply system.



Introduced stricter watering restrictions during high demand season as part of a revised [Drinking Water Conservation Plan](#), to strengthen resilience and conserve drinking water supplies.



Rendering of the North Shore Wastewater Treatment Plant

2022 In Progress:



Advanced construction on the new North Shore Wastewater Treatment Plant (NSWWTP) which will replace the existing Lions Gate Wastewater Treatment Plant which served the North Shore communities. The use of renewable natural gas produced by the plant's digesters to generate electricity and heat will lead to reduced GHG emissions from plant operations. In addition, heat from the treated wastewater will be extracted and provided to Lonsdale Energy Corporation, the district energy service provider in the City of North Vancouver, providing clean, renewable energy to reduce emissions from buildings.

Climate 2050 Roadmap Development:

Climate 2050 Water & Wastewater Discussion Paper approved for engagement in January 2021. Draft Roadmap under development in 2022.



United Boulevard Recycling & Waste Centre



Waste

Waste management will help shape our low-carbon future by reducing and diverting waste, promoting a circular economy, and generating low-carbon energy.

2021 Implementation Highlights:

Corporate LEADERSHIP

Implemented projects to reduce GHG emissions at Metro Vancouver-operated waste facilities, including the continuation of the Coquitlam Landfill Gas Capture project, and a Non-Ferrous Metals Recovery project at the Waste-to-Energy Facility.



Incorporated climate preparedness considerations into design of two new Recycling and Waste Centers which will open in 2022.



2022 In Progress:



Evaluation of Renewable Natural Gas at Metro Vancouver Waste-to-Energy Facility.



Opening two new Recycling and Waste Centres at United Boulevard and Central Surrey.

Climate 2050 Roadmap Development: *Climate 2050 Waste Discussion Paper* approved for engagement in June 2020. Draft Roadmap under development in 2022.



təmtəmíx*ten/Belcarra Regional Park



Human Health & Well-Being

Anticipating and preparing for climate change impacts including storms, flooding, heat waves, and wildfires, protects our health and safety.

2021 Implementation Highlights:



Replaced natural gas hallway make-up air supply units with electric heat pump systems that feature cooling capacity, where previous systems only had heating, at the MVHC Meridian Village housing site. This is important for health & well-being as we anticipate more extreme heat events in the region.



Introduced a [Residential Wood Burning Bylaw](#), to reduce emissions of the short-lived climate forcer black carbon, and other health-harming air contaminants such as fine particulate matter in the region.



2022 In Progress:

In 2022, Metro Vancouver is continuing to provide and enhance our Air Quality Advisory Program, which helps residents of the region understand current air quality conditions and potential health risks as climate change- influenced air quality events become more frequent and intense.

Climate 2050 Roadmap Development: Climate 2050 Human Health & Wellbeing Roadmap under development.



Burnaby

Land Use & Growth Management

The location of new homes and businesses strongly influences both GHG emissions and exposure to risks associated with climate change.

2021 Implementation Highlights:

Proposed strengthened climate policies related to land-use and growth management, as part of Metro 2050, the regional growth strategy update informed by recommendations resulting from the Climate Change and Natural Hazards Policy Review. This work continued in 2022.



2022 In Progress:

In 2022, Metro Vancouver Board directed staff to explore stronger policy directions on GHG emission reductions and regional resilience post [Metro 2050](#) adoption, driven in part by the unprecedented climate change-related impacts the region and surrounding areas.

Climate 2050 Roadmap Development: Climate 2050 Land Use & Growth Management Roadmap under development.

For more information
metrovancover.org
icentre@metrovancover.org
604.432.6200



metrovancover
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

DELEGATION PRESENTATION TO REGIONAL PARKS COMMITTEE

July 13 2022

by Paul Hundal, Old Growth Conservancy Society

As President of the Old Growth Conservancy Society based in West Vancouver, I would like to ask the Regional Parks Committee to pass a motion **directing staff to seek either a 999 lease for the crown lands within the Lynn Headwaters Regional Park area or a fee simple transfer of those lands from the provincial government to the Metro Vancouver Regional District for recreation and conservation purposes only**. The current 30 year lease for these lands has just expired so this is the ideal time to make that request in order to provide the land with the fullest protection it deserves.

Thirty years ago when the first lease was signed I expressed the same concern and below is a newspaper article from that time covering the issue.



More recently it was discovered that among the many giant cedars in the upper Lynn Headwaters lease area is the fourth widest tree in Canada. This underscores the importance of this area for both recreation and conservation purposes. The problem with these shorter leases is that nothing is preventing the provincial government at renewal time from deciding to pluck out the most valuable trees by helicopter logging and then renew the lease. At each renewal time the province has the option of exploiting the timber values of this forest and when we see the ongoing failure of the provincial government to support the recommendations of the provincial Old Growth Technical Review Panel (which has led to the many forest protection battles now) how can we have any confidence that at a future renewal date, these increasingly rare trees, over 1000 years old, won't be harvested for their timber values.



Photo Credit: Ian Thomas and Colin Spratt

The above photo is of just one of many old growth trees scattered throughout the upper Lynn Headwaters on crown land that is the subject of the expired lease. This place is special enough to deserve permanent protection, not just temporary leases. One also has to wonder why the province wouldn't give permanent protection to this area. The failure to do so in the past raises concerns that they are looking to exploit the timber values at some future time. They would appear to be preserving their right to do so, otherwise there is no reason to not give permanent protection to this well used recreation and conservation area now.

The alternatives proposed within the motion are to request the provincial government to either transfer title of the whole Lynn Headwaters area to Metro Vancouver for conservation and recreational purposes only, or to arrange for a 999 year lease for the same purpose. There are numerous precedents for 999 year leases such as the GVWD watershed lease. Most of the Capilano, Seymour and Coquitlam watersheds are leased to the GVWD on a 999 year lease for water supply purposes only. When the province privatized BC Rail they leased the railbeds and surrounding lands on a 999 year lease for railway purposes only. When the lands must be used for a specific public purpose this device has been used. A fee simple transfer is also possible with a restrictive covenant on title to use the lands for recreational and conservation purposes only. We would support either option and we propose that the province be offered these two options.

Lynn Headwaters is an exceptional natural treasure located close to more than half the population of BC. Preserving all the remaining old-growth forest in this region is a worthy priority which I hope you will embrace. It is one of the finest legacies that you can leave both for the residents of Greater Vancouver, its visitors and the province of British Columbia. Please make the aforesaid motion to guarantee the most secure future for these exceptional trees.

To: Regional Parks Committee

From: Mike Redpath, Director, Regional Parks
Jeffrey Fitzpatrick, Division Manager, Design and Development, Regional Parks

Date: June 23, 2022 Meeting Date: July 13, 2022

Subject: **Draft 2023-2027 Regional Parks Capital Plan**

RECOMMENDATION

That the Regional Parks Committee receive for information the report dated June 23, 2022, titled "Draft 2023-2027 Regional Parks Capital Plan."

EXECUTIVE SUMMARY

The Draft 2023-2027 Regional Parks Capital Plan has been prepared following direction received at the April 14, 2022 Metro Vancouver Board Budget Workshop and continues to maintain Regional Parks customer levels of service.

As part of Metro Vancouver's focus on enhancing transparency and governance of the Capital Plan, this report allows for the Regional Parks Committee to provide comments on the draft Capital Plan, which will then be incorporated into the Regional Parks Financial Plan and included in the Fall budget presentations to the Regional Parks Committee and MVRD Board.

The estimated 2023 Capital Cash Flow is \$59.8M with a total estimated spend of \$169.8M over the five years. This is a \$12.5M, or 8.0% change from last year's five-year capital plan. This change is largely due to the introduction of a new project to plan, design and develop recently acquired parkland in Bowen Island Municipality.

PURPOSE

To present to the Regional Parks Committee the draft Regional Parks 2023-2027 Capital Plan for comments.

BACKGROUND

On April 14, 2022, Metro Vancouver held a Board Budget Workshop to seek direction for the preparation of the 2023-2027 Financial Plan. Metro Vancouver is enhancing the transparency and governance of the capital planning process by providing Metro Vancouver Committees with an opportunity for input in advance of final budget preparation and presentations to the Committee and Board in the fall.

REGIONAL PARKS CAPITAL PLAN

The Regional Parks Capital Plan reflects the *Board Strategic Plan 2019-2022*, *Regional Parks Plan*, *Regional Greenways 2050*, regional park management plans and ongoing natural and built asset management strategic planning.

Regional Parks continue to experience high visitation – in 2021 the Regional Parks system welcomed over 16.3 million visitors. The Regional Parks Capital Plan includes investments in enhanced access, carrying capacity and visitor experience, and ecological resilience so regional residents can access the health benefits and ecosystem services from regional parks over the long term.

Specifically, the Regional Parks Capital Plan is guided by the following customer levels of service:

- Expand the Regional Parks System to protect natural areas and connect people to nature
- Develop park amenities to expand capacity and accommodate increased visitation
- Enhance the resilience of the Regional Parks System to climate change and increased visitation
- Maintain park facilities in a state of good repair to ensure safety and reliability over the long term
- Work closely with First Nations to advance reconciliation, build and strengthen relationships
- Expand opportunities to connect with nature to support the mental and physical health of regional residents

CAPITAL PLAN HIGHLIGHTS

The Draft 2023-2026 Capital Plan includes two components: major capital and land acquisition. Minor capital, the maintenance and replacement of infrastructure at the end of its lifespan, is included in the operating budget and is not a part of this report.

The Regional Parks capital program is funded by reserves and external grants. The Draft 2023-2027 Capital Plan includes \$59.8M for 2023 and a total of \$169.8M over the five years, an average of \$33.9M per year (Attachment). In 2023, \$45M is allocated to land acquisition and \$14.8M is allocated to major capital, of which up to \$4.2M will be funded from external grants.

The key drivers for spending over the next 5 years include:

- **Land Acquisition** - Expanding Regional Parks System to protect natural areas and connect people to nature
- **Ecological Resilience** - Enhancing ecological function and resilience to climate change and increased visitation
- **Capacity and Growth** – Developing park amenities to expand capacity and accommodate increased visitation
- **Connected Network** - Expanding the greenway network to improve connectivity
- **Facility Replacement and Asset Management** - Lifecycle replacement of major regional park assets and upgrading, where required, to ensure long term resilience

In 2023, implementation of the MVRD Board approved *Regional Parks Land Acquisition 2050* strategy will continue. The following major capital projects will continue or begin implementation:

Key capital projects planned or ongoing in 2023-2027 for Regional Parks include the following:

Infrastructure Type	Project Name	Primary Driver	Proposed 2023 Cashflow
Land Acquisition	Regional Parks Land Acquisition	Land Acquisition	44,990,000
Major Projects	Widgeon Marsh Regional Park Development	Capacity/Growth	6,580,000
Major Projects	Grouse Mountain Regional Park Trail and Amenity Improvements	Capacity/Growth	1,000,000
Major Projects	Campbell Valley Management Plan Implementation	Capacity/Growth	1,000,000
Greenways	Aldergrove South Slope Greenway	Connected Network	1,250,000
Greenways	Tynehead Perimeter Trail	Connected Network	1,000,000
Park Development	Park Amenities and Visitor Experience	Capacity/Growth	500,000
	Other Projects	Various	3,450,000
			59,770,000

In 2023, advanced design will focus on the planning and design of recently acquired parkland, with an aim to provide public access as soon as possible.

Advanced design will also continue or be initiated for the Belcarra South Day Use Area, Delta Nature Reserve and Delta South Surrey Greenway, Belcarra Admiralty Heights restoration, Burnaby Lake Central Valley Greenway Connection, and the Boundary Bay Perimeter Trail. These projects will advance to implementation from 2023-2027.

Capital Plan Changes

Metro Vancouver's annual capital planning process allows the Board to adjust the capital budget once a year, in the fall, to accommodate changes required to fund projects in response to new or changing project needs, emerging issues, and changing priorities.

Proposed changes in the draft 2023-2027 Capital Plan can be described within the following categories:

- Projected Carryforward – Project expenditures which are expected to occur in 2022, but are now scheduled to occur in 2023.
- Net Deferral – Project expenditures that have been deferred or re-scheduled beyond 2026.
- Cost Adjustments – Project cashflow changes resulting from project budget changes not related to scope.
- New Scope – Project cashflow changes resulting from project budgets specifically related to project scope change

The breakdown of total draft 2023-2027 Capital Plan compared to prior cycle capital plan is summarized below:

(\$Millions)

Prior cycle Cashflow 2022- 2026	Cashflow 2022	Adjustments to 2023-2026 Capital Plan					Cashflow 2027	Draft Capital Plan 2023- 2027
		Projected Carry- Forward	Net Deferral	Cost Adjustments	New Scope	Total		
\$156.5	(31.3)		(1.3)		13.8	12.5	32.1	\$169.8

Adjustments to the 2023-2026 Capital Plan are due to the introduction of a new project to plan, design and develop recently acquired parkland in Bowen Island Municipality.

The scope of the Widgeon Marsh Regional Park Development and the Campbell Valley Management Plan Implementation projects have been updated to reflect advanced project planning, design and costing.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The draft 2023-2027 Capital Plan includes \$59.8M for 2023 and a total of \$169.8M over the five years, an average of \$33.9M per year. The intent is that the Regional Parks Committee provide feedback which will be incorporated into the final Capital Plan for presentation to the Committee and Board in the fall.

CONCLUSION

The 2023-2027 Capital Plan supports expansion of the Regional Parks system to protect natural areas and connect people to nature, development of park amenities to expand capacity and accommodate increased visitation, enhanced resilience to climate change, and the maintenance of facilities in a state of good repair to ensure safety and reliability over the long term.

The presentation of the draft 2023-2027 Capital Plan provides the opportunity for input from the Committee which will be incorporated into the fall budget presentation to the Committee and Board.

Attachment

Draft Regional Parks 2023-2027 Capital Plan

53675205

METRO VANCOUVER REGIONAL DISTRICT
CAPITAL PORTFOLIO
REGIONAL PARKS

DRAFT 2023 CAPITAL BUDGET AND 2023-2027 CAPITAL PLAN

	PROJECT BUDGET FOR APPROVAL	2023 CASH FLOW	2024 CASH FLOW	2025 CASH FLOW	2026 CASH FLOW	2027 CASH FLOW	2023 to 2027 TOTAL	ACTIVE PHASE	PRIMARY DRIVER
Major Projects									
Grouse Mountain - Regional Park Trail and Amenity Improvements	3,075,000	1,000,000	1,000,000	-	-	-	2,000,000	Construction	Capacity, Growth & Ecological Resilience
Widgeon Marsh - Regional Park Development	19,100,000	6,580,000	6,500,000	-	-	-	13,080,000	Construction	Capacity, Growth & Ecological Resilience
Campbell Valley - Management Plan Implementation	8,100,000	1,000,000	1,000,000	1,000,000	1,000,000	3,000,000	7,000,000	Construction	Capacity, Growth & Ecological Resilience
təmtəmix*ʔən/Belcarra - South Day Use Area	5,950,000	250,000	2,200,000	3,500,000	-	-	5,950,000	Planned	Capacity, Growth & Ecological Resilience
Bowen Island - Park Development	15,800,000	400,000	4,000,000	5,800,000	3,600,000	2,000,000	15,800,000	Planned	Capacity, Growth & Ecological Resilience
Codd Wetland - Park Development	-	-	-	-	-	900,000	900,000	Planned	Capacity, Growth & Ecological Resilience
West Creek Wetlands - Park Development	-	-	-	-	300,000	750,000	1,050,000	Planned	Capacity, Growth & Ecological Resilience
Burns Bog - Fire Restoration	-	-	-	-	500,000	1,000,000	1,500,000	Planned	Capacity, Growth & Ecological Resilience
Major Projects Total	52,025,000	9,230,000	14,700,000	10,300,000	5,400,000	7,650,000	47,280,000		
Greenways									
Aldergrove - Southern Slopes Greenway	1,250,000	1,250,000	-	-	-	-	1,250,000	Planned	Connected Network
DNR/DSSG Management Plan Implementation	10,600,000	500,000	1,000,000	2,000,000	2,500,000	4,600,000	10,600,000	Planned	Connected Network
Boundry Bay - Perimeter Trail	1,650,000	150,000	1,500,000	-	-	-	1,650,000	Planned	Connected Network
Tynehead - Perimeter Trail	2,500,000	1,000,000	1,500,000	-	-	-	2,500,000	Planned	Connected Network
Burnaby Lake - Glencarin Greenway Connection	-	-	1,500,000	2,000,000	-	-	3,500,000	Planned	Connected Network
Other Greenways Upgrades	-	-	-	100,000	200,000	200,000	500,000	Planned	Connected Network
Greenways Total	16,000,000	2,900,000	5,500,000	4,100,000	2,700,000	4,800,000	20,000,000		
Service Facilities									
Burnaby Lake - Service Yard Building Replacement	1,700,000	50,000	50,000	100,000	-	1,500,000	1,700,000	Construction	Facility Replacement & Asset Management
Capilano - New Service Yard	943,000	150,000	-	-	-	-	150,000	Construction	Facility Replacement & Asset Management
Service Facilities Total	2,643,000	200,000	50,000	100,000	-	1,500,000	1,850,000		
Park Development									
Crippen - Davies Orchard	1,750,000	250,000	500,000	-	-	-	750,000	Planned	Capacity, Growth & Ecological Resilience
Colony Farm - TMX Agreement Projects	1,000,000	300,000	300,000	300,000	-	-	900,000	Planned	Capacity, Growth & Ecological Resilience
təmtəmix*ʔən/Belcarra - Admiralty Heights Trail Decomissioning	1,050,000	150,000	150,000	250,000	250,000	250,000	1,050,000	Planned	Capacity, Growth & Ecological Resilience
Campbell Valley - Little River Loop Boardwalk	1,700,000	200,000	1,500,000	-	-	-	1,700,000	Planned	Facility Replacement & Asset Management
Minnekhada - Park Improvements	-	-	-	-	-	650,000	650,000	Planned	Capacity, Growth & Ecological Resilience
Lynn Valley - Cable Pool Bridge Replacement	-	-	-	100,000	1,250,000	1,250,000	2,600,000	Planned	Facility Replacement & Asset Management
Burnaby Lake - Nature House	-	-	-	50,000	150,000	2,000,000	2,200,000	Planned	Facility Replacement & Asset Management
Pacific Spirit - Beach Access & Trail Improvments	-	-	50,000	100,000	500,000	1,000,000	1,650,000	Planned	Facility Replacement & Asset Management
Park Amenities and Visitor Experience	2,350,000	500,000	300,000	300,000	250,000	1,000,000	2,350,000	Planned	Capacity, Growth & Ecological Resilience
Other Replacement, Restoration & Upgrade Projects	9,865,000	1,050,000	3,130,000	850,000	1,905,000	3,930,000	10,865,000	Planned	Facility Replacement & Asset Management
Park Development Total	17,715,000	2,450,000	5,930,000	1,950,000	4,305,000	10,080,000	24,715,000		
Regional Parks Land Acquisition									
Regional Parks Land Acquisition	44,990,000	44,990,000	7,000,000	8,000,000	8,000,000	8,000,000	75,990,000		Land Acquisition
Regional Parks Land Acquisition Total	44,990,000	44,990,000	7,000,000	8,000,000	8,000,000	8,000,000	75,990,000		
TOTAL CAPITAL EXPENDITURES	133,373,000	59,770,000	33,180,000	24,450,000	20,405,000	32,030,000	169,835,000		

	PROJECT BUDGET FOR APPROVAL	2023 CASH FLOW	2024 CASH FLOW	2025 CASH FLOW	2026 CASH FLOW	2027 CASH FLOW	2023 to 2027 TOTAL	ACTIVE PHASE	PRIMARY DRIVER
SUMMARY BY DRIVER									
Capacity, Growth & Ecological Resilience	58,175,000	10,430,000	15,950,000	11,150,000	5,900,000	9,550,000	52,980,000		
Facility Replacement & Asset Management	14,208,000	1,450,000	4,730,000	1,200,000	3,805,000	9,680,000	20,865,000		
Connected Network	16,000,000	2,900,000	5,500,000	4,100,000	2,700,000	4,800,000	20,000,000		
Land Acquisition	44,990,000	44,990,000	7,000,000	8,000,000	8,000,000	8,000,000	75,990,000		
TOTAL CAPITAL EXPENDITURES	133,373,000	59,770,000	33,180,000	24,450,000	20,405,000	32,030,000	169,835,000		

To: Performance and Audit Committee

From: Linda Sabatini, Acting Director, Financial Operations

Date: July 7, 2022 Meeting Date: July 14, 2022

Subject: **Metro Vancouver Quarterly Financial Report – June 30, 2022**

RECOMMENDATION

That the Performance and Audit Committee receive for information the report dated June 30, 2022 titled “Metro Vancouver Quarterly Financial Report – June 30, 2022”.

EXECUTIVE SUMMARY

The Performance and Audit Committee’s terms of reference requires that financial information be presented on a regular basis. Beginning in 2022, quarterly reports are being presented, to replace the tri-annual reporting presented in prior years. This reports presents the second quarterly financial report, for the six months ending June 30, 2022.

The quarterly results indicate that operating expenditures are on target at 90% of year-to-date budget and capital expenditures are lower than expected at 16.8% of annual capital cash flow. This is primarily due to staff vacancies, delayed project starts, and seasonality of expenditures. It is expected that operating and capital spending will accelerate in the later half of the year as projects previously delayed ramp up. Revenues are essentially on target with fluctuations due to lower water consumption and due to unusually cooler temperatures, higher Solid Waste tipping fees and variable service revenues. The year to date variance is indicating a potential surplus of about \$40.5 million, about 3.9% of total budget.

Cash flow projections and accounts receivable collections are on target and remain positive in both the likely and pessimistic scenarios.

PURPOSE

To present the Committee with key financial information as of June 30, 2022, the second quarter of fiscal 2022.

BACKGROUND

The Performance and Audit Committee’s Terms of Reference requires that the Committee be provided on a regular basis, with financial performance reports, of the Metro Vancouver Districts and Metro Vancouver Housing Corporation, including audited financial statements presented and approved by the Board annually.

Prior to 2022, staff provided the Committee with tri-annual financial reports. However, beginning in 2022, to better align with industry standards and respond to requests from the Committee, a financial snapshot with additional information elements is being provided quarterly. The information presented in this package is the second quarterly report, representing financial information as of June 30, 2022.

FINANCIAL QUARTER AT A GLANCE (JUNE 30, 2022)

The key quarterly trends are presented on page three of Attachment 1. The financial information presented for the second quarter of 2022, indicates that Metro Vancouver's operating budget is in a favourable variance of \$40.5M compared to year-to-date budget. This is largely a result of operating expenditures at 90% of the YTD operating budget due to staff vacancies, delayed project starts and seasonality of expenditures compared to budget. Overall revenues are \$1M below budget. Higher revenues in Solid Waste tipping fees and variable service revenues, are offset by lower than expected Water sales due to cooler temperatures and higher than average rainfall. Capital spending is lower than expected; however, construction during the summer months is expected to ramp up as projects previously delayed move forward. Cash flow projections and accounts receivable collections are on track and remain positive in the likely and pessimistic scenarios.

ALTERNATIVES

This report is provided for information; no alternatives are presented.

FINANCIAL IMPLICATIONS

The quarterly report as of June 30, 2022, indicates that Metro Vancouver operating and capital spending are lower than YTD budgets. It is anticipated that increased spending will occur in the later half of the year as operating and capital spending accelerates.

SUMMARY / CONCLUSION

This report provides information on financial information as of June 30, 2022, the second quarter of 2022. Information presented, identifies that both operating and capital spending are lower than the YTD budgets, largely due to staff vacancies, delayed project starts and seasonality of expenditures compared to budget. It is anticipated that increased spending will occur in the later half of the year as construction and operating projects ramp up.

Attachments:

1. 2022 Quarterly Financial Report - June 30, 2022












METRO VANCOUVER QUARTERLY FINANCIAL REPORT

Six Months Ended June 30, 2022

Table of Contents

At a Glance – Six Months Ended June 30, 2022	1
Operating Budget Summary	2
Metro Vancouver Districts Budget Utilization.....	3
Capital Annual Expenditure Summary.....	4
Solid Waste Tipping Fees and Tonnages	5
Water Services Water Sales and Consumption	6
Other Variable Revenues	7
Awarded Procurement	8
Cash Flow Scenarios	9
Accounts Receivable and Collections	10

At a Glance – Six Months Ended June 30, 2022

	Trend	Commentary
Operating Expenditures		For the six months ended June 30, 2022, operating expenditures are on target at 90% of the YTD expected budget. Operating expenditures represent 36.1% of the annual budget (\$369.8M out of \$1.0B) due to timing of capital contributions that occur later in the year.
Capital Budget		After six months, capital spending year-to-date represents 16.8% of the annual capital cash flow (\$234.2M out of \$1.4B) and 33.5% of the pro-rated YTD budget. It is anticipated this will improve during the summer construction period.
Solid Waste Revenue		
Tonnages		Q2 year-to-date total system tonnage is 17% higher than budget and 11% higher than the same period last year. Metro Vancouver system waste flows are significantly higher this year. This, in combination with tipping fee price increases, has contributed to higher than budgeted revenues.
Tipping Fee Revenues		Q2 year-to-date, tipping fee revenues are 7.3% higher than budget and 12% higher than last year.
Water Services Revenue		
Consumption		Q2 year-to-date water consumption is 4.9% lower than the YTD budget and 5.8% lower than the same period last year due to generally lower temperature this year.
Water Sales		Q2 year-to-date water sales revenue is 5.5% lower than the YTD budget and 5.5% lower than the same period last year due to lower consumption.
Other Variable Revenues		Variable revenues are dependent on timing of billing and are expected to be on target.
Awarded Procurements		11 awards were issued for the five months ended May 31, 2022. This represents 50% of last year's numbers and corresponds to 29% in terms of dollar value.
Cash Flows, Accounts Receivables and Collections		
Cash Flow Forecast		Projected annual cash balance remains positive in all modeled scenarios.
Accounts Receivables and Collections		AR is mostly current and the aging has improved comparable to the prior year. Overall, collection remains mostly on track with overdue balances for Water, Source Control Industrial (SCI) and Environmental Regulation & Enforcement (ER&E) invoices.
Housing Tenant Receivables		Outstanding rent balance of \$53K is comparable to prior months and slightly lower than prior year's balance of \$57K. Staff are working with tenants through payment plans. The Province's rent freeze ended on December 31, 2021.











Operating Budget Summary

Metro Vancouver Districts Operating Budget Summary Six Months Ended June 30, 2022					
	Annual Budget	Year-to-date Budget	Year-to-date Actual	% Actuals to YTD Budget	Year-to-date Variance
REVENUES					
Key Service Revenues					
Water Sales	\$ 329,365,517	\$ 140,929,042	\$ 132,940,929	94%	\$ (7,988,113)
Liquid Waste Services Levy	301,424,687	-	-	0%	-
Solid Waste Tipping Fees	112,909,870	56,441,725	60,977,444	108%	4,535,719
Metro Vancouver Regional District Requisitions	89,868,576	-	-	0%	-
Housing Rents	42,110,363	21,055,200	21,631,649	103%	576,449
	<u>875,679,013</u>	<u>218,425,967</u>	<u>215,550,022</u>	<u>99%</u>	<u>(2,875,945)</u>
Key Service Supplemental Revenues	<u>4,012,307</u>	<u>942,918</u>	<u>896,441</u>	<u>95%</u>	<u>(46,477)</u>
Variable Service Revenues	<u>38,217,925</u>	<u>15,024,812</u>	<u>17,950,203</u>	<u>119%</u>	<u>2,925,391</u>
Internal Transfers	<u>107,672,909</u>	<u>5,029,504</u>	<u>4,015,505</u>	<u>80%</u>	<u>(1,013,999)</u>
TOTAL REVENUES	<u>\$ 1,025,582,154</u>	<u>\$ 239,423,201</u>	<u>\$ 238,412,171</u>	<u>100%</u>	<u>\$ (1,011,030)</u>
EXPENDITURES					
Greater Vancouver Water District	\$ 338,434,643	\$ 112,506,996	\$ 103,805,377	92%	\$ 8,701,619
Greater Vancouver Sewerage and Drainage District					
Liquid Waste Services	392,967,276	156,246,447	144,130,644	92%	12,115,803
Solid Waste Services	122,991,007	59,780,071	55,806,650	93%	3,973,421
Metro Vancouver Housing Corporation	54,798,873	27,353,964	19,895,244	73%	7,458,720
Metro Vancouver Regional District	<u>116,390,355</u>	<u>55,472,405</u>	<u>46,117,598</u>	<u>83%</u>	<u>9,354,807</u>
TOTAL EXPENDITURES	<u>\$ 1,025,582,154</u>	<u>\$ 411,359,883</u>	<u>\$ 369,755,513</u>	<u>90%</u>	<u>\$ 41,604,370</u>
SURPLUS (DEFICIT)	<u>\$ -</u>	<u>\$ (171,936,682)</u>	<u>\$ (131,343,342)</u>		<u>\$ 40,593,340</u>

- For the six months ended June 30, 2022, operating expenditures are at 90% of the YTD expected budget. Operating expenditures represent 36.1% of the total annual budget (\$369.8M out of \$1.0B) largely due to timing of capital contributions that occur later in the year.

Metro Vancouver Districts Budget Utilization

■ Annual Budget ■ Year-to-date Budget ■ Year-to-date Actual

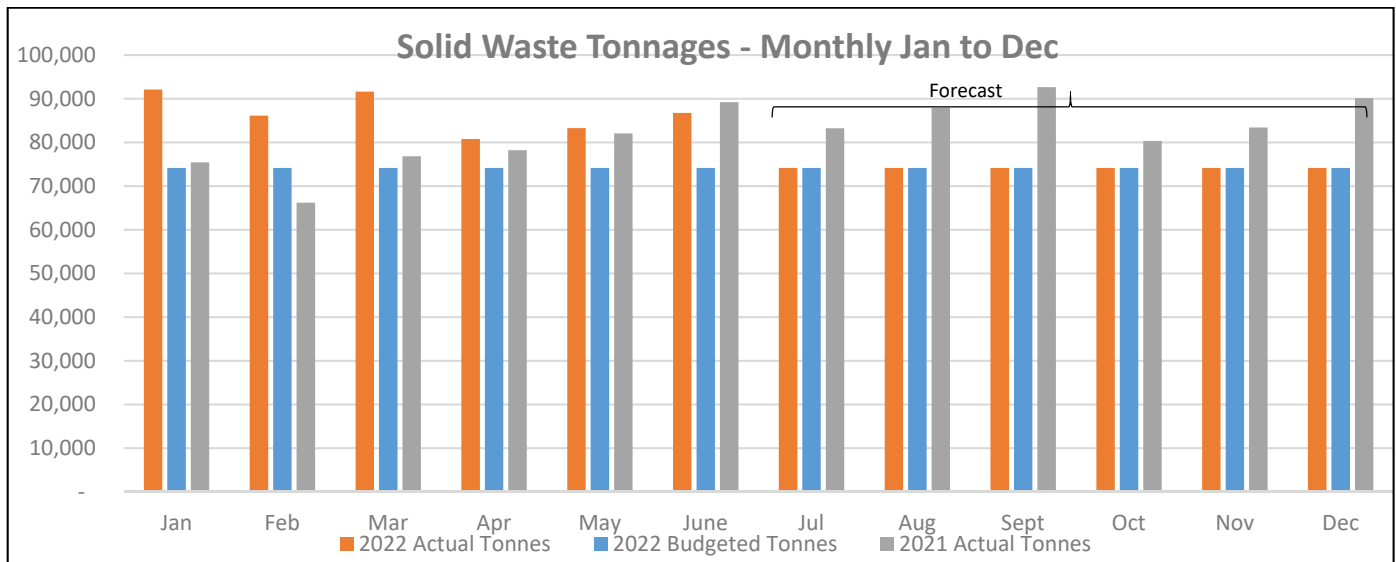
Six Months Ended June 30, 2022	Revenues	Expenditures	Commentary
Greater Vancouver Water District			<p>Both water sales and year-to-date expenditures are fairly close to prior periods and expectations. The cooler spring is having some slight downward impact on water sales to date.</p> <p>Staff vacancies, lower than budgeted spending related to deferred operating projects, and seasonality of expenditures have put downward pressure on the actuals for the first six months.</p>
Greater Vancouver Sewerage and Drainage District Liquid Waste Services			<p>There is no revenue variance for Liquid Waste Services due to timing of levy billings.</p> <p>Staff vacancies, lower than budgeted spending related to deferred operating projects, and seasonality of expenditures have put downward pressure on the actuals for the first six months.</p>
Greater Vancouver Sewerage and Drainage District Solid Waste Services			<p>Tipping fee revenues are higher than YTD budget and 12% higher than the same period in 2021. The increased fees are due to higher construction demolition material processing facility residuals, which historically haven't been delivered to the regional solid waste system. Economic recovery following the pandemic contributes to the increase in waste quantities.</p> <p>Expenditures are below budget as a result of timing of contract costs. Landfill costs will depend on actual Vancouver Landfill costs and quantity of waste delivered to that facility over the course of the year.</p>
Metro Vancouver Housing Corporation			<p>Housing's rental revenues have outperformed year-to-date budget due to lower than expected tenant rental assistance than anticipated at budget time.</p> <p>Expenditures, and their related funding, are trending lower due to delays in maintenance spending, related spending is anticipated to be in line by year end.</p>
Metro Vancouver Regional District			<p>Regional District expenditures are trending lower largely due to staff vacancies caused by the timing of hiring of positions and routine vacancies due to staff turnover.</p>

Capital Annual Expenditure Summary

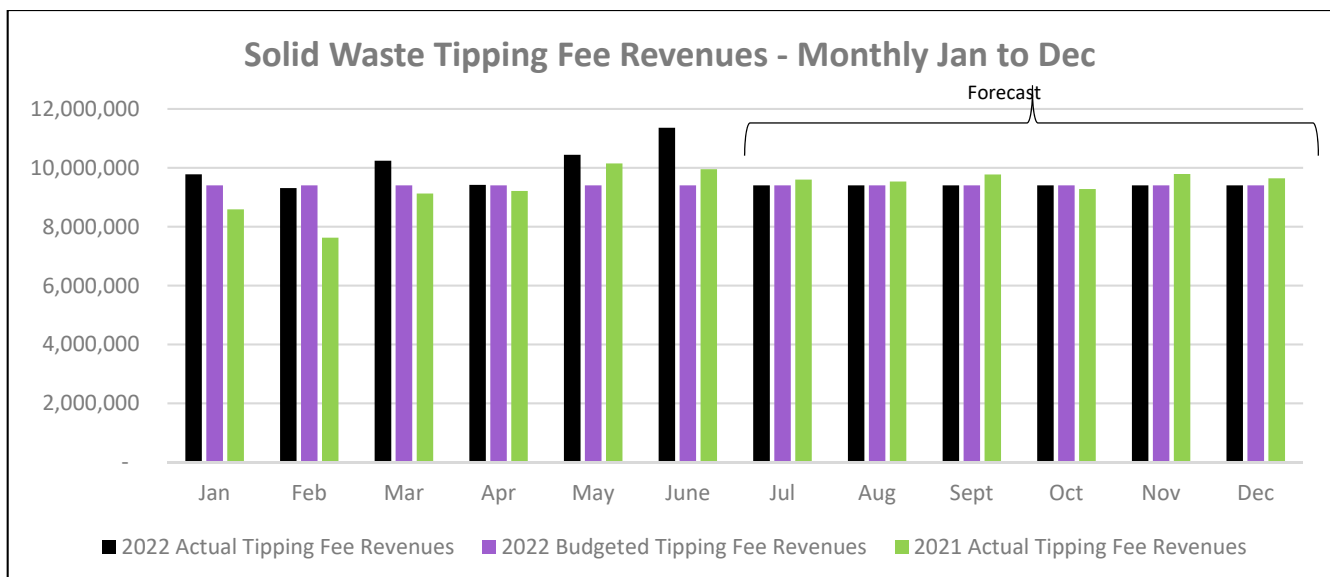
Metro Vancouver					
2022 Capital Spending Summary For the 6 months ending June 30, 2022					
	Annual	Year to Date			
	2022 Cash Flow	2022 Capital Cash Flow to June 2022	Actual Expenditures	% of Prorated Capital Cash Flow	% of Annual Capital Cash Flow
Housing Services					
Capital Replacement	9,918,180	4,959,000	4,384,009		
Development Capital	48,300,000	24,150,000	5,731,355		
	<u>58,218,180</u>	<u>29,109,000</u>	<u>10,115,364</u>	34.7%	17.4%
Liquid Waste Services					
Collections	187,337,000	93,670,000	16,157,447		
Treatment Plants	593,115,000	296,558,000	104,373,106		
	<u>780,452,000</u>	<u>390,228,000</u>	<u>120,530,553</u>	30.9%	15.4%
Regional Parks					
Capital Maintenance Projects	5,185,000	2,593,000	1,372,641		
Capital Development	15,505,000	7,754,000	1,277,157		
Parkland Acquisition Fund Projects	15,750,000	7,875,000	6,927,759		
	<u>36,440,000</u>	<u>18,222,000</u>	<u>9,577,557</u>	52.6%	26.3%
Solid Waste Services					
Landfills	2,350,000	1,175,000	56,548		
Recycling and Waste Centres	28,900,000	14,450,000	6,222,536		
Waste To Energy Facilities	17,750,000	8,875,000	1,611,470		
Opportunity	1,840,000	920,000	55,085		
	<u>50,840,000</u>	<u>25,420,000</u>	<u>7,945,639</u>	31.3%	15.6%
Water Services					
Water Mains	333,800,000	166,901,000	73,833,889		
Pump Stations	39,050,000	19,525,000	835,657		
Reservoirs	44,004,000	22,003,000	7,745,646		
Treatment Plants	22,025,000	11,013,000	756,049		
Others	32,394,000	16,198,000	2,824,515		
	<u>471,273,000</u>	<u>235,640,000</u>	<u>85,995,755</u>	36.5%	18.2%
Total	<u>1,397,223,180</u>	<u>698,612,000</u>	<u>234,164,867</u>	33.5%	16.8%

- Overall, year-to-date capital expenditures as of June 30, 2022 are \$234.2M, which represents 16.8% of the annual capital cash flow of \$1.4B, and 33.5% of the prorated YTD cash flow of \$698.6M.
- For Liquid Waste, total year-to-date capital expenditures as of June 30, 2022 are \$120.5M, which represents 15.4% of the annual capital cash flow of \$780.5M, and 30.9% of the prorated YTD cash flow of \$390.2M.
- For Water, total year-to-date capital expenditures as of June 30, 2022 are \$86.0M, which represents 18.2% of the annual cash flow of \$471.3M, and 36.5% of the prorated YTD cash flow of \$235.6M.

Solid Waste Tipping Fees and Tonnages

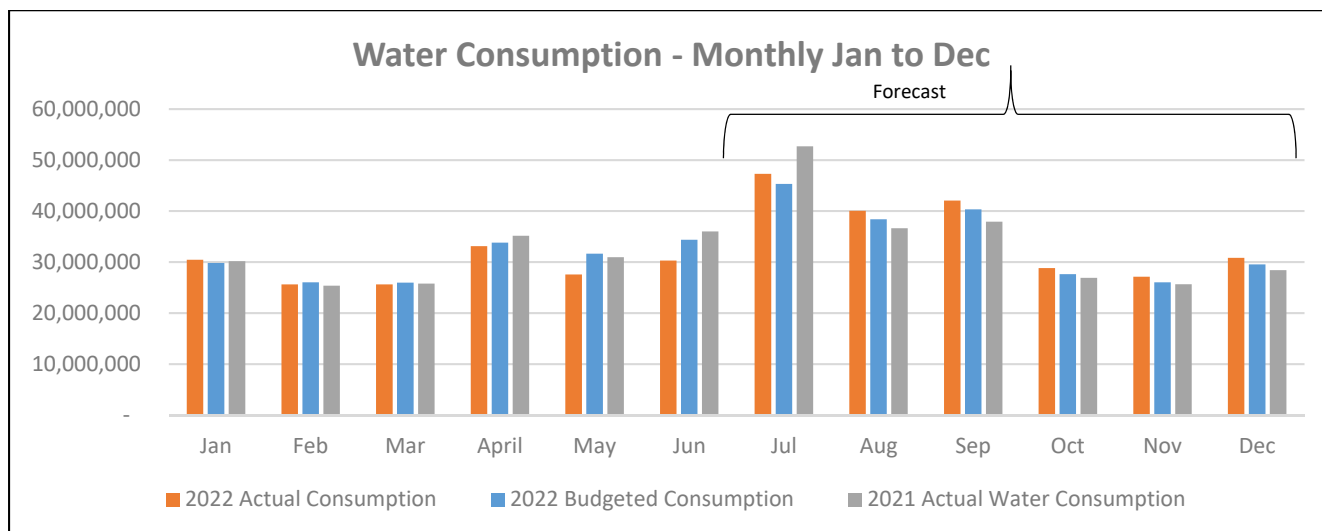


- Year to date tonnage of 508,065 is 17% higher than the budget and 11% higher than the same period last year.
- Metro Vancouver system waste flows are significantly higher this year. This, in combination with tipping fee price increases, has contributed to higher than budgeted revenues.
- The total 2022 budget for tonnage is 890,000 tonnes.

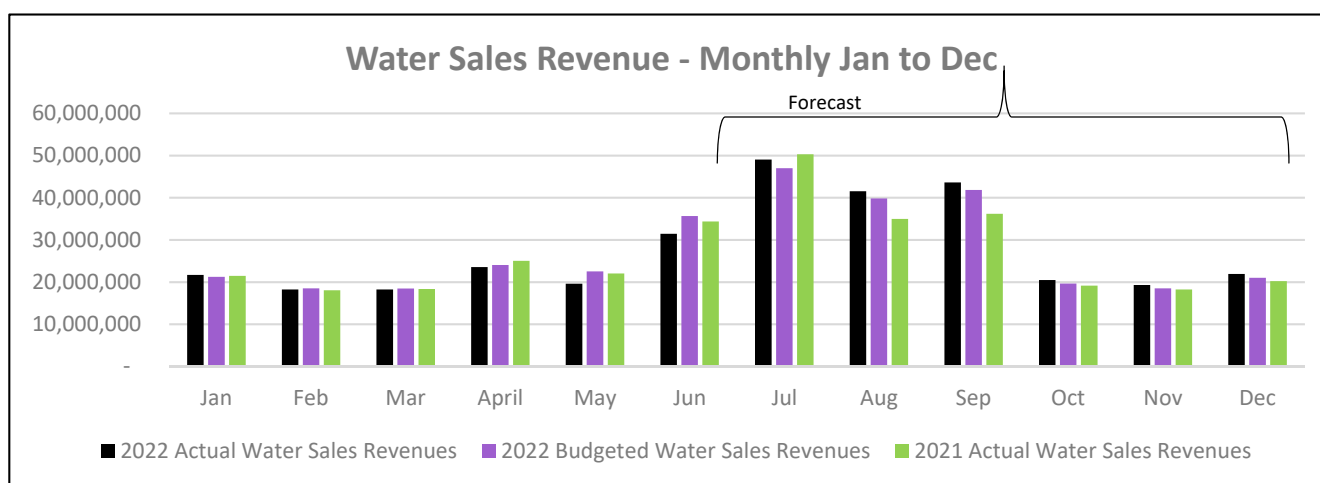


- Year-to-date Solid Waste total system revenues are \$61M, which is 7.3% higher than budget and 12% higher than the same period last year.
- The total 2022 annual budget for tipping fee revenues is \$112.9M.

Water Services Water Sales and Consumption



- Year-to-date water consumption is 172.8M m³, which is 4.9% lower than the YTD budget and 5.8% lower than the same period last year due to generally lower temperature this year.
- The total 2022 annual water consumption budget is 389M m³.



- Year-to-date water sales revenue is \$132.9M which is 5.5% lower than the YTD budget and 5.5% lower than same period last year due to lower consumption.
- The total annual 2022 water sales revenue budget is \$329.4M.

Other Variable Revenues

	2022 Budget	% Budget	YTD Budget	January Actuals	February Actuals	March Actuals	April Actuals	May Actuals	June Current	YTD Actuals	YTD Variance Budget to Actual
Variable Service Revenues:											
Liquid Waste Industrial Charge	12,262,636	32.1%	3,065,659 (1)	-	26,875	145,210	-	2,976,823	193,260	3,342,169	276,510
Energy Sales	6,401,758	16.8%	3,200,880 (2)	826,788	635,204	712,386	505,570	538,200	463,134	3,681,282	480,402
User Fees	5,977,543	15.6%	2,468,199 (3)	353,473	344,349	562,581	395,941	713,914	395,594	2,765,851	297,652
Non-Road Diesel Permit Fees	1,070,000	2.8%	524,300	111,891	94,479	105,155	98,869	101,076	97,946	609,417	85,117
Love Food Hate Waste	400,000	1.0%	199,998 (4)	354,429	-	6,000	-	5,763	-	366,192	166,194
Zero Waste Conference	337,000	0.9%	168,500 (5)	-	-	3,150	2,800	38,075	9,503	53,528	(114,973)
Other External Revenues	11,768,988	30.8%	5,397,276 (6)	159,740	3,093,492	957,172	1,186,743	777,589	957,027	7,131,764	1,734,488
	<u>\$ 38,217,925</u>	<u>100.0%</u>	<u>\$ 15,024,812</u>	<u>\$ 1,806,322</u>	<u>\$ 4,194,400</u>	<u>\$ 2,491,654</u>	<u>\$ 2,189,923</u>	<u>\$ 5,151,440</u>	<u>\$ 2,116,464</u>	<u>\$ 17,950,203</u>	<u>\$ 2,925,391</u>
Total Variable Service Revenues	\$ 38,217,925	100.0%	\$ 15,024,812	\$ 1,806,322	\$ 4,194,400	\$ 2,491,654	\$ 2,189,923	\$ 5,151,440	\$ 2,116,464	\$ 17,950,203	\$ 2,925,391

- Liquid Waste industrial charges are slightly ahead of budget and expected to remain on target by year-end.
- Energy sales are slightly ahead of budget and expected to remain on target by year-end.
- User sales are slightly ahead of budget and expected to remain on target by year-end.
- YTD variance for Love Food Hate Waste campaign is mostly due to 2022 funding received last year in 2021, which was deferred and brought into revenue in the current year in accordance with the accounting standards.
- The YTD variance for Zero Waste Conference is due to the timing of billings as ticket sales will be generated 2-3 months leading up to September when the annual ZWC will take place.
- Other external revenues include grant, merchandise sales, filming, parking, housing laundry, and other miscellaneous revenues. The revenues in this category tend to fluctuate month over month due to the nature of the revenues. Most of the YTD variance is driven by timing of receipt for the Grants in Lieu of Taxes and the annual contract payments which are collected at the anniversary dates.

Awarded Procurement

- Procurement data is updated 4 times per year. The most recent report is to May 31st.
- Below figures are compiled from the Tender/Contract Award Information as provided to the Performance and Audit Committee (PAU).
- Awards less than \$5 million refer to contracts in excess of \$500,000 and below \$5 million as \$500,000 is the threshold for contracts be reported to the Performance and Audit Committee.
- The number of awards issued up to May 2022 represents 50% of last year's numbers, or 29% in terms of dollar value. While the total value will fluctuate depending on the nature of awards, the total number remains fairly consistent compared to prior years except for 2020 due to global pandemic.

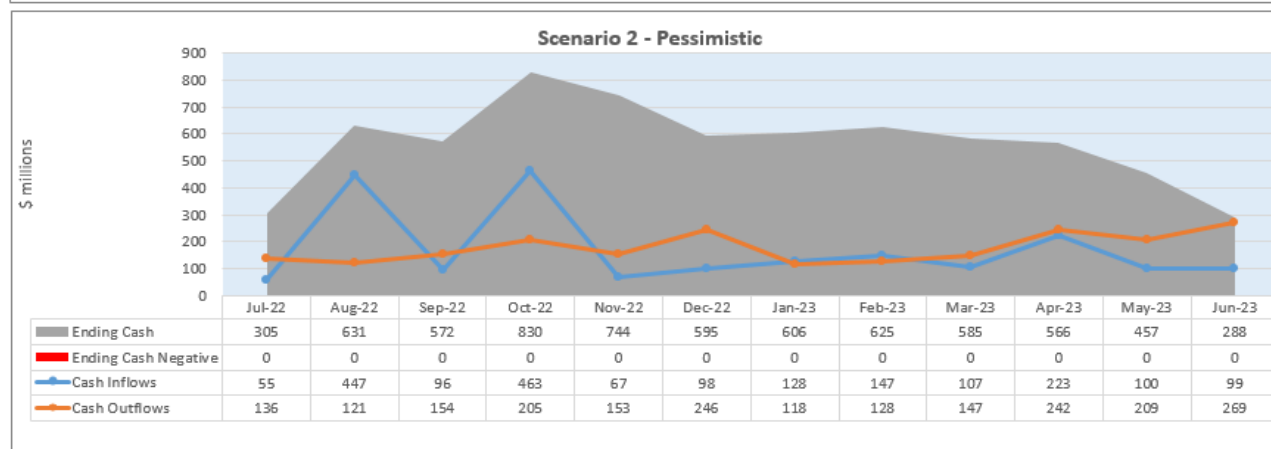
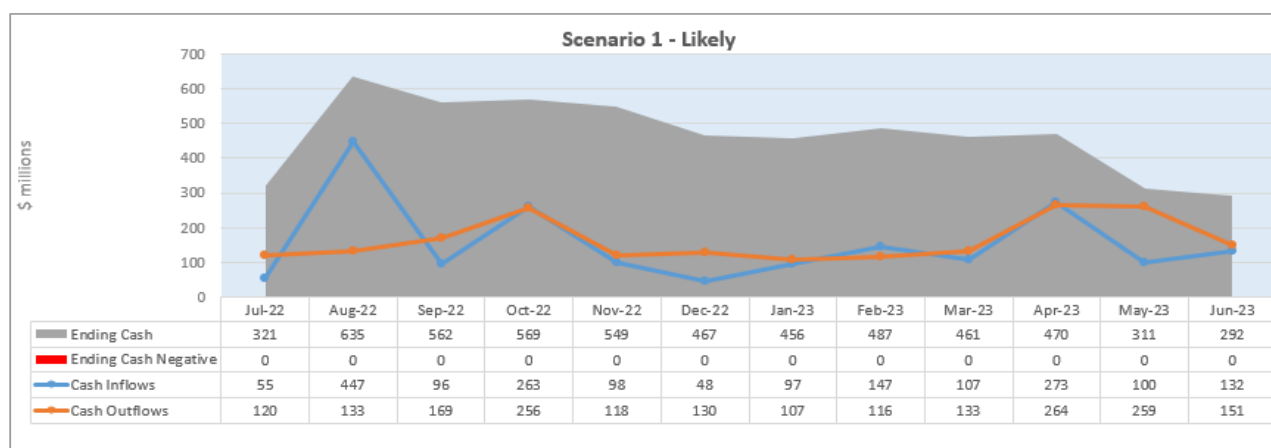
Award Type	2022*	2021	2020	2019
Board Awarded	11	25	16	26
Less than \$5 Million	27	51	51	42
Totals:	38	76	67	68

Award Type	2022*	2021	2020	2019
Board Awarded	\$215,842,419	\$798,139,628	\$163,365,307	\$812,341,330
Less than \$5 Million	\$46,565,633	\$92,545,559	\$98,731,113	\$60,111,064
Total:	\$262,408,052	\$890,685,187	\$262,096,420	\$872,452,394

*Jan-May due to timing of the PAU meeting

Cash Flow Scenarios

Risk Assumptions	
Scenario 1: Likely <ul style="list-style-type: none"> Housing – 1.5% rent rate increase budgeted for 2022 Fall 2022 \$200 million and Spring 2023 \$350 million MFA Long Term borrowing (\$550 million total) MFA short term borrowing \$50 million per month starting January 2023 – March 2023 (\$150 million total) & May 2023 – June 2023 (\$100 million total) 	Scenario 2: Pessimistic <ul style="list-style-type: none"> Housing – 1.5% rent rate increase budgeted for 2022 Fall 2022 \$400 million and Spring 2023 \$350 million MFA Long Term borrowing (\$750 million total) MFA short term borrowing \$50 million per month starting December 2022 – March 2023 (\$200 million total) & May 2023 – June 2023 (\$100 million total)



- Cash balance is expected to remain positive over the next 12 months under the likely and pessimistic scenario.
- Staff are working closely with MFA to implement a temporary short term borrowing program to facilitate cash management and backstop potential long-term funding limitation. Estimated start is in Fall 2022.

Accounts Receivable and Collections

AR Aging Report (Excluding Housing)

As at June 06, 2022	Amount Owning	Current	1-30 Days	31-60 Days	61-90 Days	Over 90 Days
Solid Waste	5,946,745	5,841,844	104,610	0	292	0
	100.00%	98.24%	1.76%	0.00%	0.00%	0.00%
Water	8,085,576	7,864,667	4,152	0	216,757	0
	100.00%	97.27%	0.05%	0.00%	2.68%	0.00%
Other	2,017,712	1,027,052	921,636	9,245	30,084	29,695
	100.00%	50.90%	45.68%	0.46%	1.49%	1.47%
Consolidated Current Year	16,050,033	14,733,562	1,030,397	9,245	247,134	29,695
	100.00%	91.80%	6.42%	0.06%	1.54%	0.19%
Consolidated Prior Year	39,853,575	29,254,638	7,845,867	8,547	191,601	2,552,922
	100.00%	73.41%	19.69%	0.02%	0.48%	6.41%
\$ Change	(23,803,541)	(14,521,076)	(6,815,470)	699	55,533	(2,523,227)

- Solid Waste – is mostly current. \$105K remain overdue in the 1-30 Days category. Staff are following up.
- Water – is mostly current. \$216K remain overdue in the 61-90 Days category. Staff are following up.
- Other – \$875K of the \$922K remain overdue in the 1-30 Days category is related to Liquid Waste industrial charges. Staff are following up. Finance is working with the respective departments to assess delinquent accounts on a case by case basis to determine appropriate course of action which may include the use of collections agency following a reasonable notice period.
- Overall, the AR is mostly current and the aging has improved comparable to the prior year.

Housing Tenant Receivable

Housing Aged Outstanding Tenant Rent (in 1000s)													
	As of Jun 30, 2021	As of Jul 31, 2021	As of Aug 31, 2021	As of Sep 30, 2021	As of Oct 31, 2021	As of Nov 30, 2021	As of Dec 31, 2021	As of Jan 31, 2022	As of Feb 28, 2022	As of Mar 31, 2022	As of Apr 30, 2022	As of May 31, 2022	As of June 30, 2022
Total Expected Monthly Revenue (1)	\$ 3,522	\$ 3,533	\$3,532	\$3,521	\$ 3,544	\$3,534	\$3,551	\$3,560	\$3,546	\$3,554	\$3,565	\$3,565	\$3,551
Cumulative Outstanding Rent (2)	\$ 57	\$ 60	\$57	\$49	\$52	\$58	\$53	\$50	\$56	\$57	\$59	\$54	\$53

(1) Excludes commercial housing (essential services, no deferral anticipated)

(2) Life-to-date Cumulative Balance. Includes other charges such as miscellaneous chargebacks and deposits.

To: Performance and Audit Committee

From: Linda Sabatini, Acting Director, Financial Operations

Date: July 7, 2022 Meeting Date: July 14, 2022

Subject: **Metro Vancouver Quarterly Financial Report – June 30, 2022**

RECOMMENDATION

That the Performance and Audit Committee receive for information the report dated June 30, 2022 titled “Metro Vancouver Quarterly Financial Report – June 30, 2022”.

EXECUTIVE SUMMARY

The Performance and Audit Committee’s terms of reference requires that financial information be presented on a regular basis. Beginning in 2022, quarterly reports are being presented, to replace the tri-annual reporting presented in prior years. This reports presents the second quarterly financial report, for the six months ending June 30, 2022.

The quarterly results indicate that operating expenditures are on target at 90% of year-to-date budget and capital expenditures are lower than expected at 16.8% of annual capital cash flow. This is primarily due to staff vacancies, delayed project starts, and seasonality of expenditures. It is expected that operating and capital spending will accelerate in the later half of the year as projects previously delayed ramp up. Revenues are essentially on target with fluctuations due to lower water consumption and due to unusually cooler temperatures, higher Solid Waste tipping fees and variable service revenues. The year to date variance is indicating a potential surplus of about \$40.5 million, about 3.9% of total budget.

Cash flow projections and accounts receivable collections are on target and remain positive in both the likely and pessimistic scenarios.

PURPOSE

To present the Committee with key financial information as of June 30, 2022, the second quarter of fiscal 2022.

BACKGROUND

The Performance and Audit Committee’s Terms of Reference requires that the Committee be provided on a regular basis, with financial performance reports, of the Metro Vancouver Districts and Metro Vancouver Housing Corporation, including audited financial statements presented and approved by the Board annually.

Prior to 2022, staff provided the Committee with tri-annual financial reports. However, beginning in 2022, to better align with industry standards and respond to requests from the Committee, a financial snapshot with additional information elements is being provided quarterly. The information presented in this package is the second quarterly report, representing financial information as of June 30, 2022.

FINANCIAL QUARTER AT A GLANCE (JUNE 30, 2022)

The key quarterly trends are presented on page three of Attachment 1. The financial information presented for the second quarter of 2022, indicates that Metro Vancouver's operating budget is in a favourable variance of \$40.5M compared to year-to-date budget. This is largely a result of operating expenditures at 90% of the YTD operating budget due to staff vacancies, delayed project starts and seasonality of expenditures compared to budget. Overall revenues are \$1M below budget. Higher revenues in Solid Waste tipping fees and variable service revenues, are offset by lower than expected Water sales due to cooler temperatures and higher than average rainfall. Capital spending is lower than expected; however, construction during the summer months is expected to ramp up as projects previously delayed move forward. Cash flow projections and accounts receivable collections are on track and remain positive in the likely and pessimistic scenarios.

ALTERNATIVES

This report is provided for information; no alternatives are presented.

FINANCIAL IMPLICATIONS

The quarterly report as of June 30, 2022, indicates that Metro Vancouver operating and capital spending are lower than YTD budgets. It is anticipated that increased spending will occur in the later half of the year as operating and capital spending accelerates.

SUMMARY / CONCLUSION

This report provides information on financial information as of June 30, 2022, the second quarter of 2022. Information presented, identifies that both operating and capital spending are lower than the YTD budgets, largely due to staff vacancies, delayed project starts and seasonality of expenditures compared to budget. It is anticipated that increased spending will occur in the later half of the year as construction and operating projects ramp up.

Attachments:

1. 2022 Quarterly Financial Report - June 30, 2022












METRO VANCOUVER QUARTERLY FINANCIAL REPORT

Six Months Ended June 30, 2022

Table of Contents

At a Glance – Six Months Ended June 30, 2022	1
Operating Budget Summary	2
Metro Vancouver Districts Budget Utilization.....	3
Capital Annual Expenditure Summary.....	4
Solid Waste Tipping Fees and Tonnages	5
Water Services Water Sales and Consumption	6
Other Variable Revenues	7
Awarded Procurement	8
Cash Flow Scenarios	9
Accounts Receivable and Collections	10

At a Glance – Six Months Ended June 30, 2022

	Trend	Commentary
Operating Expenditures		For the six months ended June 30, 2022, operating expenditures are on target at 90% of the YTD expected budget. Operating expenditures represent 36.1% of the annual budget (\$369.8M out of \$1.0B) due to timing of capital contributions that occur later in the year.
Capital Budget		After six months, capital spending year-to-date represents 16.8% of the annual capital cash flow (\$234.2M out of \$1.4B) and 33.5% of the pro-rated YTD budget. It is anticipated this will improve during the summer construction period.
Solid Waste Revenue		
Tonnages		Q2 year-to-date total system tonnage is 17% higher than budget and 11% higher than the same period last year. Metro Vancouver system waste flows are significantly higher this year. This, in combination with tipping fee price increases, has contributed to higher than budgeted revenues.
Tipping Fee Revenues		Q2 year-to-date, tipping fee revenues are 7.3% higher than budget and 12% higher than last year.
Water Services Revenue		
Consumption		Q2 year-to-date water consumption is 4.9% lower than the YTD budget and 5.8% lower than the same period last year due to generally lower temperature this year.
Water Sales		Q2 year-to-date water sales revenue is 5.5% lower than the YTD budget and 5.5% lower than the same period last year due to lower consumption.
Other Variable Revenues		Variable revenues are dependent on timing of billing and are expected to be on target.
Awarded Procurements		11 awards were issued for the five months ended May 31, 2022. This represents 50% of last year's numbers and corresponds to 29% in terms of dollar value.
Cash Flows, Accounts Receivables and Collections		
Cash Flow Forecast		Projected annual cash balance remains positive in all modeled scenarios.
Accounts Receivables and Collections		AR is mostly current and the aging has improved comparable to the prior year. Overall, collection remains mostly on track with overdue balances for Water, Source Control Industrial (SCI) and Environmental Regulation & Enforcement (ER&E) invoices.
Housing Tenant Receivables		Outstanding rent balance of \$53K is comparable to prior months and slightly lower than prior year's balance of \$57K. Staff are working with tenants through payment plans. The Province's rent freeze ended on December 31, 2021.











Operating Budget Summary

Metro Vancouver Districts Operating Budget Summary Six Months Ended June 30, 2022					
	Annual Budget	Year-to-date Budget	Year-to-date Actual	% Actuals to YTD Budget	Year-to-date Variance
REVENUES					
Key Service Revenues					
Water Sales	\$ 329,365,517	\$ 140,929,042	\$ 132,940,929	94%	\$ (7,988,113)
Liquid Waste Services Levy	301,424,687	-	-	0%	-
Solid Waste Tipping Fees	112,909,870	56,441,725	60,977,444	108%	4,535,719
Metro Vancouver Regional District Requisitions	89,868,576	-	-	0%	-
Housing Rents	42,110,363	21,055,200	21,631,649	103%	576,449
	<u>875,679,013</u>	<u>218,425,967</u>	<u>215,550,022</u>	<u>99%</u>	<u>(2,875,945)</u>
Key Service Supplemental Revenues	<u>4,012,307</u>	<u>942,918</u>	<u>896,441</u>	<u>95%</u>	<u>(46,477)</u>
Variable Service Revenues	<u>38,217,925</u>	<u>15,024,812</u>	<u>17,950,203</u>	<u>119%</u>	<u>2,925,391</u>
Internal Transfers	<u>107,672,909</u>	<u>5,029,504</u>	<u>4,015,505</u>	<u>80%</u>	<u>(1,013,999)</u>
TOTAL REVENUES	\$ 1,025,582,154	\$ 239,423,201	\$ 238,412,171	100%	\$ (1,011,030)
EXPENDITURES					
Greater Vancouver Water District	\$ 338,434,643	\$ 112,506,996	\$ 103,805,377	92%	\$ 8,701,619
Greater Vancouver Sewerage and Drainage District					
Liquid Waste Services	392,967,276	156,246,447	144,130,644	92%	12,115,803
Solid Waste Services	122,991,007	59,780,071	55,806,650	93%	3,973,421
Metro Vancouver Housing Corporation	54,798,873	27,353,964	19,895,244	73%	7,458,720
Metro Vancouver Regional District	<u>116,390,355</u>	<u>55,472,405</u>	<u>46,117,598</u>	<u>83%</u>	<u>9,354,807</u>
TOTAL EXPENDITURES	\$ 1,025,582,154	\$ 411,359,883	\$ 369,755,513	90%	\$ 41,604,370
SURPLUS (DEFICIT)	\$ -	\$ (171,936,682)	\$ (131,343,342)		\$ 40,593,340

- For the six months ended June 30, 2022, operating expenditures are at 90% of the YTD expected budget. Operating expenditures represent 36.1% of the total annual budget (\$369.8M out of \$1.0B) largely due to timing of capital contributions that occur later in the year.

Metro Vancouver Districts Budget Utilization

■ Annual Budget ■ Year-to-date Budget ■ Year-to-date Actual

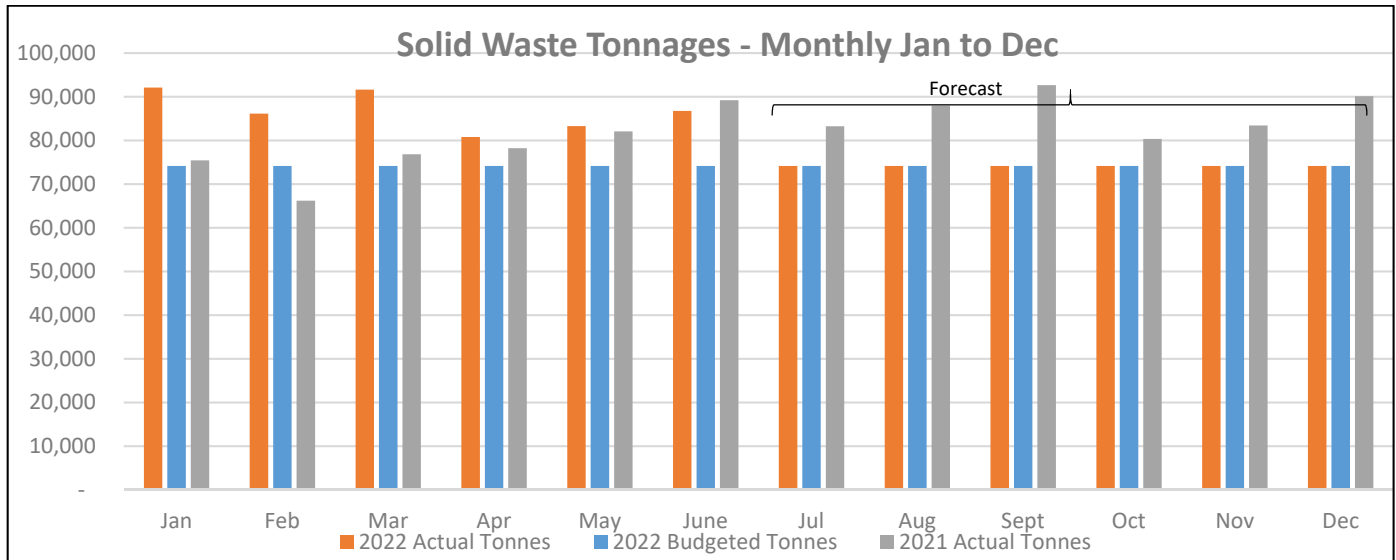
Six Months Ended June 30, 2022	Revenues	Expenditures	Commentary
Greater Vancouver Water District			<p>Both water sales and year-to-date expenditures are fairly close to prior periods and expectations. The cooler spring is having some slight downward impact on water sales to date.</p> <p>Staff vacancies, lower than budgeted spending related to deferred operating projects, and seasonality of expenditures have put downward pressure on the actuals for the first six months.</p>
Greater Vancouver Sewerage and Drainage District Liquid Waste Services			<p>There is no revenue variance for Liquid Waste Services due to timing of levy billings.</p> <p>Staff vacancies, lower than budgeted spending related to deferred operating projects, and seasonality of expenditures have put downward pressure on the actuals for the first six months.</p>
Greater Vancouver Sewerage and Drainage District Solid Waste Services			<p>Tipping fee revenues are higher than YTD budget and 12% higher than the same period in 2021. The increased fees are due to higher construction demolition material processing facility residuals, which historically haven't been delivered to the regional solid waste system. Economic recovery following the pandemic contributes to the increase in waste quantities.</p> <p>Expenditures are below budget as a result of timing of contract costs. Landfill costs will depend on actual Vancouver Landfill costs and quantity of waste delivered to that facility over the course of the year.</p>
Metro Vancouver Housing Corporation			<p>Housing's rental revenues have outperformed year-to-date budget due to lower than expected tenant rental assistance than anticipated at budget time.</p> <p>Expenditures, and their related funding, are trending lower due to delays in maintenance spending, related spending is anticipated to be in line by year end.</p>
Metro Vancouver Regional District			<p>Regional District expenditures are trending lower largely due to staff vacancies caused by the timing of hiring of positions and routine vacancies due to staff turnover.</p>

Capital Annual Expenditure Summary

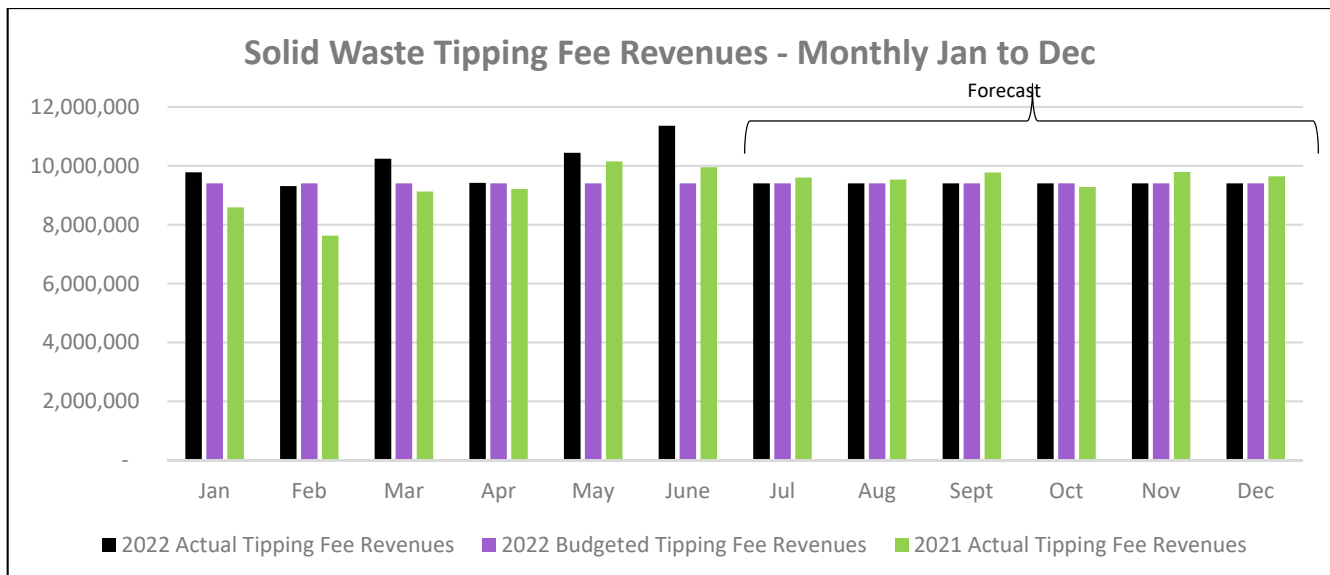
Metro Vancouver					
2022 Capital Spending Summary For the 6 months ending June 30, 2022					
	Annual	Year to Date			
	2022 Cash Flow	2022 Capital Cash Flow to June 2022	Actual Expenditures	% of Prorated Capital Cash Flow	% of Annual Capital Cash Flow
Housing Services					
Capital Replacement	9,918,180	4,959,000	4,384,009		
Development Capital	48,300,000	24,150,000	5,731,355		
	<u>58,218,180</u>	<u>29,109,000</u>	<u>10,115,364</u>	34.7%	17.4%
Liquid Waste Services					
Collections	187,337,000	93,670,000	16,157,447		
Treatment Plants	593,115,000	296,558,000	104,373,106		
	<u>780,452,000</u>	<u>390,228,000</u>	<u>120,530,553</u>	30.9%	15.4%
Regional Parks					
Capital Maintenance Projects	5,185,000	2,593,000	1,372,641		
Capital Development	15,505,000	7,754,000	1,277,157		
Parkland Acquisition Fund Projects	15,750,000	7,875,000	6,927,759		
	<u>36,440,000</u>	<u>18,222,000</u>	<u>9,577,557</u>	52.6%	26.3%
Solid Waste Services					
Landfills	2,350,000	1,175,000	56,548		
Recycling and Waste Centres	28,900,000	14,450,000	6,222,536		
Waste To Energy Facilities	17,750,000	8,875,000	1,611,470		
Opportunity	1,840,000	920,000	55,085		
	<u>50,840,000</u>	<u>25,420,000</u>	<u>7,945,639</u>	31.3%	15.6%
Water Services					
Water Mains	333,800,000	166,901,000	73,833,889		
Pump Stations	39,050,000	19,525,000	835,657		
Reservoirs	44,004,000	22,003,000	7,745,646		
Treatment Plants	22,025,000	11,013,000	756,049		
Others	32,394,000	16,198,000	2,824,515		
	<u>471,273,000</u>	<u>235,640,000</u>	<u>85,995,755</u>	36.5%	18.2%
Total	<u>1,397,223,180</u>	<u>698,612,000</u>	<u>234,164,867</u>	33.5%	16.8%

- Overall, year-to-date capital expenditures as of June 30, 2022 are \$234.2M, which represents 16.8% of the annual capital cash flow of \$1.4B, and 33.5% of the prorated YTD cash flow of \$698.6M.
- For Liquid Waste, total year-to-date capital expenditures as of June 30, 2022 are \$120.5M, which represents 15.4% of the annual capital cash flow of \$780.5M, and 30.9% of the prorated YTD cash flow of \$390.2M.
- For Water, total year-to-date capital expenditures as of June 30, 2022 are \$86.0M, which represents 18.2% of the annual cash flow of \$471.3M, and 36.5% of the prorated YTD cash flow of \$235.6M.

Solid Waste Tipping Fees and Tonnages

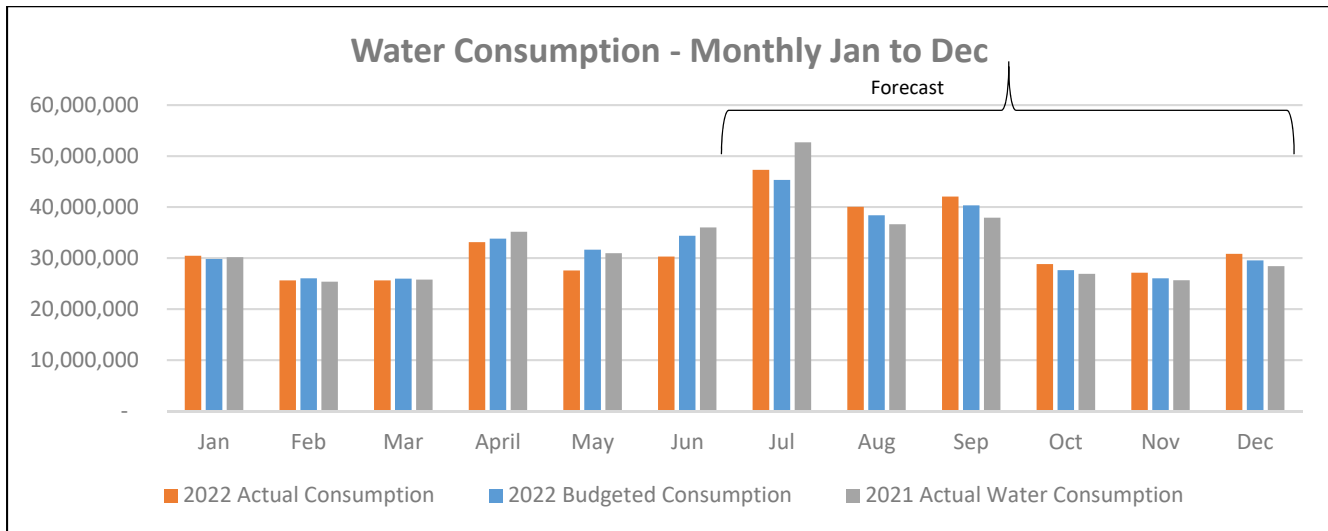


- Year to date tonnage of 508,065 is 17% higher than the budget and 11% higher than the same period last year.
- Metro Vancouver system waste flows are significantly higher this year. This, in combination with tipping fee price increases, has contributed to higher than budgeted revenues.
- The total 2022 budget for tonnage is 890,000 tonnes.

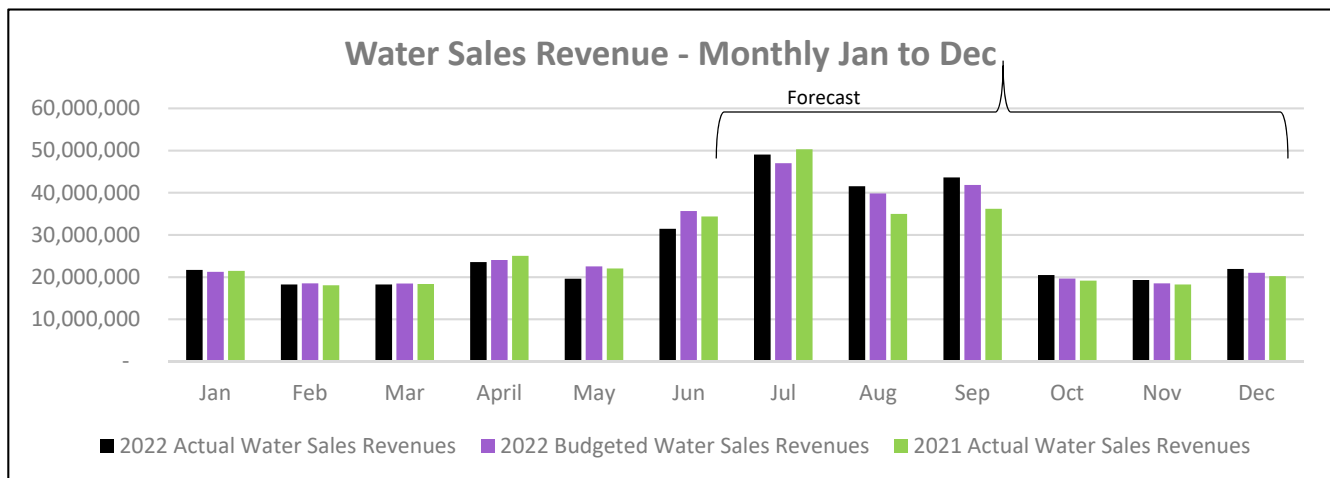


- Year-to-date Solid Waste total system revenues are \$61M, which is 7.3% higher than budget and 12% higher than the same period last year.
- The total 2022 annual budget for tipping fee revenues is \$112.9M.

Water Services Water Sales and Consumption



- Year-to-date water consumption is 172.8M m³, which is 4.9% lower than the YTD budget and 5.8% lower than the same period last year due to generally lower temperature this year.
- The total 2022 annual water consumption budget is 389M m³.



- Year-to-date water sales revenue is \$132.9M which is 5.5% lower than the YTD budget and 5.5% lower than same period last year due to lower consumption.
- The total annual 2022 water sales revenue budget is \$329.4M.

Other Variable Revenues

	2022 Budget	% Budget	YTD Budget	January Actuals	February Actuals	March Actuals	April Actuals	May Actuals	June Current	YTD Actuals	YTD Variance Budget to Actual
Variable Service Revenues:											
Liquid Waste Industrial Charge	12,262,636	32.1%	3,065,659 (1)	-	26,875	145,210	-	2,976,823	193,260	3,342,169	276,510
Energy Sales	6,401,758	16.8%	3,200,880 (2)	826,788	635,204	712,386	505,570	538,200	463,134	3,681,282	480,402
User Fees	5,977,543	15.6%	2,468,199 (3)	353,473	344,349	562,581	395,941	713,914	395,594	2,765,851	297,652
Non-Road Diesel Permit Fees	1,070,000	2.8%	524,300	111,891	94,479	105,155	98,869	101,076	97,946	609,417	85,117
Love Food Hate Waste	400,000	1.0%	199,998 (4)	354,429	-	6,000	-	5,763	-	366,192	166,194
Zero Waste Conference	337,000	0.9%	168,500 (5)	-	-	3,150	2,800	38,075	9,503	53,528	(114,973)
Other External Revenues	11,768,988	30.8%	5,397,276 (6)	159,740	3,093,492	957,172	1,186,743	777,589	957,027	7,131,764	1,734,488
	<u>\$ 38,217,925</u>	<u>100.0%</u>	<u>\$ 15,024,812</u>	<u>\$ 1,806,322</u>	<u>\$ 4,194,400</u>	<u>\$ 2,491,654</u>	<u>\$ 2,189,923</u>	<u>\$ 5,151,440</u>	<u>\$ 2,116,464</u>	<u>\$ 17,950,203</u>	<u>\$ 2,925,391</u>
Total Variable Service Revenues	\$ 38,217,925	100.0%	\$ 15,024,812	\$ 1,806,322	\$ 4,194,400	\$ 2,491,654	\$ 2,189,923	\$ 5,151,440	\$ 2,116,464	\$ 17,950,203	\$ 2,925,391

1. Liquid Waste industrial charges are slightly ahead of budget and expected to remain on target by year-end.
2. Energy sales are slightly ahead of budget and expected to remain on target by year-end.
3. User sales are slightly ahead of budget and expected to remain on target by year-end.
4. YTD variance for Love Food Hate Waste campaign is mostly due to 2022 funding received last year in 2021, which was deferred and brought into revenue in the current year in accordance with the accounting standards.
5. The YTD variance for Zero Waste Conference is due to the timing of billings as ticket sales will be generated 2-3 months leading up to September when the annual ZWC will take place.
6. Other external revenues include grant, merchandise sales, filming, parking, housing laundry, and other miscellaneous revenues. The revenues in this category tend to fluctuate month over month due to the nature of the revenues. Most of the YTD variance is driven by timing of receipt for the Grants in Lieu of Taxes and the annual contract payments which are collected at the anniversary dates.

Awarded Procurement

- Procurement data is updated 4 times per year. The most recent report is to May 31st.
- Below figures are compiled from the Tender/Contract Award Information as provided to the Performance and Audit Committee (PAU).
- Awards less than \$5 million refer to contracts in excess of \$500,000 and below \$5 million as \$500,000 is the threshold for contracts be reported to the Performance and Audit Committee.
- The number of awards issued up to May 2022 represents 50% of last year's numbers, or 29% in terms of dollar value. While the total value will fluctuate depending on the nature of awards, the total number remains fairly consistent compared to prior years except for 2020 due to global pandemic.

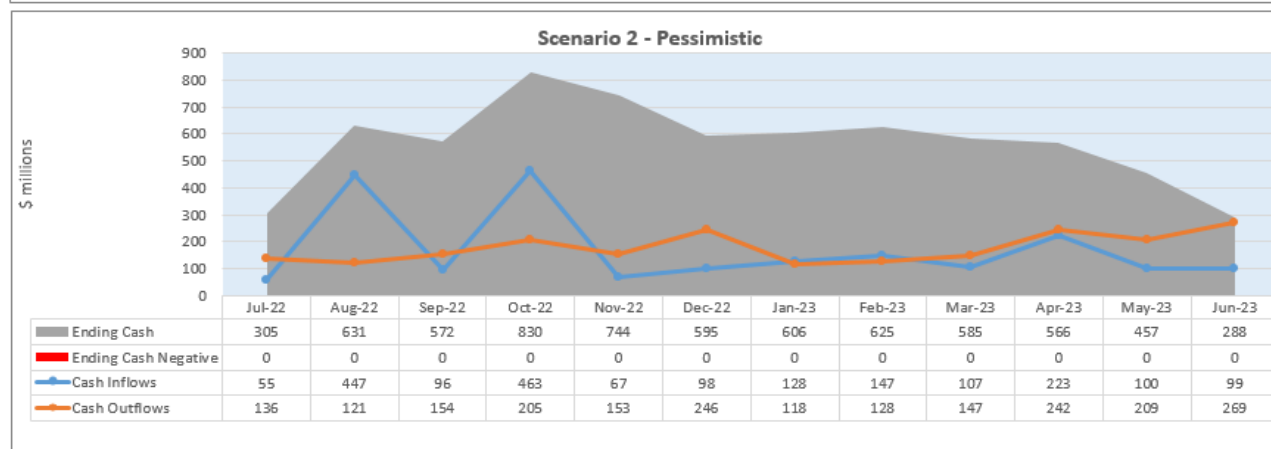
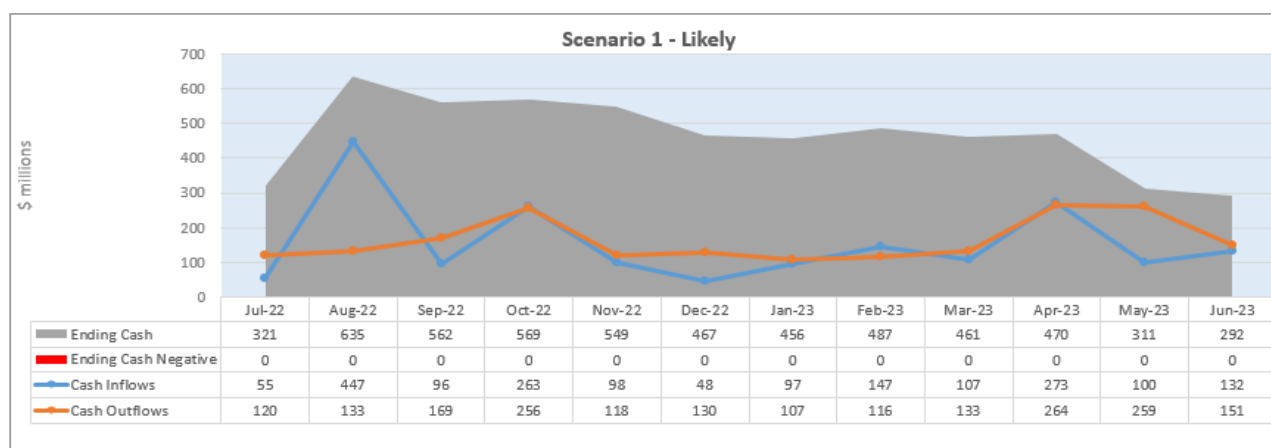
Award Type	2022*	2021	2020	2019
Board Awarded	11	25	16	26
Less than \$5 Million	27	51	51	42
Totals:	38	76	67	68

Award Type	2022*	2021	2020	2019
Board Awarded	\$215,842,419	\$798,139,628	\$163,365,307	\$812,341,330
Less than \$5 Million	\$46,565,633	\$92,545,559	\$98,731,113	\$60,111,064
Total:	\$262,408,052	\$890,685,187	\$262,096,420	\$872,452,394

*Jan-May due to timing of the PAU meeting

Cash Flow Scenarios

Risk Assumptions	
Scenario 1: Likely <ul style="list-style-type: none"> Housing – 1.5% rent rate increase budgeted for 2022 Fall 2022 \$200 million and Spring 2023 \$350 million MFA Long Term borrowing (\$550 million total) MFA short term borrowing \$50 million per month starting January 2023 – March 2023 (\$150 million total) & May 2023 – June 2023 (\$100 million total) 	Scenario 2: Pessimistic <ul style="list-style-type: none"> Housing – 1.5% rent rate increase budgeted for 2022 Fall 2022 \$400 million and Spring 2023 \$350 million MFA Long Term borrowing (\$750 million total) MFA short term borrowing \$50 million per month starting December 2022 – March 2023 (\$200 million total) & May 2023 – June 2023 (\$100 million total)



- Cash balance is expected to remain positive over the next 12 months under the likely and pessimistic scenario.
- Staff are working closely with MFA to implement a temporary short term borrowing program to facilitate cash management and backstop potential long-term funding limitation. Estimated start is in Fall 2022.

Accounts Receivable and Collections

AR Aging Report (Excluding Housing)

As at June 06, 2022	Amount Owning	Current	1-30 Days	31-60 Days	61-90 Days	Over 90 Days
Solid Waste	5,946,745	5,841,844	104,610	0	292	0
	100.00%	98.24%	1.76%	0.00%	0.00%	0.00%
Water	8,085,576	7,864,667	4,152	0	216,757	0
	100.00%	97.27%	0.05%	0.00%	2.68%	0.00%
Other	2,017,712	1,027,052	921,636	9,245	30,084	29,695
	100.00%	50.90%	45.68%	0.46%	1.49%	1.47%
Consolidated Current Year	16,050,033	14,733,562	1,030,397	9,245	247,134	29,695
	100.00%	91.80%	6.42%	0.06%	1.54%	0.19%
Consolidated Prior Year	39,853,575	29,254,638	7,845,867	8,547	191,601	2,552,922
	100.00%	73.41%	19.69%	0.02%	0.48%	6.41%
\$ Change	(23,803,541)	(14,521,076)	(6,815,470)	699	55,533	(2,523,227)

- Solid Waste – is mostly current. \$105K remain overdue in the 1-30 Days category. Staff are following up.
- Water – is mostly current. \$216K remain overdue in the 61-90 Days category. Staff are following up.
- Other – \$875K of the \$922K remain overdue in the 1-30 Days category is related to Liquid Waste industrial charges. Staff are following up. Finance is working with the respective departments to assess delinquent accounts on a case by case basis to determine appropriate course of action which may include the use of collections agency following a reasonable notice period.
- Overall, the AR is mostly current and the aging has improved comparable to the prior year.

Housing Tenant Receivable

Housing Aged Outstanding Tenant Rent (in 1000s)													
	As of Jun 30, 2021	As of Jul 31, 2021	As of Aug 31, 2021	As of Sep 30, 2021	As of Oct 31, 2021	As of Nov 30, 2021	As of Dec 31, 2021	As of Jan 31, 2022	As of Feb 28, 2022	As of Mar 31, 2022	As of Apr 30, 2022	As of May 31, 2022	As of June 30, 2022
Total Expected Monthly Revenue (1)	\$ 3,522	\$ 3,533	\$3,532	\$3,521	\$ 3,544	\$3,534	\$3,551	\$3,560	\$3,546	\$3,554	\$3,565	\$3,565	\$3,551
Cumulative Outstanding Rent (2)	\$ 57	\$ 60	\$57	\$49	\$52	\$58	\$53	\$50	\$56	\$57	\$59	\$54	\$53

(1) Excludes commercial housing (essential services, no deferral anticipated)

(2) Life-to-date Cumulative Balance. Includes other charges such as miscellaneous chargebacks and deposits.

To: Performance and Audit Committee

From: Linda Sabatini, Acting Director, Financial Operations

Date: June 27, 2022 Meeting Date: July 14, 2022

Subject: **Treasury Report – March 1, 2022 to May 31, 2022**

RECOMMENDATION

That the Performance and Audit Committee receive for information the report dated June 27, 2022 titled “Treasury Report – March 1, 2022 to May 31, 2022”.

EXECUTIVE SUMMARY

The annualized investment returns for Metro Vancouver at May 31, 2022 was 1.20% for Short-Term, 2.30% for Long-Term and 2.28% for the Cultural Reserve Fund. Investment performance is comparable with benchmarks. Results and balance information cover the three-month period from March through May.

Treasury reported to the Committee in April 2022, and since that time, in response to rising inflation, the Bank of Canada increased the overnight borrowing rate by 100 basis points, resulting in both higher borrowing costs and higher investment returns for Metro Vancouver.

Finance staff are investigating cash management strategies to mitigate risks associated with higher than normal inflationary environment. An opportunity exists to improve cash management by using temporary borrowing, which will reduce the amount of cash on hand and maximize cash invested in the long-term investment portfolio. This practice is similar to what is used by the member municipalities. The temporary borrowing program is being reported through the Finance Committee for approval by the Metro Vancouver’s Boards on July 29th.

PURPOSE

To provide the Performance and Audit Committee the investment performance for the period ending May 31st, 2022 and to highlight emerging economic issues and our responses to these challenges.

BACKGROUND

The Treasury Report is presented to the Committee to keep members informed on important updates relating to Metro Vancouver’s investments and related treasury risks. The *Corporate Investment Policy* requires that an investment update report be presented to the Committee three times per year. The period covered by the report will vary depending on the timing of the committee meeting. The current report includes balance and information to the end of May 2022.

This report is also an opportunity to discuss emerging issues such as emerging financial risks and the steps being taken to manage these risks.

INVESTMENT CATEGORIES

Short term investments have terms of less than one year at the time of investment. These may include Bankers' Acceptances, Canadian Bank Bonds and Credit Union Term Deposits.

Long term investments have terms greater than one year at the time of investment. These investments may include Canada, Provincial, and Canadian Bank bonds, Guaranteed Investment Certificates, Credit Union Term Deposits greater than one year and MFA pooled funds.

Cultural Reserve investments are long term investments whose revenues have been set aside to fund Metro Vancouver's annual contributions to cultural activities.

OVERALL INVESTMENT RETURNS

Table 1

2022 SUMMARY OF INVESTMENT RESULTS				
PERIOD	SHORT TERM*	LONG TERM	CULTURAL RESERVE	TOTAL**
January	0.08%	0.18%	0.19%	0.10%
February	0.08%	0.17%	0.18%	0.10%
March	0.10%	0.18%	0.20%	0.12%
April	0.11%	0.20%	0.19%	0.13%
May	0.13%	0.23%	0.19%	0.16%
2022 Annualized Estimate	1.20%	2.30%	2.28%	1.46%

* Includes cash and high-interest savings account balances

**Weighted average return of short-term, long-term and cultural reserve fund

Investment Performance

Table 2 summarizes the amounts held in the short term, long term and cultural reserve portfolios and the estimated annualized yield for each.

Table 2

INVESTMENT PORTFOLIO BREAKDOWN									
PERIOD ENDING	SHORT TERM			LONG TERM			CULTURAL RESERVE		
	\$ AMOUNT	% OF TOTAL	EST. ANNUALIZED YIELD	\$ AMOUNT	% OF TOTAL	EST. ANNUALIZED YIELD	\$ AMOUNT	% OF TOTAL	EST. ANNUALIZED YIELD
February 28, 2022	\$112.5M	37.60%	0.96%	\$184.9M	61.70%	2.10%	\$2.2M	0.7%	2.22%
May 31, 2022	\$152.8M	37.10%	1.20%	\$257.3M	62.40%	2.30%	\$2.2M	0.5%	2.28%

Appendices 1 and 2 detail the performance during the period compared to benchmarks. The portfolios exceeded all benchmarks for the period, except the MFA Bond Fund, due to the pace of increasing interest rates. Treasury expects to meet all its benchmarks as maturing investments are re-invested in higher yielding bonds.

Investment Holdings and Limits

Investments by counterparty as percentage of the total portfolio and the maximum limits per the policy have been included in Appendix 4.

The portfolio continues to be heavily weighted in financial institutions, with large cash holdings, due to the significant cash demands of the capital program. However, the cash balance has been reduced since the February report as some funds have been moved to short and long-term investments.

Looking at the “days to maturity” for all investments including cash, 17.7% will mature in the next 12 months and 29.8% will mature beyond 12 months. The remaining 52.5% are held in HISA and is fully liquid. The expected maturity by sector can be found in Appendix 3 of this report.

EMERGING RISKS

Rising Interest Rates and Inflation

In the past three months, the *Bank of Canada (BOC)* has increased the overnight lending rate from 0.50% to 1.50%. This was done through two increases of 50 basis points at the BOC’s last 2 meetings. This action was taken as a response to the inflation rate being higher than the BOC’s target range of 2%. There is an expectation from the market that the BOC will continue to increase rates for the remainder of 2022. The BOC’s next scheduled meeting to announce a rate increase is July 13th.

The purchasing power of Metro Vancouver’s investments is diminished when inflation is higher. In addition, the costs for ongoing and future projects are increased. Canada’s year over year inflation rate in May, compared to May 2021, was 7.7%, the highest inflation rate in nearly 40 years.

Since March 2022, the US Fed has increased its interest rate from a range of 0.00%-0.25% to a range of 1.50%-1.75%. In June, in response to continued inflation concerns, the rate increase was a higher than usual 75 basis points. Inflation in the United States was 8.6% in May 2022, when compared to prices 12 months ago. Further rate hikes are expected in the coming months. The US Fed’s next meeting is at the end of July.

As interest rates increase, the cost of borrowing for Metro Vancouver also increases. Treasury is carefully monitoring how these increases will affect our debt servicing costs and our budgets. The projected MFA long-term borrowing rate for the fall 2022 borrowing is 4.35%.

MANAGING RISKS

Temporary borrowing

An opportunity exists to improve cash management by using temporary borrowing, which will reduce the amount of cash on hand and maximize cash invested in the long-term investment portfolio. By using Temporary borrowing, funds needed to pay suppliers can be borrowed in smaller amounts and more frequently than the current long-term borrowing process through MFA. It is anticipated that this program will result in \$1.8 million a year in additional returns, across the organization as a whole. This practice is similar to what is used by the member municipalities. The temporary borrowing program is being reported through the Finance Committee for approval by the Metro Vancouver’s Boards on July 29th.

Additional steps

In addition, higher inflation makes future contracts more expensive. Treasury is working with our procurement team to determine how best to manage the pressures of increasing costs. This may include pre-purchasing materials or negotiating limits to cost overruns into the agreements.

Finance staff will be revisiting our capital plan to understand the impact of inflation on planned projects as part of the 2023 budget process.

Another approach to managing the increasing costs of borrowing is to explore a hedging program for our borrowing. Using this approach will help to create more certainty of the cost of borrowing over medium and long term.

ONGOING MATTERS

Environmental, Social and Governance (ESG)

As part of the investment policy approved on November 27, 2020, staff committed to providing an update on the Environmental, Social and Governance (ESG) investing environment to inform the continued evolution of the Metro Vancouver investment policy.

Metro Vancouver remains committed to the principals of ESG and continues to monitor developments in this area. In addition to environmental factors, there are related goals such as social equality and access to suitable housing for every resident in the region. Treasury staff are working with MFA and other municipalities to report on ESG projects and understand the framework for ESG reporting.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

Overall portfolio returns remain modest, but are trending higher, as rates increase. At the same time, while rates of return are higher, the rising cost of inflation results in a negative real rate of return on our investment portfolio.

CONCLUSION

Overall, investment performance for the period met expectations. Metro Vancouver's portfolios hold quality investments and are well positioned as rates trend higher. The overall rate of return is expected to be higher over the next several months as rates continue to increase and investments mature and are reinvested at higher rates. A significant percentage of the portfolio will continue to be held in cash for liquidity.

At the same time, higher inflation rates will erode the value of our portfolio and result in higher costs for future and ongoing projects, and for interest costs of borrowing. Finance staff continue to re-assess our cash management strategies to find ways to optimize returns.

Attachments:

Appendix 1 – Short Term Portfolio – Investment Results and Comparison to Benchmarks

Appendix 2 – Long Term Portfolio – Investment Results and Comparison to Benchmarks

Appendix 3 – Investment Maturity Charts

Appendix 4 – Investment Holdings and Maximum Limit

Appendix 5 – Canada Benchmark Curve

50323170

APPENDIX 1

INVESTMENT RESULTS - SHORT TERM PORTFOLIOS				
2022 Comparison to Benchmarks				
	SHORT TERM*	ONE MONTH B/A**	THREE MONTH B/A**	MFA MONEY MARKET FUND
January	0.08%	0.02%	0.04%	0.03%
February	0.08%	0.03%	0.05%	0.04%
March	0.10%	0.05%	0.07%	0.06%
April	0.11%	0.08%	0.11%	0.09%
May	0.13%	0.11%	0.15%	0.11%
2022 Annualized Estimate	1.20%	0.70%	1.02%	0.79%

* Includes cash and high-interest savings account balances

** Per IIROC BA Rate History

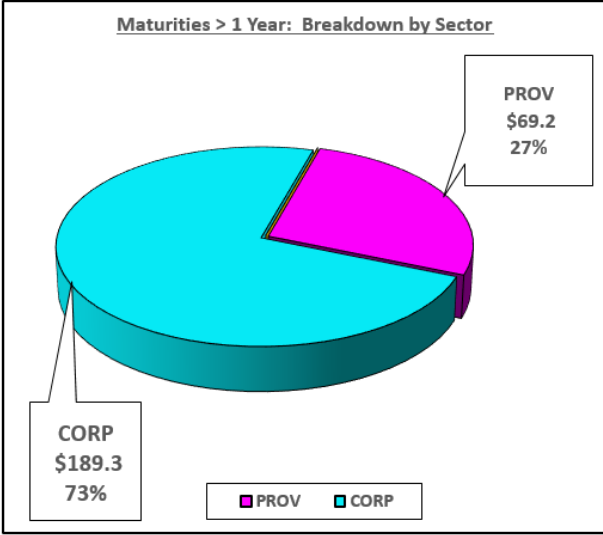
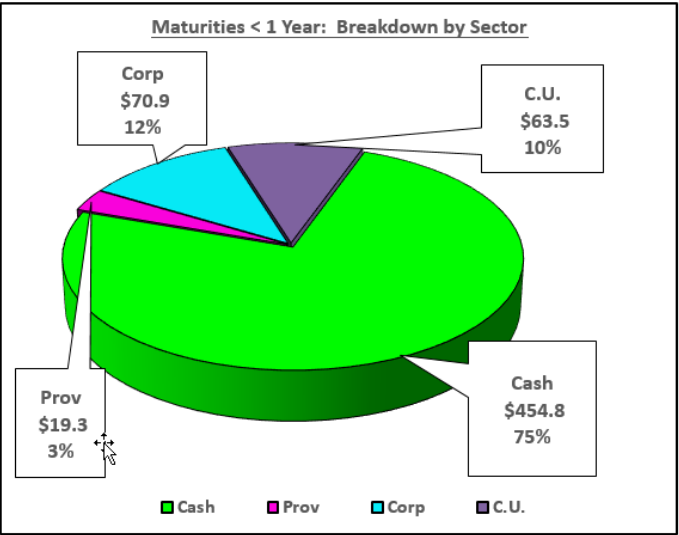
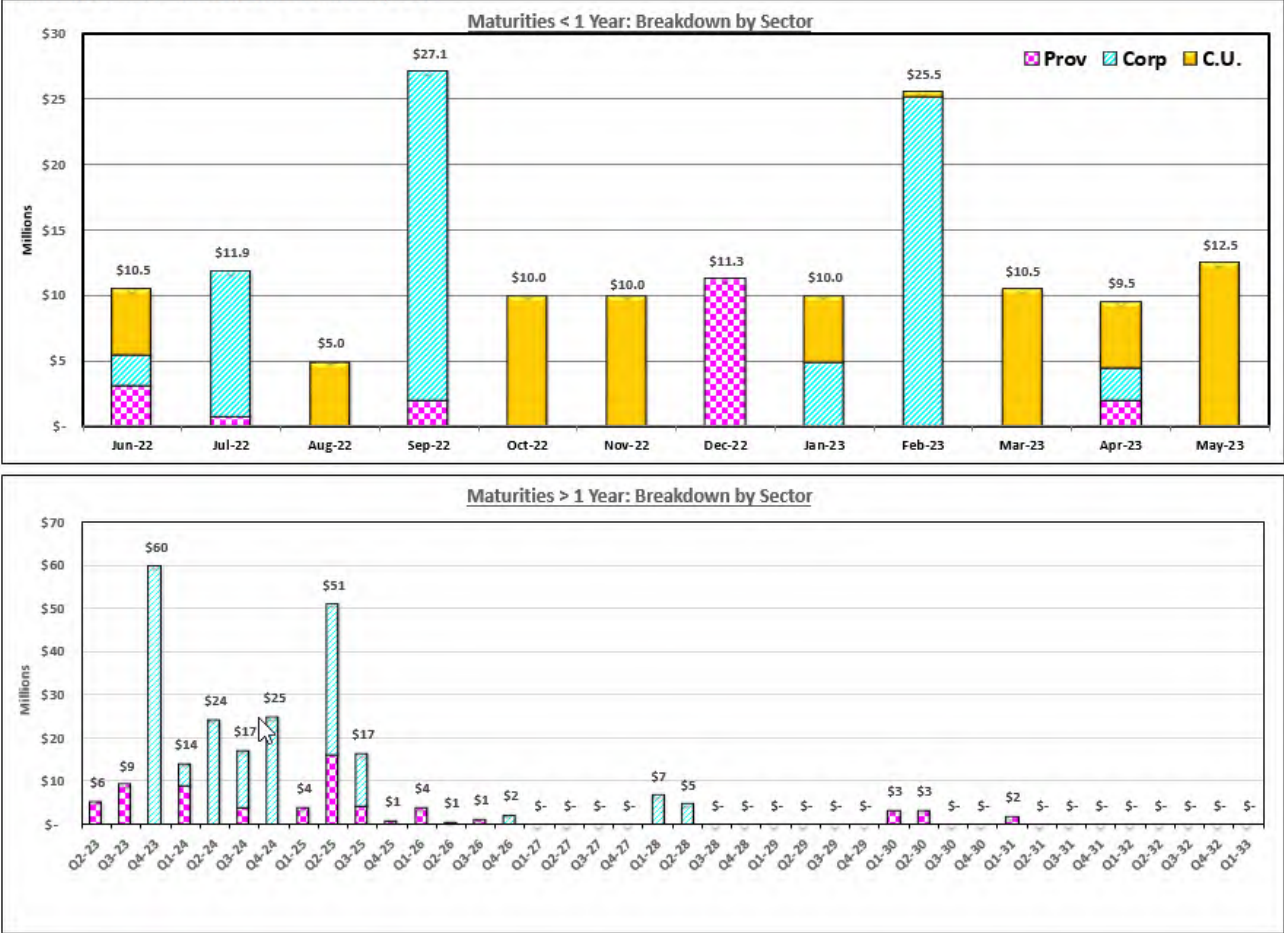
APPENDIX 2

2022 INVESTMENT RESULTS - LONG TERM PORTFOLIOS				
Comparison to Benchmarks				
PERIOD	LT PORTFOLIO	CULTURAL RES	MFA GOVT FOCUSED ULTRA- SHORT BOND FUND (Average Yield*)	MFA BOND FUND (YTM*)
January	0.18%	0.19%	0.09%	0.15%
February	0.17%	0.18%	0.11%	0.16%
March	0.18%	0.20%	0.16%	0.23%
April	0.20%	0.19%	0.22%	0.27%
May	0.23%	0.19%	0.22%	0.27%
2022 Annualized Estimate	2.30%	2.28%	1.89%	2.61%
Average term-to-maturity	2.19 Years	2.04 Years	0.89 Years	2.59 Years

*Starting October 2020, MFA is no longer providing Average Yield in their monthly performance reports. Instead, MFA discloses the Yield to Maturity which is the total return anticipated if securities held in the fund are held until maturity.

APPENDIX 3

MATURITIES BY SECTOR AS AT MAY 31, 2022



APPENDIX 4

METRO VANCOUVER

INVESTMENT HOLDINGS AND LIMITS AS AT MAY 31, 2022

	(% of total portfolio)	
	Corporate Policy Limit	Investments as at May 31, 2022
Canada	100.0%	0.0%
Provinces rated AA- or better by S&P (or equivalent)		
British Columbia	50.0%	0.0%
Saskatchewan	50.0%	0.0%
Provinces rated A- or better by S&P (or equivalent)		
Alberta	30.0%	0.0%
New Brunswick	30.0%	0.2%
Ontario	30.0%	2.4%
Quebec	30.0%	4.5%
Manitoba	50.0%	1.3%
Nova Scotia	30.0%	0.4%
Newfoundland	30.0%	0.6%
Prince Edward Island	30.0%	0.0%
Subtotal	50.0%	9.40%
Municipal Finance Authority of BC	15.0%	1.9%
Government Term 11-30 years	5.0%	0.0%
SCHEDULE I/II BANKS		
Bank of Montreal	20.0%	16.4%
Bank of Nova Scotia	20.0%	17.4%
CIBC	20.0%	6.2%
Royal Bank of Canada	20.0%	8.0%
TD Bank	20.0%	6.3%
HSBC Bank Canada	15.0%	1.4%
National Bank of Canada	15.0%	11.6%
Manulife Bank	15.0%	4.6%
Canadian Western Bank	15.0%	9.4%
BC CREDIT UNIONS		
Vancity	20.0%	3.7%
CoastCapital	20.0%	0.0%
Westminster Credit Union	20.0%	0.0%
Blueshore	20.0%	2.3%
First West	20.0%	0.1%
Prospera	20.0%	0.0%
G&F Financial	20.0%	1.2%
Subtotal	50.0%	7.3%
BC Credit Union Long 2-5 years	30.0%	0.0%
Caisse Central Desjardins	5.0%	0.0%

APPENDIX 5

The Bank of Canada yield curve is higher than it has been the past two years. For periods longer than 10 years the rate is much higher. As of May 31, 2022, 10 year Canada benchmark bonds traded at 2.8%. This compares to a rate of 1.5% in May 2021 and 0.5% in May 2020. In June 2022, rates have moved even higher, with 5, 10 and 30 year yields all above 3.25%.

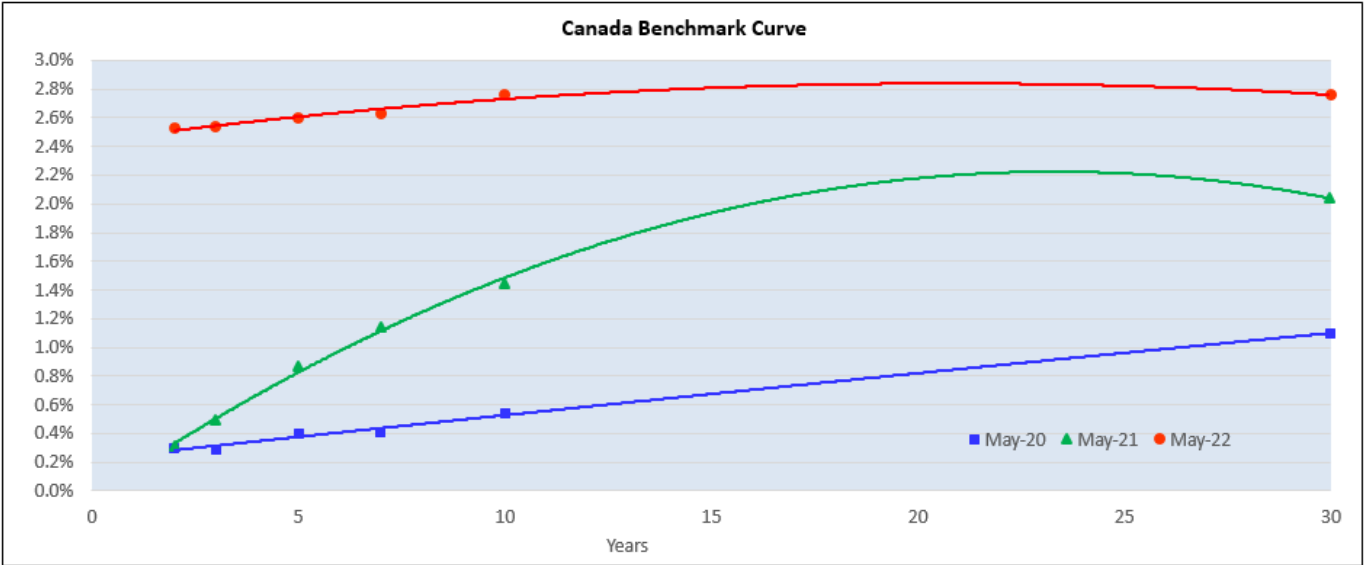


Table 2

To: Performance and Audit Committee

From: Linda Sabatini, Acting Director, Financial Operations

Date: June 27, 2022

Meeting Date: July 14, 2022

Subject: **Status of Asset Retirement Obligation Project**

RECOMMENDATION

That the Performance and Audit Committee receive for information the report dated June 27, 2022, titled "Status of Asset Retirement Obligation Project".

EXECUTIVE SUMMARY

The *Canadian Public Sector Accounting Standards ("PSAS")*, followed by Metro Vancouver in the preparation of its annual audited financial statements, introduced a new *asset retirement obligation ("ARO")* standard for implementation December 31, 2023. Under the new standard, the costs to retire or decommission a *tangible capital asset ("TCA")* are to be reported as liabilities, at the time the asset is acquired, developed or constructed. Currently these costs are expensed as they are incurred.

Metro Vancouver has identified potential AROs in the Parks Department, MVHC and Solid Waste Operations and are in the process of reviewing cost estimates to determine the impact on the financial statements. Efforts to calculate the AROs in Water and Liquid Waste Services are in the early stages. Based on work performed to date, it is anticipated that Metro Vancouver will complete the required audit requirement for the preparation of the December 31, 2023 financial statements.

In terms of potential budget and rate impact, as part of the capital planning process, Metro Vancouver includes the cost of retiring and decommissioning a TCA in the overall capital plan and appropriate funding decisions are made during the budget process.

PURPOSE

To provide the Performance and Audit Committee with the progress of work performed on the new *Public Sector Accounting Standard 3280 ("PS3280")*, called *Asset Retirement Obligations ("ARO")*, to be implemented fiscal year ending December 31, 2023.

BACKGROUND

Metro Vancouver's annual audited financial statements are prepared in accordance with *Canadian public sector accounting standards ("PSAS")*. The ARO standard, PS3280, was issued by the PSAS Board in August 2018 for implementation December 31, 2022. However, as a result of the COVID19 pandemic, PSAS extended the implementation deadline to December 31, 2023. The standard provides guidance on how to account for and report a liability related to the retirement and decommissioning of an asset.

With the implementation of the new ARO standard, PSAS will be rescinding the existing landfill obligation standard, PS3270, that is being followed by Metro Vancouver to record its Solid Waste landfill liability. Beginning in 2023, the accounting treatment for landfill closure and post-closure liabilities will adopt the requirements of the new ARO standard, PS3280.

ASSET RETIREMENT OBLIGATION (ARO) DEFINITION

An ARO is a legal obligation associated with the retirement or decommissioning of a TCA controlled by a public sector organization. The obligation can be legislated, contractual or created by promissory estoppel and can include post-retirement operation, maintenance and monitoring costs. Examples include, removal of asbestos, leased site restoration and landfill closure and post-closure costs. An ARO does not include routine replacement or maintenance, remediation of contamination from an unexpected event, preparation of a site for sale or the selling costs. It also does not include the cost to replace an asset.

FINANCIAL STATEMENT IMPACT OF AROs

When an ARO exists, the new accounting standard will require that costs to retire and decommission the TCA be recorded as a liability, with an equal offsetting increase to the carrying amount of the related TCA. Initially, both the liability and the increase to the asset value are recorded on the Statement of Financial Position (the statement that is similar to the Balance Sheet in public companies), thereby having no impact to the Statement of Operations, as no expenditure is recorded.

AROs will generally occur in the future so the initial value recorded in the financial statements is discounted and recorded at the present value of the liability. In subsequent years, until the liability is settled or otherwise extinguished, the ARO is adjusted annually for accretion and changes to estimates, taking into account inflation. In addition, by initially adding the cost of the ARO to the related TCA, the ARO will be amortized in a rational and systematic manner, consistent with the related asset. Both the accretion adjustment and the amortization will be recorded as expenditures in the Statement of Operations. However, neither of these expenditures requires a cash outlay until the asset is actually retired, so there is no impact to the cash balance in the financial statements.

As part of the capital planning process, Metro Vancouver includes the cost of retiring and decommissioning a TCA in the overall capital plan and appropriate funding decisions are made during the capital planning process. The PSAS ARO standard will highlight the estimated amounts that will need to be included in the capital plan and funded in the future as assets are retired.

UPDATE ON THE ARO PROJECT AT METRO VANCOUVER

Metro Vancouver began working on the ARO project in 2020, however with COVID, the project was put on hold as Finance staff dealt with operational impacts of COVID.

The overall approach at Metro Vancouver to implement the new ARO standard is to review significant assets that will have a material impact on the financial statements. Finance staff have had initial discussions with Metro Vancouver's auditors regarding the approach and will continue to engage and involve the auditors throughout the project to ensure Metro Vancouver's ARO approach satisfies their audit requirements.

The following provides a summary of work performed to date on the new ARO standard.

Buildings and Structures in MVHC

The approach to MVHC's ARO determination was to review buildings and structures constructed prior to 1990 that may contain asbestos. Through analysis, there are approximately 2,900 units built prior to 1990 with potential asbestos.

Finance staff are in the process of using the asbestos removal costs from the Heather Place project to extrapolate and determine the AROs for Housing. In 2017, the demolition costs were \$65K for 23,000 square feet at Heather Place Phase 1. Applying a construction inflation factor results in a cost of \$3.72 per square foot in 2022. Finance will use this rate to the estimate of the ARO for the units identified, with additional consideration for units that may have been renovated since 1990 and thus asbestos already removed.

Buildings and Structures in Parks

In Parks, there are approximately 200 structures identified as constructed prior to 1990, that potentially contain asbestos or other contamination. Buildings and structures were broken out into three categories to segregate the complexity of the structure.

- Category 1 structures are small or modular buildings such as small sheds, steel containers or pit toilets,
- Category 2 have little or no interior finishing or utilities, such as barns and workshops, and
- Category 3 are fully furnished and have utilities, such as houses and parks office sites.

The estimated ARO for Parks related to these 200 structures is \$2.2 million. This was calculated using actual invoices from demolishing other Parks' structures. Finance staff are in the process of reviewing these estimates and determining the accretion and amortization impact on the financial statements.

Solid Waste Operations

With the implementation of PS3280 in 2023, the existing landfill obligation standard, PS3270, that is followed by Metro Vancouver to record the Solid Waste landfill liability, will be rescinded. Beginning in 2023, the accounting treatment for landfill closure and post-closure liabilities will adopt the requirements of the new ARO standard, PS3280. The new standard requires that the full present value of the liability be recorded in the financial statements as opposed to the current method of recording the liability incrementally as the landfill is used.

One of the requirements to record an ARO, under PS3280, is for the public sector to control the asset. In the case of the Vancouver landfill, located in Delta, the City of Vancouver operates the landfill. In accordance with an agreement with the City of Vancouver, GVS&DD is responsible for its proportionate share of the closure and post-closure costs based on usage. These costs are estimated by City of Vancouver's engineering department. As a result of PS3270 being rescinded, the measurement and presentation of the liability in Metro Vancouver's financial statements is being discussed with Metro Vancouver's auditors to determine the appropriate financial statement disclosure. If an ARO does not exist, Metro Vancouver will continue to record its share of the closure and post-closure costs as a liability under other sections of PSAS, without the need to record amortization or accretion as with AROs.

In addition to landfill liability issue, AROs in Solid Waste have been identified for small amounts of asbestos and lead contamination at each of the transfer stations, Cache Creek and Ashcroft ranch properties and the Waste-to-Energy facility. Cost estimates are being reviewed to determine the potential liability.

Water and Liquid Waste Services

Work on AROs for Water Services and Liquid Waste services is in the early stages. Finance staff are working on gathering a list of assets with potential AROs and will be working with the Metro Vancouver's engineers to determine future ARO liabilities.

ALTERNATIVES

This report is provided for information; no alternatives are presented.

FINANCIAL IMPLICATIONS

The new ARO standard, PS3280, to be implemented December 31, 2023 will result in the disclosure of ARO liabilities in the annual financial statements, an offsetting increase in the carrying value of the TCAs and the annual subsequent recording of accretion and amortization expenses. The amounts will initially have no cash impact to Metro Vancouver's budget but will highlight the amounts to be included and funded in the future as assets are retired or decommissioned.

CONCLUSION

The new ARO standard, PS3280, that will need to be implemented by December 31, 2023 will result in the disclosure of ARO liabilities in the annual financial statements, with an offsetting increase in the carrying value of the related TCA, and the annual subsequent recording of accretion and amortization expenses. To date, significant progress has been made to identify assets with potential AROs in the Parks Department, MVHC and Solid Waste Operations. Efforts to calculate the ARO liabilities in Water and Liquid Waste Services are in the early stages. Based on work performed to date, it is anticipated that Metro Vancouver will complete the required audit requirement for the preparation of the December 31, 2023 financial statements.

To: Performance and Audit Committee

From: Roy Moulder, Director, Procurement
Procurement and Real Estate Services Department

Date: June 28, 2022 Meeting Date: July 14, 2022

Subject: **Tender/Contract Award Information – March 2022 to May 2022**

RECOMMENDATION

That the Performance and Audit Committee receive for information the report dated June 28, 2022 titled “Tender/Contract Award Information – March 2022 to May 2022”.

EXECUTIVE SUMMARY

During the period March 1, 2022 and May 31, 2022, the Procurement Division issued twenty-two (22) new contracts, each with a value in excess of \$500,000 (exclusive of taxes). In addition, there were ten (10) existing contracts requiring contract amendments which necessitate further reporting to the Performance and Audit Committee. The 10 amendments experienced additional costs resulting from either scope changes and project extensions due to site conditions or third party regulatory requirements.

All awards and amendments were issued in accordance with the “*Officers and Delegation Bylaws 1208, 284 and 247 – 2014*” and the “*Procurement and Real Property Contracting Authority Policy*”.

PURPOSE

To provide the Performance and Audit Committee information with regard to contracts, handled through the Procurement Division, with a total anticipated value at or in excess of \$500,000 (exclusive of taxes).

BACKGROUND

The Procurement Division of Metro Vancouver awards contracts for goods, services and construction in accordance with the “*Officers and Delegation Bylaws 1208, 284 and 247 – 2014*” (*Bylaws*), and the “*Procurement and Real Property Contracting Authority Policy*” (*Policy*) adopted by the Board of Directors on July 11, 2014, effective September 1, 2014. These *Bylaws* and *Policy* outline thresholds for competitive bidding and contracting authorities. Contracts in excess of \$500,000 will be reported to the Performance and Audit Committee to align with the thresholds outlined in the Policy.

Capital projects may result in the awarding of one or more contracts to complete the project. Budget availability is verified prior to the execution of contracts.

NEW CONTRACTS - \$500,000 to \$5,000,000

The following contracts were **awarded** during the months of *March 2022 to May 2022*
(Details attached as **APPENDIX A**):

		(Exclusive of taxes)	
1.	Telus Communications Inc. RFP No. 22-001 <i>High Speed Wide Area Network (WAN) - Network Services</i>	\$504,600	MVRD
2.	VIA Architecture RFP No. 21-460 <i>Architect and Design Services for Affordable Housing Project - Malaspina Village Phases I & II</i>	\$2,432,242	MVHC
3.	Geocycle Canada Inc. SRFEOI No. 21-232 <i>Drinking Water Treatment Residuals Management at Lafarge Richmond Cement Plant</i>	\$3,965,000	GVWD
4.	Core6 Environmental Ltd. RFP No. 21-144 <i>Environmental Engineering Services Related to Remediation and Risk Assessment for Iona Island Wastewater Treatment Plant Upgrade Project</i>	\$2,104,460	GVS&DD
5.	Anaconda Systems Limited RFP No. 21-519 <i>Innovative Organics Processing</i>	\$1,650,000	GVS&DD
6.	Tetra Tech Inc. RFP No. 21-276 <i>Consulting Engineering Services for Annacis Island Wastewater Treatment Plant (AIWWTP) Electrical Studies and Upgrade</i>	\$587,558	GVS&DD
7.	Geotech Drilling Services Ltd. RFP No. 21-146 <i>Geotechnical Exploration Services for the Iona Island Wastewater Treatment Plant Projects</i>	\$2,174,207	GVS&DD
8.	McRae's Environmental Services Ltd. RFP No. 21-459 <i>Sludge Hauling Services for Northwest Langley Wastewater Treatment Plant</i>	\$2,850,000	GVS&DD

9.	Skye Consulting (B.C.) Ltd. RFP No. 22-002 <i>Delivery of School Programs for Metro Vancouver's Watershed Education Program</i>	\$706,871	GVWD
10.	Associated Engineering (B.C) Ltd. RFP No. 21-498 <i>Conceptual Design of the Haney Water Supply Tunnel – Pitt River Crossing</i>	\$1,833,562	GVWD
11.	Homewood Health Inc. RFP No. 21-125 <i>Employee and Family Assistance Program – Metro Vancouver</i>	\$674,648	MVRD
12.	Avenue Machinery Corporation RFP No. 21-104 <i>Supply and Delivery of Working Class Utility Terrain Vehicles</i>	\$720,000	MVRD
13.	Brenntag Canada Ltd. Sole Source No. 22-095 <i>Supply and Delivery of Sodium Carbonate (Soda Ash) for Coquitlam Water Treatment Plant (CWTP)</i>	\$1,095,200	GVWD
14.	GHD Limited RFP No. 22-003 <i>Preliminary Design, Detailed Design and Construction Engineering Services North Surrey Interceptor No. 2 Tunnel</i>	\$2,521,429	GVS&DD

NEW CONTRACTS – BOARD APPROVED

The following contracts were **authorized for execution** by the GVS&DD and GVWD Boards of Directors during the months of *March 2022 to May 2022* (as such no further information is included in this report):

		(Exclusive of taxes)	
1.	Kenaidan Contracting Ltd. Tender No. 21-001 <i>Construction – Fleetwood Reservoir Phase 1</i>	\$30,959,650	GVWD
2.	AECOM Canada Ltd. RFP No. 14-205 <i>Design Build Consulting Services for the Lions Gate Secondary Wastewater Treatment Plant</i>	\$15,000,000	GVS&DD

3.	Sea to Sky Composting Inc. Sole Source No. 21-215 <i>Organics Management</i>	\$828,000	GVS&DD
4.	Stantec Consulting Ltd. RFP No. 21-283 <i>Program Management Consulting Services for the Iona Island Wastewater Treatment Plant Projects</i>	\$99,500,000	GVS&DD
5.	Halton Recycling Ltd. (doing business as Emterra Environmental) RFP No. 21-517 <i>Operation and Maintenance of the Central Surrey Recycling and Waste Centre</i>	\$38,700,000	GVS&DD
6.	Brenntag Canada Inc. RFP No. 22-015 <i>Supply and Delivery of Sodium Hypochlorite</i>	\$11,992,000	GVS&DD/ GVWD
7.	Michels Canada Co. RFP No. 21-468 <i>Newton Pump Station No. 2 – Reservoir Tunnelling and Outlets</i>	\$12,362,769	GVWD
8.	Metro Motors Ltd. RFP No. 21-266 <i>Provision of Light and Medium Duty Vehicles</i>	\$6,500,000	MVRD

AMENDED CONTRACT

The following '**not previously reported**' contracts were **amended** during the months of *March 2022 to May 2022 (APPENDIX B)*:

	<u>Value of Amendments</u>	<u>Total Amended Value of Contract</u>
1. Awarebase Corp. RFP No. 18-108 <i>Engineering Drawing Storage System</i>	\$281,588	\$531,588
2. Ross Morrison Ltd. Tender No. 19-185 <i>Construction, Installation and Commissioning of Hudson and Willingdon Pump Stations</i>	\$84,475	\$580,975
3. Zoom Video Communications Inc. Sole Source No. 22-228 Zoom Video Communications	\$296,976 USD	\$446,186 USD

The following **previously reported** contracts were **amended** during the months of *March 2022 to May 2022* (Details attached as **APPENDIX C**):

	<u>Value of Amendments</u>	<u>Total Amended Value of Contract</u>
1. CH2M Hill Canada Limited RFP No. 15-040 <i>Consulting Engineering Services for the South Surrey Interceptor Delta Section Odour Control Facility</i>	\$748,754	\$1,763,688
2. AECOM Canada Ltd. RFP No. 17-063 <i>Consulting Engineering Services - Owner's Engineer for Iona Island Wastewater Treatment Plant Biosolids Dewatering Facility</i>	\$879,750	\$4,384,545
3. Morrison Hershfield Limited RFQ No. 17-090 <i>Consulting Engineering Services for the Design and Construction Management of the Surrey Small Vehicle Drop Off Facility</i>	\$587,890	\$5,276,489
4. McMillen Jacobs Associates RFP No. 18-127 <i>Consulting Engineering Services for the Northwest Langley Wastewater Treatment Plant River Crossing Project</i>	\$1,883,948	\$9,213,933
5. WSP Canada Group Ltd. RFP No. 18-213 <i>Consulting Engineering Services - Owner's Engineer for the North Surrey Interceptor Flow Management - Sanitary Sewer Overflow Tank</i>	\$2,989,383	\$4,304,558
6. Brown and Caldwell Consultants Canada Ltd. RFQ No. 18-245 <i>Lulu Island Wastewater Treatment Plant Pilot Digestion Optimization Facility</i>	\$602,226	\$1,326,622
7. Local Practice Architecture + Design Ltd. RFP NO. 20-171 <i>Architect and Design Services for Heather Place B Multi-Family Residential Development</i>	\$1,934,311	\$2,410,219

COMPETITIVE SELECTION PACKAGES - anticipated to be greater than \$500,000 (Issued but not awarded) (Details attached as **APPENDIX D**).

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

The contract approval process includes a review of available budget. The contracts presented herein are consistent with budget authority provided by the respective Boards.

CONCLUSION

The contracts presented herein were awarded in accordance with the *“Officers and Delegation Bylaws 1208, 284 and 247 – 2014” (Bylaws)* and the *“Procurement and Real Property Contracting Authority Policy” (Policy)* and comply with competitive bidding laws and applicable legislation.

Further, the competitive selection packages were carefully crafted by teams of subject matter experts resulting in the award of contracts that are fiscally responsible, and balance risk, economic, ethical and legal obligations.

Attachments

APPENDIX A: Information with regard to newly awarded contracts - \$500,000 to \$5,000,000.

APPENDIX B: Contract amended to a value of more than \$500,000 but not previously reported to the Performance and Audit Committee

APPENDIX C: Previously reported contracts that have been amended.

APPENDIX D: Competitive Selection Packages anticipated to be greater than \$500,000 (Issued but not awarded).

AWARD OF CONTRACT

RFP No. 22-001

1. A contract was awarded, February 16, 2022 for the **Metro Vancouver Regional District**.

To: ***Telus Communications Inc.***

in the anticipated amount of up to **\$504,600** (exclusive of taxes) for High Speed Wide Area Network (WAN) - Network Services. This replaces the Corporation's High Speed WAN access links to various Metro Vancouver sites, as well as managing and maintaining the access network on an ongoing basis, for up to a five (5) year term. The initial award of \$334,800 (exclusive of taxes) is for a period of three (3) years with an option to extend for an additional two (2) year extension, upon mutual agreement with the successful proponent.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on November 23, 2021.

Closing Date: December 14, 2021

3. Proposal received (exclusive of taxes):

Telus Communications Inc.

Cost over 5 years

\$504,600

4. Proposal reviewed by:

Contractual: Procurement Division Staff

Technical: Human Resources and Corporate Services Department Staff

5. Award was made to the only responding bidder. Telus Communications Inc. was the incumbent service provider. As a result of running the competitive process, the monthly fees for this service have been cut in half.

AWARD OF CONTRACT

RFP No. 21-460

1. A contract was awarded, March 9, 2022 for the **Metro Vancouver Housing Corporation**.

To: ***VIA Architecture***

in the anticipated amount of up to **\$2,432,242** (exclusive of taxes) for Architect and Design Services for Affordable Housing Project - Malaspina Village Phases I & II. The initial award is limited to Phase A – Schematic Design and Phase B – Design Development at a cost of \$759,818 (exclusive of taxes) and subsequent phases of the work will be awarded subject to mutual agreement.

The contract price is within the overall budget.

2. Seven (7) firms were shortlisted as a result of RFQ No. 20-373 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on RFP No. 21-460 on November 23, 2021.

Closing Date: December 21, 2021

3. Proposals received (exclusive of taxes):

VIA Architecture	\$2,432,242
Ryder Architecture (Canada) Inc.	\$2,710,750
Integra Architecture	\$3,397,236

4. Proposals reviewed by:

Contractual: Procurement Division Staff

Technical: Regional Planning and Housing Services Division Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

SRFEOI No. 21-232

1. A contract was awarded, March 29, 2022, for the **Greater Vancouver Water District**.

To: ***Geocycle Canada Inc.***

in the anticipated amount of up to **\$3,965,000** (exclusive of taxes) for Drinking Water Treatment Residuals Management at Lafarge Richmond Cement Plant over a ten (10) year period. The initial award of \$1,850,000 (exclusive of taxes) is for a period of five (5) years with an option to extend for an additional five (5) year extension, upon mutual agreement with the successful proponent.

The standing Request for Expressions of Interest (SRFEOI) No. 21-232 invited responses (by Metro Vancouver's and BC Bid websites) regarding the management and beneficial use of the Drinking Water Treatment Residuals (DWTR) generated at Lafarge Richmond Cement Plant. Negotiations were held with Respondents that provided attractive solutions.

The contract price is within the overall budget.

2. Response received (exclusive of taxes):

Geocycle Canada Inc.	\$1,850,000
----------------------	-------------

3. Response reviewed by:

Contractual: Procurement Division Staff and Legal Staff

Technical: Water Services Department Staff

4. This SRFEOI opportunity is posted and remains on Metro Vancouver and BC Bid Websites annually to solicit viable Drinking Water Treatment Residuals solution which offer good value to the Corporation. Negotiations were held with one such Respondent who provided an attractive solution.

AWARD OF CONTRACT

RFP No. 21-144

1. A contract was awarded, March 29, 2022 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Core6 Environmental Ltd.***

in the anticipated amount of up to **\$2,104,460** (exclusive of taxes) for Environmental Engineering Services Related to Remediation and Risk Assessment for Iona Island Wastewater Treatment Plant Upgrade Project. The anticipated amount is a combination of the successful consultants' proposed price of \$1,835,960 (exclusive of taxes) and an additional \$268,500 (exclusive of taxes) to account for issues identified during negotiations as allowed for in the RFP. The initial award is limited to Phase 1 – Background, Information Review, Monitoring & Design at a cost of \$1,324,124 (exclusive of taxes) and subsequent phases of the work will be awarded subject to mutual agreement.

The contract price is within the overall budget.

2. Four (4) firms were shortlisted as a result of RFQ No. 21-143 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on RFP No. 21-144 on October 18, 2021.

Closing Date: November 19, 2021

3. Proposals received (exclusive of taxes):

Core6 Environmental Ltd.	1,835,960
SLR Consulting (Canada) Ltd.	2,138,943
Golder Associates Ltd.	2,698,055

4. Proposals reviewed by:

Contractual: Procurement Division Staff

Technical: Project Delivery Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

RFP No. 21-519

1. A contract was awarded, April 4, 2022 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Anaconda Systems Limited***

in the anticipated amount of up to **\$1,650,000** (exclusive of taxes) for Innovative Organics Processing over a five (5) year period. The initial award of \$990,000 (exclusive of taxes) is for a period of three (3) years with an option to extend for an additional two (2) year extension, upon mutual agreement with the successful proponent.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on January 18, 2022.

Closing Date: February 15, 2022

3. Proposal received (exclusive of taxes):

Anaconda Systems Limited	\$990,000
--------------------------	-----------

4. Proposal reviewed by:

Contractual: Procurement Division Staff

Technical: Solid Waste Services Department Staff

5. Four (4) submissions were received but only the proposal from Anaconda Systems Ltd. met the key requirements. 1) have a drop-off location in South Vancouver, South Burnaby or North Richmond, and 2) must be a permitted facility able to process organics for beneficial use.

AWARD OF CONTRACT

RFP No. 21-276

1. A contract was awarded, April 4, 2022 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Tetra Tech Inc.***

in the anticipated amount of up to **\$587,558** (exclusive of taxes) for Consulting Engineering Services for Annacis Island Wastewater Treatment Plant (AIWWTP) Electrical Studies and Upgrades. The anticipated amount is a combination of the successful consultants' proposed price of \$792,982 (exclusive of taxes) less \$205,424 (exclusive of taxes) to account for a reduced scope and lessened hours for Construction Services, as identified during negotiations and allowed for in the RFP. The initial award is limited to Phase A – Preliminary Electrical Study and Cable Bus Differential Design at a cost of \$410,017 (exclusive of taxes) and subsequent phases of the work will be awarded subject to mutual agreement.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on October 6, 2021.

Closing Date: November 12, 2021

3. Proposals received (exclusive of taxes):

Wood Canada Limited	\$757,460
BBA Engineering Ltd.	\$782,298
Tetra Tech Inc.	\$792,982
Lex Engineering Ltd.	\$938,824
Ausenco Engineering Canada Inc.	\$955,438
WSP Canada Inc.	\$959,491
Klohn Crippen Berger	\$1,167,007

4. Proposals reviewed by:

Contractual: Procurement Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the highest ranked proponent but not lowest cost based on the evaluation criteria established in the RFP.
6. Tetra Tech provided the strongest proposal and demonstrated a very good technical understanding of the scope of services and key issues. Their corporate experience, proposed team and methodology align very well with the electrical studies and upgrades. They

emphasized the importance of validation and accurate data collection to providing meaningful study results. Their work plan demonstrated a good understanding of the importance of engagement with manufacturers of in-situ equipment and Metro Vancouver Operations and Maintenance Staff. This is required to complete the project successfully.

AWARD OF CONTRACT

RFP No. 21-146

1. A contract was awarded, April 6, 2022 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Geotech Drilling Services Ltd.***

in the anticipated amount of up to **\$2,174,207** (exclusive of taxes) for Geotechnical Exploration Services for the Iona Island Wastewater Treatment Plant Projects. The anticipated amount is a combination of the successful consultants' proposed price of \$1,744,441 (exclusive of taxes) and an additional \$429,766 (exclusive of taxes) to account for issues identified during negotiations as allowed for in the RFP.

The contract price is within the overall budget.

2. Three (3) firms were shortlisted as a result of RFQ No. 21-145 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on RFP No. 21-146 on December 15, 2021.

Closing Date: January 21, 2022

3. Proposals received (exclusive of taxes):

Geotech Drilling Services Ltd.	\$1,744,441
ConeTec Investigations Ltd.	\$2,539,025

4. Proposals reviewed by:

Contractual: Procurement Division Staff

Technical: Project Delivery Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

RFP No. 21-459

1. A contract was awarded, April 6, 2022 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***McRae's Environmental Services Ltd.***

in the anticipated amount of up to **\$2,850,000** (exclusive of taxes) for Sludge Hauling Services for Northwest Langley Wastewater Treatment Plant over a five (5) year period with no option to extend.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on February 4, 2022.

Closing Date: February 25, 2022

3. Proposal received (exclusive of taxes):

McRae's Environmental Services Ltd.	\$2,850,000
-------------------------------------	-------------

4. Proposal reviewed by:

Contractual: Procurement Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the only responding bidder. The contract term was initially contemplated to be three years with an option to extend of an additional two years. Negotiations with McRae's resulted in locking in rates for the full five (5) years if the contract term became the full 5 years. It is anticipated to realize an annual savings of approximately 13%.

AWARD OF CONTRACT

RFP No. 22-002

1. A contract was awarded, April 19, 2022 for the **Greater Vancouver Water District**.

To: ***Skye Consulting (B.C.) Ltd.***

in the anticipated amount of up to **\$706,871** (exclusive of taxes) for Delivery of School Programs for Metro Vancouver's Watershed Education Program over a (5) year period. The initial award of \$416,550 (exclusive of taxes) is for a period of three (3) years with an option to extend for an additional two (2) year extension, upon mutual agreement with the successful proponent.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on February 9, 2022.

Closing Date: March 2, 2022

3. Proposal received (exclusive of taxes):

Skye Consulting (B.C.) Ltd.

Cost over 5 years
\$706,871

4. Proposal reviewed by:

Contractual: Procurement Division Staff

Technical: Water Services Department Staff

5. Award was made to the sole responding bidder. It is believed that the pool of education consultants has shrunk significantly due to Covid restrictions. As well, only a niche market of consultants is able to meet the requirements of both in-person and virtual delivery services. Skye Consulting has held the contract for the past eleven years.

AWARD OF CONTRACT

RFP No. 21-498

1. A contract was awarded, May 4, 2022 for the **Greater Vancouver Water District**.

To: ***Associated Engineering (B.C) Ltd.***

in the anticipated amount of up to **\$1,833,562** (exclusive of taxes) for Conceptual Design of the Haney Water Supply Tunnel - Pitt River Crossing over a two (2) year period.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on January 20, 2022.

Closing Date: February 17, 2022

3. Proposals received (exclusive of taxes):

Aecom Canada Ltd.	\$1,382,328
Associated Engineering (B.C) Ltd.	\$1,833,562
WSP Canada Inc.	\$1,998,692
Mott MacDonald Canada Limited	\$2,065,739

4. Proposals reviewed by:

Contractual: Procurement Division Staff

Technical: Project Delivery Department Staff

5. Award was made to the highest ranked proponent and second lowest priced based on the evaluation criteria established in the RFP.
6. Associated Engineering (B.C.) Ltd. proposal demonstrated a thorough understanding of the project requirements with a detailed project methodology and work plan that addressed key issues and challenges.

AWARD OF CONTRACT

RFP No. 21-125

1. A contract was awarded, May 12, 2022 for the **Metro Vancouver Regional District**.

To: ***Homewood Health Inc.***

in the anticipated amount of up to **\$674,648** (exclusive of taxes) for Employee and Family Assistance Program – Metro Vancouver over a seven (7) year period. The initial award of \$481,891 (exclusive of taxes) is for a period of five (5) years with an option to extend for an additional two (2) year extension, upon mutual agreement with the successful proponent.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on March 30, 2021.

Closing Date: April 21, 2021

3. Proposals received (exclusive of taxes):

ComPsych Corporation	\$319,295
OneHealth Technologies Inc.	\$421,260
LifeWorks (Canada) Ltd. (formerly Morneau Shepell)	\$658,870
Homewood Health Inc.	\$674,648
Inkblot Technologies Inc.	\$723,986
Family Services of Greater Vancouver	\$1,090,747

4. Proposals reviewed by:

Contractual: Procurement Division Staff

Technical: Human Resources Department Staff and External Consultant

5. Award was made to the overall top ranked proponent based on the evaluation criteria established in the RFP.
6. Homewood Health Inc. was identified as the overall top ranked proponent after taking into consideration service level degradation of the incumbent provider. These service concerns were not adequately addressed prompting Metro Vancouver to recommend that Homewood Health be awarded the contract to provide EFAP services to Metro Vancouver.

AWARD OF CONTRACT

RFP No. 21-104

1. A contract was awarded, May 17, 2022 for the **Metro Vancouver Regional District.**

To: ***Avenue Machinery Corporation***

in the anticipated amount of up to **\$720,000** (exclusive of taxes) for Supply and Delivery of Working Class Utility Terrain Vehicles (UTV's) over a five (5) year period. The initial award is for a three (3) year period at a cost of \$320,000 (exclusive of taxes) with the option to extend for two (2) additional one (1) year terms upon mutual agreement. This initial acquisition is for a possible eight (8) UTV's in a variety of configurations. Additional requirements of UTV's will be handled with individual purchase orders over the life of the agreement.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on December 20, 2021.

Closing Date: January 28, 2022

3. Proposals received (exclusive of taxes and levies):

	Each Vehicle
Avenue Machinery Corporation (Kubota model X1100C)	\$25,031
Douglas Lake Equipment (Kubota model X1100C)	\$26,495

4. Proposals reviewed by:

Contractual: Procurement Division Staff

Technical: Fleet Services and Parks Operations Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF SOLE SOURCE CONTRACT

No. 22-095

1. A contract was awarded May 19, 2022 for the **Greater Vancouver Water District**.

To: ***Brenntag Canada Ltd.***

in the amount of **\$1,095,200** (exclusive of taxes) for the Supply and Delivery of Sodium Carbonate (Soda Ash) for Coquitlam Water Treatment Plant (CWTP).

A sole source contract was awarded to Brenntag Canada Ltd. (Brenntag) for the supply and delivery of Sodium Carbonate (Soda Ash) for the Coquitlam Water Treatment Plant for up to 12 months commencing on November 1, 2021. The recent supply contract with Brenntag, including extension terms, has expired. This sole source contract will provide time for staff to execute a new RFP and set in place a new contract, while allowing continuity of supply of Soda Ash to CWTP and avoid disruptions to daily operations.

AWARD OF CONTRACT

RFP No. 22-003

1. A contract was awarded, May 25, 2022 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***GHD Limited***

in the anticipated amount of up to **\$2,521,429** (exclusive of taxes) for Preliminary Design, Detailed Design and Construction Engineering Services North Surrey Interceptor No. 2 Tunnel. The anticipated amount is a combination of the successful consultants' proposed price of \$2,254,378 (exclusive of taxes) and an additional \$267,051 (exclusive of taxes) to account for issues identified during negotiations as allowed for in the RFP. The initial award is limited to Phase A – Preliminary Design at a cost of \$1,213,599 (exclusive of taxes) and subsequent phases of the work will be awarded subject to mutual agreement.

The contract price is within the overall budget.

2. Three (3) firms were shortlisted as a result of RFQ No. 21-236 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on RFP No. 22-003 on January 19, 2022.

Closing Date: February 17, 2022

3. Proposals received (exclusive of taxes):

GHD Limited	\$2,254,378
CH2M Hill Canada Limited	\$2,593,338
Stantec Consulting Ltd.	\$3,062,223

4. Proposals reviewed by:

Contractual: Procurement Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP. An estimated number of hours for each phase was prescribed in the RFP. The increase in fee, resulting from negotiations with the lead proponent, are attributable to additional hours required for Phase A. A shortage of hours for this phase was echoed by the second lowest fee proponent as well.

Appendix B

No. 1

CONTRACTS AMENDED TO A VALUE OF MORE THAN \$500,000 BUT NOT PREVIOUSLY REPORTED TO THE PERFORMANCE AND AUDIT COMMITTEE

RFP No. 18-108
PURCHASE ORDER No. 685232

Awarebase Corp.

Engineering Drawing Storage System for the **Metro Vancouver Regional District**

1.	Original Value of Contract (exclusive of taxes):	\$250,000
2.	Amendment Value (exclusive of taxes):	\$281,588
3.	Amendment Number:	01
4.	Total Amended Value of Contract (exclusive of taxes):	\$531,588
5.	Budget Status:	

This contract is funded within the annual operating budget.

6. Reasons for Amendment to Contract:

Awarebase was originally awarded the contract to supply a software system to store and publish engineering drawings. The initial award was for a term of five (5) years for software and support.

There have been three (3) amendments to this contract since execution in 2018, totaling \$281,588.

- 1) \$155,588 for Awarebase to migrate approximately 200,000 engineering drawings from Orbit to the new software,
- 2) \$76,500 to provide additional functionality required by the users, and
- 3) \$49,500, in March 2022 for further functionality enhancements

CONTRACTS AMENDED TO A VALUE OF
MORE THAN \$500,000
BUT NOT PREVIOUSLY REPORTED TO THE
PERFORMANCE AND AUDIT COMMITTEE

Tender No. 19-185
PURCHASE ORDER No. 627488

Ross Morrison Ltd.

Construction, Installation and Commissioning of Hudson and Willingdon Pump Stations
for the **Greater Vancouver Sewerage & Drainage District**

1.	Original Value of Contract (exclusive of taxes):	\$496,500
2.	Amendment Value (exclusive of taxes):	\$84,475
3.	Amendment Number:	01
4.	Total Amended Value of Contract (exclusive of taxes):	\$580,975
5.	Budget Status:	

This contract is funded within the capital budget for this project.

6. Reasons for Amendment to Contract:

This amendment is for Change Order No. 1 and Change Order No. 2:

Change Order No. 1 is for the supply of two steel concrete-filled bollards and four brackets including civil works required to install them on the south east side of the generator; and upgrade electrical ground monitoring equipment in contact with newer equipment.

Change Order No. 2 is for the replacement of obsolete communications equipment and for the supply and installation of additional equipment (pump station flow meter) needed to complete the works at Hudson Pump Station.

CONTRACTS AMENDED TO A VALUE OF
MORE THAN \$500,000
BUT NOT PREVIOUSLY REPORTED TO THE
PERFORMANCE AND AUDIT COMMITTEE

Sole Source No. 22-228

Zoom Video Communications Inc.

Zoom Video Communications for the **Metro Vancouver Regional District**

1.	Original Value of Contract (exclusive of taxes):	\$149,213 USD
2.	Amendment Value (exclusive of taxes):	\$296,973 USD
3.	Amendment Number:	01
4.	Total Amended Value of Contract (exclusive of taxes):	\$446,186 USD

5. Budget Status:

This contract is funded within the operating budget for this project.

6. Reasons for Amendment to Contract:

Zoom was procured in early 2020 to support the organization during the pandemic. Zoom has become one of the core communications tools at Metro Vancouver and it is used by many staff members to conduct meetings involving both internal staff as well as people outside the organization. In order to maintain a consistent user experience and to provide better user support throughout the organization it is important that a single video conferencing solution be used. This amendment will allow staff to continue using zoom for an additional one-year period.

It is anticipated that during this one-year extension, a full analysis will be undertaken to determine further needs and opportunities for a competitive procurement process.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 15-040

PURCHASE ORDER No. 139138

Consulting Engineering Services for the South Surrey Interceptor Delta Section
Odour Control Facility for the **Greater Vancouver Sewerage and Drainage District**

- | | | |
|----|---|---------------------------|
| 1. | Name of Contractor: | CH2M Hill Canada Limited |
| 2. | Date Contract Reported: | April 2016 |
| 3. | Original Awarded Value of Contract - Phase A & B: | \$214,391 |
| | Awarded Value of Phase C: | \$633,417 |
| | Value of Change Orders No. 1 to No. 4: | \$167,126 |
| | Subtotal: | <u>\$1,014,934</u> |
| 4. | Amendment Number: | 02 |
| 5. | Value of Amendment (exclusive of taxes): | \$748,754 |
| 6. | Amendment Type: | Additional Services |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$1,763,688 |
| 8. | Budget Status: | |
| | This contract is funded within the capital budget for this program. | |
| 9. | Amendment No. 02 is the result of awarding Phase D – Construction Engineering Services. | |

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 17-063
PURCHASE ORDER No. 145932

Consulting Engineering Services - Owner's Engineer for Iona Island Wastewater Treatment Plant
Biosolids Dewatering Facility for the **Greater Vancouver Sewerage & Drainage District**

1. Name of Contractor: AECOM Canada Ltd.
2. Date Contract Reported: **February, 2018**
3. Original Awarded Value of Phase B: \$1,217,726
Awarded Value of Phase C: \$2,287,069
Subtotal: **\$3,504,795**
4. Amendment Number: 02
5. Value of Amendment (exclusive of taxes): \$879,750
6. Amendment Type: Additional Services
7. Total Revised Anticipated Amended Value of Contract (exclusive of taxes): \$4,384,545
8. Previous Amendment Explanation (Reported to Performance and Audit Committee July 4, 2021

Amendment No. 01 is the result of request to award Phase C - Design-Build Construction anticipated in the initial contract award that subsequent phases would be awarded at a later date. The increase of hours required to complete Phase C is for construction engineering services and due to the increase of complexity of proposed design, review of submittals, and other various geotechnical requirements.
9. Budget Status:

This contract is funded within the capital budget for this program.
10. Amendment No. 02 is the result of change orders No. 1 to No. 5 to provide for bench-scale sludge dewatering testing, centrifuge and polymer pilot testing on plant site, resultant design build scope modifications, and two schedule extensions due to ongoing pandemic and supply chain impacts. AECOM are requested to provide additional site engineering services to cover two consecutive 6-month extensions. This amendment value can be accommodated within the existing design/build construction budget and will have no impact to contingency.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFQ No. 17-090

PURCHASE ORDER No. 147030

Consulting Engineering Services for the Design and Construction Management of the Surrey Small Vehicle Drop Off Facility for the **Greater Vancouver Sewerage and Drainage District**

- | | | |
|----|---|-----------------------------|
| 1. | Name of Contractor: | Morrison Hershfield Limited |
| 2. | Date Contract Reported: | April 2018 |
| 3. | Original Awarded Value of Contract - Phase A & B: | \$847,057 |
| | Awarded Value of Phase C: | \$1,264,911 |
| | Value of Board Approved - Phase D: | \$2,576,631 |
| | Subtotal: | <u>\$4,688,599</u> |
| 4. | Amendment Number: | 01 |
| 5. | Value of Amendment (exclusive of taxes): | \$587,890 |
| 6. | Amendment Type: | Additional Services |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$5,276,489 |
| 8. | Budget Status: | |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of change orders 1 to 18. The majority of which are relatively low in value and due to design changes, additional scope or 3rd party regulatory requirements. The largest change order, number 18, in the amount of \$216,000 is related to additional construction engineering services due to the constructions schedule extending by five months.
- This amendment value can be accommodated within the existing budget and will have no impact on the contingency.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 18-127

PURCHASE ORDER No. 608881

Consulting Engineering Services for the Northwest Langley Wastewater Treatment Plant River Crossing Project for the **Greater Vancouver Sewerage and Drainage District**

1. Name of Contractor: McMillen Jacobs Associates
2. Date Contract Reported: **October 2018**
3. Original Awarded Value of Contract - Phase A, B, C: \$4,218,203
Value of Escalation Phases A, B, C: \$47,378
Value of Board Approved - Phase D & E: \$2,440,656
Value of Amendment No. 01: \$623,748
Subtotal: **\$7,329,985**
4. Amendment Number: 02
5. Value of Amendment (exclusive of taxes): \$1,883,948
6. Amendment Type: Additional Services
7. Total Revised Anticipated Amended Value of Contract (exclusive of taxes): \$9,213,933
8. Previous Amendment Explanation (Reported to Performance and Audit Committee May, 2020)

The consulting team requested additional funds to support the increased level of effort required for project management and permitting support. Longer than expected permitting timelines and the pipe alignment re-alignment resulted in an extended project schedule. The new alignment eliminated the need to cross under a bridge, and made use of existing infrastructure to tie-into while reducing the construction cost and environmental impacts. Additional geotechnical and environmental sampling and topographic survey was required to support the new alignment.

In addition, incorporating O&M feedback into the design required the re-evaluation of the pipe material selection, and the removal of confined space entry where possible. This resulted in design changes that will result in better seismic performance and resiliency of the force main and safe entry for maintenance of our system air valves.

9. Budget Status:

This contract is funded within the capital budget for this program.

10. Amendment No. 02 is the result of change orders to address additional site investigation, alternate ramp crossing design, and increased construction management scope (CO No. 7, CO No. 9).

Preliminary site investigation indicated contamination in soil and groundwater samples. The consultant recommended additional testing to clarify the extent and nature of contamination, and confirm management requirements. While this was an increase to the consulting scope, the results allowed the cost estimate and contract documents to be prepared appropriately.

The northern portion of the Golden Ears Forcemain will be installed under Translink infrastructure, and TransLink requested design deliverables for alternative ramp crossing options. While this was an addition to the consultants' scope, the project team recognized the value in seeking approvals in the construction methodology.

The contractor proposed a schedule with increased duration and extended working hours, impacting the level of effort required by the consultant to complete the Construction Support scope of work. In addition, Metro Vancouver requested additional resources and coverage for Engineer of Record inspection, construction management support, quality assurance, site inspection, and environmental monitoring due to the complexity and risk profile of the Project.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 18-213

PURCHASE ORDER No. 617888

Consulting Engineering Services - Owner's Engineer for the North Surrey Interceptor Flow
Management - Sanitary Sewer Overflow Tank
for the **Greater Vancouver Sewerage and Drainage District**

- | | | |
|----|---|---------------------------|
| 1. | Name of Contractor: | WSP Canada Group Ltd. |
| 2. | Date Contract Reported: | July 2019 |
| 3. | Original Awarded Value of Contract - Phase A: | \$757,885 |
| | Value of Awarded Amendment - Phase 2A: | \$557,290 |
| | Subtotal: | <u>\$1,315,175</u> |
| 4. | Amendment Number: | 01 |
| 5. | Value of Amendment (exclusive of taxes): | \$2,989,383 |
| 6. | Amendment Type: | Additional Services |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$4,304,558 |
| 8. | Budget Status: | |

This contract is funded within the capital budget for this program.

9. This contract was originally reported to Performance and Audit Committee in July of 2019 for an anticipated full amount of \$3,225,627. As noted the initial award was made for Phase A only. Post award, it was determined to move from a Design/Build to a Design/Bid/Build delivery model. WSP's role as Owners Engineer was converted to that of the design engineer for feasibility and preliminary design only. Detailed design and construction engineering services can be competed separately. Phase 1- Feasibility and Phase 2A- Environmental Permitting and Site Investigation are complete.

This amendment reflects the following:

- 1) Phase 2B, consisting of Preliminary Design for the North Surrey Interceptor Tank, as originally contemplated (\$2,124,994), plus Detailed Design for the North Surrey Interceptor re-alignment (\$618,041), and Conceptual Design for the grit chamber

(\$145,193). This new scope was not originally contemplated, but is integral to the timeline of the overall project.

- 2) Four change orders related to additional scope within Phase 2A and an hourly rate escalation as allowed for in the RFP (\$101,155).

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFQ No. 18-245
PURCHASE ORDER No. 611385

Lulu Island Wastewater Treatment Plant Pilot Digestion Optimization Facility
for the **Greater Vancouver Sewerage and Drainage District**

- | | | |
|----|--|---|
| 1. | Name of Contractor: | Brown and Caldwell Consultants
Canada Ltd. |
| 2. | Date Contract Reported: | January 2019 |
| 3. | Original Anticipated Reported Value of Contract
(exclusive of taxes): | \$724,396 |
| 4. | Amendment Number: | 01 |
| 5. | Value of Amendment (exclusive of taxes): | \$602,226 |
| 6. | Amendment Type: | Additional Services |
| 7. | Total Revised Anticipated Amended Value of Contract
(exclusive of taxes): | \$1,326,622 |
| 8. | Budget Status: | |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of change orders 1 to 7 to implement design changes, to respond to an increased number of contractor submittals and requests for information due to the innovative nature of the project, to add electrical safety and maintenance friendly features, to increase operational control flexibility, and to provide extended construction engineering services to accommodate a 4 month schedule extension of the project due to pandemic impacts, supply chain and procurement issues.

This amendment will be offset by an equal reduction in the project contingency.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP NO. 20-171
PURCHASE ORDER No. 687666

Architect and Design Services for Heather Place B Multi-Family Residential Development
for the **Metro Vancouver Housing Corporation**

- | | | |
|----|---|---|
| 1. | Name of Contractor: | Local Practice Architecture + Design Ltd. |
| 2. | Date Contract Reported: | January 2021 |
| 3. | Original Awarded Value of Phase A & B: | \$475,908 |
| 4. | Amendment Number: | 01 |
| 5. | Value of Amendment (exclusive of taxes): | \$1,934,311 |
| 6. | Amendment Type: | Additional Services |
| 7. | Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$2,410,219 |
| 8. | Budget Status: | |

This contract is funded within the capital budget for this program.

9. This contract was originally reported to the Performance and Audit Committee in January of 2021 in the anticipated amount of \$1,922,502. Only Phases A and B were awarded with Phases C, D and E to be awarded at a later date in an anticipated amount of \$1,246,594. This amendment includes Phases C, D and E for the identified \$1.246 million plus an additional \$494,674 resulting from an increase in the expected construction costs and construction timeline.

This amendment also includes four (4) change orders totaling \$193,043. Change Order No. 1 was for additional fees to incorporate child care unit, investigation of sustainability approach, review of incorporation of accessibility features into design, and removal of rooftop amenity. Change Order No. 2 was for additional fees for off-site lighting design which was not included in the original proposal. Change Order No. 3 was for additional fees to prepare drawings for the outdoor rooftop amenity, childcare unit, preparation of landscaping, air space parcel, additional storm water and other items not original proposed in the design. Change Order No. 4 was to

update building design to accommodate integration of either a green roof or photovoltaic panels, which was not part of the original proposal design.

This amendment value can be accommodated within the existing project budget and will have no impact on the contingency.

Appendix D

June 28, 2022

Competitive Selection Packages Anticipated to be greater than \$500,000 (Issued but not awarded)

Note: All contracts listed below are within the project budgets approved by the Board of Directors

Tender/RFP	Closing Date
RFP No. 20-192 <i>Consulting Engineering Services for the Rechlorination Stations Upgrade (Cape Horn, Pitt River, Clayton)</i>	November 23, 2021
Tender No. 21-268 <i>LSG Tank Inspection and Membrane Replacement at Annacis Island and Lulu Island WWTP</i>	November 17, 2021
RFP No. 21-425 <i>Ground Improvements and Preload Engineering Services for the Iona Island Wastewater Treatment Plant (IIWWTP) Upgrades Program</i>	March 22, 2022
RFP No. 22-038 <i>Technical Support for the Metro Vancouver Waste-to-Energy Facility Operations and Maintenance Contract Procurement Process</i>	April 29, 2022
RFP No. 22-103 <i>Program Management & Technical Services for the Northwest Langley Wastewater Treatment Plant Expansion Program</i>	April 26, 2022
RFP No. 22-006 <i>Construction of Gilbert Trunk Sewer No. 2 Gilbert Road South Section</i>	April 21, 2022
RFP No. 21-492 <i>Kennedy Newton Main - Kennedy Reservoir to 84th Avenue (Cancelled)</i>	April 21, 2022
RFP No. 22-138 <i>Cleveland Dam and Seymour Falls Dam 2022-2026 Dam Monitoring Program</i>	April 20, 2022
RFP No. 21-485 <i>Westburnco Pump Station No.2 Variable Frequency Drive (VFD) Replacement Project - Pre-Purchase VFD Equipment</i>	April 14, 2022

RFP No. 22-079 <i>Consulting Engineering Services for Cleveland Dam Public Warning System</i>	May 10, 2022
RFP No. 21-306 <i>Supply and Delivery of Sodium Carbonate</i>	May 6, 2022
RFP No. 22-197 <i>Kennedy Newton Main - Phase 3 Scott Road Section</i>	June 23, 2022
RFP No. 22-033 <i>EIC Engineering Consulting Services for Wastewater Treatment Plants</i>	June 17, 2022
RFP No. 22-251 <i>Temporary Sewer Flow Monitoring Services</i>	July 13, 2022
RFP No. 21-491 <i>Supply and Delivery of Metal-Seated Triple Offset Butterfly Valves for Coquitlam Main No.4 - South Section</i>	July 12, 2022
Tender No. 20-028 <i>Construction of Hellings Tank No. 2</i>	July 11, 2022
RFP No. 21-307 <i>Supply and Delivery of Coagulant Aid Polymer for the Seymour Capilano Filtration Plant</i>	July 6, 2022
RFP No. 22-252 <i>Alternative Fuel and Recyclables Recovery Project</i>	August 18, 2022

To: Performance and Audit Committee

From: Victoria Freinhofer, Corporate Project Coordinator, CAO Executive Offices

Date: June 13, 2022 Meeting Date: July 14, 2022

Subject: **Performance Monitoring Dashboard Update**

RECOMMENDATION

That the Performance and Audit Committee receive for information the report dated June 13, 2022, titled "Performance Monitoring Dashboard Update".

EXECUTIVE SUMMARY

In 2017, Metro Vancouver launched the Performance Monitoring Dashboard (the Dashboard) to provide a centralized view of key performance indicators for the organization's services in connection with Metro Vancouver's strategic priorities or directions, as reflected in the annual work plan.

Updated on an annual basis, the performance indicators are a valuable resource both internally and externally, as they assist in the organization's long term-planning, guide decision making, track departmental performance, and demonstrate transparency and accountability to both partners and the public.

In order to respond to shifting circumstances as well as improve communication and efficiency of the reporting process, future developments to the Performance Monitoring Dashboard have been proposed, including incorporating the story behind the data and automation.

PURPOSE

To provide the Committee with background information on the Performance Monitoring Dashboard and plans for future development.

BACKGROUND

Quantitative evidence is essential for strategic planning and decision making, as it provides a more objective, transparent and democratic form of knowing. In October 2017, Metro Vancouver launched the Performance Monitoring Dashboard as a tool to provide a centralized overview of each of our service's performance indicators by collecting, archiving and visualizing quantitative data. Here, performance is measured and forecasted as a numerical indicator on a graph.

The Performance Monitoring Dashboard offers a year-to-year indication of departmental objectives set and/or industry benchmarks, if available, which are reported out in the annual work plans. Data for the Dashboard is updated each year during the second quarter once the data from the previous year becomes available; although data from certain indicators may not be available until later in the year given its reporting process.

PERFORMANCE INDICATORS

The performance indicators have been an integral component of Metro Vancouver's annual budget process for several years, as they help to evaluate trends, determine key actions for the upcoming year, and assist in long-term planning. The monitoring framework of the Dashboard contains indicators to convey performance results through metrics and statistics, which are derived by using two or more sources of data.

Additionally, the performance indicators offer public accountability, connect high-level targets with work plans, improve management decisions, and demonstrate evidence of organizational success. Not all of the indicators shown on the work plan are included on the Dashboard; however, the 93 active corporate indicators that are included subsequently reflect Metro Vancouver's priorities, demonstrate transparency to ensure accountability, communicate to a broad range of audiences, and are of value to both key internal and external partners, as well as the public.

PROPOSED FUTURE DEVELOPMENTS

Story Behind the Data

While the Performance Monitoring Dashboard showcases data for each of the department's key performance indicators, the potential contributing and limiting factors that either support the indicators progress or hinder the indicator's results are currently not included on the Dashboard. The story of the results would provide an enhanced explanation of the data's influences, and could also propose high-impact actions to undertake in order to turn the results (if the indicator is not achieving the performance objective).

For example, the Annual Visits to Regional Parks indicator reveals the substantial increase in visitation numbers from 11,935,000 visits in 2019, to 16,497,000 visits in 2020, reflecting an escalation of 38%. The increase in visitation number is largely due to the COVID-19 pandemic, as lockdowns and restrictions placed on public activities and gatherings led to parks/green spaces becoming one of the only open and accessible areas available for public-use. As a result, this data correspondingly highlights the important role of parks in contributing to the physical, mental and social well-being of residents in our region. Furthermore, the variables of park visitor number changes, COVID-19 cases, and restrictions/policies would be reflected to provide Dashboard viewers with an in-depth explanation of the data and its correlations, where applicable.

Upgrade to Automation

At the request of the Performance and Audit Committee, consideration has been given to automating the Performance Monitoring Dashboard to streamline its collecting and reporting process. To determine its feasibility, staff are working with the departments to identify gaps in the process, and are also exploring the possibility of alignment with Metrolytics in order to find a single source of cross-organizational data for review and analysis. After this examination has been conducted and achievability has been determined, staff will report back to the Committee at a future date.

ALTERNATIVES

This is an information report. No alternatives are presented.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this information report.

CONCLUSION

While the Performance Monitoring Dashboard provides a strong overview of key performance indicators for the organization's services in connection with Metro Vancouver's strategic priorities, per the work plan, future developments are proposed. Proposed developments include thorough explanations of indicator influences (where applicable) to improve communication and accountability with viewers, as well as shifting to an automated process to offer more improved and frequent reporting.

References

1. [Metro Vancouver Dashboard](#)
2. [MV Board Budget Workshop Agenda Package - October 20, 2021 \(metrovancover.org\)](#)

DELEGATION EXECUTIVE SUMMARY

Name or Organization: Nathan Davidowicz

Subject: TransLink's Greater Vancouver Regional Fund Application

Presenting to: Finance Committee

Date of Meeting: July 14, 2022

As per your By-Law Below I wish to appear as a delegation on 14.7.2022 Finance Committee meeting. Item 5.1 GVRF

- (a) Was unable to give earlier notice as agenda was not available.
- (b) Transit services need to be upgraded not downgraded.
- (c) Report 5.1 GVRF or the new name of Canada Community- Building Fund (CCBF)
- (d) Nathan Davidowicz
- (e) Refer the report as well as the total capital budget of Translink to an independent evaluation. (Maybe by the former Independent Transit Commissioner).

Request proper statistics from TransLink and CleanBC in order to determine why Metro Vancouver/Lower Mainland will not achieve the 2030 targets set by CleanBC.

See my presentation to the BC Finance Committee on June 17, 2022. at 1135 am

Submission of 3 recommendations to BC Leg. standing committee on finance 17.06.2022

<https://www.leg.bc.ca/documents-data/committees-transcripts/20220617am-Finance-Vancouver-Blues>

- A. Immediately order 1000 extra electric buses. To be delivered over 3 years.
- B. Proper Transit governance together with proper and equitable financing
- C. Develop a comprehensive, province-wide public transit plan to ensure accessible, affordable public transportation options are available across the province, with a view to addressing gaps in the provision of regional transportation services, investing in electric buses, increasing accessible transportation options such as HandyDART , and addressing the needs of small, rural, remote, and Indigenous communities

Sincerely

Nathan Davidowicz