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REPORT TO TRANSPORTATION COMMITTEE
MEETING OF WEDNESDAY, APRIL 17, 2024

SUBJECT **Transportation Governance Update**

ISSUE SUMMARY

To provide an update on planned engagement activities required to advance the regional transportation governance initiative.

BACKGROUND

Transportation is a priority for residents and the Capital Regional District (CRD) Board. The region has three transportation goals: reduce carbon pollution, support higher rates of walking, cycling and transit use, and address congestion. A 2023-2026 CRD Board strategic priority is to present options for transportation governance change. This priority shifts focus from goal setting to implementation through a new CRD transportation service.

The purpose of the transportation governance initiative is to create more tools to advance regional connectivity and integrated mobility. The short-term goal is to establish a regional transportation service. This new transportation service would consolidate existing CRD transportation functions, with additional scope to develop new programs in approved service categories that can be delivered by the CRD without requiring legislative change. The long-term goal is to integrate, where applicable, transportation functions that are best delivered at a regional scale through a new regional entity. This requires ongoing cooperation between the CRD, local governments and other transportation agencies, such as BC Transit and the Ministry of Transportation and Infrastructure (MOTI).

This approach is designed to signal to the Province of British Columbia that a regional body is ready to take on the additional responsibilities necessary to achieve the long-term regional vision for transportation. Phased this way, the CRD, local governments and affected agencies can evaluate and refine strategy, ensure that decisions are evidence-based and confirm viability of a new transportation service before scaling up more functions and moving on to the long-term goal.

In the summer and fall of 2023, the CRD engaged with member local governments, electoral areas and partner agencies to solicit feedback on regional transportation governance. The feedback provided the CRD with a baseline understanding of the aspects of transportation governance that local governments are interested in exploring further.

On December 13, 2023, the CRD Board directed staff to initiate concept development and analysis work on an inclusive list of potential transportation service categories. The Board also directed staff to plan for engagement activities and schedule a workshop for Q2 2024.

Transportation Service Design

A service design and feasibility study is currently underway to provide a governance recommendation on how best to deliver the CRD's current services and suite of expanded functions. Based on feedback from the 2023 engagement, CRD staff have evolved the service categories and are preparing additional information for local government, electoral area and agency consideration.

2024 Engagement Plan

The next phase of engagement is divided into two streams. One stream is ongoing consultation with local government staff, BC Transit and the Ministry of Transportation and Infrastructure (MOTI). The other stream is a regional workshop in May 2024, bringing together political and staff representatives from local governments, electoral areas and First Nations.

The May 2024 workshop will seek input on potential service categories, including what new programs are possible to add to consolidated CRD functions if the category is included in the establishment bylaw. Participants will have an opportunity to ask questions, hear from regional peers and provide input that will be considered in developing a draft bylaw.

This phase of engagement will focus on all the potential service categories to be included in the service establishment bylaw. Costing and implementation details from the feasibility study continue to be a work in progress. While it remains critical to continue collaborating on the long-term vision, and the region's transportation are of great interest to many, the more appropriate place for mobility visioning discussions would be in updates to existing transportation plans, such as the Transit Future Plan and the Regional Transportation Plan (RTP). Those documents are the foundational expression of our regional goals, and through these policy processes there will be opportunity to envision, discuss and reach agreement on a new long-term vision.

While it remains important to inform the public on potential new functions with any recommended service categories, an agreement by the CRD Board on the scope of the bylaw is needed. As such, the most appropriate time to consider the level of public information or engagement required in presenting the draft bylaw to the public would be after developing a draft bylaw.

Next Steps

Once input is gathered, CRD staff will seek CRD Board approval for the scope of a new transportation service establishment bylaw and direction to draft the bylaw. Pending the timing of this direction and what approach the CRD Board recommends for its approval process, CRD staff anticipate bringing a draft bylaw to the CRD Board in Q4 2024.

IMPLICATIONS

Alignment with Board & Corporate Priorities
A CRD Board priority for the 2023–2026 term is to present options for changes in governance for transportation in the region, including the Electoral Areas. Initiative 4a-1 in the CRD Corporate Plan is to scope and develop governance options, including consideration of a new transportation authority. The proposed workshop, along with concept development and analysis, is the next step to advance this initiative.

Alignment with Existing Plans & Strategies
CRD plans and strategies will inform concept development and analysis. Relevant plans are the Regional Growth Strategy (RGS), the RTP, the Regional Parks and Trails Strategic Plan, the Regional Trails Management Plan, the Climate Action Strategy and the intergovernmental relations policy.

Environmental and Climate Action
The CRD Board has declared a climate emergency. In 2022, on-road transportation accounted for 42% of all carbon pollution in the region. New travel behaviours are one solution to get more people taking transit, walking and cycling. In turn, this will reduce carbon pollution and improve mobility. CRD staff would have more tools to advance this solution with an expanded regional role in behaviour change.

Equity, Diversity & Inclusion
The needs of equity seeking groups will be considered through the concept development and analysis work of specific programs.

Financial Implications
The 2024 provisional budget includes a one-time budget adjustment of $422,000 to complete concept development and analysis, host a workshop and undertake a bylaw approval process. Costs to implement governance change will be identified through concept development and analysis. Decisions about funding would be made through the annual service and financial planning processes.

Intergovernmental Implications
By bringing together both political and staff leadership, engagement is intended to support discussion and provide an opportunity for input from all 13 local governments, participating electoral areas and First Nations. The workshop will provide additional input that will inform a Board decision on what is included or not in the scope of the bylaw. Having all local governments in the CRD on the same page about the scope of a new transportation service is an essential step that will support feasibility and service impact analysis that are key steps in bylaw development.

Both MOTI and BC Transit have expressed interest in participating in the workshop as their interests may be impacted by governance changes. Individual engagement will also occur to hear directly about potential concerns and for CRD staff to receive guidance on service establishment.

First Nations Relations Implications
First Nations Chiefs and council members will be invited to participate in the workshop. Staff will also continue to engage First Nations on a parallel track through government-to-government meetings.

Regional Growth Strategy Implications
The RGS (and the RTP) are the key expressions of the long-term vision for the region. It will be made clear to workshop participants that discussing this vision is not the focus of this engagement workshop. While those conversations will be essential in the future, the current process is focused on defining the scope of a new transportation service. Discussion of vision and long-term goals are best addressed in their own process in future updates to the RGS and RTP.

Service Delivery Implications
The project timelines assume that 2025 is the first year to implement a new transportation service. Concept development and analysis must conclude by Q2 2024 to meet this timeline. Schedule delays will affect the CRD Board's ability to advance governance change this term.

CRD staff will continue to defer incremental improvements to the transportation data program to free up capacity to progress concept development and analysis in 2024. The data program may need to be expanded to deliver new functions. Any updates to the Regional Trail Management Plan will occur once a decision is made about service consolidation.

The CRD's Legislative Services, Legal, Finance and Regional Parks divisions also support this initiative.

CONCLUSION

Transportation is a priority for residents and the CRD Board. The purpose of the transportation governance initiative is to create more tools to advance regional connectivity and mobility by establishing a new regional transportation service. To support the development of a service establishment bylaw, targeted engagement is needed to seek input from mayors, councillors, electoral area directors, First Nations, senior local government staff and senior staff from MOTI

and BC Transit. This report summarizes the engagement activities planned for 2024.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Emily Sinclair, MCIP, RPP, Senior Manager, Regional & Strategic Planning
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

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REPORT TO TRANSPORTATION COMMITTEE
MEETING OF WEDNESDAY, APRIL 17, 2024

SUBJECT **Mass Transit Modelling and Climate Impacts**

ISSUE SUMMARY

To report back on modelling the climate impacts of mass transit in the Capital Regional District (CRD).

BACKGROUND

At the February 14, 2024, CRD Board meeting, staff were directed:

> *"To report back on modelling expanded mass transit in the CRD and its potential climate impacts."*

BC Transit is in the early stages of developing greenhouse gas (GHG) modelling and anticipates having data by the fiscal year end. This modelling will be at a system level and is not planned to include route level analysis nor forecast the impact of service level change scenarios. As the transit service provider for the region, BC Transit is well positioned with data and domain knowledge to take the lead on this project.

If the desired outcome is to maximize GHG reductions from the transportation sector, it is critical that mass transit investments be accompanied by corresponding changes in land use and active transportation networks to create the greatest impact. This is because the majority of GHG savings from mass transit are indirect and occur due to compact development around stations that support increased housing and employment density and access to amenities. Implementing mass transit to lower density areas with a focus on park and rides would attract more discretionary riders, those who have the option of driving. However, it would achieve a small GHG reduction as only a few car trips would be replaced by transit such as workday commutes, leaving residents car dependent for most trips.

Several local governments around the region are updating their Official Community Plans (OCPs) to intensify land use along transit corridors, in response to new provincial housing legislation. A new regional transportation service, with a mandate for integrated transit and mobility hub planning, would help ensure that transit service investments are fully integrated with long-range corridor planning.

Regional and Strategic Planning will support the BC Transit modelling effort. Once system-level modelling is complete, there would be an opportunity to consider whether additional scenario-based modelling is needed and have further discussion about joint project efforts between CRD and BC Transit staff.

IMPLICATIONS

Alignment with Board & Corporate Priorities
While "Support investments, expansion and equitable access to active and low carbon transportation" is within the 2023-2026 Board priorities, the current focus is on infrastructure within the CRD's control, such as regional trails.

Intergovernmental Implications
Given the dependencies on land use and active transportation, the Transportation Working Group and the Development and Planning Advisory Committee (DAPC) may have an interest in this item. When BC Transit has information to share it can be brought to these groups for comment.

Service Delivery Implications
Regional and Strategic Planning staff can provide technical support to BC Transit. Staff are fully engaged on the Board priority for transportation governance and core service delivery and do not have the capacity at current staffing levels to take a lead on GHG modelling of mass transit.

CONCLUSION

BC Transit is developing climate impact models for transit at a system level. CRD staff will play a supporting role in this work and will ensure that relevant findings are shared with the Transportation Working Group and DPAC when appropriate. Once the modelling is complete, there would be an opportunity to consider whether scenario-based modelling is needed and have further discussion about joint project efforts between CRD and BC Transit staff.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Emily Sinclair, MCIP, RPP, Senior Manager, Regional and Strategic Planning
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

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EEP 24-26

REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, MAY 08, 2024

SUBJECT **Biosolids Monthly Update – May**

ISSUE SUMMARY

To provide a monthly update to the Board on the status of the short-term options for biosolids management, as well as progress on the advanced thermal pilot project. The Long-term Biosolids Beneficial Use Strategy will be reported under separate cover.

BACKGROUND

The Capital Regional District (CRD) has been responsible for the beneficial use of Class A biosolids produced at the Residuals Treatment Facility since the commissioning of the core area wastewater treatment project in 2020. Currently, the CRD is operating under the Short-term Biosolids Management Plan (2020-2025), with the primary beneficial use options being incineration as an alternative fuel in a cement manufacturing plant in Richmond, BC, and integration with landfill cover systems as contingencies. When neither of these options are available, landfilling biosolids at Hartland Landfill has been the only alternative. In 2011, the CRD Board passed a resolution to ban the land application of biosolids from CRD facilities; however, in 2023, given the operational and logistical challenges with the short-term plan, the CRD Board amended its position to allow limited non-agricultural land application of biosolids as a contingency option. The CRD has secured the use of biosolids for industrial land reclamation at a quarry near Cassidy, BC. Staff continue to seek additional short-term beneficial use contingency options, in order to limit or avoid landfilling of biosolids when the other options are not available.

The CRD is also required to develop a Long-term Biosolids Beneficial Use Strategy by June 2024. Plan development has included input from the Technical and Community Advisory Committee, First Nations engagement and public consultation.

Short-term Biosolids Management Plan Implementation

Land Reclamation in Cassidy, BC: The quarry received the majority of biosolids produced in April. Biosolids are blended with sand and are being stored by the landowner under cover, pending regulatory approval for mixing and placement of biosolids growing medium (BGM), in accordance with the *Organic Matter Recycling Regulation* and approvals under the *Mines Act.* The quarry has capacity to accept 2,000 cubic metres in 2024 and received approximately 500 cubic metres through April.

Cement Kiln in Richmond, BC: The cement facility received one load (25 tonnes) of biosolids in early April, but an equipment malfunction occurred shortly after offloading that has prevented additional deliveries. The equipment is expected to be repaired in late May.

Landfilling at Hartland Landfill: In April, no biosolids were landfilled. Landfilling is not a beneficial use, as per provincial and federal expectations, and consumes valuable airspace at the landfill.

Second Quarry Site in the Regional District of Nanaimo: As reported last month, the CRD has been approached by a site operator of a second gravel quarry within the Regional District of

Nanaimo to receive CRD Class A biosolids for site reclamation. This option in on hold pending further consultation with First Nations and the Regional District of Nanaimo.

Composting Facilities in Parksville/Port Alberni/Chemainus: An operator of various composting facilities on southern Vancouver Island has expressed interest in receiving CRD biosolids and either mixing into BGM or co-composting with other organic feedstocks. Finished BGM or compost is sold wholesale throughout southern Vancouver Island. With Board approval, this is a viable short-term option for the program.

Provincial (Organic Matter Recycling Regulation) Technical Working Group (TWG) Review: In 2023, the provincial Ministry of Environment and Climate Change Strategy conducted a review of the Organic Matter Recycling Regulation, including an evaluation of emerging contaminants of concern in the context of land application. The TWG completed its work in late 2023; the final report is expected to be released in May. The Ministry has not altered its regulatory direction at this time. As per Board Direction in March, staff brought forward options to undertake an independent literature review at the April 17, 2024 Environmental Services Committee meeting, and Committee recommendations on completing independent literature and legal reviews are being presented to the Board under separate cover.

Letter to Minister Requesting Meeting: On March 19, the CRD Board Chair, as directed by the Board, sent a letter to the Minister of the Environment & Climate Change Strategy, requesting a meeting to discuss the extension of the submission deadline for the Long-Term Biosolids Beneficial Use Strategy. The CRD Board Chair was scheduled to meet with the Minister on May 6, 2024.

Advanced Thermal Pilot Project Status

The CRD hired GHD as the technical advisor to support staff to develop terms and technical requirements for a Request For Proposals (RFP) for a demonstration plant. The advisor has begun working on the technical specifications, and it is anticipated that the RFP for the demonstration plant will be issued in Q2, with a preferred proponent selected in Q3-Q4 2024.

CONCLUSION

The Capital Regional District continues to implement the Short-term Biosolids Management Plan while also developing the draft Long-term Biosolids Management Plan. The short-term program continues to experience operational challenges and there is inadequate contingency capacity to ensure the sustainable beneficial use of biosolids. Staff are currently exploring additional contingency options to support short-term and long-term operations.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

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EHQ 24-29

REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, MAY 08, 2024

SUBJECT **Long-term Biosolids Management Strategy**

ISSUE SUMMARY

The Capital Regional District (CRD) is required to submit a long-term biosolids management strategy to the BC Ministry of Environment and Climate Change Strategy by June 18, 2024 as a requirement of the CRD's commitments under the Core Area Liquid Waste Management Plan.

BACKGROUND

The CRD submitted Amendment No. 11 to the Core Area Liquid Waste Management Plan (CALWMP) to the Ministry of Environment and Climate Change Strategy (ENV) in 2016, committing to the determination of a long-term management strategy for the beneficial use of biosolids produced at the Residuals Treatment Facility (RTF), that would be built as part of the Core Area Wastewater Treatment Program that was commissioned in 2020. ENV approved the Amendment, requiring the CRD to develop a Definitive Plan for biosolids by 2019 that outlined a short-term (2020-2025) plan for the beneficial use of the Class A biosolids, as well as a long-term beneficial use strategy.

In 2019, the Minister of Environment and Climate Change Strategy approved the CRD Biosolids Beneficial Use Strategy, forming part of the CALWMP (Amendment 11) with short-term and long-term conditions. For the Long-Term Strategy, there were three specific conditions noted, as follows:

a) The CRD must include land application in the options analysis and conduct consultation for the long-term biosolids strategy that is intended to be implemented by January 1, 2025.
b) Options considered should include a range of beneficial uses including, but not limited to, forestry (for example: fertilizer/soil conditioner), reclamation (for example: mines), landfill closure and agriculture.
c) Consultation process must include citizens, local government, and Indigenous communities within the CRD.

The short-term plan had a primary focus to provide biosolids to a cement manufacturing plant in Richmond, BC, as an alternative fuel source for its kiln operations. A supplement to the short-term plan has been the beneficial use of biosolids as a cover material at the regional landfill. Due to significant maintenance, operational and economic challenges at the cement plant, and limited space for cover material, as previously reported, a significant volume of biosolids has been landfilled under emergency measures, which is out of compliance with provincial regulatory direction, while other possible short-term contingency alternatives are explored.

In July 2011, prior to introducing wastewater treatment in the core area, the CRD Board passed a resolution to ban the production and land application of biosolids at CRD facilities and parks, and on farmland in the CRD, based on public health and environmental concerns raised by members of the public. In 2023, due to ongoing challenges with existing options, the CRD Board

amended the land application ban to allow for out-of-region, non-agricultural application of biosolids as a short-term contingency alternative.

As of 2023, the RTF produces approximately 10 tonnes of dried biosolids per day, or 3,650 tonnes per year. This volume will increase over time with population growth and the incorporation of residuals from other wastewater treatment plants in the region.

PREPARING THE LONG-TERM BIOSOLIDS MANAGEMENT STRATEGY

ENV requires submission of a long-term biosolids strategy by June 18, 2024, with the expectation that all biosolids be beneficially used through a range of options, in accordance with provincial regulation. Current technical information, public consultation and First Nations engagement outcomes are key components of a Long-Term Biosolids Management Strategy.

The CRD retained a technical consultant, GHD, who provided a long-term biosolids management options analysis report, which was presented to the Environmental Services Committee in July 2023. In addition to including the options analysis, the report contained an updated review of international biosolids management practices and a summary and evaluation of the advanced thermal (gasification and pyrolysis) pilots procured in 2022.

The production, distribution, storage, sale and usage of biosolids are regulated under the BC Organic Matter Recycling Regulation (OMRR), which includes minimum standards for biosolid product quality (vector attraction reduction, pathogen and heavy metals limits) and land application practices (e.g., nutrient loading and erosion control). The biosolids from the RTF are characterized as Class A, under Section 3.2.6 of the OMRR, which regulates the production and beneficial use of compost and biosolids.

In 2023, ENV conducted a review of the OMRR, including an evaluation of emerging contaminants of concern in the context of land application. The technical working group assigned to this task completed its work in late 2023; the final report is expected to be released in May. ENV has not altered its regulatory direction at this time. On March 13, 2024, the CRD Board directed staff to reinitiate consideration of a legal liability review and a scientific literature review of biosolids land application, given the recent delays in reports supporting the current OMRR review. Staff brought forward options to undertake an independent literature review at the April 17, 2024 Environmental Services Committee meeting, and Committee recommendations on completing independent literature and legal reviews are being presented to the Board under separate cover.

On March 19, 2024, the CRD Board Chair, as directed by the Board, sent a letter to the Minister of Environment & Climate Change Strategy, requesting a meeting to discuss the extension of the submission deadline for the Long-Term Biosolids Beneficial Use Strategy. The CRD Board Chair was scheduled to meet with the Minister on May 6, 2024.

Public Consultation Summary

Public engagement on the Long-term Biosolids Management Strategy occurred from January 11 to March 6, 2024. Despite the CRD Board's 2011 resolution banning the land application of biosolids, several land application options were included for public consideration, in accordance with explicit direction from the provincial regulator. The consultation process was commissioned

to the Tavola Strategy Group ("Tavola") for design and implementation. Tavola followed a comprehensive approach to encourage broad public participation and capture their feedback. The process included:

- A project engagement page on the CRD's website with detailed background information, including context on provincial regulatory requirements and the Board's direction on land application.
- An online survey ("CRD Survey") hosted on the CRD's project engagement page. The CRD Survey rendered 569 responses.
- A representative survey ("Ipsos Survey") of 516 residents across the region, designed and facilitated by market research and public opinion specialist, Ipsos.
- A virtual open house on February 20, 2024, which included presentations from CRD staff and the technical consultant, as well as a moderated question-and-answer period. Approximately 59 participants attended the virtual event.
- Various avenues to submit comments, pose questions and receive answers.
- A subscription service to allow receipt of information added to the site as the engagement period progressed.

Tavola's Summary Consultation Report summarizing the public engagement is attached as Appendix A. Key themes heard from the public during the public engagement are:

- Respondents to both the Ipsos representative survey and the CRD survey indicated that *Environmental Impacts [air, water and soil contaminants]* were the most important consideration when planning for the beneficial use of biosolids. Costs, climate/greenhouse gas emissions and community impacts (truck traffic, odour and noise emission, dust) were less important.

- The two surveys solicited very different results when it came to support for long-term biosolids management options.
  - The Ipsos survey indicates the broader general public is supportive of all options, while respondents to the CRD survey have substantial levels of opposition to most options other than Advanced Thermal, with the least support for bagged fertilizer for residential use and agricultural fertilizer.
  - For this research, Ipsos conducted an online panel survey of 516 adult (18+ years) CRD residents. The final data has been weighted to ensure that the gender/age and regional distribution reflects that of the actual population in the CRD according to 2021 Census data. The precision of Ipsos online polls is measured using a credibility interval. In this case, the poll is accurate to within ±4.9 percentage points, 19 times out of 20, of what the results would have been had all adult CRD residents been polled.
  - Ipsos provided respondents with background information related to biosolids (including regulatory context and the Board's ban on land application).

The most popular option (advanced thermal) in the CRD survey was the least popular for the broader general public in the Ipsos survey. The level of opposition to all options was higher in the CRD survey.

- The concerns associated with various options varied depending on the survey. The level of opposition to all options and associated concerns were much greater in the voluntary CRD survey, than in the Ipsos representative survey. Many respondents to the CRD survey

expressed concerns related to the potential contaminants (e.g., PFAS) and potential health and environmental risks of land application. Many respondents in the CRD survey felt land application options are not a "beneficial-use" due to potential risks, and advanced thermal/biochar options are the most effective method to reduce risks of biosolids.

- Many respondents who submitted correspondence, attended the open house and participated in the CRD survey would like more detail about plans, progress and timelines towards piloting advanced thermal options, and more information about the testing, scientific research and risks associated with land applying biosolids. Some would also like to better understand the cost benefit analysis of options and the feasibility, experience and case studies of various options in other jurisdictions.

First Nations Consultation Summary

First Nations consultation on the Long-term Biosolids Management Strategy is ongoing. CRD commissioned the design and facilitation of the initial outreach to 50th Parallel Public Relations ("50th Parallel"). Nineteen First Nations were provided the following opportunities for input over the last two months:

- attending separate in-person and virtual open houses
- participation in an online survey
- open invitation to meet with staff at any time regarding biosolids management planning.

To date, staff have had discussions on the topic of biosolids management with representatives from the Pacheedaht, T'Souke and Pauquachin Nations. CRD staff provided a brief presentation and overview of the wastewater treatment project and resulting requirement to beneficially use biosolids. Staff also presented the full suite of available options for biosolids management, including various land application scenarios, incineration and advanced thermal treatment. Staff also highlighted the concern raised by several groups regarding land application of biosolids.

The 50th Parallel report summarizing the First Nations engagement is attached as Appendix B. The overarching themes expressed by the First Nations included:

- a clear expectation of CRD to engage further with the Nations on any land application projects across the region
- questions regarding scenarios relevant to their traditional territories
- general questions regarding options

Opportunities to provide input are ongoing, and all feedback received will be provided to the Province with the CRD's submission of the Long-Term Biosolids Management Strategy. Following approval of the Long-term Strategy, further engagement with First Nations will be pivotal in the development of specific land application projects located on their traditional territories.

Technical and Community Advisory Committee

In September 2023, staff reconvened the Technical and Community Advisory Committee (TCAC) to advise on several liquid waste management issues, including biosolids management. The presentation materials provided to the TCAC are attached as Appendix C. The TCAC assessed and ranked all beneficial use options. All options had majority support, with the following order of preference (highest to lowest): industrial land reclamation, forest fertilization,

wholesale distribution, residential use, advanced thermal, combustion/incineration and agricultural. While some comments and concerns were raised about land application contaminant risks, the TCAC generally felt that the nutritive value in biosolids outweighed the contaminant risks; agricultural land application had the lowest level of TCAC support due to these contaminant concerns. In addition, concerns were raised about the greenhouse gas implications, cost/benefit and feasibility of the advanced thermal option. Greenhouse gas concerns were also raised for the combustion/incineration option.

DRAFT LONG-TERM BIOSOLIDS MANAGEMENT STRATEGY

The CRD retained a technical consultant, GHD, to prepare a draft long-term biosolids beneficial use strategy. GHD assessed all available beneficial use options and provided an options analysis report, which was presented to the Board on August 9, 2023. Based on its analysis, GHD recommended that the CRD pursue a portfolio of biosolids management options to ensure beneficial use of biosolids is resilient and sustainable into the future. This is consistent with the CRD's experience to date with options that are not continuously available or reliable, as well as a review of the experiences of other jurisdictions.

Based on:

- the Minister of Environment and Climate Change Strategy's direction and provincial requirements
- the CRD Board's ban of the land application of biosolids in the CRD
- the feedback received in the various public engagement processes detailed above
- the technical recommendations provided by GHD in order to develop a robust program that is flexible and provides redundancy in order to minimize operational and compliance risks
- the CRD's goal to have a strategy that:
  - utilizes the existing RTF infrastructure and Class A biosolids already being produced but also prioritizes implementing advanced thermal technology infrastructure
  - minimizes negative impacts on the natural environment
  - protects the health and safety of the public and workers involved in biosolids operations
  - is cost effective, while balancing all of the above considerations

staff recommend procuring a portfolio of options in alignment with the GHD Long-term Biosolids Management Strategy (Appendix D) and utilizing each option under a prioritization structure, as follows:

Tier 1: **Advanced thermal option**
Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:

a) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.

Tier 2: **Out-of-region compliance options**
Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option are being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These include (in priority order):

a) Industrial land reclamation, such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
b) Forest fertilization
c) Production of biosolids growing medium and/or feedstock in soil production
d) Partnerships with established biosolids programs
e) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option, when available.

Tier 3: In-region contingency options
Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable. These include (in priority order):
a) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
b) Forest fertilization
c) Maintain the option of biosolids application in engineered cover systems at Hartland Landfill to act as an emergency support option; subject to space availability and cover needs of the Landfill

Note: The CRD will continue to explore beneficial use opportunities with those Nations that express interest both in-region and out-of-region. The CRD will also listen to any concerns Nations may have regarding the beneficial use options and is committed to working with individual Nations to address their concerns.

The Strategy focuses on pursuing the in-region thermal management of biosolids utilizing advanced thermal treatment technology to produce biochar and synthetic fuels, while the tiered approach balances the Board's direction on land application and meeting regulatory requirements. As previously reported, given that it is anticipated to take 2-3 years to design, permit, construct, commission and pilot a thermal demonstration plant and longer for a full scale facility, the other options in the portfolio will be necessary to pursue in the 2025-2035 time period. Direct agricultural application would be excluded at this time but reclamation of industrial lands where the end use is pasture lands may be considered.

The landfilling of biosolids at the Hartland Landfill would only be required as an emergency measure when the RTF fails to produce a Class A biosolids product due to an operational emergency, such as a process equipment failure.

The above recommended portfolio of options, the Long-Term Biosolids Management Strategy and the Long-Term Biosolids Beneficial Use Option Analysis documents prepared by GHD, and the summary consultation reports, together form the CRD's Long-Term Biosolids Management Strategy. The Strategy will likely require updating in the next ten years as the CRD gains experience with the portfolio implementation, further develops the thermal option, considers advances in technology over time, and responds to any regulatory or Board policy changes.

Biosolids Advanced Thermal Site Trial Update

A Request for Proposals (RFP) for a technical advisor to support CRD staff in developing terms and technical requirements for a demonstration plant closed on March 11, and a preferred technical advisor has been selected. The subsequent RFP for the demonstration plant is in

development and is expected to be issued in Q2, with a preferred proponent selected in Q3/Q4 2024. Once a proponent and technology are selected, staff will have sufficient information to support initiating the provincial permitting process, which is anticipated to take 1.5-2 years. To support the permit application, additional public and First Nations engagement will be required inclusive of project specifics (e.g., siting, air discharge (exhaust) composition and rates etc.).

Next Steps

With Board endorsement, the draft Long-Term Biosolids Management Strategy will be referred back to the TCAC for its final review and comment and posted on the CRD's webpage for a final three-week comment period between May 13 and June 3. A summary of the comments received along with the final Long-Term Biosolids Management Strategy will be presented at the June 12, 2024 Board meeting for consideration, and with final Board approval, would be submitted to the provincial regulator by June 18, 2024.

ALTERNATIVES

Alternative 1
That the CRD Board:

1. Endorse the following portfolio of options in alignment with the Long-Term Biosolids Management Strategy (prepared by GHD, April 2024), utilizing each option under a prioritization structure, as follows:

   (a) **Tier 1**: **Advanced thermal option:** Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:
   (i) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.

   (b) **Tier 2**: **Out-of-region compliance options:** Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option is being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These are (in priority order):
   (i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
   (ii) Forest fertilization
   (iii) Production of biosolids growing medium and/or feedstock in soil production
   (iv) Partnerships with established biosolids programs
   (v) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option when available.

   (c) **Tier 3: In-region contingency options**: Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable. These include (in priority order):
   (i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
   (ii) Forest fertilization

(iii) Maintain the option of biosolids application in engineered cover systems at Hartland Landfill to act as an emergency support option; subject to space availability and cover needs of the Landfill;

2. Direct staff to continue to explore biosolids beneficial use opportunities with those First Nations that express interest both in-region and out-of-region, and to address any concerns First Nations may have regarding the beneficial use options;
3. Refer the Draft Long-Term Biosolids Management Strategy and portfolio of options to the TCAC for review and comment;
4. Post the Draft Long-Term Biosolids Management Strategy and portfolio of options on the CRD webpage for 21 days (May 13-June 3) for First Nations and public review and comment; and
5. Direct staff to bring back the comments received during the 21-day posting period from the TCAC, First Nations and public, along with a final Long-Term Biosolids Management Strategy and portfolio of options for the Board's consideration and approval at the June 12, 2024 Board meeting, for submission to the Province by June 18, 2024.

Alternative 2
That the CRD Board:
1. Endorse the following portfolio of options in alignment with the Long-Term Biosolids Management Strategy (prepared by GHD, April 2024), utilizing each option under a prioritization structure, as follows:

   (a) **Tier 1**: **Advanced thermal option**. Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:
      (i) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.
   (b) **Tier 2**: **Out-of-region and In-region compliance options.** Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option is being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These are (in priority order):
      (i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
      (ii) Forest fertilization
      (iii) Production of biosolids growing medium and/or feedstock in soil production
      (iv) Partnerships with established biosolids programs
      (v) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option, when available.
      (vi) Maintain the option of biosolids application in engineered cover systems at Hartland Landfill to act as an emergency support option, subject to space availability and cover needs of the Landfill;

2. Direct staff to continue to explore biosolids beneficial use opportunities with those First Nations that express interest both in-region and out-of-region, and to address any concerns First Nations may have regarding the beneficial use options;
3. Refer the Draft Long-Term Biosolids Management Strategy and portfolio of options to the TCAC for review and comment;

4. Post the Draft Long-Term Biosolids Management Strategy and portfolio of options on the CRD webpage for 21 days (May 13-June 3) for First Nations and public review and comment; and
5. Direct staff to bring back the comments received during the 21-day posting period from the TCAC, First Nations and public, along with a final Long-Term Biosolids Management Strategy and portfolio of options for the Board's consideration and approval at the June 12, 2024 Board meeting, for submission to the Province by June 18, 2024.

Alternative 3
That this report be referred back to staff for additional information.

IMPLICATIONS

Climate Action Implications

All beneficial reuse long-term biosolids management options have potential greenhouse gas (GHG) emission implications. Land application options have higher emissions the further away the land application sites are due to transportation requirements. However, these could be offset by the enhanced GHG sequestration within the soils following land application. Thermal and advanced thermal options result in direct GHG emissions to the atmosphere, in addition to transportation-related emissions. Advanced thermal options partially mitigate GHG emissions with sequestration in biochar. Respondents to both the Ipsos representative survey and the CRD survey indicated that "Environmental Impacts (air, water and soil contaminants)" were the most important consideration when planning for the beneficial use of biosolids. Costs, climate/GHG emissions and community impacts (truck traffic, odour and noise emission, dust) were less important.

Environmental Implications

Under the Canadian governance framework, provincial and federal regulators and agencies are responsible to ensure that biosolids reuse options are safe for the intended purposes and protective of human health and the environment when produced and used in accordance with regulations. Agencies assess the risks and benefits associated with specific resources and products and recommend policies that are incorporated into regulatory frameworks, which are evaluated on a regular and ongoing basis. Current regulations support the beneficial use of biosolids, including all of the options considered by the technical consultant.

All options have some level of risks and benefits. Advanced thermal technologies with biosolids feedstock are not yet commercially proven in Canada or the United States. Thermal options have the benefit of reduced (but not eliminated) contaminant levels in end-products. Despite concerns for risks associated with contaminants for land application options, the most significant land application risks are associated with over fertilization (too many nutrients). Both sets of risks can be mitigated by following properly designed land application plans and complying with the OMRR. Land application options have the benefit of recycling nutrients, enhancing plant growth and offsetting use of commercial GHG-intensive fertilizers.

Community concerns around the land application of biosolids are largely based on the presence, or suspected presence, of unregulated organic chemical compounds, commonly referred to as "contaminants of emerging concern" (CECs). CECs include Volatile and Semi-

Volatile Organic Compounds (VOC & SVOC), Per and Polyfluoroalkyl substances (PFAS), Polybrominated flame retardants (PBDE), dioxins, pharmaceuticals and personal care products (PPCP) and microplastics. There is concern that biosolids with detectable levels of unregulated CECs could impact soil quality, surface water or groundwater.

In recent years, there has been an increased interest in PFAS and their effects on human and environmental health. PFAS are a class of over 4,700 substances that do not occur naturally. PFAS make products non-stick, water repellent and fire resistant, and are found in a wide range of consumer and industrial products, including cookware, food packaging, clothing and firefighting foams. PFAS are sometimes referred to as “forever chemicals” because the molecules are characterized by a chain of strong fluorine-carbon bonds, which result in highly stable and long-persisting chemicals. Exposure to sufficient concentrations of PFAS is associated with an increased risk of cancer, increased cholesterol levels, and can affect the immune system.

In June 2022, ENV released the Organic Matter Recycling Regulation Project Update, which contained some discussion of CECs. “Due to advances in analytical chemistry, the ability to measure CECs has generally outpaced the ability to understand the impacts of CECs on human health and the environment. For this reason, the impacts of CECs in biosolids and wastewater treatment discharges is the subject of ongoing scientific research.” The ENV intends to add the authority for a director to require the testing of biosolids for CECs but does not intend to regulate the concentration of CECs in biosolids. ENV advocates for a prevention-first approach to reducing CECs in biosolids by implementing source control measures to discourage the discharge of certain wastes to the system.

On May 19, 2023, the Canadian Food Inspection Agency (CFIA) proposed an interim standard for PFAS in biosolids used in Canada as fertilizers. The CFIA worked with Environment and Climate Change Canada, Health Canada and provincial partners to assess an appropriate standard for PFAS. The proposed standard will protect human health by preventing the small proportion of biosolids products that are heavily impacted by industrial inputs from being applied to agricultural land in Canada. The proposed standard is 50 ppb PFOS (one type of PFAS). The concentration of PFOS in CRD biosolids is under the proposed standard at approximately 6 ppb (ng/g) (based on two samples). For comparison, a 2020 study found that the PFOS concentration in household dust was 100 ppb (100ng/g).

With regards to the Core Area Wastewater Treatment Program, during the wastewater treatment process at the McLoughlin Point Wastewater Treatment Plant, residual solids are removed from wastewater and conveyed to the RTF for further treatment. The residual solids undergo anaerobic digestion in which microorganisms break down biodegradable material in the absence of oxygen and produce biogas. The residual solids are then dewatered and heated at a very high temperature to create Class A biosolids.

In 2022, in support of the biosolids management program, the CRD collected and submitted samples of Class A biosolids being produced at the Residual Treatment Facility for high resolution analysis of a wide range of contaminants, including contaminants of emerging concern. The results are summarized in Appendix E.

Financial Implications

The proposed portfolio includes options with a range of costs per tonne. Land application and conventional thermal options are approximately the same, at less than $500 per tonne. Advanced thermal options are more expensive at up to $4,500 per tonne; there is significant uncertainty regarding capital and operating costs for a permanent advanced thermal facility at this time, as well as the potential for revenue generation from advanced thermal synthetic gas, bio-oil and biochar end-products and a current lack of demonstrated facilities for cost comparisons. However, this information will be ascertained through the development of the demonstration plant initiative.

Service Delivery Implications

A portfolio of options is required to ensure redundancy and resiliency of the biosolids management strategy. Previous experience with the CRD, as well as a jurisdictional review, has indicated that relying on a single or very few options and single contingency is not suitable to maintain service delivery and regulatory compliance. Based on the consultation feedback, as well as concerns raised previously by the Board, a portfolio of beneficial use options that includes reclamation of industrial lands and forest fertilization but excludes direct application to agricultural lands is considered prudent. Use of biosolids as an alternative fuel in the current short-term plan will also be carried over as an option in the long-term strategy.

Although the long-term strategy is to address biosolids produced by the Core Area wastewater service, the RTF was designed to receive and process residual solids from the Saanich Peninsula, Sooke and Gulf Island wastewater treatment plants. Once the RTF receiving station is operational, staff will work with the Saanich Peninsula Wastewater Commission to update the Saanich Peninsula Liquid Waste Management Plan accordingly.

Alignment with Board and Corporate Priorities

The recommended Long-Term Biosolids Management Strategy aligns with the 2023-2026 CRD Corporate Plan goal of *Management of wastewater and treatment residuals,* and the initiative to *Develop and implement a long-term Biosolids Management Plan*. The Strategy also supports the initiative under this goal to *Update the Liquid Waste Management Plans for the Saanich Peninsula and Core Area* with regards to complying with the commitment to beneficially use the biosolids generated from the wastewater treatment plants.

First Nations Implications

First Nations are seeking a more respectful, reciprocal government-to-government relationship with the CRD related to service delivery and service delivery impacts in their traditional territories. As described above, First Nations consultation on the Long-Term Biosolids Management Strategy is ongoing. The CRD will continue to explore beneficial use opportunities with those Nations that express interest. The CRD will also listen to any concerns Nations may have regarding the beneficial use options and is committed to working with individual Nations to address their concerns.

Intergovernmental Implications

As the strategy is implemented, CRD staff will provide advanced and regular communication to local governments in jurisdictions where out-of-region options are being contemplated or procured. Due to the nature of some of the beneficial use options and in order to have a portfolio of options that ensures redundancy and flexibility, it is not unusual for local governments to have biosolids management programs that extend beyond the jurisdictional boundaries of the local government in terms of processing and end use, particularly in areas that are more urban and those that produce larger volumes of biosolids.

Social Implications

Based on all public and TCAC engagement, there is majority support for prioritizing a range of beneficial use options, including advanced and conventional thermal options and land application options. Both the representative survey and TCAC recommendations were in close alignment, with industrial land reclamation and forest fertilization having the strongest support. However, the voluntary survey showed more support for advanced thermal options, although some forms of land application still had support. The differences between the representative and voluntary survey results were likely due to the advocacy and efforts of a few special interest groups that are known to be opposed to land application options. Moving forward, additional public and stakeholder consultation, as required by the provincial regulator on a project-by- project basis, will be conducted.

CONCLUSION

The CRD is required to provide a draft Long-Term Biosolids Management Strategy to the provincial regulator as part of the CRD's commitments under the Core Area Liquid Waste Management Plan. The recommended strategy was informed by:

- the Minister of Environment and Climate Change Strategy's direction and provincial requirements
- the CRD Board's ban of the land application of biosolids in the CRD
- the feedback received in the various public engagement processes detailed above
- the technical recommendations provided by GHD in order to develop a robust program that is flexible and provides redundancy in order to minimize operational and compliance risks,
- the CRD's goal to have a strategy that:
  (a) utilizes the existing RTF infrastructure and Class A biosolids already being produced but also prioritizes implementing advanced thermal technology infrastructure
  (b) minimizes negative impacts on the natural environment
  (c) protects the health and safety of the public and workers involved in biosolids operations
  (d) is cost effective, while balancing all of the above considerations,

The strategy consists of a portfolio of options to ensure maximum flexibility to address market, operational and logistical challenges, continuous beneficial use of biosolids and avoiding landfilling.

RECOMMENDATION

That the CRD Board:

1. Endorse the following portfolio of options in alignment with the Long-Term Biosolids Management Strategy (prepared by GHD, April 2024), utilizing each option under a prioritization structure, as follows:

   (a) **Tier 1**: **Advanced thermal option:** Constitutes the preferred long-term solution and will be pursued concurrently with options in other tiers. Current projects include:
   (i) Develop a demonstration facility for advanced thermal processing, as planned. Outcomes from the demonstration project will serve as the basis for a scaled, long-term solution.

   (b) **Tier 2**: **Out-of-region compliance options:** Constitute measures that the CRD will utilize to ensure regulatory compliance is continuously achieved while the Tier 1 thermal processing option is being implemented and when options in Tier 1 are unable to process the totality of biosolids produced in the region. These are (in priority order):
   (i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
   (ii) Forest fertilization
   (iii) Production of biosolids growing medium and/or feedstock in soil production
   (iv) Partnerships with established biosolids programs
   (v) Continue alternative fuel combustion in the cement manufacturing facility in Richmond, BC. Prioritize this option when available.

   (c) **Tier 3: In-region contingency options**: Constitute contingency options to ensure compliance with regulatory requirements. The CRD would implement Tier 3 options on a contingency basis, only when options within the Tier 2 portfolio are unavailable. These include (in priority order):
   (i) Industrial land reclamation such as mine and quarry sites (acknowledging that some reclaimed sites may eventually have a pasture land end use)
   (ii) Forest fertilization
   (iii) Maintain the option of biosolids application in engineered cover systems at Hartland Landfill to act as an emergency support option; subject to space availability and cover needs of the Landfill;

2. Direct staff to continue to explore biosolids beneficial use opportunities with those First Nations that express interest both in-region and out-of-region, and to address any concerns First Nations may have regarding the beneficial use options;
3. Refer the Draft Long-Term Biosolids Management Strategy and portfolio of options to the TCAC for review and comment;
4. Post the Draft Long-Term Biosolids Management Strategy and portfolio of options on the CRD webpage for 21 days (May 13-June 3) for First Nations and public review and comment; and
5. Direct staff to bring back the comments received during the 21-day posting period from the TCAC, First Nations and public, along with a final Long-Term Biosolids Management Strategy and portfolio of options for the Board's consideration and approval at the June 12, 2024 Board meeting, for submission to the Province by June 18, 2024.

Submitted by:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Long-term Options for the Beneficial Use of Biosolids – January-March 2024 – Tavola Strategy Group (March 2024)
Appendix B: Long-Term Biosolids Management Plan: First Nations Engagement – What We Heard Report
Appendix C: Technical and Community Advisory Committee – Long-term Biosolids Management Strategy Presentations
Appendix D: GHD Technical Memorandum: Long-term Biosolids Beneficial Use Strategy – April 23, 2024
Appendix E: Biosolids – Class A Biosolids Analysis – April 2024



TAVOLA
STRATEGY GROUP

CAPITAL REGIONAL DISTRICT SUMMARY CONSULTATION REPORT

Long-Term Options for the Beneficial Use of Biosolids
January – March 2024

Submitted by:
Katie Hamilton, Principal
Tavola Strategy Group Ltd.
tavolagroup.com

March 2024

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PROJECT OVERVIEW

The purpose of the public consultation process was to engage the public in the development of a long-term biosolids management plan for the Capital Regional District.

The end by-product of the sewage treatment process, biosolids are a nutrient-rich resource that can benefit the community in several different ways. The Province of BC's Organic Matter Recycling Regulation sets the requirements for production of high-quality biosolids, and subsequent beneficial uses related to land application and composting. The CRD produces 3,300 tonnes annually of Class A biosolids, the highest quality category of biosolids.

A Long-Term Biosolids Management plan must be submitted to the Province by June 2024. The Ministry of Environment and Climate Strategy requires that the long-term plan consider all potential beneficial uses, including land application. The Capital Regional District has had a policy banning land application in place since 2011. Broad public engagement about the long-term management of biosolids has not occurred in the Capital Region until now.

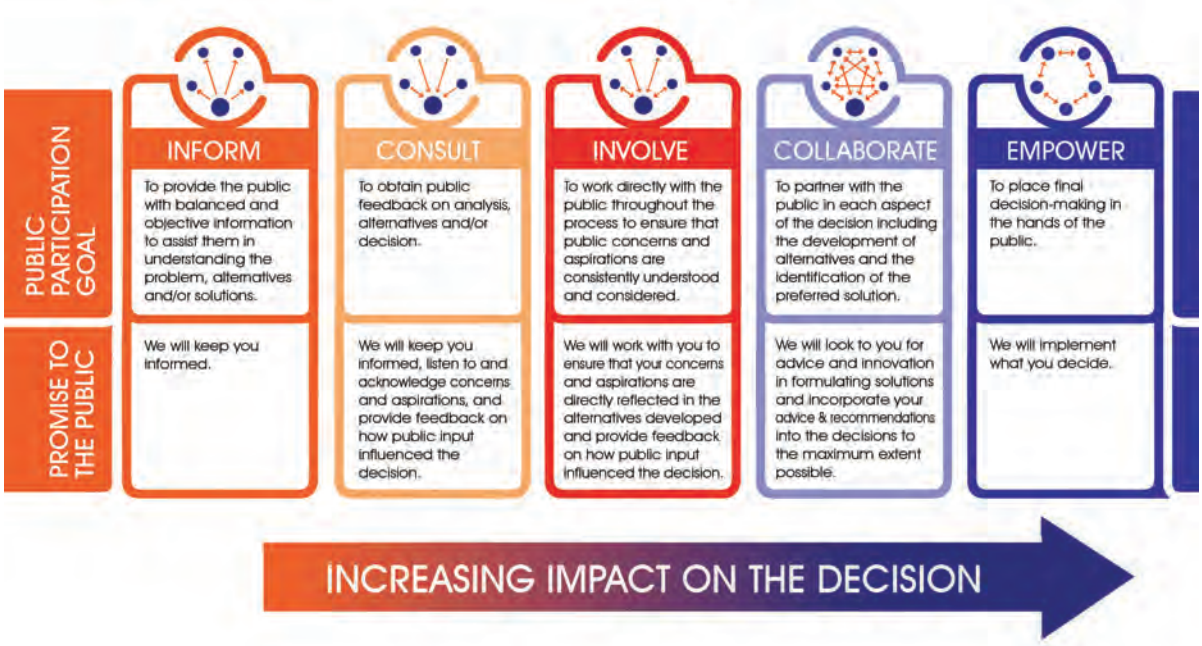
Seven biosolid management options were presented to the public for feedback.



The broad public engagement process occurred from January 11 to March 6, 2024. A representative sample survey of Capital Region adult residents was fielded by Ipsos from March 1 – March 11, 2024. The Ipsos data is weighted to ensure it reflects the gender/age and regional distribution of the CRD population according to the 2021 census data.

PUBLIC PARTICIPATION APPROACH

The consultation process was designed in alignment with the International Association of Public Participation (IAP2) spectrum and core values.



Communication & Engagement Objectives

1. ***Raise awareness of the need to develop a long-term biosolids management plan that outlines how the Capital Regional District will utilize the benefits of biosolids in-region.***
2. ***Provide multiple channels and opportunities for the community to learn more and provide input into the development of the definitive biosolids management plan.***
3. ***Seek to understand public awareness, perceptions, concerns and top of mind considerations for how biosolids should be managed in the Capital Region.***

Promise To The Public

The public consultation plan aimed to engage at the level of "consult". The promise to the public is "we will keep you informed, listen to, and acknowledge concerns and provide feedback on how public input influenced the decision." The Technical and Community Advisory Committee were engaged at the level of "involve".

Public Consultation Process

On Thursday, January 11, 2024, the Capital Regional District launched the public consultation process to raise awareness of the need and opportunities for the community to provide input into the development of the definitive biosolids management plan. Greater understanding of public awareness, perceptions, concerns and top of mind considerations for how biosolids should be managed in the CRD will help inform options for CRD Board consideration.

The public consultation process ran in parallel to a separate First Nations engagement process led by other consultants.

Information was shared through a variety of channels to provide background on how biosolids have been managed since wastewater treatment was introduced in 2020, the options available to the CRD, including land application [as required by the Ministry of Environment and Climate Strategy], and the technical analysis and considerations associated with various options.

Consultation Activities & Timeline

- A detailed Long-Term Biosolids Management project webpage was developed on **www.GetInvolved.crd.bc.ca**
- Questions were submitted through the website and answers were posted for all web visitors
- Media releases was distributed on January 11 and February 7, 2024.
- Updates were emailed to project page subscribers.
- Several social media posts were shared on CRD social media channels: Facebook, Twitter, and Instagram throughout the process.
- Print ads appeared in the Times Colonist and BlackPress newspapers.
- Letters were sent to a variety of groups and organizations.
- Input was invited by email at **biosolids@crd.bc.ca**
- An online open house was hosted on Tuesday, February 20, 2024 where attendees could pose questions to Capital Regional District staff and GHD technical consultants.
- An online survey was hosted on the CRD's website.
- A statistically representative sample survey of Capital Region residents was conducted by Ipsos from March – March 11, 2024.

A Technical and Community Advisory Committee (LWMP Core Area) was reconstituted to inform the development of the long-term biosolids management plan. They held their first meeting in October 2023 and were presented the public consultation plan for feedback. The committee toured the Residual Treatment Facility in December and met several times in 2024.

Engagement by the numbers



569
Online survey participants



516
Representative survey of Capital Region residents



3,300
Unique web visitors



12
Questions and answers via website



56
Open house attendees



12
Subscribers to project updates



7
Emails to biosolids@crd.bc.ca

WHAT WE HEARD

Over-Arching Themes

- Respondents to both the Ipsos representative survey and the CRD survey indicated that "Environmental Impacts [air, water and soil contaminants]" were the most important consideration when planning for the beneficial use of biosolids. Costs, climate/ greenhouse gas emissions and community impacts (truck traffic, odour and noise emission, dust) were less important.
- The two surveys solicited very different results when it came to support for long-term biosolid management options.
    - *The Ipsos representative survey indicates strong majority support and low levels of opposition to all beneficial uses presented. Support is highest for forest fertilizer and industrial land reclamation. Respondents to the CRD survey indicate substantial levels of opposition to most options other than Advanced Thermal, with the least support for bagged fertilizer for residential use and agricultural fertilizer.*
    - *The most popular option (Advanced Thermal) in the CRD survey was the least popular for the broader general public in the Ipsos survey. The level of opposition to all options is much higher in the CRD survey.*

Comparison of survey results regarding options:

	IPSOS		CRD	
LONG-TERM BIOSOLIDS USE OPTION	***Support***	***Oppose***	***Support***	***Oppose***
Forest fertilizer	85%	4%	41%	51%
Industrial land reclamation (e.g. mine/quarry)	83%	6%	43%	45%
Wholesale fertilizer for landscaping	79%	5%	37%	54%
Agriculture fertilizer	78%	7%	34%	60%
Bagged fertilizer for low-cost residential use	77%	7%	33%	56%
Fuel for incineration/ combustion	66%	9%	49%	38%
Advanced thermal (gasification/pyrolysis technology)	56%	11%	66%	19%

**Numbers may not add to 100% due to summary reporting and rounding.*

- The concerns associated with various options varied depending on the survey. The level of opposition to all options and associated concerns were much greater in the voluntary CRD survey, than in the Ipsos representative survey. Many respondents to the CRD survey expressed concerns related to potential contaminants [e.g. toxicity, PFAS's] and health and environmental risks of land application and many indicated biochar is the only beneficial use.
- Many respondents in the CRD survey felt land application options are not a "beneficial-use" due to potential risks and advanced thermal/biochar options are the most-effective method to reduce risks of biosolids.
- Many respondents who submitted correspondence, attended the open house, and participated in the CRD survey would like more detail about plans, progress, and timelines towards piloting advanced thermal options, and more information about the testing, scientific research and risks associated with land applying biosolids. Some would also like to better understand the cost benefit analysis of options and the experience, feasibility, and case studies of various options in other jurisdictions.

IPSOS Representative Survey

516 people participated in a representative survey of Capital Region residents conducted by Ipsos between March 1 and March 11, 2024. The data is weighted to ensure it reflects the gender/age and regional distribution of the CRD population according to the 2021 census data.



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3.4 FINAL COMMENTS
4 WEIGHTED SAMPLE CHARACTERISTICS
5 APPENDIX - QUESTIONNAIRE

2 – © Ipsos



Objectives and Methodology

These are the findings of an Ipsos survey conducted on behalf of the Capital Regional District.

The main objective of the survey is to obtain a representative sampling of residents' opinions about how to harness the benefits of biosolids from wastewater treatment. The results of the research will be used to inform the CRD's long-term plan outlining the beneficial use of biosolids.

For this research, Ipsos conducted an online panel survey of 516 adult (18+ years) CRD residents.

The survey was fielded from March 1 to 11, 2024.

The final data has been weighted to ensure that the gender/age and regional distribution reflects that of the actual population in the CRD according to 2021 Census data.

The precision of Ipsos online polls is measured using a credibility interval. In this case, the poll is accurate to within ±4.9 percentage points, 19 times out of 20, of what the results would have been had all adult CRD residents been polled. The credibility interval will be wider among subsets of the population.

Notes to Reader

The Core Region is defined as Victoria, Saanich, Esquimalt, Oak Bay, Colwood, Langford and View Royal.

Prior to answering the questions, respondents were presented with a brief overview of the topic and invited to learn more by watching a short video and reading a list of Frequently Asked Questions. A copy of the survey questionnaire can be found in the report Appendix.

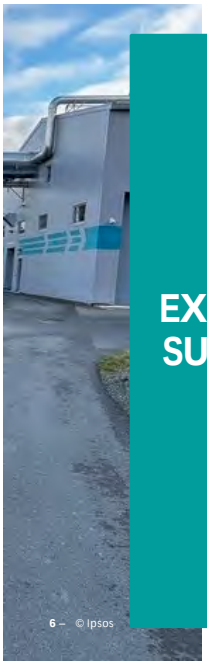
Some totals in the report may not add to 100%. Some summary statistics (e.g., total familiar) may not match their component parts. The numbers are correct, and the apparent errors are due to rounding.

The CRD also hosted a non-representative online survey on its website, the results of which have been reported separately.

4 – © Ipsos







EXECUTIVE SUMMARY

1. **Many residents are not familiar with the topics** of the CRD wastewater treatment system and biosolids. Overall, just less than four-in-ten residents say they are "extremely familiar" or "moderately familiar" with these topics.
2. **The topic is relevant to residents**, with six-in-ten saying it is "very important" or "important" to them how biosolids are maximized for community benefit.
3. When planning for the beneficial uses of biosolids, residents place the **greatest priority on environmental impacts** (air, water and soil contaminants) ahead of considerations like cost, climate/ greenhouse gas emissions and community impacts (truck traffic, odour and noise emission, dust).
4. There is **strong majority support and low levels of opposition to all tested potential uses** of biosolids. Support is highest for forest fertilizer and industrial land reclamation. Support is lower for advanced thermal and fuel for incineration/combustion.
5. Residents say that that **TV news is the best way to keep them informed** on this topic, but many residents also want information via webpage, newspaper, CRD social media and radio.

6 – © Ipsos



FAMILIARITY AND IMPORTANCE 3.1

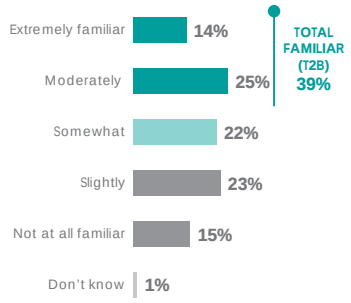
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Ipsos

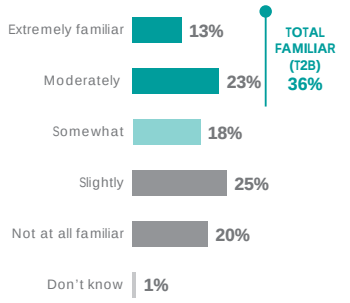
Familiarity with Topics

- Close to four-in-ten residents say they are at least moderately familiar with the topics of the CRD wastewater treatment system and biosolids.

CRD WASTEWATER TREATMENT SYSTEM



BIOSOLIDS



Base: All respondents (n=516)
Q1. How familiar are you with the following topics?

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Familiarity with Topics (by Demos)

- Claimed familiarity with these topics is lower among older residents and women.

Total Important (Extremely + Moderately)

	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
CRD wastewater treatment system	39%	36%	45%	47%	43%	31%	52%	27%
Biosolids	36%	33%	43%	45%	40%	27%	49%	25%

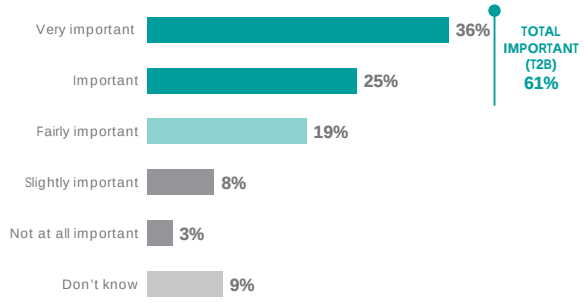
Statistically higher Statistically lower

Base: All respondents (n=516)
Q1. How familiar are you with the following topics?

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Importance of Maximizing Biosolids for Community Benefit

- Six-in-ten residents say it is important to them how biosolids are maximized for community benefit.



Base: All respondents (n=516)
Q2. How important is it to you how biosolids are maximized for community benefit?

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Importance of Maximizing Biosolids for Community Benefit (by Demos)

- Older residents are more likely to place importance on how biosolids are maximized for community benefit.

Total Important (Very Important + Important)

	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
Total important	61%	61%	59%	61%	49%	68%	63%	59%

Statistically higher | Statistically lower

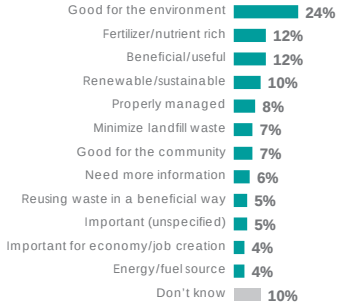
Base: All respondents (n=516)
Q2. How important is it to you how biosolids are maximized for community benefit?

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Reasons why Important/Not Important

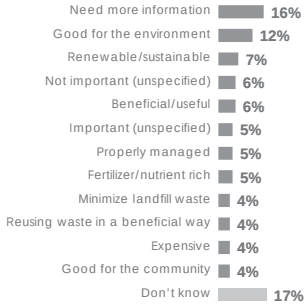
- Residents rate this topic as important because of reasons such as being good for the environment, providing nutrient rich fertilizer, being generally beneficial/useful and being renewable/sustainable.

REASONS WHY IMPORTANT



Mentions <4% not shown.
Base: Those rating very important or important (n=316)
Q3. Please explain why you chose that level of importance.

REASONS WHY FAIRLY/SLIGHTLY/NOT IMPORTANT

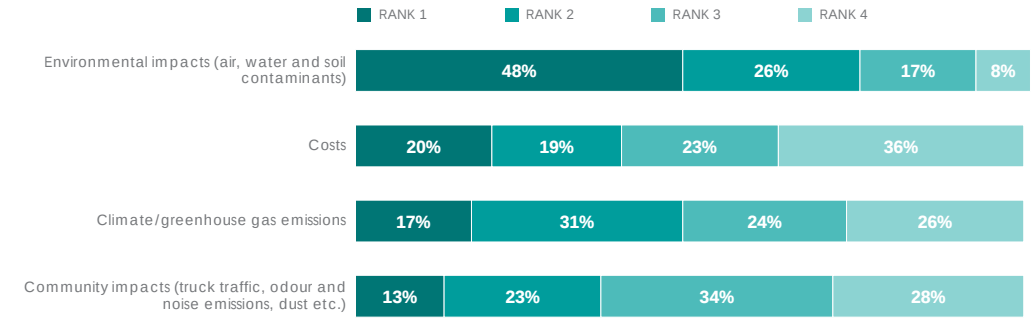


Mentions <4% not shown.
Base: Those rating fairly important, slightly important, or not at all important (n=159)
Q3. Please explain why you chose that level of importance.

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Ranked Importance of Considerations when Planning Beneficial Uses of Biosolids

- Residents prioritize environmental impacts over costs, climate and community impacts.



Base: All respondents (n=516)
Q4. When planning for the beneficial uses of biosolids, how important are the following considerations to you? Please rank in order of importance (1 being most important – 4 being least important).

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Ranked Importance of Considerations when Planning Beneficial Uses of Biosolids (by Demos)

- Older residents are more likely to prioritize environmental impacts and costs. Younger residents are more likely to prioritize community impacts and less likely to prioritize costs.
- Women are more likely to prioritize environmental impacts.

Ranked First (Most Important)

	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
Environmental impacts (air, water and soil contaminants)	48%	48%	50%	40%	45%	55%	43%	52%
Costs	20%	22%	16%	9%	22%	25%	21%	19%
Climate/greenhouse gas emissions	17%	18%	16%	24%	19%	12%	19%	16%
Community impacts (truck traffic, odour and noise emissions, dust etc.)	13%	12%	18%	25%	12%	7%	16%	11%

Statistically higher | Statistically lower

Base: All respondents (n=516)
Q4. When planning for the beneficial uses of biosolids, how important are the following considerations to you? Please rank in order of importance (1 being most important – 4 being least important).

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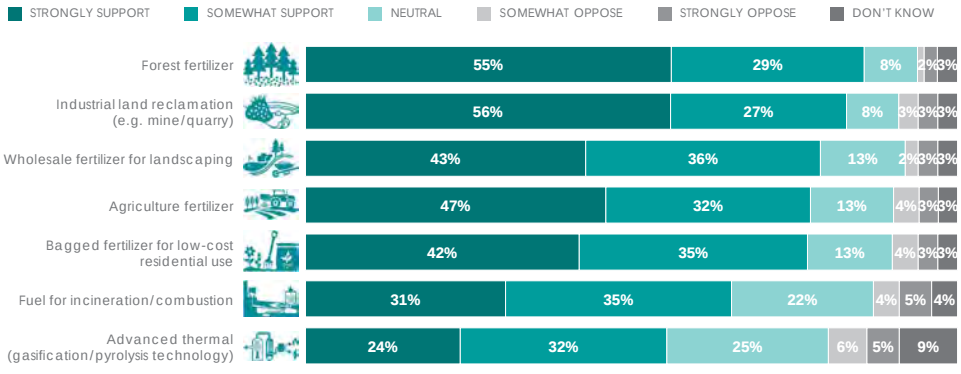
POTENTIAL BENEFICIAL OPTIONS

3.2

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Support for Options

- There is majority support and low levels of opposition to all tested options. The greatest support is for forest fertilizer and industrial land reclamation. There is lower support for advanced thermal.



Data labels <2% not shown.
Base: All respondents (n=516)
Q5-Q11. Please indicate your level of support for...?

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Support for Options (by Demos)

- Older residents are more supportive of using biosolids for wholesale fertilizer for landscaping and agricultural fertilizer. They are less supportive of advanced thermal.
- Residents aged 35-54 years are less supportive of using biosolids for wholesale fertilizer for landscaping and for bagged fertilizer for low-cost residential use.
- Younger residents are more supportive of using biosolids for advanced thermal.

Total Support (Strongly + Somewhat)

	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
Forest fertilizer	85%	87%	80%	81%	83%	88%	84%	86%
Industrial land reclamation (e.g. mine/quarry)	83%	82%	84%	79%	83%	85%	85%	81%
Wholesale fertilizer for landscaping	79%	78%	82%	76%	73%	84%	79%	79%
Agriculture fertilizer	78%	79%	77%	74%	73%	84%	74%	82%
Bagged fertilizer for low-cost residential use	77%	76%	81%	81%	69%	81%	76%	79%
Fuel for incineration/combustion	66%	66%	66%	67%	65%	66%	67%	65%
Advanced thermal (gasification/pyrolysis technology)	56%	56%	56%	70%	55%	48%	56%	55%

Statistically higher | Statistically lower

Data labels <2% not shown.
Base: All respondents (n=516)
Q5-Q11. Please indicate your level of support for...?

 © Ipsos

Reasons Oppose Use of Biosolids for Forest Fertilizer
(verbatim comments)

- Verbatim comments provided by those opposed to the use of biosolids for **forest fertilizer** can be found below.

Pets.

Potential contamination of ground water.

The thought of animals eating the fertilizer.

Don't believe it is the safest procedure.

Toxicity.

Toxic sludge is not good for trees.

If biosolids are so good for the environment why was the ocean release not continued? Given the huge water exchange in Victoria's location on Juan de Fuca, and the lack of any deleterious effect, the decision to surround ourselves on land with our waste makes no sense at all.

Base: Sampling of those opposed
Q6A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Industrial Land Reclamation
(verbatim comments)

- Verbatim comments provided by those opposed to the use of biosolids for **industrial land reclamation** can be found below.

I think that the use of biosolids in bad areas can affect the environment and eco systems.

Cost to me.

Are better things.

I don't believe it to be safe enough.

Toxic sludge is not appropriate for this use.

To save land.

Sounds like it will be bad for soil for vegetable growth.

I do not trust the treatment that is given.

Environment.

I worry that there will be health concerns to using biosolids.

Toxicity.

It is bad for climate change.

Expensive.

I'm unsure of the long term effects on the land and the water. We won't know the long term impacts on the environment for at least 10 years or so and by then it might be too late for intervention on the environment and we won't be able to make the necessary adjustments in time for our planet. I'm just very concerned about the world my son is going to be inheriting in the future and I'm praying we aren't too late already.

Base: Sampling of those opposed
Q7A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Wholesale Fertilizer for Landscaping (verbatim comments)

- Verbatim comments provided by those opposed to the use of biosolids for **wholesale fertilizer for landscaping** can be found below.

Green.

Future use is unknown.

It's not bad, but I don't think manicured lawns should be the priority. Less water usage is great!

I don't want to consume foods grown by our waste.

I do not oppose I say for only landscape.

Human waste in your garden??

I am concerned about run off and contamination.

It is too close to city life.

Don't know if there may be harmful effects to humans and animals.

Beehives.

Would want to better understand heath implications.

Unless the biosolids (sewage waste) is treated in a Pyrolysis plant then the heavy metals, pharmaceuticals, chemicals etc. remain in the sewage & is detrimental to the environment with the ability to downstream into water flows eventually ending up in the ocean affecting wildlife & fish habitats.

Base: Sampling of those opposed
Q8A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Agriculture Fertilizer (verbatim comments)

- Verbatim comments provided by those opposed to the use of biosolids for **agriculture fertilizer** can be found below.

Your Walmarts aren't very big like the U.S per say it seems like kind of a waste right now.

It could be bad.

Unproven.

I oppose the use of biosolids because it's not the right thing to use.

Because I believe eating natural food is always healthier.

Potential contamination of ground water.

Concerns that we may not have enough evidence that pharmaceutical and disease particles have all been removed and won't seep into the food.

Not certain of health implications - would need to understand more.

There isn't enough scientific evidence proving the safety of using biosolids as fertilizer for human food production.

Contaminants.

Concerned about cross contamination of agricultural products.

*Simple philosophy, don't s*** in your own nest.*

Endangered species honeybees.

Human waster should not be on our fields for growing food.

From experience biosolids are full of heavy metals and could contain pathogens if not properly sterilized. Proper testing is simply not done.

Base: Sampling of those opposed
Q5A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Bagged Fertilizer for Low-Cost Residential Use (verbatim comments)

- Verbatim comments provided by those opposed to the use of biosolids for **bagged fertilizer for low-cost residential use** can be found below.

Unsure of impact.

Have honeybees and they are endangered.

I don't want people's poop in my garden.

At the residential level it may not be safely handled due to lack of complete knowledge.

Unsure.

I don't trust biosolids uses on private property.

Pathogens and heavy metals, not enough testing is done to ensure public safety.

Gross.

I just don't know enough about negatives.

Again, not sure if there may be harmful effects for humans and animals.

Bad for the environment.

*Again, same philosophy, don't s*** in your own nest.*

Human waste should not be use for growing food, or be around the population.

Even more expensive.

I don't like the idea of private people controlling this.

Base: Sampling of those opposed
Q10A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Fuel for Incineration/Combustion
(verbatim comments) (slide 1 of 3)

- Verbatim comments provided by those opposed to the use of biosolids for **fuel for incineration/combustion** can be found below.

Not enough facilities to use the product.

I feel it is detrimental to the environment.

Too much greenhouse gasses and it's already bad.

Gases.

CO_2 & CH_4 emissions increased with burning.

Prefer other options.

It goes into the air.

It is not a beneficial use. We should be using as fertilizer in appropriate areas.

It releases a lot of CO_2 emissions.

It seems like a waste and there are probably other things we can burn.

Burning and its impact on carbon emissions.

Not used locally.

I see this this as the worst option since it will produce emissions.

We should be sequestering, not combusting hydrocarbons.

The negative impact on the environment, we won't know the full results of our lack of action and on our stupidity and putting the dollar above our world. It just means that we have already lost this fight. How completely selfish and self absorbed are we to not have put things in place like, when deciding to create something, making it illegal to mass produce something that doesn't decompose within 20 years. It may take a bit longer than we would like to have certain things but at least we would have a world that's going to be here and have air for us to breathe and our children to breathe in the future.

Base: Sampling of those opposed
Q9A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Fuel for Incineration/Combustion

(verbatim comments) (slide 2 of 3)

- Verbatim comments provided by those opposed to the use of biosolids for **fuel for incineration/combustion** can be found below.

Should be used in Victoria.

Impact on neighborhood.

Pointless.

The cost to transport, the inability to expect constant use of the solids in heat generation, and the inability to store the solids safely as a result make this a terrible idea.

I support them.

Damage to the environment.

I worry about the resulting air pollution and greenhouse gases.

It seems like a carbon emitting use.

Burning is pollution.

Trucking costs of the product seem unnecessary.

Inefficient--too much transport needed--fertilizer is better.

Concerns over potential contaminants.

There are enough power and fuel options, and we don't need more impacts to the environment.

Because of the pollution that gets put into the air with burning the biosolids.

The treated sewage (biosolids) were not produced suitable for the cement kilns to burn & the plants could not accept the total volume 100% of the time. The excess biosolid was applied to land.

Base: Sampling of those opposed
Q9A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Fuel for Incineration/Combustion

(verbatim comments) (slide 3 of 3)

- Verbatim comments provided by those opposed to the use of biosolids for **fuel for incineration/combustion** can be found below.

This would create air born particles, and we need to reduce this.

It seems like there are better uses than burning it and releasing CO_2.

I am not sure what the impact is on the environment vis a vis carbon footprint.

Base: Sampling of those opposed
Q9A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Advanced Thermal (Gasification/Pyrolysis Technology) (verbatim comments) (slide 1 of 3)

- Verbatim comments provided by those opposed to the use of biosolids for **advanced thermal (gasification/pyrolysis technology)** can be found below.

It is a solution which is going to take a long time with questionable benefits.

Cost, time, effect on neighbours.

Progress unknown.

I am already overburdened as a taxpayer. I cannot anymore "feel good" projects.

Prefer other options.

Costly and could make climate change worse.

I have concerns about the long timeline and costs associated with this use/application of biosolids.

If this is going to be similar to coal then you're getting negative emissions - not in favour of that at all. We're mostly away from coal and working to eradicate it, not find a new way to add it.

It is costly and not necessary. We should be selling as fertilizer.

They contain poop.

It doesn't sound super great for the environment.

Unproven technology that seems to carry a very high price tag.

It seems like just a different and possibly expensive way to produce another carbon emitting fuel source.

Not sure the process and all of its effects have been properly studied.

It takes too darn long to get there and too darn many money when compared to other options available, not to mention the fact that there is no experience in Canada using this. Plus, there may be other factors, like, where such a facility be build? I can see locals fighting against such a facility for various reasons.

Current level of use.

Base: Sampling of those opposed
Q11A. What is the main reason why you oppose this use of biosolids?

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Reasons Oppose Use of Biosolids for Advanced Thermal (Gasification/Pyrolysis Technology) (verbatim comments) (slide 2 of 3)

- Verbatim comments provided by those opposed to the use of biosolids for **advanced thermal (gasification/pyrolysis technology)** can be found below.

Time and cost.

Unhealthy.

Too expensive if it reaches $4500.

Not cost-effective and requires too much resources for beneficial results.

This is the most expensive option so far. Whatever is the least cost is what I would prefer.

Too expensive.

Potential cost.

It seems like an expensive way to produce another carbon emitting fuel source.

Burning gas is still pollution.

Need more information and research.

It doesn't seem super environmentally friendly.

Seems costly compared to some of the other options.

Far too expensive.

*COST!!!

Reasons Oppose Use of Biosolids for Advanced Thermal (Gasification/Pyrolysis Technology) (verbatim comments) (slide 3 of 3)

- Verbatim comments provided by those opposed to the use of biosolids for **advanced thermal (gasification/pyrolysis technology)** can be found below.

- *Unknown costs.*
- *Cost, and availability of alternatives.*
- *Cost/benefit bad.*
- *Too much cost and investment, cost benefit analysis is not stated.*
- *Cost and length of time to implement.*
- *Cost and potential of going excessively over budget.*
- *Contaminants.*
- *If there are non carbon producing options, why make a polluting one.*

Base: Sampling of those opposed
Q11A. What is the main reason why you oppose this use of biosolids?

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COMMUNICATION 3.3

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Best Ways to Keep Informed about Topic

- TV news is the number one best way to keep residents informed about this topic, but several other methods are also desired by many residents.



56%	48%	45%	43%	35%	5%	4%
TV NEWS	WEBPAGE	NEWSPAPER	CRD SOCIAL MEDIA	RADIO	OTHER	DON'T KNOW

Base: All respondents (n=516)
Q12. What is the best way to keep you informed about this topic in future?

 © Ipsos

Best Ways to Keep Informed about Topic (by Demos)

- Older residents are less interested in keeping informed by CRD social media and radio.
- Core are residents and men are less interested in keeping informed by radio.

Total Familiar (Extremely + Moderately)

	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	348	168	99	171	246	237	276
TV news	56%	56%	57%	61%	52%	57%	58%	55%
Webpage	48%	47%	49%	52%	48%	45%	47%	47%
Newspaper	45%	46%	42%	43%	45%	46%	42%	47%
CRD social media	43%	42%	44%	54%	57%	26%	41%	44%
Radio	35%	31%	40%	39%	43%	27%	29%	41%

Statistically higher **Statistically lower**

Base: All respondents (n=516)
Q12. What is the best way to keep you informed about this topic in future?

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FINAL COMMENTS

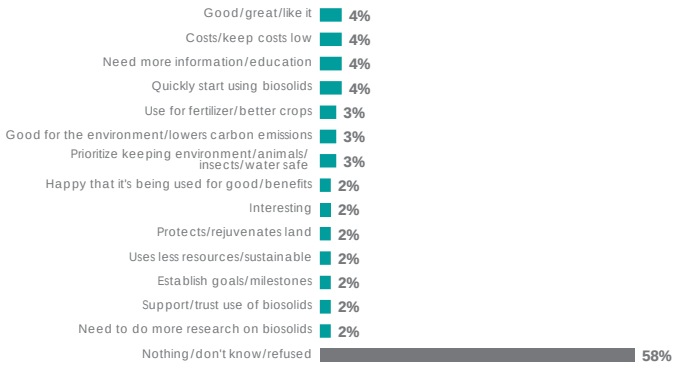
3.4

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Final Comments

- Most survey respondents had no final comments or suggestions for the CRD on this topic.





Mentions <2% not shown.
Base: All respondents (n=516)
Q13. Do you have any final comments about biosolids and the potential uses being considered by the CRD?

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WEIGHTED SAMPLE CHARACTERISTICS 4

Weighted Sample Characteristics

GENDER	
Male	47%
Female	52%
Another gender	1%
AGE	
18-24	7%
25-34	19%
35-44	18%
45-54	13%
55-64	17%
65+	28%
OWN/RENT	
Yes	68%
No	31%
Prefer not to answer	2%
OWN BUSINESS	
Yes	11%
No	87%
Prefer not to answer	2%

COMMUNITY	
Central Saanich	6%
Colwood	4%
Esquimalt	3%
Highlands	2%
Juan de Fuca	0%
Langford	11%
Metchosin	2%
North Saanich	3%
Oak Bay	2%
Saanich	26%
Salt Spring Island	3%
Sidney	4%
Sooke	5%
Southern Gulf Islands	1%
Victoria	26%
View Royal	2%

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Game Changers

In our world of rapid change, the need for reliable information to make confident decisions has never been greater.

At Ipsos we believe our clients need more than a data supplier, they need a partner who can produce accurate and relevant information and turn it into actionable truth.

This is why our passionately curious experts not only provide the most precise measurement, but shape it to provide True Understanding of Society, Markets and People.

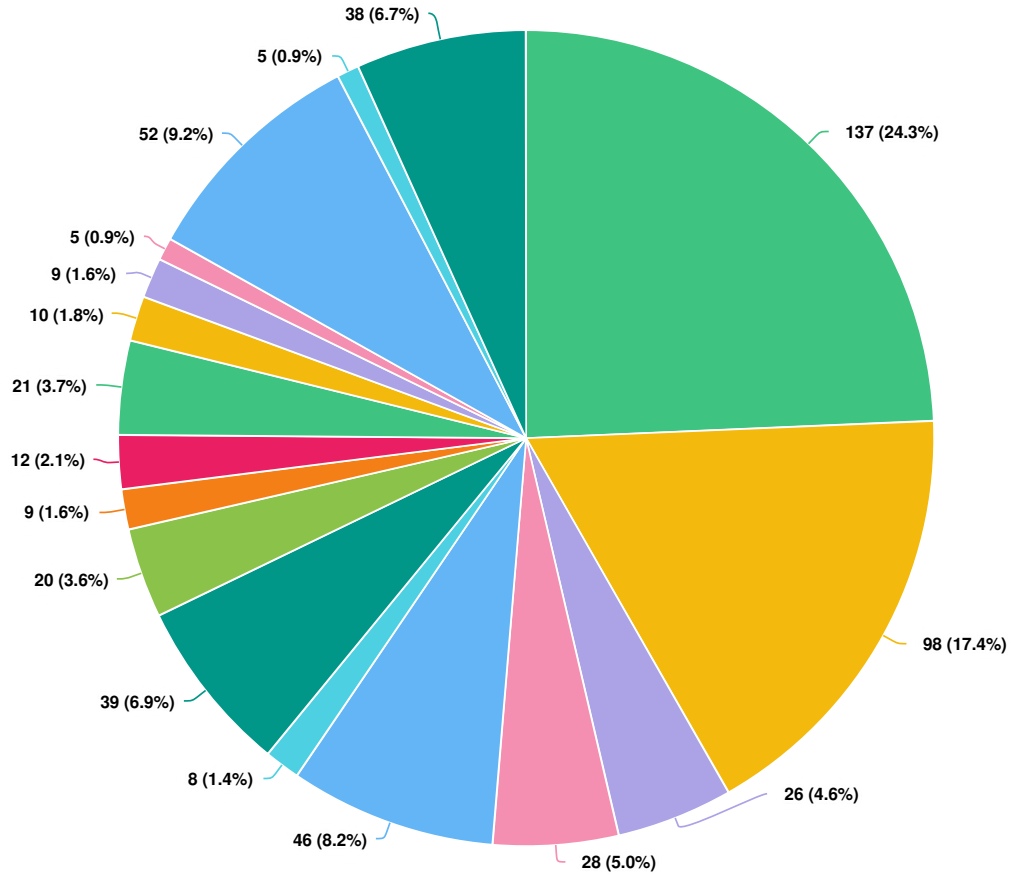
To do this we use the best of science, technology and know-how and apply the principles of security, simplicity, speed and substance to everything we do.

So that our clients can act faster, smarter and bolder. Ultimately, success comes down to a simple truth:
You act better when you are sure.

CRD Online Survey

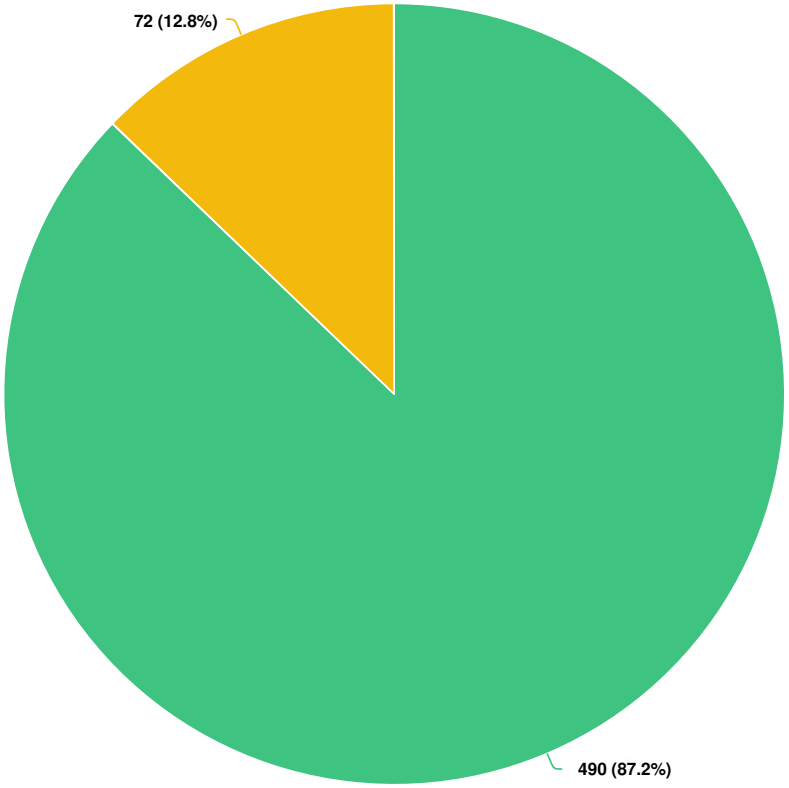
569 people participated in the online survey between January 11 and March 6, 2024. The survey was hosted on the CRD's ***www.GetInvolved.crd.bc.ca*** engagement platform. The highest participation was experienced timed with the survey launch, media coverage and promotion by a third-party non-profit organization, Creatively United.

Question #1 – *Where do you live?*



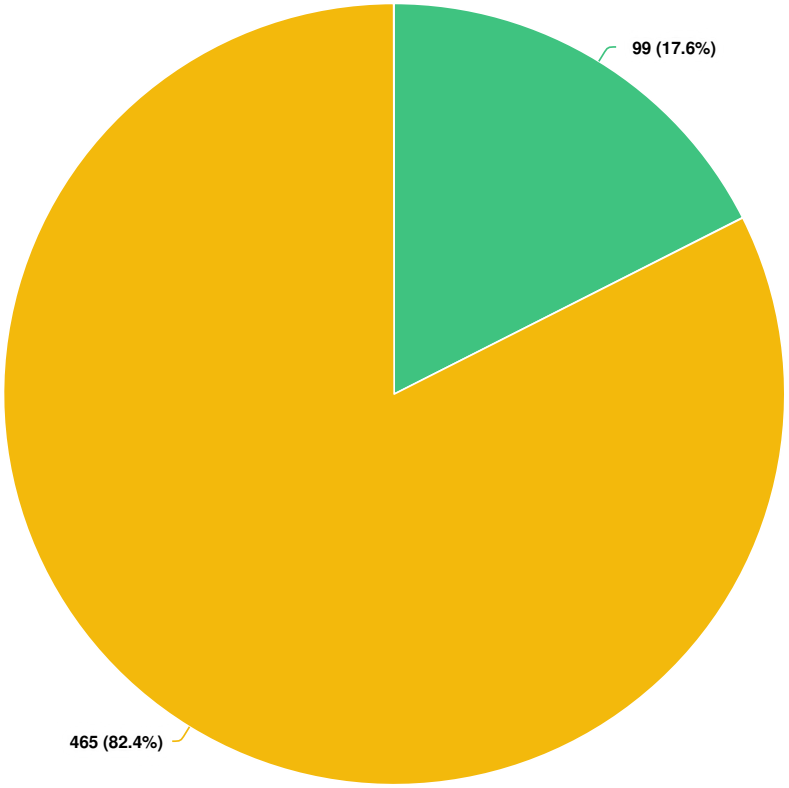
Optional question (562 response(s), 7 skipped)
Question type: Dropdown Question

Question #2 – *Do you own or rent your home?*



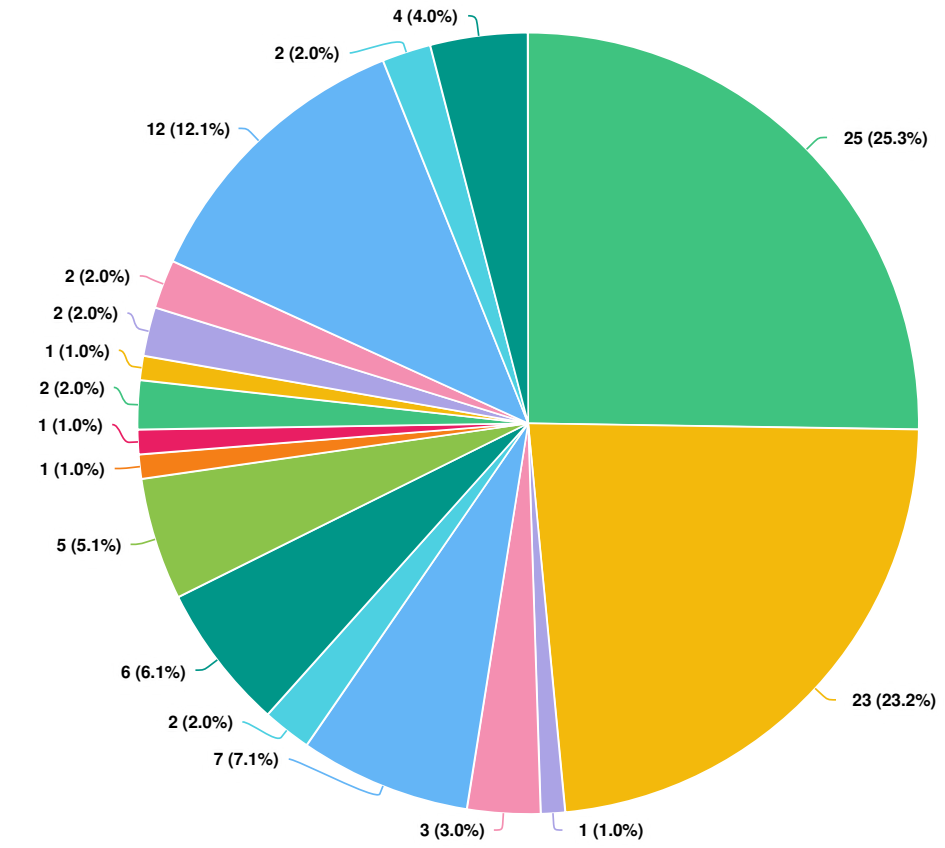
Optional question (561 response(s), 8 skipped)
Question type: Radio Button Question

Question #3 – *Do you own a business in the capital region?*



Optional question (563 response(s), 6 skipped)
Question type: Radio Button Question

Question #4 – *Where is your business located?*



Question options

Saanich · Victoria · Langford · Oak Bay · Esquimalt · Colwood · Central Saanich · Sooke · Sidney · North Saanich · View Royal · Metchosin · Highlands · Salt Spring Island · Juan de Fuca · Southern Gulf Islands · Other (please specify)

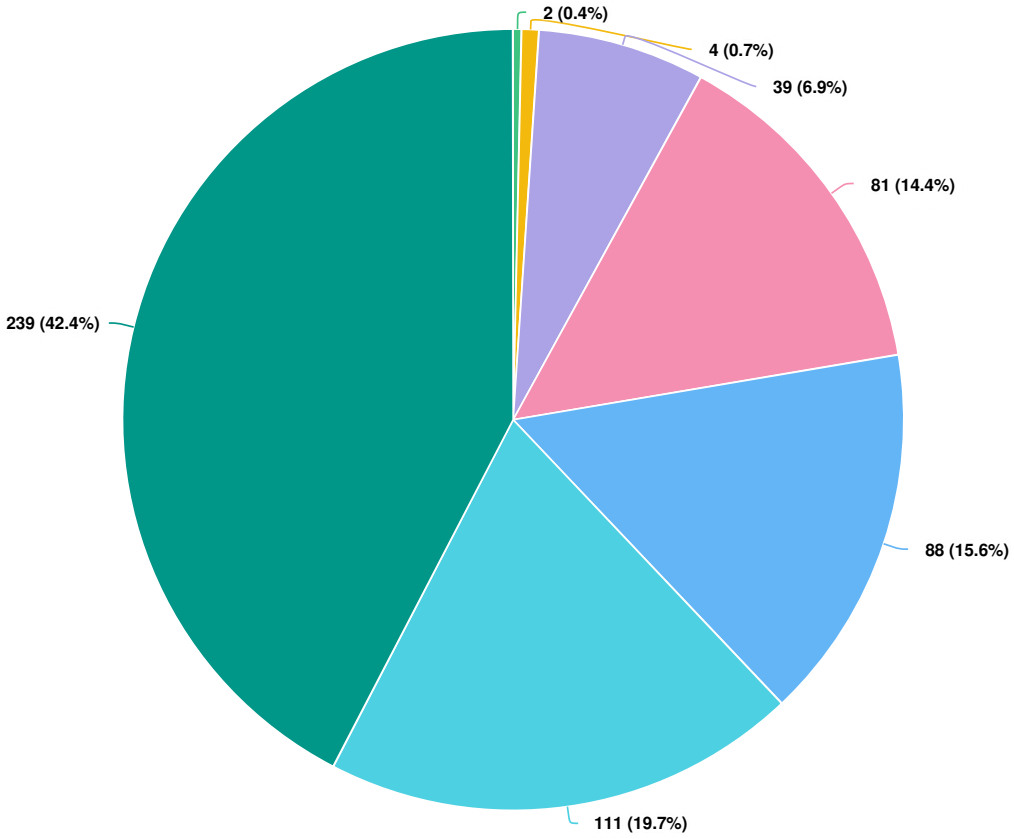
Optional question (99 response(s), 470 skipped)
Question type: Dropdown Question

Question #5 – *How familiar are you with the following topics?*



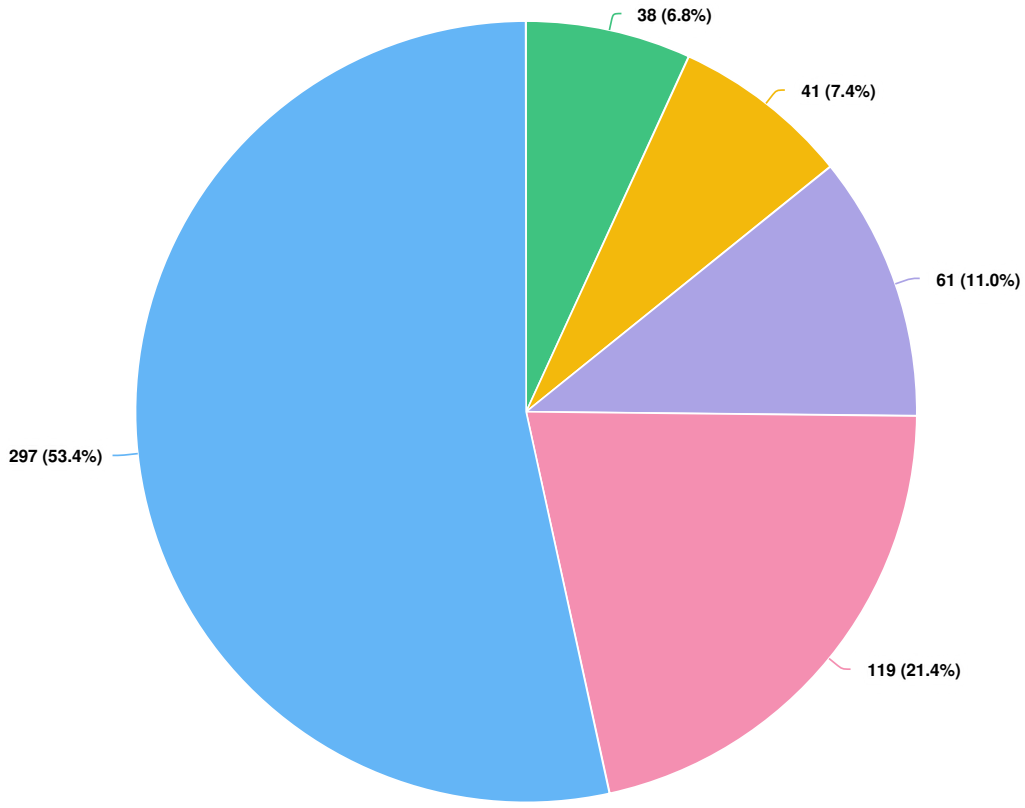
Optional question (562 response(s), 7 skipped)
Question type: Likert Question

Question #6 – *What is your age range?*



Optional question (563 response(s), 6 skipped)
Question type: Radio Button Question

Question #7 – *How important is it to you how biosolids are maximized for community benefit?*



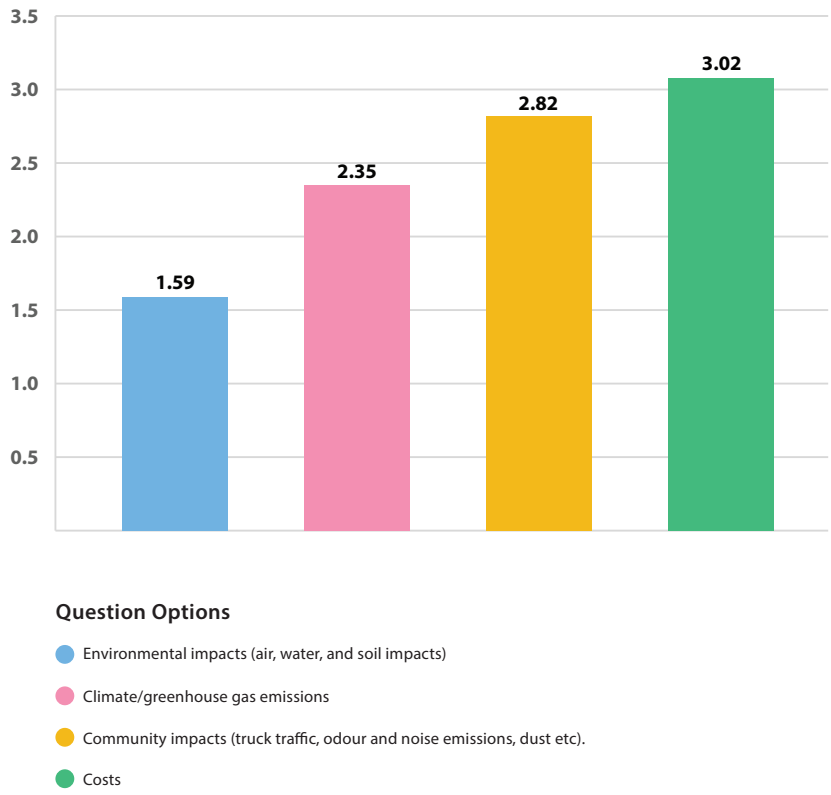
Optional question (555 response(s), 14 skipped)
Question type: Radio Button Question

Question #8 – *Please explain why you chose that level of importance.*

Top mentions included:

- Biosolids should be managed responsibly for the long-term, taking into consideration environment and health. Some respondents also noted costs.
- Land application options are not "beneficial" due to potential risks.
- Biochar/advanced thermal options are the most effective method to reduce risks of biosolids.
- Biosolids should not be landfilled/buried.
- Some respondents feel "beneficial use" is a subjective term.
- Some respondents who felt biosolids should be utilized as a resource mentioned circular economy.

Question #9 – *When planning for the beneficial uses of biosolids, how important are the following considerations to you? Please rank in order of importance (1 being most important – 4 being least important).*



Optional question (552 response(s), 17 skipped)
Question type: Ranking Question

Question #10 – *Please indicate your level of support for the following potential uses.*



Optional question (563 response(s), 6 skipped)
Question type: Likert Question

Question #11 – *What specifically interests you about the potential benefits biosolids can offer?*

Top mentions include:

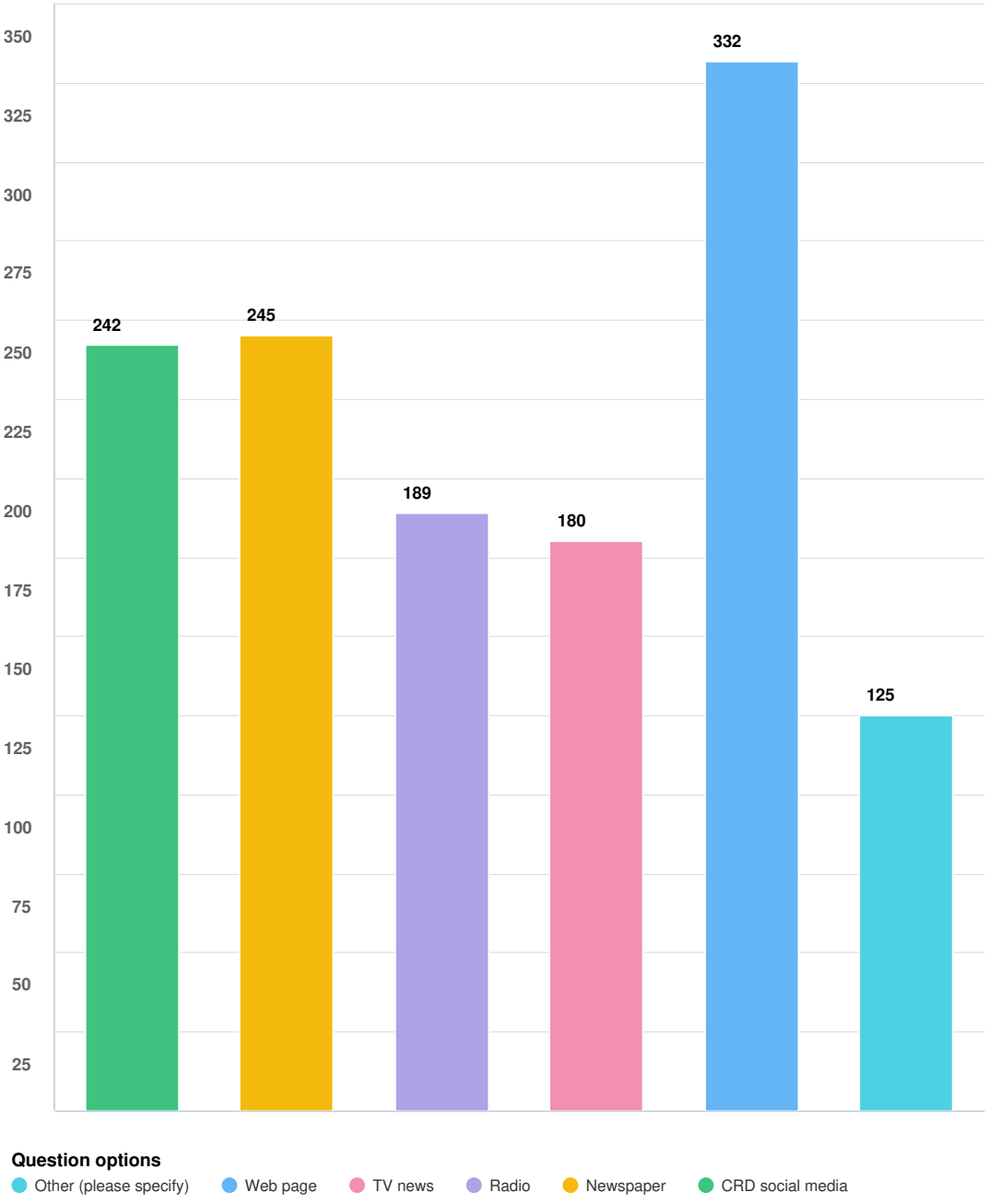
- Biosolids have no benefit unless converted to biochar.
- Some felt biosolids could benefit soils as various forms of fertilizer or soil amendment.
- Some felt it is important to reuse/reduce/recycle waste in a responsible manner.

Question #12 – *Do you have any specific concerns about the beneficial use of biosolids?*

Top mentions included:

- Concern about the toxicity, level of contaminants and specifically Per- and polyfluoroalkyl substances [PFSAs]/forever chemicals.
- Risk [of land application] to environment and plants.
- Biosolids need to be treated.
- Biochar/advanced thermal options are the only beneficial use.

Question #13 – ***What is the best way to keep you informed about this topic in future? Check all that apply.***



Optional question (558 response(s), 11 skipped)
Question type: Checkbox Question

Question #14 – *Is there anything more you wish you knew about biosolids, and the options being considered? [n=325]*

Top mentions included:

- More detail about plans, progress, and timelines towards piloting advanced thermal options.
- More information about the testing, scientific research and risks associated with land applying biosolids.
- Costs benefit analysis of options.
- Feasibility, experience, and case studies of various options in other jurisdictions.

Open House – Tuesday, February 20, 2024

56 people [of 99 who RSVP'd] participated in the two-hour virtual open house. The open house was an opportunity for the CRD staff and technical consultants to present background information, outline the process and Provincial regulatory requirements for the beneficial use of biosolids, as well as the beneficial-use options being explored.

Attendees were invited to ask questions of the staff and consultants. Questions were moderated by communications consultant Jim Beatty and posed to the panel of Glenn Harris, Senior Manager, Environmental Protection, Peter Kickham, Manager, Regulatory Services, Environmental Protection Division, and GHD Technical Consultant Deacon Liddy. Over 100 questions were submitted during the two-hour session. Attendees were encouraged to provide feedback through the CRD's online survey or ***biosolids@crd.bc.ca***

Key themes:

- Many questions were related to the testing, regulations, and environmental and health risks associated with land application [e.g., metals, microplastics, Per- and polyfluoroalkyl substances] and whether the CRD has considered the associated scientific literature and experience of other jurisdictions.
- Some questions were related to legal liability of land application
- Some questions were about the open house format [e.g., virtual, moderated questions] and status of indigenous engagement.



Watch the recording of the Long-Term Biosolids Management Plan Open House held Tuesday, February 20, 2024: ***Harnessing the Benefits of Biosolids - Virtual Open House (youtube.com)***

Correspondence to the CRD Board of Directors – January 11 – March 6, 2024

24 letters were submitted to the CRD Board between January 11 and March 6, 2024.

Letters were received from individual residents and the following organizations:

- Biosolids Free BC
- Butchart Gardens
- Creatively United for Planet Society
- Friends of Tod Creek
- Mount Work Coalition
- Peninsula and Area Agricultural Commission
- Peninsula Biosolids Coalition
- Peninsula Streams
- Regional District of Nanaimo [RDN]
- Saanich Inlet Protection Society

The majority of correspondence noted risks associated with land application and encouraged the CRD Board to uphold the existing land application ban.

Many letters noted the need to refer to studies and literature about the risks of contaminants such as microplastics and PFAS in biosolids that should be considered.

Some letters noted concern with the consultation process and emphasized the need for greater emphasis on the risks associated with land application and the existing land application ban.

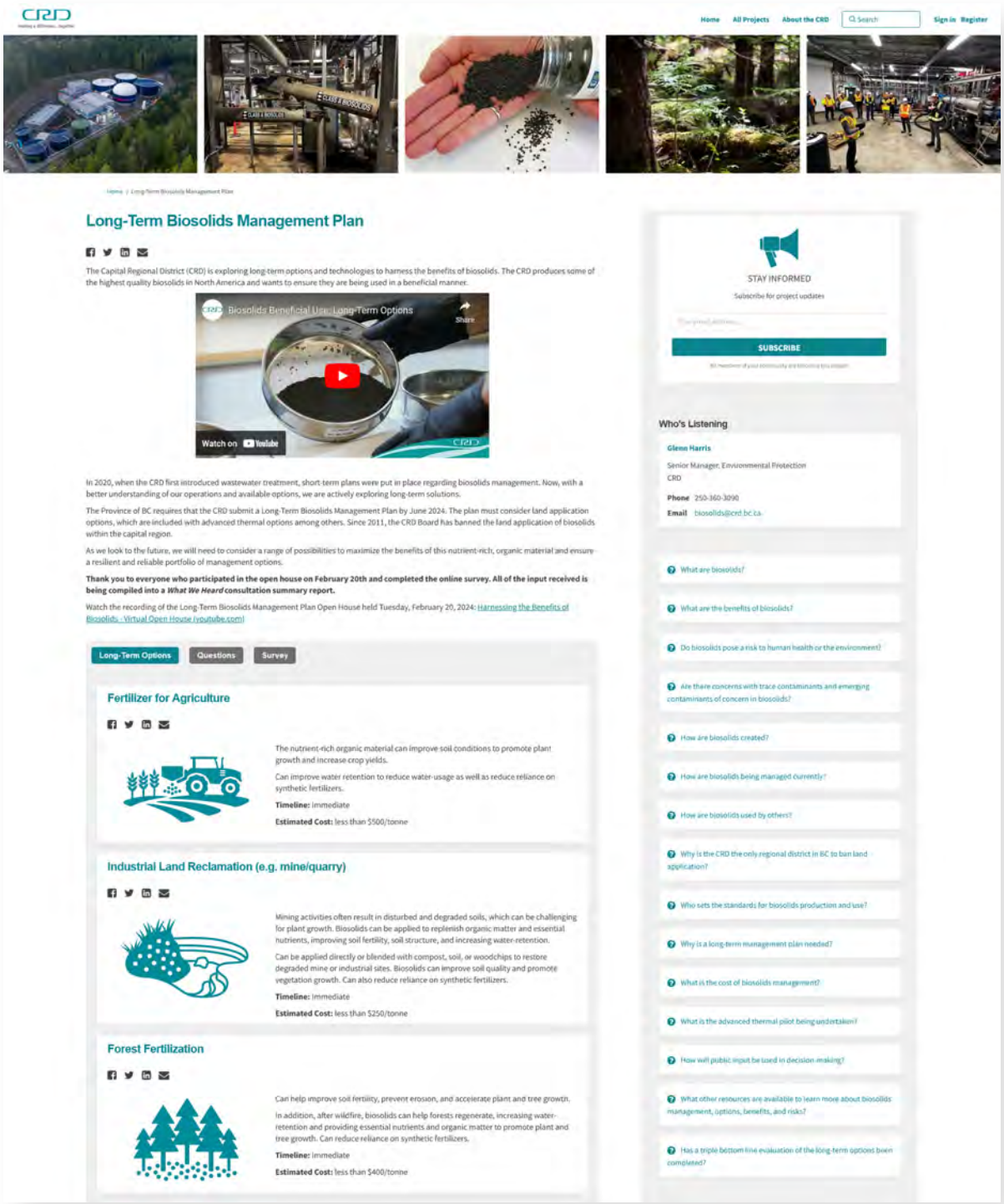
Some letters expressed support for thermal processing of biosolids.

NEXT STEPS

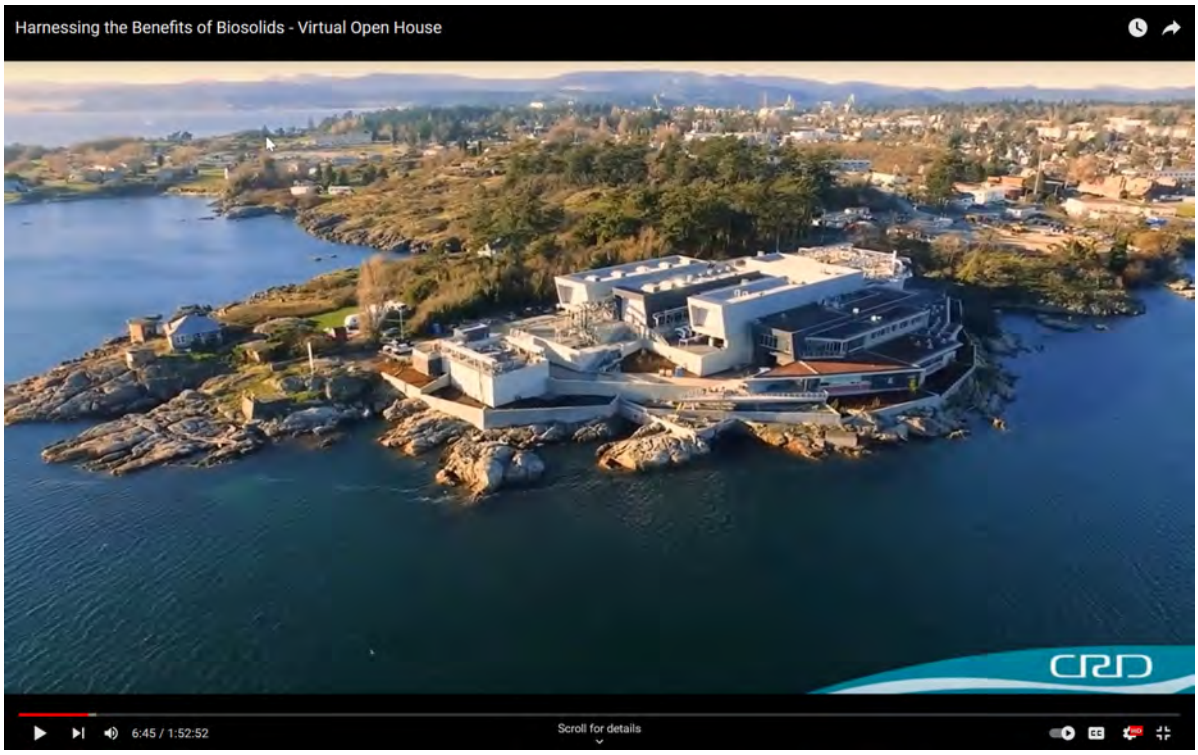
This ***What We Heard*** consultation summary report will be presented to the Technical and Community Advisory Committee [Core Area LWMP] and the CRD Board for Directors in Spring 2024 to inform the development of a long-term biosolids management plan that will be submitted to the Ministry of Environment and Climate Change Strategy. It will also be posted on the project website at ***getinvolved.crd.bc.ca***.

APPENDICES

Webpage Screenshot



Overview Video



Watch the overview video: ***Biosolids Beneficial Use: Long-Term Options (youtube.com)***

Media Release

Making a difference...together

Media Release

For Immediate Release
January 11, 2024

Community consultation begins to determine best use for Biosolids

Victoria, BC- Public consultation is underway as the Capital Regional District (CRD) considers long-term options and technologies to harness the benefits of biosolids, the nutrient-rich by-product from wastewater treatment.

Currently, the region's biosolids are largely being landfilled under emergency measures, while some are beneficially used to offset fossil fuels or for mine reclamation. The CRD is obligated as part of regulatory commitments to find a long-term solution.

"Biosolids are a valuable resource which we must use to benefit our region," said CRD Board Chair Colin Plant. "Public and First Nations consultation will help us shape a sustainable, long-term solution for biosolids management that aligns with our regulatory requirements."

The provincial government requires the CRD to file a long-term plan outlining the beneficial uses for biosolids by Spring 2024.

Biosolids are the by-product of the region's wastewater treatment processes and must meet stringent environmental standards. The CRD produces the highest quality biosolids obtainable, known as "Class A" biosolids. They meet or exceed rigorous provincial standards regarding pathogens and heavy metals to ensure the protection of human and environmental health.

"It's not a topic most people are talking about around the water cooler but it's very important to our region," said CRD Director Barbara Desjardins, Chair of the CRD's Environmental Services Committee. "Our role is to determine how to best maximize the community benefits of this organic by-product. In 2011, prior to introducing wastewater treatment in the core area, the CRD Board of Directors passed a biosolids land application ban based on the concerns of members of the public. However, the province requires that land application options be considered along with the other options the CRD is exploring, including advanced thermal options."

Biosolids can help improve soil fertility, prevent erosion, and accelerate tree and plant growth. Some communities use biosolids as forest fertilizer or to reclaim industrial lands such as mines. Others use it on lawns, golf courses, municipal boulevards and in agriculture, such as orchards, to promote plant growth and reduce reliance on synthetic fertilizers.

Biosolids can also be thermally processed and used as fuel, reducing the requirement for non-renewable fuels such as coal or natural gas. A small percentage of CRD biosolids have been sent to a cement kiln in Richmond but this is not regarded as a reliable long-term option as the facility has had operational difficulties.

Biosolids are commonly used in beneficial ways in communities across North America. In British Columbia., nearly every large community uses biosolids as fertilizer or in compost and biosolids are commonly found in lawn products sold at local retailers.

The public consultation process includes educational videos and materials, an online open house, a statistically valid survey, and an online survey that is open until Friday, March 6, 2024. A Community and Technical Advisory Committee, which includes public representatives as well as those from each of the core municipalities, has been engaging on this topic since October 2023.

To learn more, the public can visit https://getinvolved.crd.bc.ca/biosolids or call Glenn Harris, Senior Manager of Environmental Protection, at 250-360-3090.

The CRD delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and government partners to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure while continuing to provide core services to residents throughout the region. Visit us online at www.crd.bc.ca.

-30-

For media inquiries, please contact:
Andy Orr, Senior Manager
CRD Corporate Communications
Tel: 250.360.3229
Cell: 250.216.5492
Facebook | X | Instagram | LinkedIn | www.crd.bc.ca

Letter

Making a difference...together

Parks & Environmental Services
625 Fisgard Street, PO Box 1000
Victoria, BC, Canada V8W 2S6

T: 250.360.3078
F: 250.360.3079
www.crd.bc.ca

February 15, 2024

File: 0220-20
Correspondence

RE: PUBLIC CONSULTATION TO SHAPE THE LONG-TERM BIOSOLIDS MANAGEMENT PLAN

The Capital Regional District (CRD) is actively exploring long-term options and technologies to harness the benefits of biosolids. The CRD produces high quality Class A biosolids and wants to ensure they are being used in a beneficial manner.

A Long-term Biosolids Management Plan is required by the Province of BC and must outline how biosolids generated in the capital region will be managed for community benefit. In 2020, when the CRD first introduced wastewater treatment, biosolids short-term management plans were put in place. Now, with a better understanding of our operations and available options, we are actively exploring long-term solutions.

The Province of BC requires that the CRD submit a Long-term Biosolids Management Plan by June 2024. The plan must consider land application options, as part of the beneficial use options analysis. Landfilling biosolids has been used as an emergency measure. However, it wastes valuable space in the landfill and does not meet provincial requirements for beneficial use of biosolids. It is not being considered as a long-term option. The CRD is moving ahead with a pilot of thermal technologies for managing biosolids. However, if successful, it will still be 7-10 years before it can be utilized as a long-term option. Since 2011, the CRD Board has banned the land application of biosolids within the capital region. In 2023, due to on-going challenges with existing options, the CRD Board amended the policy to allow for non-agricultural application of biosolids as a short-term contingency alternative. The Province of BC requires that the consultation process consider all options that meet beneficial use criteria as defined by regulatory guidance.

As we look to the future, we will need to explore a range of possibilities to maximize the benefits of biosolids. We invite you to learn more and share your ideas. Building on the involvement of the Technical and Community Advisory Committee since October 2023 and First Nations consultation, the public consultation process involves a range of opportunities from January to March 2024, including:

- Project Website: https://getinvolved.crd.bc.ca/biosolids
- Virtual Open House – Tuesday, February 20, 2024. Pre-registration required at https://us06web.zoom.us/webinar/register/WN_OJ4RQavWRZiEn8T3wS4K6g
- Provide written feedback by email: biosolids@crd.bc.ca
- Online Survey open until Friday, March 6, 2024 - Long-Term Biosolids Management Plan | Get Involved CRD

Learn more about biosolids and the different beneficial options being considered and opportunities to provide input at https://getinvolved.crd.bc.ca/biosolids. A Summary Consultation Report will capture “What We Heard” throughout the process and will be shared online.

ENVS-1852788916-307

We welcome your participation in this process and look forward to hearing from you. If you have any questions, please contact me at biosolids@crd.bc.ca.

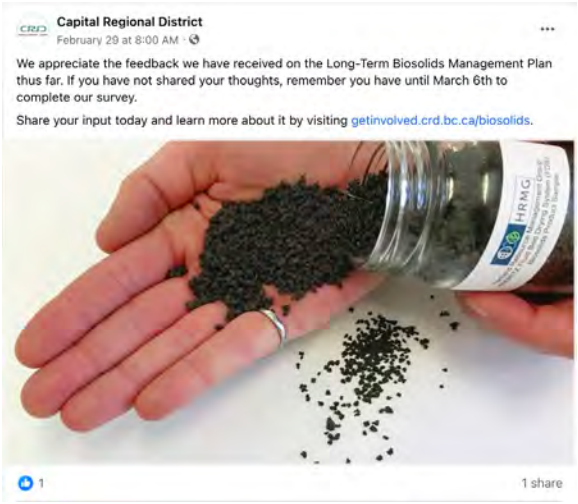
Sincerely,

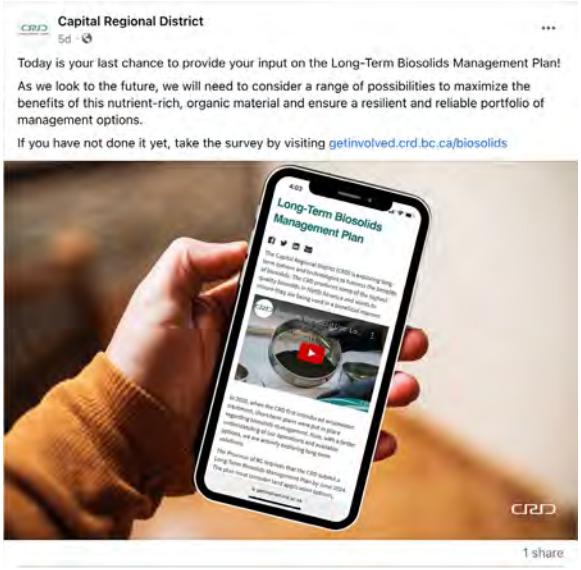


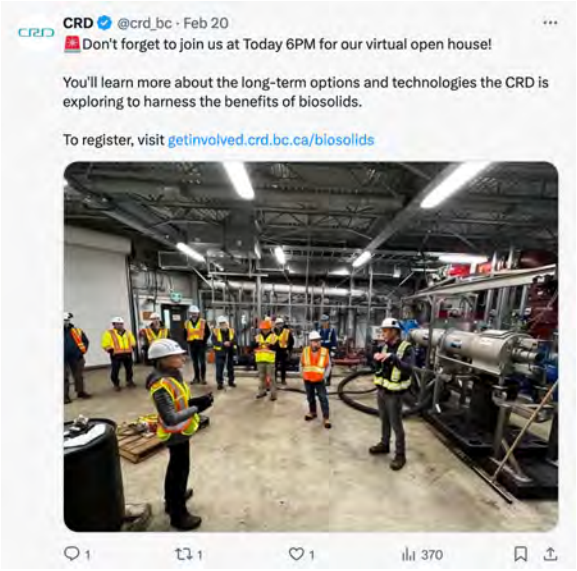
Glenn Harris, Ph.D., R.P.Bio.
Senior Manager, Environmental Protection

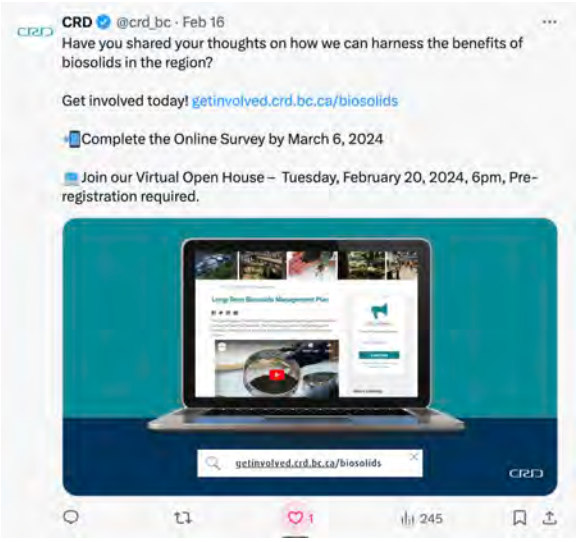
Attachment: Harnessing the Potential of Biosolids Fact Sheet

Social Media







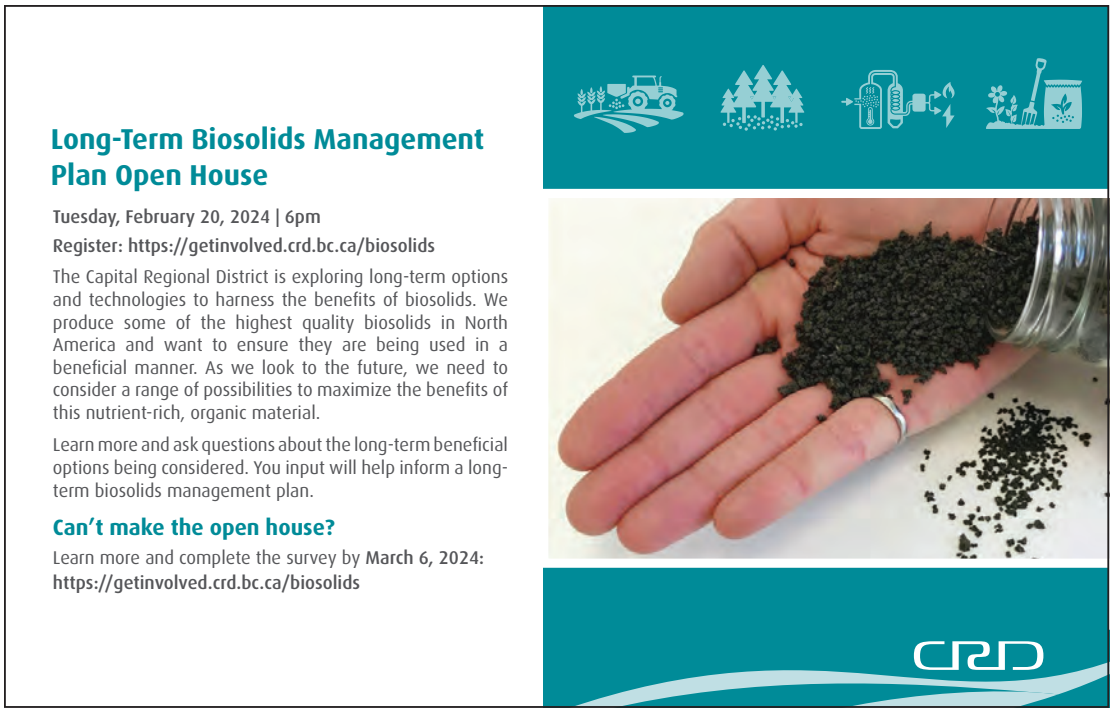


Print Advertising

Right: 3.8" x 7" ad that ran in Black Press: publications on Vancouver Island.

Below: 8.4" x 5.4" ad that ran in Victoria's Times Colonist.





Fact Sheet

Harnessing the Potential of Biosolids

Making a difference...together

Fact Sheet

Capital Regional District | **January 2024**

The CRD is exploring long term options and technologies to harness the benefits of biosolids. The CRD produces some of the highest quality biosolids in North America and wants to ensure they are being used in a beneficial manner.

In 2020, when the CRD introduced wastewater treatment for the core area municipalities and Songhees and Esquimalt First Nations, we implemented a 5-year, short-term plan. Now, with a better understanding of both our operations and available options, we are developing a long-term plan to move us forward into the future.

What Are Biosolids?

Biosolids are the nutrient-rich by-product of wastewater treatment. They contain nutrients, energy, and organic matter that can be recycled and used in various ways. The most common use is as fertilizer to promote tree and plant growth and as a soil additive to restore degraded industrial lands. Other emerging options may include harnessing energy contained in biosolids through thermal (heating) processes to use as an alternative fuel.



CRD biosolids are dark, dry granular pellets. Approximately 3,300 tonnes of Class A biosolids are generated in the CRD each year. CRD biosolids surpass all provincial standards. This is due to the limited heavy industry in Greater Victoria, the highest standards of sewage treatment, and robust source control programs that prevent metals and other contaminants from ever entering the wastewater system.

Benefits of Biosolids

Biosolids contain important nutrients such as nitrogen, phosphorus, calcium, sulphur, and iron. Benefits include:

- *Adds organic matter and plant nutrients to enrich soil*
- *A natural alternative to synthetic (chemical) fertilizers*
- *Stores carbon in soil and decrease greenhouse gas emissions*
- *Increases soil water retention*
- *Can be mixed with wood chips or yard waste to create compost*
- *Can be used to create alternate fuel*



For generations, biosolids have been safely used around the world by farmers, landscapers, and foresters. More recently in other countries, biosolids have been used in thermal (heating) processes to generate alternate energy sources. Biosolids are commonly used within communities across Canada. In fact, many common bagged fertilizers and soil products sold at local hardware stores and retailers contain biosolids.

How Are Biosolids Being Managed Currently?

Presently, the CRD's biosolids are largely being landfilled as an emergency measure, which does not meet provincial requirements. Further, it is exacerbating a capacity problem at the Hartland Landfill which is filling up at an accelerated rate. In 2011, prior to introducing wastewater treatment, the CRD Board passed a biosolids land application ban based on the concerns of members of the public. The ban remains in place today. Due to limited viable options, short-term exceptions were made for land cover application at Hartland Landfill in 2020 and for non-agricultural, out-of-region land application options in 2023.

Presently, the CRD's biosolids are mostly being landfilled because of challenges with the short-term options, which do not meet provincial requirements. The CRD is currently investigating a pilot study of thermal technologies for managing biosolids. However, if successful, it will still be 7-10 years before it can be utilized as a long-term option.

The Province of BC requires that the current consultation process consider land application options, which are included with advanced thermal options. Any options that don't meet beneficial use criteria will not be included. Landfilling biosolids has been used as an emergency measure. It wastes valuable space in the landfill and does not meet provincial requirements for beneficial use of biosolids.

Who Sets the Standard for How Biosolids Are Managed?

The BC Ministry of Environment and Climate Change Strategy and federal Environment and Climate Change Canada set the standards for wastewater treatment. Regional districts in BC are legally required by the Province to find beneficial uses for biosolids.

Class A biosolids must meet regulatory requirements under the Provincial Environmental Management Act and Organic Matter Recycling Regulation. These stringent requirements outline maximum allowable levels of pathogens and heavy metals to ensure protection of human health and the environment. They also provide strict controls on how and where biosolids may be used.





The Options

As we look to the future, a range of options must be explored. The CRD is exploring all options to use biosolids in ways that are increasingly beneficial for the environment. The CRD is committed to smart, innovative solutions that help reduce greenhouse gas emissions. We need to pursue a variety of options. The Province of BC requires that the CRD submit a Long-Term Biosolids Management Plan by June 2024. The plan must consider land application options, which are included with advanced thermal options among others.

OPTION	BENEFITS	TIMELINE	ESTIMATED COSTS *(per tonne)*	
Industrial Land Reclamation (e.g., mines or quarries) 	Mining activities often result in disturbed and degraded soils, which can be challenging for plant growth. Biosolids can be applied to replenish organic matter and essential nutrients, improving soil fertility, soil structure, and increasing water-retention. Can be applied directly or blended with compost, soil, or woodchips to restore degraded mine or industrial sites. Biosolids can improve soil quality and promote vegetation growth. Can also reduce reliance on synthetic fertilizers.	Immediate	<$250/tonne	LAND-BASED OPTION
Fuel for Incineration / Combustion (e.g., for cement kilns) 	Biosolids are burned or used as an alternative fuel to power facilities, such as cement kilns and pulp mills, reducing reliance on other non-renewable sources like coal or natural gas.	Limited facilities available. The CRD currently utilizes this technology at a plant in Richmond. In-region options are not available.	<$500/tonne	THERMAL OPTION
Forest Fertilization 	Can help improve soil fertility, prevent erosion, and accelerate plant and tree growth. In addition, after wildfire, biosolids can help forests regenerate, increasing water-retention and providing essential nutrients and organic matter to promote plant and tree growth. Can reduce reliance on synthetic fertilizers.	Immediate	<$400/tonne	LAND-BASED OPTION
Pyrolysis or Gasification Technology (to create biochar/gas) 	Biosolids are heated (using little or no oxygen) to make a gas or "biochar". The gas created can be used to produce heat or electricity. Biochar is a type of charcoal that is made from organic material. It can be used as a soil additive to improve soil fertility and enhance water retention.	7-10 years for permitting, siting and construction of a permanent facility. Advanced thermal technology is not currently used for processing biosolids in Canada.	$500-$4,500 /tonne	THERMAL OPTION

OPTION	BENEFITS	TIMELINE	ESTIMATED COSTS *(per tonne)*	
Bagged Fertilizer for Residential Use 	The nutrient-rich organic material is bagged and distributed as fertilizer for residential use. Can also be blended with soil, compost or wood chips and made available for residential use. Can improve water retention to reduce water-usage as well as reduce reliance on synthetic fertilizers	Immediate	<$500/tonne	LAND-BASED OPTIONS
Fertilizer for Agriculture 	The nutrient-rich organic material can improve soil conditions to promote plant growth and increase crop yields. Can improve water retention to reduce water-usage, as well as reduce reliance on synthetic fertilizers.	Immediate	<$500/tonne	
Wholesale Fertilizer for Landscaping (e.g., lawns, boulevards, golf courses) 	The nutrient-rich organic material can improve soil conditions to promote lawn and plant growth. Can improve water retention to reduce water-usage as well as reduce reliance on synthetic fertilizers.	Immediate	<$500/tonne	

Timeline

2011
- CRD Policy – no land application

2020
- Short-term Biosolids Management plan developed in 2020
- Sewage treatment introduced in 2020

2021

2022
- Technical review of long-term options from 2022 to 2023

2023

2024
- Public Engagement from December 2023 to March 2024
  - Draft Long-term Biosolids Management Plan in June 2024

Share Your Thoughts!

Email: biosolids@crd.bc.ca

Online Open House:
Date TBD

Website and Survey:
www.getinvolved.crd.bc.ca
Complete the online survey by Wednesday, March 6,2024

CRD
Making a difference...together

Capital Regional District
625 Fisgard Street, Victoria, BC V8W 1R7
250.360.3000 | www.crd.bc.ca

Open House Presentation by CRD

Long-term Biosolids Beneficial Use Open House



February 20, 2024

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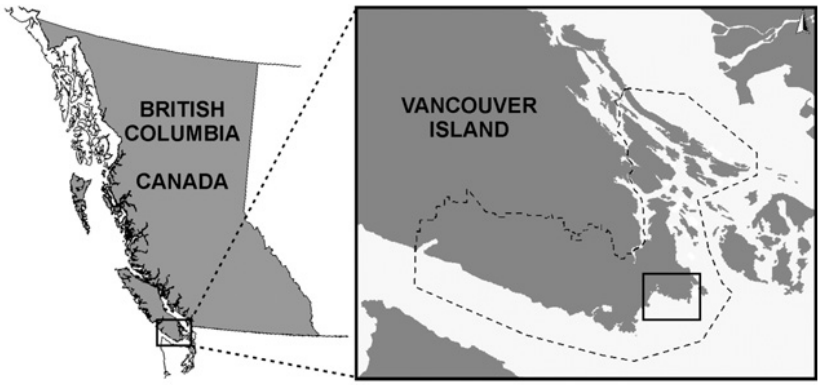
Management of Residual Wastewater Materials

CRD
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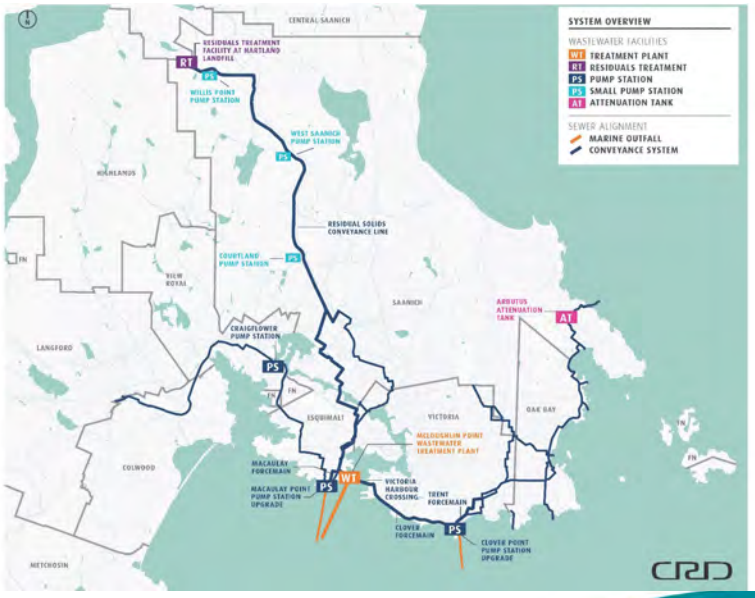
- Production and Management of Biosolids
- Status of Short-Term Biosolids Management Plan
- Technical Evaluation of Beneficial Use Options
- Development of a Long-Term Management Plan
- Questions and Answers

Capital Regional District

- The Capital Regional District (CRD) consists of 13 municipalities and 3 electoral areas.
- The CRD owns and operates seven wastewater treatment plants (WWTP), including the McLoughlin Point Wastewater Treatment Plant.



Core Area Wastewater Treatment



Regional Source Control Program

- Source control is the first step in wastewater treatment.
- Source control is about preventing and reducing contaminants at the source, before they enter the wastewater system.
- Municipal wastewater treatment plants receive discharges from households, industry and commercial sources. Our region has very minimal heavy industry.
- The CRD's source control program is designed to protect:
    1. Human (operator and public) health and safety
    1. Marine receiving environment
    2. Municipal infrastructure
    3. Treatment plants
    4. Biosolids quality



Regional Source Control Program

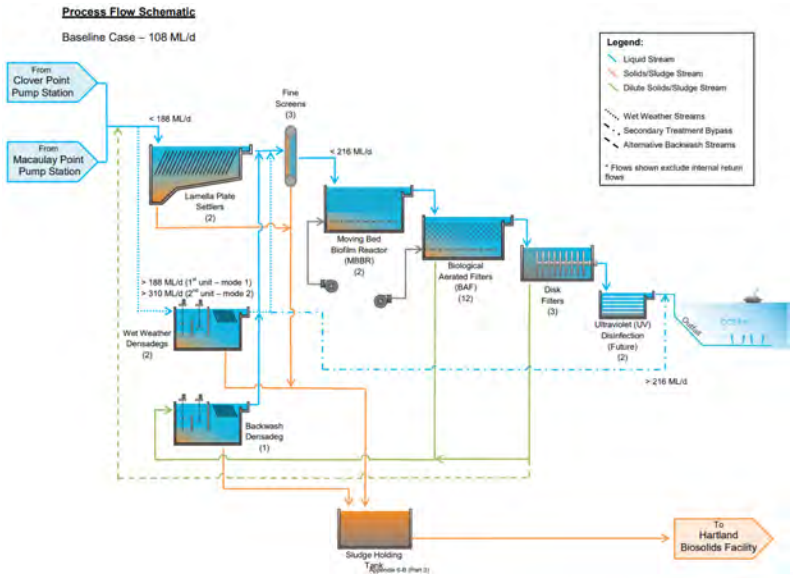
- Upstream elimination is more effective than downstream treatment.
- The CRD's source control program consists of:
    1. Regulatory inspections under the Sewer Use Bylaw for operations with potential to discharge high-strength wastewater, such as food service, breweries, dry cleaning and dental businesses.
    2. Requiring pre-treatment such as grease traps and amalgam separators.
    3. Public outreach campaigns encouraging the proper disposal of hazardous chemicals, medications, fats, oils, and greases (FOGs), and unflushable waste.



McLoughlin Point Wastewater Treatment Plant



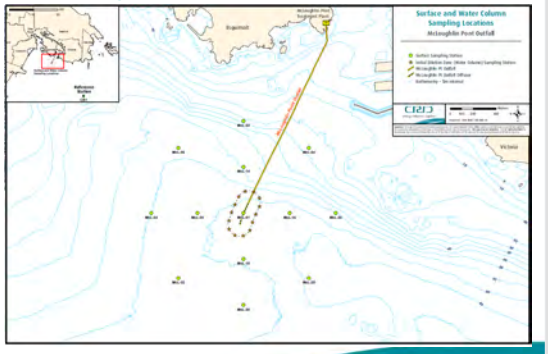
McLoughlin Point Wastewater Treatment Plant



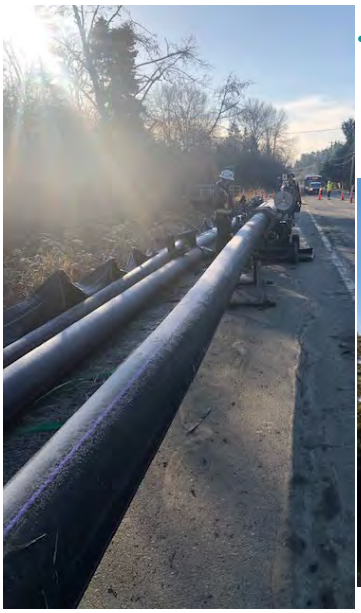
McLoughlin Point Outfall



- Effluent from the treatment plant is discharged into the ocean through a 2-kilometer-long outfall.
- The CRD regularly monitors the sediments around the outfall and the water quality both at the surface and throughout the water column.



Residual Solids Conveyance Line



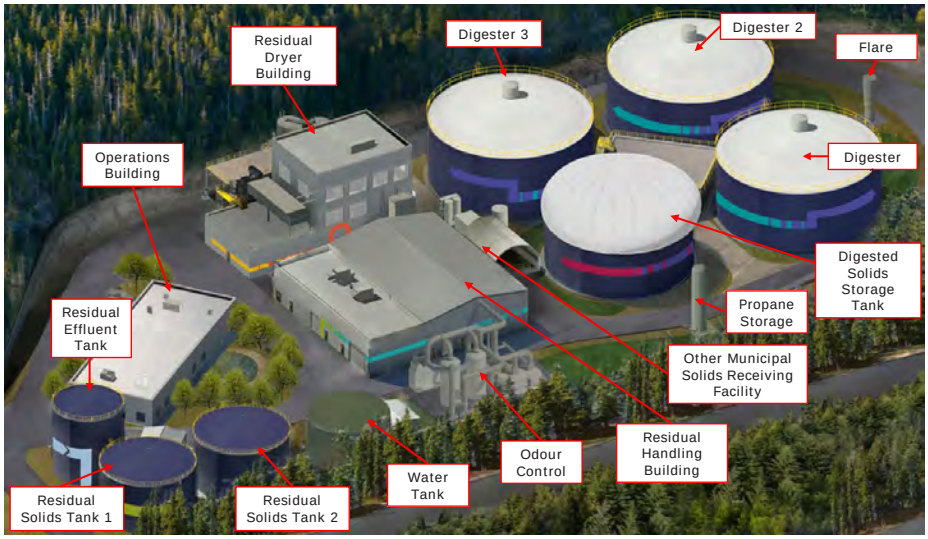
- The 18-kilometre RSCL brings residual solids from Mcloughlin Point to the Residuals Treatment Facility for further processing



Residuals Treatment Facility



Residuals Treatment Facility



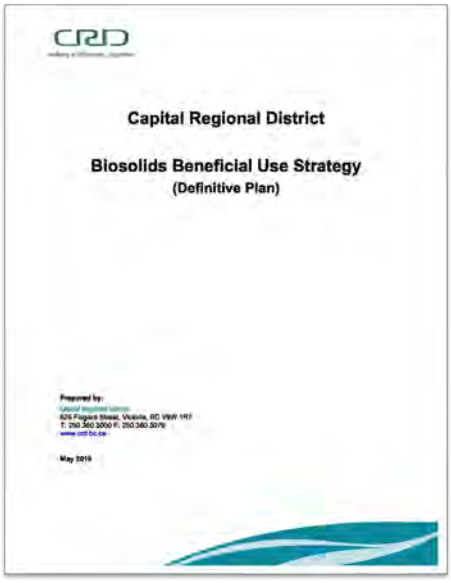
Class A Biosolids



- The RTF produces approximately 10 tonnes of dried (over 90% solids) Class A biosolids each day.
- Biosolids are tested regularly for metals and pathogens- results are posted on the CRD website.



Short-Term Biosolids Beneficial Use Strategy (2020-2025)



Capital Regional District

Biosolids Beneficial Use Strategy
(Definitive Plan)

- Developed in early 2019, before wastewater treatment began.
- Strategy consistent with the CRD policy restricting land application of biosolids.
- Conditionally approved by the Ministry of Environment in October 2019.

Short-Term Plan: Alternative Fuel

- Biosolids are shipped to a cement kiln in Richmond, and used for energy, displacing fossil fuels.
- Regular shipment of biosolids has been challenging.





Contingency Plan: Biosolids Growing Medium at Hartland Landfill



- Biosolids are mixed with sand and wood chips and applied to closed areas of the landfill to support vegetation growth and reduce methane emissions.



Alternative Contingency Plan: Quarry Reclamation

- Biosolids are used at a gravel quarry near Nanaimo to re-establish vegetation on closed parts of the quarry.





Emergency Plan: Hartland Landfill

- Biosolids have been landfilled under emergency measures much of the time due to various challenges with the short-term and contingency plans.
- Landfilling is not a beneficial use and has been prohibited by the Province.



Long-Term Biosolids Beneficial Use Strategy (2025 onward)

- Province required broad consultation.
- Must assess a range of beneficial use options including various types of land application.
- The consultation process must include citizens, local government and Indigenous Communities.



BRITISH COLUMBIA

OCT 29 2019

Colin Plant, Chair
and Directors
Capital Regional District Board
P.O. Box 1800 625 Fisgard Street
Victoria BC V8W 2S9

Dear Chair Plant and Directors:

Thank you for the June 21, 2019, submission of the Capital Regional District (CRD) Biosolids Beneficial Use Strategy, in accordance with the conditions of approval of the Core Area Liquid Waste Management Plan (CALWMP) Amendment No 11. The Strategy forms part of the CALWMP and, therefore, requires approval from the Ministry of Environment and Climate Change Strategy.

Pursuant to Section 24(3) of the *Environmental Management Act*, I hereby approve the Strategy under the following conditions:

Short Term

a) The CRD must not landfill biosolids in the event of unforeseen cement plant shutdowns;

b) By April 30, 2020, the CRD must submit for approval an updated Contingency Plan that has more fully assessed options for use of the Class A biosolids in contingency circumstances. This assessment must include scenarios under which land application could be utilized prior to landfilling; information about timing and duration of a biosolid cement plant shutdown; and an estimate of unscheduled shutdown duration and frequency based on operational history is required.

c) By June 1, 2021, the CRD must submit an updated Net Energy Balance Assessment and Greenhouse Gas Emissions Estimate;

Long Term

a) The CRD must include land application in the options analysis and conduct consultation for the long-term biosolids strategy that is intended to be implemented by January 1, 2025;

b) Options considered should include a range of beneficial uses including, but not limited to forestry (for example, fertilizer/soil conditioner), reclamation (for example, mines), landfill covers and agriculture;

c) The assessment process must include citizens, local government and Indigenous communities within the CRD.

2

Ministry of Environment and Climate Change Strategy

Mailing Address:

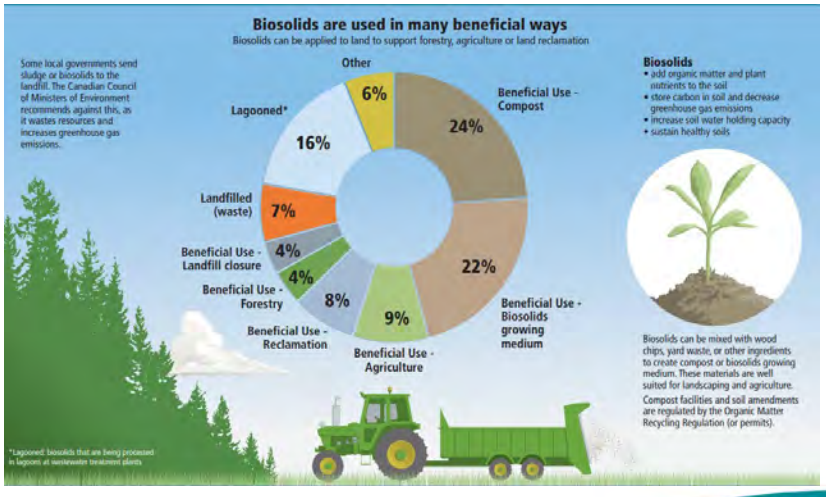
Telephone:

Facsimile:

Website:

Organic Matter Recycling Regulation

BRITISH COLUMBIA | Ministry of Environment



Beneficial Use Options



Incineration or Combustion

Timeline: Limited facilities available. The CRD currently utilizes this technology at a plant in Richmond. In-region options are not available.
Estimated Cost: Less than $500/tonne



Pyrolysis or gasification

Timeline: 7-10 years for permitting, siting and construction of a permanent facility. Advanced thermal technology is not currently used for processing biosolids in Canada.
Estimated Cost: $500-$4,500/tonne



Industrial Land Reclamation

Timeline: Immediate
Estimated Cost: less than $250/tonne



Wholesale Fertilizer

Timeline: Immediate
Estimated Cost: less than $500/tonne

Beneficial Use Options



Bagged Fertilizer for Residential Use

Timeline: Immediate
Estimated Cost: less than $500/tonne



Forest Fertilization

Timeline: Immediate
Estimated Cost: less than $400/tonne



Agriculture

Timeline: Immediate
Estimated Cost: less than $500/tonne

Advanced Thermal Pilot Programs and Demonstration Plant



- 2021 thermal pilot studies
- Procurement of an on-site trial is currently in development.
- Anticipated Cost: $10 million



Open House Presentation by GHD

GHD

→ **Deacon Liddy, P.Eng., MBA**
Senior Engineer

CRD Biosolids Long-Term Beneficial Use

Welcome

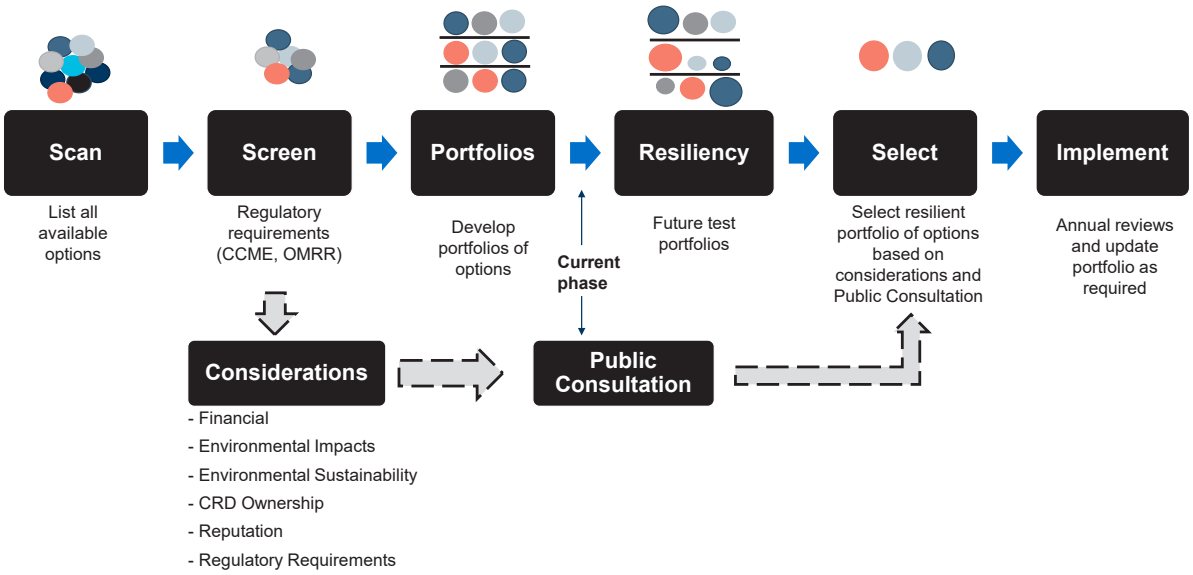
Introduction

→ **CRD Biosolids and GHD**

→ **What is beneficial use?**

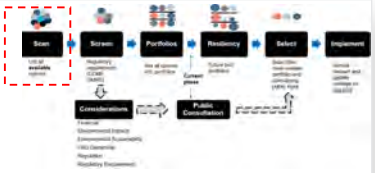


Approach



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Scan – Available Options



Available options can be broadly categorized as various forms of **thermal processing** or **land application**.

Pyrolysis or Gasification



- Heating with little to no oxygen
- 300-800 °C (pyrolysis)
- 600-1000 °C (gasification)
- Produces syngas, biochar, steam, ash
- $500 - $4,500/t

Incineration or Combustion



- Heating with excess oxygen
- 800-1200 °C
- Cement kilns, pulp mills
- Converts to energy (steam, electricity, heat)
- >$500/t

Forest Fertilization



- Supplementing nutrients in forest soil
- >$400/t

Industrial Land Reclamation



- Reclaiming barren soils damaged from mining
- >$250/t

Wholesale Fertilizer for Landscaping



- Blending with soil, compost, or wood chips
- Wholesale distribution (e.g., golf courses)
- >$500/t

Bagged Fertilizer for Residential Use



- Blending with soil, compost, or wood chips
- Residential distribution (e.g., gardens)
- >$500/t

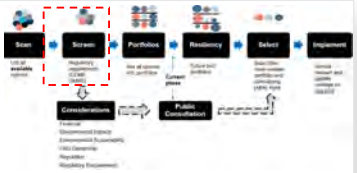
Fertilizer for Agriculture



- Fertilizer for crops
- >$500/t

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Screen – Regulatory Requirements



BRITISH COLUMBIA | Ministry of Environment

CCME
Canadian Council of Ministers of the Environment | Le Conseil canadien des ministres de l'environnement

From the BC MOE:

Biosolids are the stabilized products that are recovered at the end of the wastewater treatment process.

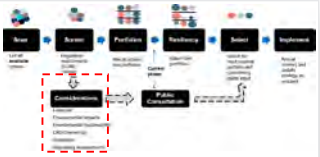
Biosolids are rich in nutrients that may be beneficially used to improve soil conditions and provide nutrition for plants. Because of the biological components of biosolids, proper management is important to control the impact on the environment and human health.

In B.C., the Organic Matter Recycling Regulation sets requirements for the production of high-quality biosolids and subsequent beneficial use in land application and composting.

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Considerations



- Financial
  - Capital cost, operational cost, revenue potential, unit cost at varying scales
- Environmental Impacts
  - Emissions (odour, noise, air, dust), truck traffic, contaminant mass balance
- Environmental Sustainability
  - Value derived products, GHGs, energy recovery, waste co-processing, soil/groundwater
- CRD Ownership
  - CRD develops facility or third party provider
- Reputational Considerations
  - Technological maturity, perception
- Regulatory Requirements
  - Permitting schedule and defined process

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Resiliency – Risks of Interruption



Consider risks to future operations resiliency of external partners:

- Insufficient capital - operational continuity
- Change in ownership
- Sustainable market for end-product
- Short-term shutdown
- New OMRR requirements
- Feedstock interruption, highway closure, wildfire
- Facility reputation – facility causing a nuisance
- Facility regulatory non-compliance
- Seasonality – fluctuations in capacity to receive and process biosolids
- Availability – option at capacity, not yet commercially operational
- Minimum tonnage – minimum contracted amount

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Considerations

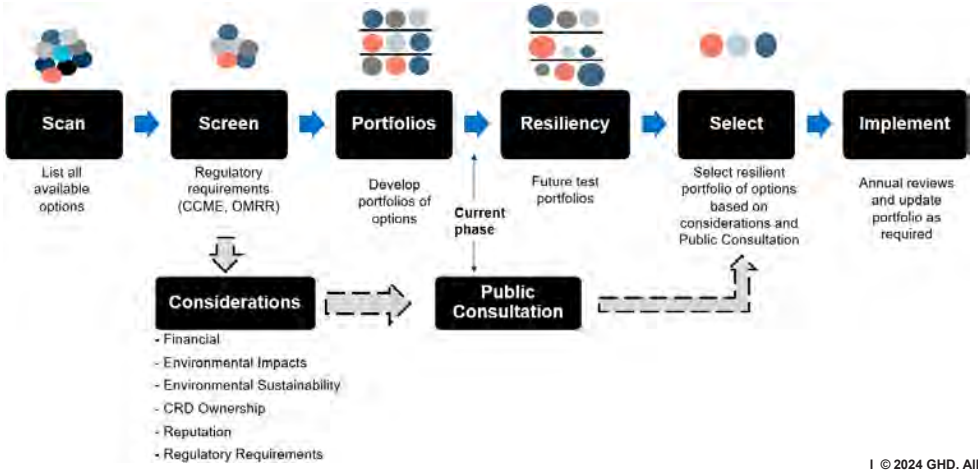
	Thermal Processing	Land Application
Financial	– High initial capital cost, low economies of scale – Potential for revenue to partially off-set processing costs	– Comparatively low capital cost. Additional investment into storage/transport infrastructure may be required. – No potential for revenue generation
Environmental Impacts	– Facility will have nuisance emission abatement systems (odour, noise, air/dust)	– Potential for nuisance odour, noise, air/dust emissions at application sites (far from population centers)
Environmental Sustainability	– Potential to recover energy from waste product – GHG emissions from transport (off-site combustion)	– Reduction of need for synthetic fertilizer – Potential for soil/groundwater impacts if OMRR not followed – GHG emissions from transport
Reputational	– Advanced thermal technology is emerging	– Demonstrated commercial implementation
CRD Ownership	– CRD would own advanced thermal facility or send biosolids to third-party for off-site combustion	– Biosolids would be sent to third-parties or be bagged by the CRD and sold commercially
Regulatory	– Facility permits required	– Land application plan required per OMRR
Potential Risks of Interruption	– Multiple years required to implement advanced thermal facility – Unknown market for biochar – Unscheduled shutdowns for operational maintenance/commissioning – Limited commercially operational biosolids thermal facilities in North America	– Fluctuations in need for biosolids (typically project-based, seasonal) – Unclear if market exists for bagged biosolids product

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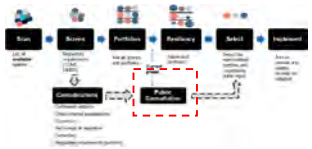
Portfolios

Risks of interruption may be mitigated through **redundancy of options,** achieved by **portfolios** composed of **multiple contingent options.**



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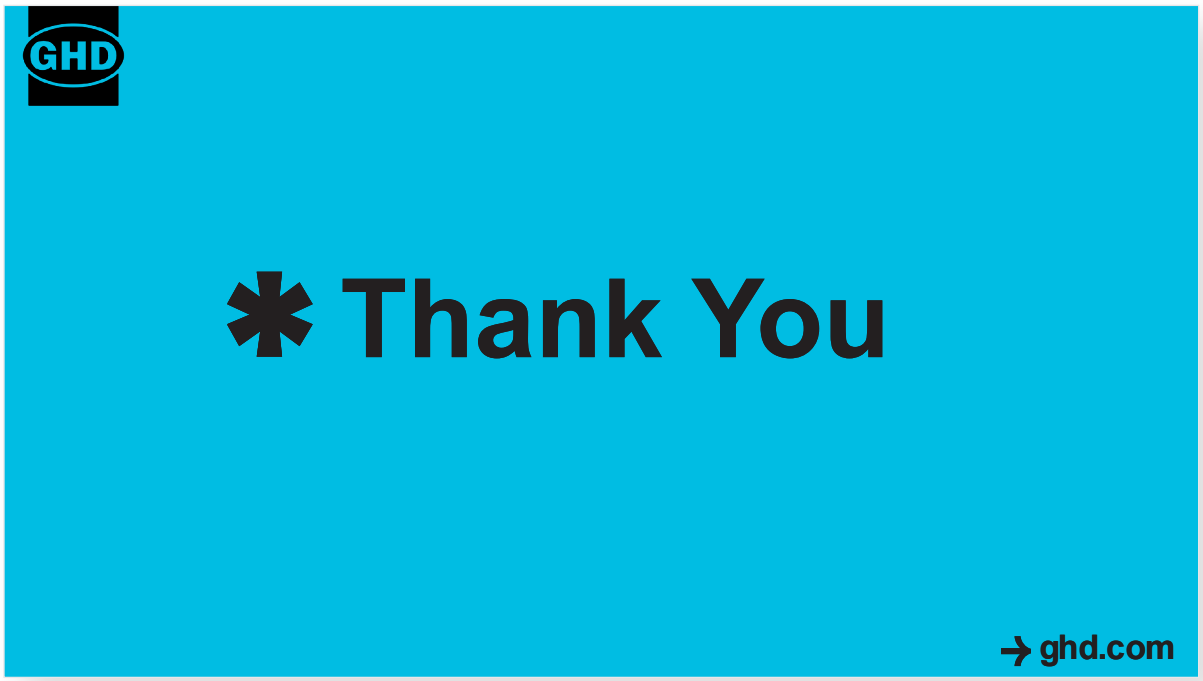
Additional Information



More information can be found at
getinvolved.crd.bc.ca/biosolids



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GHD
Thank You
ghd.com

Getinvolved.crd.bc.ca Q&A

1. I have a question about pharmaceuticals and other contaminants of emerging concern. Patients undergoing chemotherapy are advised to have their septic tanks pumped after chemo treatment and these chemicals are known to persist in sewage sludge. What, if any, methods are available to remove pharmaceuticals in the CRD wastewater processing options. The Organic Matter Recycling Regulations provide limits for heavy metal land application. Are there standards for land application of micro plastics found in many products entering the wastewater system? Will the high seasonal water table level at the Burgoyne Valley treatment plant prevent composting during the wet months. Can geotubes above grade work in wet conditions? I do hope that I will be able to see the answers to my questions and if possible view this important webinar.

2. Why are biosolids not used to create energy? Clearly our electrical grid cannot handle the demands of our governments "just transition" idea. It would horrify me to know that my garden is grown in the biosolids of human waste and potentially contaminate the water sheds in rural areas.

3. One thing to at hasn't been addressed is the plan for application of the choices and desired/expected outcomes. Example. : if we vote for land reclamation, what land is being considered for it? How *much* of an effect are we expecting? Are there any reports on other similar projects that we can look at to evaluate potential issues or roi?

4. Gasification.. After construction of plant, what does a distribution plan look like. Do we have distribution infrastructure in place? Is this an extra cost and timeline. How does CRD raise money for this project. Does it affect other ongoing projects.

5. How can I be sure the soil amendment/fertilizer solution doesn't contain dangerous drugs (fentanyl), heavy metals or a superbug?

6. Do the cost estimates include the expected financial value of all anticipated revenues and the co-benefits? For example, does the $500+ per tonne for pyrolysis include the sale of energy and biochar products? Is there a value attributed to the energy resilience benefits to the community in the event of a catastrophic earthquake or extreme weather that cuts off power supplies? Do the fertilizer options include a value for supporting a resilient agricultural sector? Indeed, the social values of these co-benefits are not in the jurisdiction of the CRD, but partnerships could avail financial value and compensation.

7. (1) Has the option of on-site creation of a series of "silting ponds" that the waste-water passes through slowly, and in lower stages can include marsh-like grasses or other plant and/or animal life so as to process at least part of the waste matter there on the spot? I saw such a facility at Esalen Institute in California that they called a "living machine". (2) Same question but: if it's been considered, why not adopted? (too costly? too small of a site? other reasons?). I'm not upset, but would love to understand why, or why not, if considered and rejected, so in future I'll have a better grasp of the topic. THANK YOU!

Email Correspondence to *biosolids@crd.bc.ca*

1. With regards to the pyrolysis or gasification technology, to create biochar / gas option the estimated cost is a very wide range-- $500 to $4500 a ton. Will any more detailed information on the capital and operating costs of a plant be provided to the public , Environmental Service s Committee and Board in the next 2 -3 months so that such information can be included in the definitive plan being submitted to the Province in June?

2. Thank you for the opportunity to participate in last night's webinar on CRD biosolids management options. I have been following this issue closely including doing extensive reading and attending CRD committee and board meetings. Here is a quick summary of my input following the webinar. I have already filled out the survey.

   1) I believe there is an opportunity to learn from the Australian experience, which appears to be significantly more advanced on biogas production than the North American practices that staff tried to consult with. The Australian Renewable Energy Agency(Arena) continues to make progress e.g. the MALABAR plant in the Sydney suburbs and elsewhere. Perhaps an information sharing agreement could be reached with them on the biogas option. I think the BC and Canadian governments would both be interested in developing Canadian expertise in conjunction with Australian agencies and firms and companies such as Fortis, which has been promoting biogas. Atomic Energy Canada is a good example of Canada showing leadership and international consulting expertise.

   2) If not already known, it should be relatively easy to determine if Hartland site can accommodate the footprint of a biogas facility, or not. Also the costs can be estimated and the percentage cost recovery from sale of biogas / biochar can be determined , based on the Australian experience. If Hartland cannot accommodate the plant , then maybe Bamberton? Obviously not having to transport biosolids is advantageous. Perhaps some 'redundancy' can be built into the system so that production can be continued in part of the plant during maintenance or breakdown.

   3) The gasification option fits well with the regional district taking care of its waste, for the most part, within its borders. The airborne emissions can be minimized using state of the art technology and in my opinion is preferable to spreading more fertilizer over agricultural and forestry land within the region. Biochar can be transported to carefully controlled and monitored remediation sites inside and outside the region, possibly transported by the specialized trucks already developed with a First Nations company.

   4) Our lakes are productive recreational fisheries because they are moderately or more eutrophic already, than other areas. All the climate research shows trends to increasing eutrophication. We don't need to be spreading tons of biosolids around this region or anywhere else where it will inevitably end up in our streams, ponds and lakes and groundwater. Biogas is a beneficial use! The BC government already approved using biosolids as a fuel in the unfortunately failed situation in cement production.

   5) To reiterate, I believe the time is right to engage both Provincial and Federal governments in supporting an innovative biogas /biochar approach and possibly develop Canadian consulting expertise for export.

3. Why aren't these being used to produce heat at one of the current sites such as Commonwealth Rec Ctr or UVIC ?

4. I was dismayed to read the misleading information published in the public consultation materials on biosolids. The information is heavily biased to the supposed "benefits" of biosolid spread and for use as fertilizer yet provides precious little and vague, obscure information on the risks. There is plenty of easy to find information available on the risks, studies from well reputed organizations across Canada and the US that are concerned with the application of biosolids in/near our food and water systems. I have no doubt that our better informed agencies will contact you with links and copies of the information they have on the danger and concern of the practices that the CRD has suggested. Not to mention the ongoing lawsuits in other areas. It is shamefully misleading to exclude the risks and opposition viewpoints in the FAQs and other information. Please take down or delay the site and survey. Review the information that surely will be presented to you, learn about the risks and inform the public of all aspects.

5. Thank you for replying. You didn't however explain why you have chosen to exclude informing the public of the risks. While you may be required to include it, it would be more responsible and transparent to also include the risks. Given that there have been so many leaks and problems with the poop pipeline, the stench, cost and time overrun, the inability to produce biosolids that the cement factory can use, how can you guarantee that you will not also bungle the testing and production of "safe" and "beneficial" biosolids for any other use? How will you address that? Thank you

6. I am very interested in receiving more details on the bio-solids complete analysis for large applications in agriculture. How do I get involved and where can I locate the details or even get a few samples for independent analysis.? Sorry for dropping this on you and please direct me in the correct direction for future inquiries.

7. My suggestion is to build a facility to turn plastic back into oil and the bio solids could be used as the heat source.

TAVOLA
STRATEGY GROUP

APPENDIX B

Making a difference...together

Long-Term Biosolids Management Plan

First Nations Engagement What We Heard Report

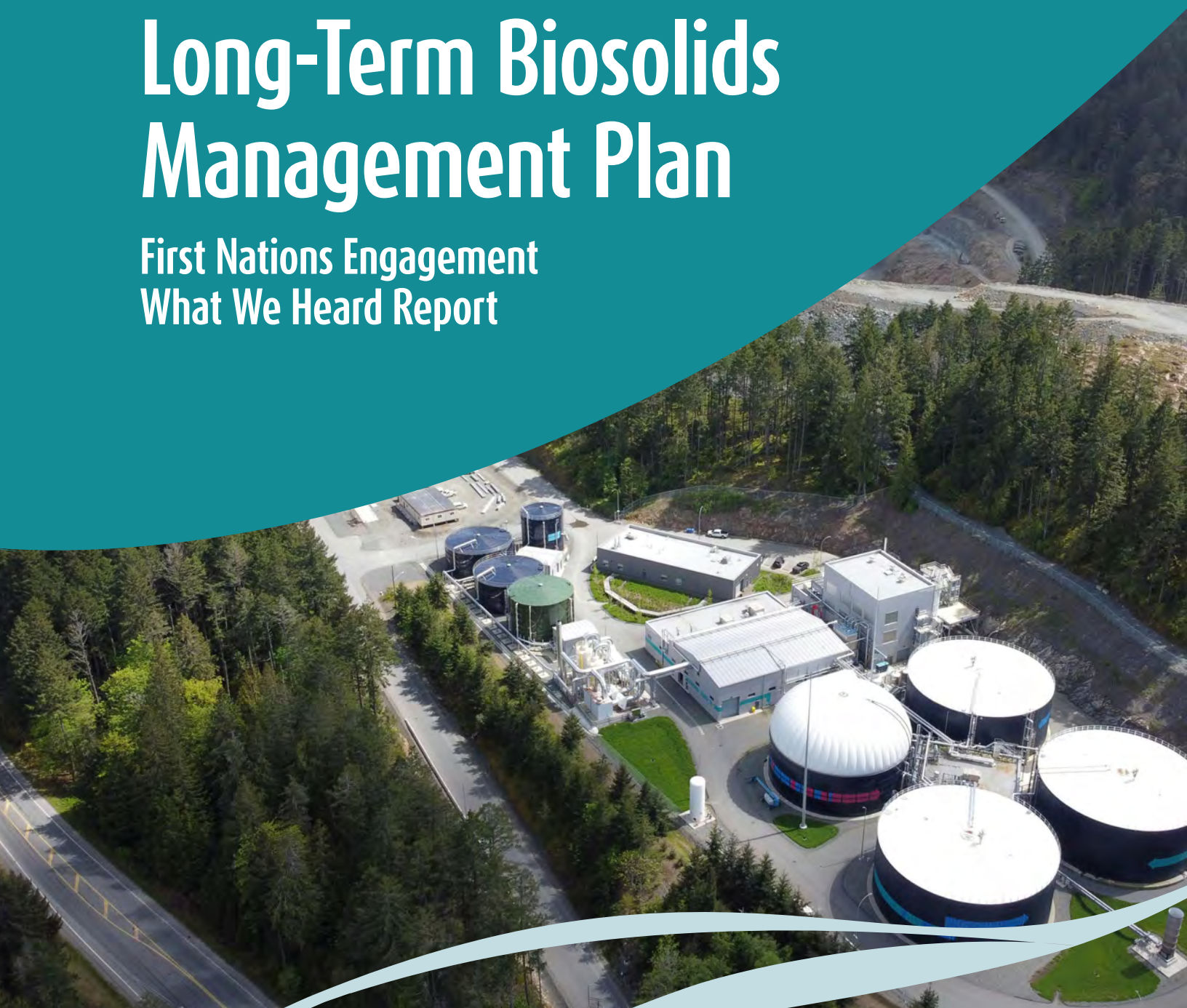


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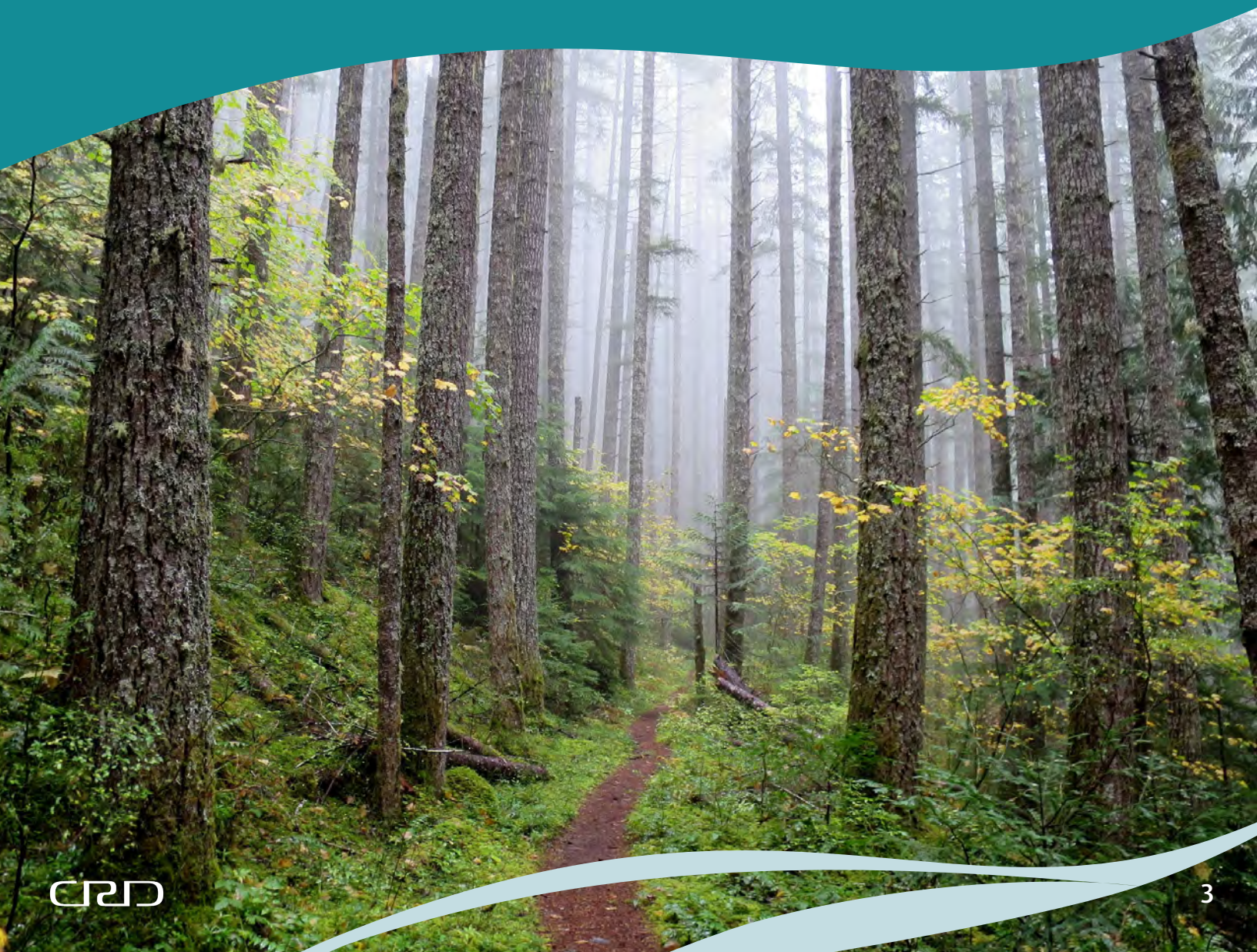
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Territorial Acknowledgement

The Capital Regional District conducts its business within the traditional territories of many First Nations, including but not limited to BOḰEĆEN (Pauquachin), MÁLEXEŁ (Malahat), Paa?čiid?atx̣ (Pacheedaht), Pune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, SṮÁUTW̱ (Tsawout), T'Sou-ke, W̱JOŁEŁP (Tsartlip), W̱SIKEM (Tseycum) and xʷsepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.



Executive Summary

The Capital Regional District (CRD) is exploring options and technologies to harness the benefits of biosolids, the by-product of wastewater treatment. Short-term plans regarding biosolids management were put in place when the CRD first introduced wastewater treatment in 2020. However, despite best efforts, the region's biosolids are largely being landfilled under emergency measures.





The Province of BC requires the CRD to submit a *Long-Term Biosolids Management Plan* by **June 2024**. This plan must consider a wide variety of management options, including various land application scenarios in addition to incineration and advanced thermal options. The long-term beneficial use options under consideration include: fertilizer for agriculture; industrial land reclamation; forest fertilization; wholesale fertilizer for landscaping; bagged fertilizer for residential use; fuel for incineration/combustion; and pyrolysis or gasification technology to create biochar/gas.

The purpose of this phase of the engagement process is to effectively communicate and engage with First Nations whose traditional territories span portions of the region in the development of a definitive (long-term) biosolids management plan for the Capital Regional District. From **February 28, 2024, to April 19, 2024**, the CRD sought feedback from First Nations leadership on the direction of which long-term uses of biosolids would best serve their Nation.

Introduction

Biosolids are the by-product of wastewater treatment, containing nutrients, such as nitrogen, phosphorus, calcium, sulphur and iron, energy and organic matter that can be recycled and used in various ways. The most common use of this material is as fertilizer to promote tree and plant growth and as a soil additive to restore degraded industrial lands. However, there are other options, such as harnessing energy through thermal (heating) processes to use as an alternative fuel.

During the treatment process, the liquids and solids are separated, and the solids are then treated to produce a dark coloured, dry granular pellet. Biosolids produced by the CRD surpass standards set out in the Organic Matter Recycling Regulation, due to the high quality of sewage treatment and robust source control programs aimed at preventing metals and other contaminants from entering the wastewater system.

Biosolids can be used as:



A nutrient-rich fertilizer. This organic material improves soil conditions, promotes plant growth, increases crop yields and improves water retention.



An alternative fuel source through burning biosolids to supply heat energy at incineration to facilities to reduce reliance on fossil fuels.



An alternative energy source through pyrolysis and gasification technologies, that creates biochar/synthetic gas, which is then burned to produce heat or electricity.

The CRD has been responsible for the beneficial use of Class A biosolids produced at the Residuals Treatment Facility since the commissioning of the core area wastewater treatment project in 2020.

Currently, the CRD is operating under a Short-term Biosolids Management Plan (2020-2025), with the primary beneficial use options being incineration as an alternative fuel in a cement manufacturing plant in Richmond, BC, and integration with landfill cover systems as contingencies. When neither of these options are available, landfilling biosolids at Hartland Landfill has been the only alternative.

In 2011, the CRD Board passed a resolution to ban the land application of biosolids from CRD facilities; however, in 2023, given the operational and logistical challenges with the short-term plan, the CRD Board amended its position to allow limited non-agricultural land application of biosolids as a contingency option. The CRD has secured the use of biosolids for industrial land reclamation at a quarry near Cassidy, BC, and continues to seek additional short-term beneficial use contingency options, in order to limit or avoid landfilling of biosolids when the other options are not available.



To support transportation, the CRD partnered with the W̱SÁNEĆ Leadership Council in the creation of K'ENES Transportation, a First Nation-owned and operated trucking company. However, regular shipments of biosolids to the cement plant have been challenged by a wide variety of logistical and operational issues.



Purpose of Engagement

This engagement process intends to gather feedback from local First Nations and ensure they are well-informed about the potential long-term uses of biosolids.

The responses received during this phase will inform the development of the *Long-Term Biosolids Management Plan* that will outline the CRD's approach to managing biosolids in the future. This report summarizes insights gained through an online survey and virtual engagement session with First Nation representatives.

Engagement Process and Activities

Committed to gathering diverse feedback, the CRD's objectives were as follows:



Gather feedback from First Nations with territory within the region to help inform the *Long-Term Biosolids Management Plan*.



Ensure that First Nations and all residents within the CRD are well-informed about the potential long-term uses of biosolids.



Seek to identify a long-term biosolids option that maximizes benefits for the communities in the CRD.

A number of resources were developed to support outreach and engagement.

A handout was created, providing frequently asked questions on one side and a description of the seven long-term use options on the other. Throughout the document, useful resources were accessible through a QR code, such as regulatory requirements, biosolids in BC and the CRD's Biosolids Beneficial Use Strategy. An online survey was also developed, asking respondents for their feedback about the use of biosolids in the region and how they want to see them utilized.





Long-term options for biosolid use in the CRD

Scan the QR code to view the biosolids fact sheet.

Fertilizer for Agriculture
The nutrient-rich organic material can improve soil conditions to promote plant growth and increase crop yields. It can also improve water retention to reduce water usage as well as reduce reliance on synthetic fertilizers.
Timeline: Immediate
Cost: Less than $500/tonne

Industrial Land Reclamation
Biosolids can be applied to disturbed and degraded soils to replenish organic matter and essential nutrients, improving soil fertility, soil structure and increasing water retention. They can be applied directly or blended with compost, soil or wood chips.
Timeline: Immediate
Cost: Less than $250/tonne

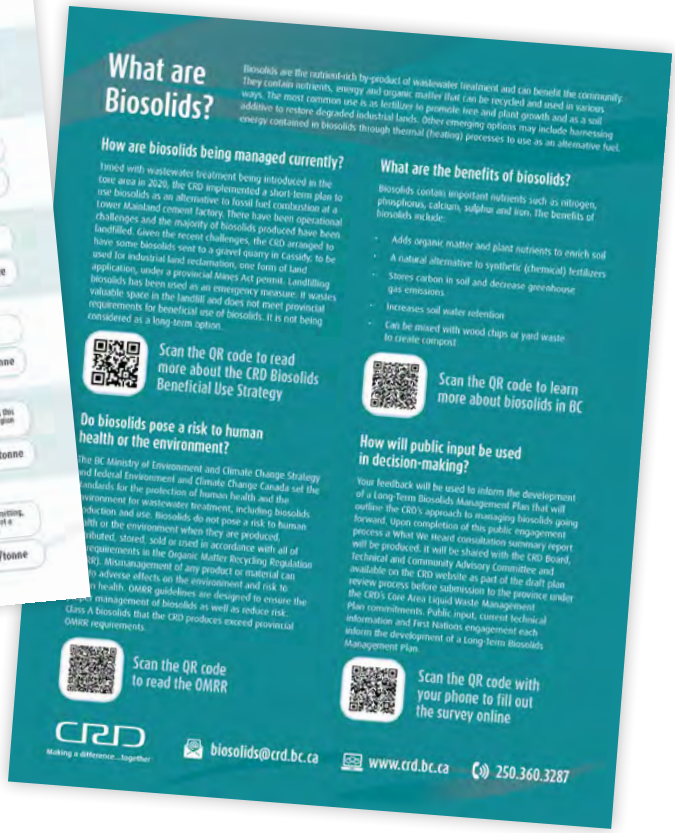
Forest Fertilization
Biosolids can help improve soil fertility, prevent erosion and accelerate plant and tree growth. After a wildfire, biosolids can help forests regenerate, increasing water retention and providing essential nutrients and organic matter to promote plant and tree growth.
Timeline: Immediate
Cost: Less than $400/tonne

Wholesale Fertilizer for Landscaping
The nutrient-rich organic material can improve soil conditions to promote lawn and plant growth. Uses include lawns, boulevards, golf courses.
Timeline: Immediate
Cost: Less than $500/tonne

Bagged Fertilizer for Residential Use
The nutrient-rich organic material is bagged and distributed as fertilizer or blended with soil, compost or wood chips and made available for residential use.
Timeline: Immediate
Cost: Less than $500/tonne

Fuel for Incineration/Combustion
Biosolids are burned or used as an alternative fuel to power facilities, such as cement kilns and pulp mills, reducing reliance on other non-renewable sources like coal or natural gas.
Timeline: CRD currently utilizes this technology in Richmond. In-region options not available.
Cost: Less than $500/tonne

Pyrolysis or Gasification Technology to Create Biochar/Gas
Biosolids are heated to make a gas or "biochar," which can be used to produce heat or electricity. Biochar is a type of charcoal that is made from organic material. It can be used as a soil additive to improve soil fertility and enhance water retention.
Timeline: 7-10 years for permitting, siting and construction of a permanent facility.
Cost: $500-$4500/tonne



What are Biosolids?

Biosolids are the nutrient-rich by-product of wastewater treatment and can benefit the community. They contain nutrients, energy and organic matter that can be recycled and used in various ways. The most common use is as fertilizer to promote tree and plant growth and as a soil additive to restore degraded industrial lands. Other emerging options may include harnessing energy contained in biosolids through thermal (heating) processes to use as an alternative fuel.

How are biosolids being managed currently?

Timed with wastewater treatment being introduced in the core area in 2020, the CRD implemented a short-term plan to use biosolids as an alternative to fossil fuel combustion at a Lower Mainland cement factory. There have been operational challenges and the majority of biosolids produced have been landfilled. Given the recent challenges, the CRD arranged to have some biosolids sent to a gravel quarry in Cassidy, to be used for industrial land reclamation, one form of land application, under a provincial Mines Act permit. Landfilling biosolids has been used as an emergency measure: it wastes valuable space in the landfill and does not meet provincial requirements for beneficial use of biosolids. It is not being considered as a long-term option.

Scan the QR code to read more about the CRD Biosolids Beneficial Use Strategy

Do biosolids pose a risk to human health or the environment?

The BC Ministry of Environment and Climate Change Strategy and federal Environment and Climate Change Canada set the standards for the protection of human health and the environment for wastewater treatment, including biosolids production and use. Biosolids do not pose a risk to human health or the environment when they are produced, distributed, stored, sold or used in accordance with all of requirements in the Organic Matter Recycling Regulation (OMRR). Mismanagement of any product or material can have adverse effects on the environment and risk to human health. OMRR guidelines are designed to ensure the safe management of biosolids as well as reduce risk. Class A biosolids that the CRD produces exceed provincial OMRR requirements.

Scan the QR code to read the OMRR

What are the benefits of biosolids?

Biosolids contain important nutrients such as nitrogen, phosphorus, calcium, sulphur and iron. The benefits of biosolids include:

- Adds organic matter and plant nutrients to enrich soil
- A natural alternative to synthetic (chemical) fertilizers
- Stores carbon in soil and decrease greenhouse gas emissions
- Increases soil water retention
- Can be mixed with wood chips or yard waste to create compost

Scan the QR code to learn more about biosolids in BC

How will public input be used in decision-making?

Your feedback will be used to inform the development of a Long-Term Biosolids Management Plan that will outline the CRD's approach to managing biosolids going forward. Upon completion of this public engagement process a What We Heard consultation summary report will be produced. It will be shared with the CRD Board, Technical and Community Advisory Committee and available on the CRD website as part of the draft plan review process before submission to the province under the CRD's Core Area Liquid Waste Management Plan commitments. Public input, current technical information and First Nations engagement each inform the development of a Long-Term Biosolids Management Plan.

Scan the QR code with your phone to fill out the survey online

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250.360.3287

The CRD scheduled two engagement sessions to hear feedback: an in-person gathering on **March 25, 2024**, in Victoria, and virtually on **March 27, 2024**.

An invitation to these sessions was distributed to an established contact list of people in leadership roles at 19 First Nations on **February 28, 2024**.

The contact list included:

- BOḰEĆEN (Pauquachin) First Nation
- MÁLEXEŁ (Malahat) Nation
- Paa?čiid?atx̣ (Pacheedaht) First Nation
- SȾÁUTW̱ (Tsawout) First Nation
- Scia'new (Beecher Bay) First Nation
- Songhees Nation
- Spune'luxutth (Penelakut) Tribe
- T'Sou-ke Nation
- W̱JOŁEŁP (Tsartlip) First Nation
- W̱SIḴEM (Tseycum) First Nation
- Xʷsepsum (Esquimalt) Nation
- Cowichan Tribes
- Halalt First Nation
- Lyackson First Nation
- sc̓əwaθən məsteyəxʷ (Tsawwassen) First Nation
- Semiahmoo First Nation
- Stz'uminus (Chemainus) First Nation
- Ts'uubaa-asatx Nation



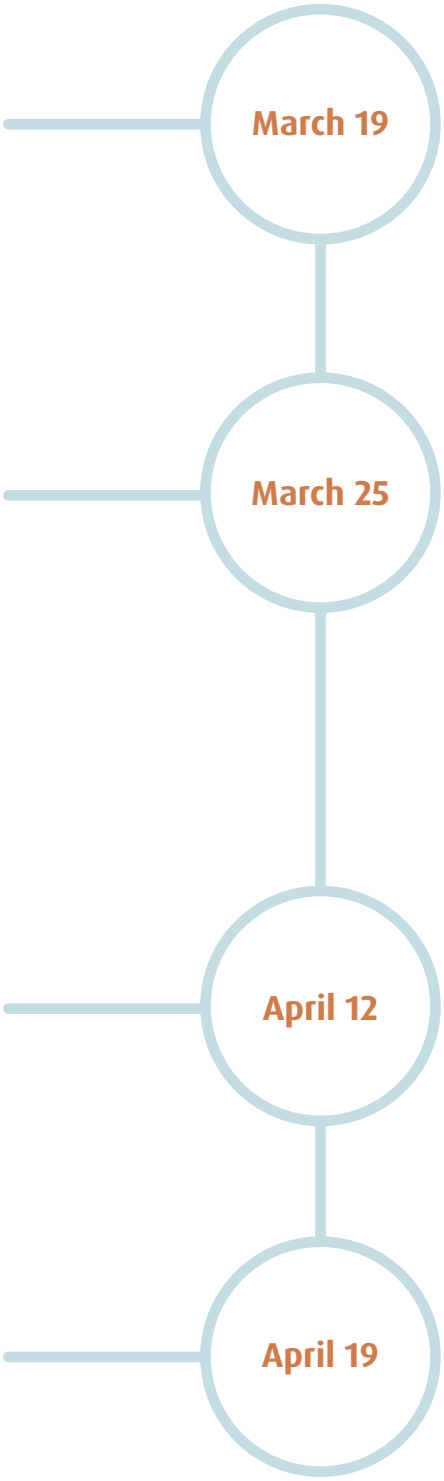
There were no responses to the initial invitation so, on **March 19, 2024**, a personalized follow-up email was sent to each contact, inviting them to attend one of the two engagement sessions. The CRD then reached out by phone to each First Nation on the contact list to ensure they had received the invitation and to create an RSVP list for the in-person and online engagement sessions. There was some interest expressed, but no confirmations for the RSVP list.

On **March 25, 2024**, the CRD sent out a third email to the contact list as a reminder of the in-person engagement session that evening, as well as the virtual session two days later. An online survey was also linked in the email to invite feedback not only from those on the contact list, but also from their colleagues and those they might share it with. There were no participants in either session, despite initial interest in attending the virtual engagement session.

However, Paaʔčiidʔatx̣ (Pacheedaht) First Nation and T'Sou-ke Nation expressed interest in providing feedback to the CRD in the near future.

A final follow-up email was distributed to the First Nation contact list on **April 12, 2024**. In this email, the CRD provided the link to the online survey as well as a link to the district's "Get Involved" landing page that details the information about the long-term options for biosolid use.

It also noted the **April 19, 2024**, deadline to have feedback included in the report to the Province of BC.



What We Heard

From **February 28, 2024, to April 19, 2024**, the CRD sought feedback from First Nations leadership on the direction of which long-term uses of biosolids would best serve their Nation.

The CRD reached out to 19 First Nations, through email and phone calls, as well as provided an online survey as an alternative way to provide their comments or questions. The district hosted three virtual formal consultation meetings, with BOḰEĆEN (Pauquachin) First Nation, Paa?čiid?atx̱ (Pacheedaht) First Nation and T'Sou-ke First Nations staff, regarding the beneficial use of biosolids. Pacheedaht First Nation encouraged the CRD to continue consultation regarding the forestry fertilization management option and T'Sou-ke Nation would like to be consulted on the specific details on any project under consideration within its territory.

Summary

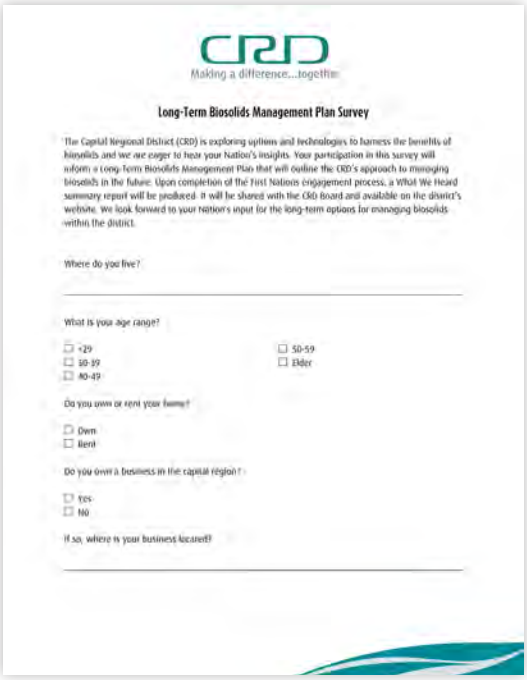
The CRD is exploring options and technologies to harness the benefits of biosolids, the by-product of wastewater treatment and sought the insight of First Nation leadership on the potential long-term uses available to the region.

The feedback gathered from this group would help to inform a Long-Term Biosolids Management Plan to fulfill provincial requirements. Over the course of two months, the CRD would take part in outreach to 19 First Nations that span portions of the region. While the CRD is required to submit a plan to the provincial government by June, the district will continue to receive feedback from First Nation leadership and will provide an update to the plan at a later date.



Appendix

Survey



Making a difference...together

Long-Term Biosolids Management Plan Survey

The Capital Regional District (CRD) is exploring options and technologies to harness the benefits of biosolids and we are eager to hear your Nation's insights. Your participation in this survey will inform a Long-Term Biosolids Management Plan that will outline the CRD's approach to managing biosolids in the future. Upon completion of the First Nations engagement process, a What We Heard summary report will be produced. It will be shared with the CRD Board and available on the district's website. We look forward to your Nation's input for the long-term options for managing biosolids within the district.

Where do you live?

What is your age range?

- ☐ <29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ Elder

Do you own or rent your home?

- ☐ Own
- ☐ Rent

Do you own a business in the capital region?

- ☐ Yes
- ☐ No

If so, where is your business located?



Making a difference...together

How familiar are you with the following topics?

CRD wastewater treatment system

- ☐ Very unfamiliar
- ☐ Unfamiliar
- ☐ Somewhat familiar
- ☐ Familiar
- ☐ Very familiar

Biosolids

- ☐ Very unfamiliar
- ☐ Unfamiliar
- ☐ Somewhat familiar
- ☐ Familiar
- ☐ Very familiar

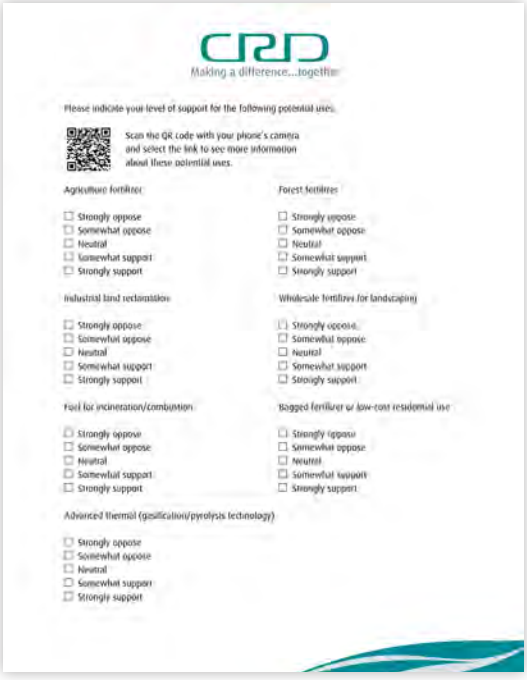
How important is it to you how biosolids are maximized for community benefit?

- ☐ Not at all important
- ☐ Unimportant
- ☐ Neutral
- ☐ Important
- ☐ Very important

Please explain why you chose that level of importance.

When planning for the beneficial uses of biosolids, how important are the following considerations to you? Please rank in order of importance
(1 being most important – 4 being least important)

- _____ Costs
- _____ Environmental impacts (ex. water and soil contaminants)
- _____ Climate/greenhouse gas emissions
- _____ Community impacts (truck traffic, odour and noise emissions, dust, etc.)



Making a difference...together

Please indicate your level of support for the following potential uses.

Scan the QR code with your phone's camera and select the link to see more information about these potential uses.

Agriculture fertilizer

- ☐ Strongly oppose
- ☐ Somewhat oppose
- ☐ Neutral
- ☐ Somewhat support
- ☐ Strongly support

Forest fertilizer

- ☐ Strongly oppose
- ☐ Somewhat oppose
- ☐ Neutral
- ☐ Somewhat support
- ☐ Strongly support

Industrial land reclamation

- ☐ Strongly oppose
- ☐ Somewhat oppose
- ☐ Neutral
- ☐ Somewhat support
- ☐ Strongly support

Wholesale fertilizer for landscaping

- ☐ Strongly oppose
- ☐ Somewhat oppose
- ☐ Neutral
- ☐ Somewhat support
- ☐ Strongly support

Fuel for incineration/combustion

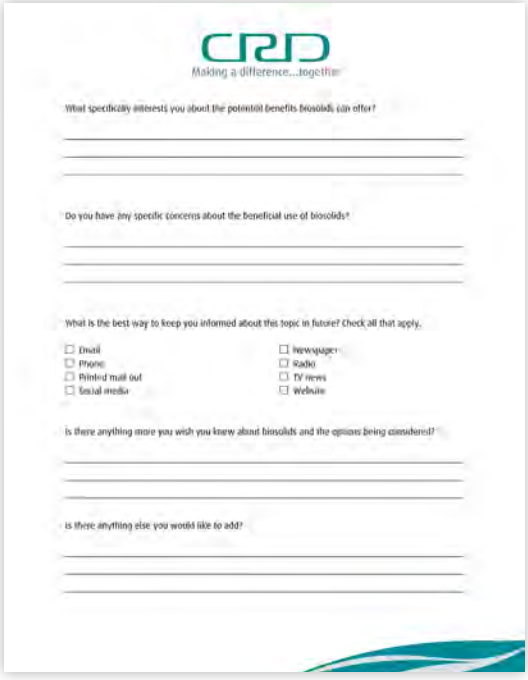
- ☐ Strongly oppose
- ☐ Somewhat oppose
- ☐ Neutral
- ☐ Somewhat support
- ☐ Strongly support

Bagged fertilizer or low-cost residential use

- ☐ Strongly oppose
- ☐ Somewhat oppose
- ☐ Neutral
- ☐ Somewhat support
- ☐ Strongly support

Advanced thermal (gasification/pyrolysis technology)

- ☐ Strongly oppose
- ☐ Somewhat oppose
- ☐ Neutral
- ☐ Somewhat support
- ☐ Strongly support



Making a difference...together

What specifically interests you about the potential benefits biosolids can offer?

Do you have any specific concerns about the beneficial use of biosolids?

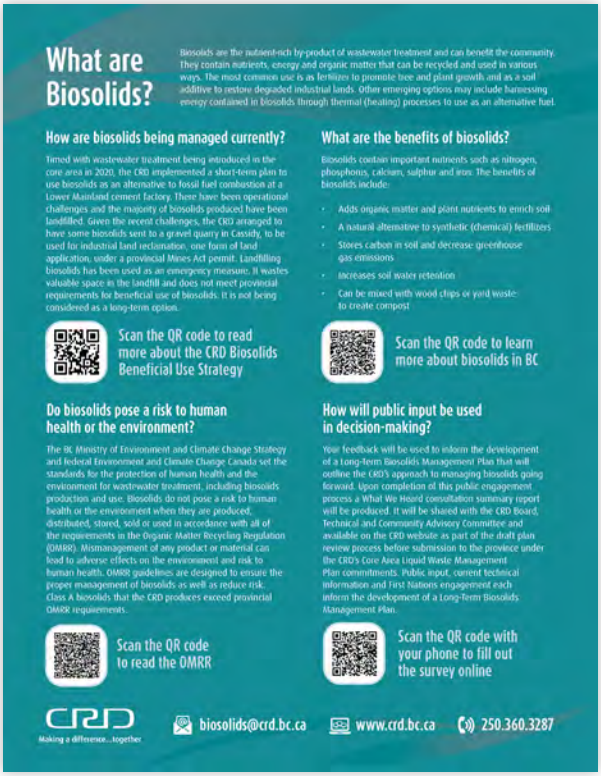
What is the best way to keep you informed about this topic in future? Check all that apply.

- ☐ Email
- ☐ Phone
- ☐ Printed mail out
- ☐ Social media
- ☐ Newspaper
- ☐ Radio
- ☐ TV news
- ☐ Website

Is there anything more you wish you knew about biosolids and the options being considered?

Is there anything else you would like to add?

Handout



What are Biosolids?

Biosolids are the nutrient-rich by-product of wastewater treatment and can benefit the community. They contain nutrients, energy and organic matter that can be recycled and used in various ways. The most common use is as fertilizer to promote tree and plant growth and as a soil additive to restore degraded industrial lands. Other emerging options may include harnessing energy contained in biosolids through thermal (heating) processes to use as an alternative fuel.

How are biosolids being managed currently?

Timed with wastewater treatment being introduced in the core area in 2020, the CRD implemented a short-term plan to use biosolids as an alternative to fossil fuel combustion at a Lower Mainland cement factory. There have been operational challenges and the majority of biosolids produced have been landfilled. Given the recent challenges, the CRD arranged to have some biosolids sent to a gravel quarry in Cassidy, to be used for industrial land reclamation, one form of land application, under a provincial Mines Act permit. Landfilling biosolids has been used as an emergency measure. It wastes valuable space in the landfill and does not meet provincial requirements for beneficial use of biosolids. It is not being considered as a long-term option.

Scan the QR code to read more about the CRD Biosolids Beneficial Use Strategy

What are the benefits of biosolids?

Biosolids contain important nutrients such as nitrogen, phosphorus, calcium, sulphur and iron. The benefits of biosolids include:

- Adds organic matter and plant nutrients to enrich soil
- A natural alternative to synthetic (chemical) fertilizers
- Stores carbon in soil and decrease greenhouse gas emissions
- Increases soil water retention
- Can be mixed with wood chips or yard waste to create compost

Scan the QR code to learn more about biosolids in BC

Do biosolids pose a risk to human health or the environment?

The BC Ministry of Environment and Climate Change Strategy and federal Environment and Climate Change Canada set the standards for the protection of human health and the environment for wastewater treatment, including biosolids production and use. Biosolids do not pose a risk to human health or the environment when they are produced, distributed, stored, sold or used in accordance with all of the requirements in the Organic Matter Recycling Regulation (OMRR). Mismanagement of any product or material can lead to adverse effects on the environment and risk to human health. OMRR guidelines are designed to ensure the proper management of biosolids as well as reduce risk. Class A biosolids that the CRD produces exceed provincial OMRR requirements.

Scan the QR code to read the OMRR

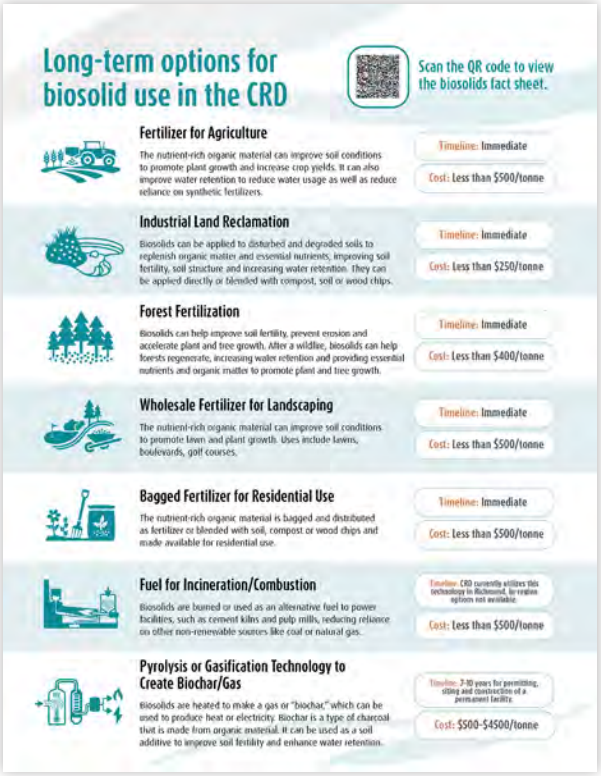
How will public input be used in decision-making?

Your feedback will be used to inform the development of a Long-Term Biosolids Management Plan that will outline the CRD's approach to managing biosolids going forward. Upon completion of this public engagement process a What We Heard consultation summary report will be produced. It will be shared with the CRD Board, Technical and Community Advisory Committee and available on the CRD website as part of the draft plan review process before submission to the province under the CRD's Core Area Liquid Waste Management Plan commitments. Public input, current technical information and First Nations engagement each inform the development of a Long-Term Biosolids Management Plan.

Scan the QR code with your phone to fill out the survey online

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Long-term options for biosolid use in the CRD

Scan the QR code to view the biosolids fact sheet.

Fertilizer for Agriculture

The nutrient-rich organic material can improve soil conditions to promote plant growth and increase crop yields. It can also improve water retention to reduce water usage as well as reduce reliance on synthetic fertilizers.

Timeline: Immediate
Cost: Less than $500/tonne

Industrial Land Reclamation

Biosolids can be applied to disturbed and degraded soils to replenish organic matter and essential nutrients, improving soil fertility, soil structure and increasing water retention. They can be applied directly or blended with compost, soil or wood chips.

Timeline: Immediate
Cost: Less than $250/tonne

Forest Fertilization

Biosolids can help improve soil fertility, prevent erosion and accelerate plant and tree growth. After a wildfire, biosolids can help forests regenerate, increasing water retention and providing essential nutrients and organic matter to promote plant and tree growth.

Timeline: Immediate
Cost: Less than $400/tonne

Wholesale Fertilizer for Landscaping

The nutrient-rich organic material can improve soil conditions to promote lawn and plant growth. Uses include lawns, boulevards, golf courses.

Timeline: Immediate
Cost: Less than $500/tonne

Bagged Fertilizer for Residential Use

The nutrient-rich organic material is bagged and distributed as fertilizer or blended with soil, compost or wood chips and made available for residential use.

Timeline: Immediate
Cost: Less than $500/tonne

Fuel for Incineration/Combustion

Biosolids are burned or used as an alternative fuel to power facilities, such as cement kilns and pulp mills, reducing reliance on other non-renewable sources like coal or natural gas.

Timeline: CRD currently utilizes this technology in Richmond, so region options not available
Cost: Less than $500/tonne

Pyrolysis or Gasification Technology to Create Biochar/Gas

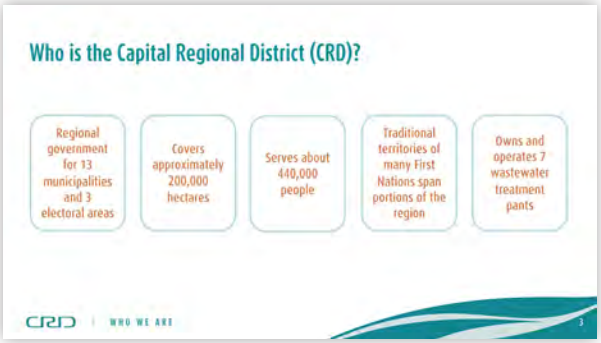
Biosolids are heated to make a gas or "biochar," which can be used to produce heat or electricity. Biochar is a type of charcoal that is made from organic material. It can be used as a soil additive to improve soil fertility and enhance water retention.

Timeline: 7-10 years for permitting, siting and construction of a permanent facility
Cost: $500-$4500/tonne

Presentation













What Are They?

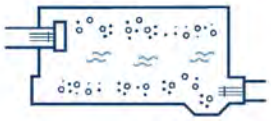
Biosolids are the nutrient-rich by-product of wastewater treatment. They contain nutrients, energy and organic matter that can be recycled and used in various ways. Common uses include:



How are Biosolids Created?

1. Conveyance System

Water that goes down the drain from a house or business is considered wastewater.
It enters the wastewater system carrying organics, and items such as toilet paper and food.



How are Biosolids Created?

2. McLoughlin Point Wastewater Treatment Plant

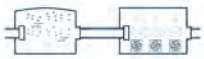
During the wastewater treatment process at the McLoughlin Point Wastewater Treatment Plant, the solids (sludge) are separated and conveyed to the Residuals Treatment Facility at Hartland Landfill for further processing.



How are Biosolids Created?

3. Residuals Treatment Facility

Here the solids (sludge) undergo anaerobic digestion in which microorganisms break down biodegradable material in the absence of oxygen and produce biogas. The water is removed, and the solid materials are heated to a very high temperature creating the highest standard of biosolids for use as fertilizer or energy generation.



Benefits of Biosolids



Biosolids contain important nutrients such as nitrogen, phosphorus, calcium, sulphur and iron.

Benefits include:

- Adds organic matter and plant nutrients to enrich soil
- A natural alternative to synthetic (chemical) fertilizers
- Stores carbon in soil and decrease greenhouse gas emissions
- Increases soil water retention
- Can be mixed with wood chips or yard waste to create compost
- Can be used to create alternate fuel

Do biosolids pose a risk to human health or the environment?

Biosolids **do not** pose a risk to human health or the environment when they are produced, distributed, stored, sold or used in accordance with all of the requirements in the Organic Matter Recycling Regulation.



What is the Organic Matter Recycling Regulation?

The Organic Matter Recycling Regulation (OMRR) regulates the production and land application of compost and biosolids.

Class A biosolids that the CRD produces exceed provincial OMRR requirements.



Short-Term Biosolids Beneficial Use Strategy

Definitive Plan

- Developed in early 2019, before wastewater treatment began.
- Strategy consistent with the CRD policy restricting land application of biosolids.
- Planned to ship biosolids to a cement plant in Richmond, BC, to be incinerated in their cement process.
- Conditionally approved by the Ministry of Environment in October 2019.



- The CRD partnered with WSÁNEĆ Leadership Council in the creation of K'ENES Transportation, a new First Nation-owned and operated trucking company.
- K'ENES Transportation transports all of the CRD's biosolids to their destinations.
- Regular shipments of biosolids has been challenging.



Contingency Plan

- Staff recommended, and the Board approved, the use of biosolids at Hartland Landfill, being mixed with sand and wood chips and applied to closed areas of the landfill to support vegetation regrowth and reduce methane emissions.
- All available space was used in 2022.

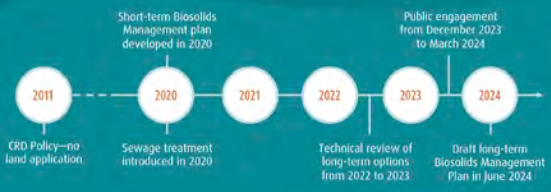


Alternative Contingency Plan and Landfilling

- A new contingency plan was adopted to use biosolids at a gravel quarry near Nanaimo to re-establish vegetation on closed parts of the quarry.
- The quarry's immediate needs were met in 2023, but they will continue to accept biosolids in the future as new areas of the quarry are reclaimed.
- An emergency plan was implemented, landfilling biosolids.
- Landfilling is not a beneficial use and has been prohibited by the province.



Timeline



Long-term Use Options

Land Based

Fertilizer for Agriculture

The nutrient-rich organic material can improve soil conditions to promote plant growth and increase crop yields. It can also improve water retention to reduce water usage as well as reduce reliance on synthetic fertilizers.

Timeline:	Cost:
Immediate	Less than $500/tonne

Industrial Land Reclamation

Biosolids can be applied to disturbed and degraded soils to replenish organic matter and essential nutrients, improving soil fertility, soil structure and increasing water retention. They can be applied directly or blended with compost, soil or wood chips.

Timeline:	Cost:
Immediate	Less than $250/tonne

Forest Fertilization



Biosolids can help improve soil fertility, prevent erosion and accelerate plant and tree growth. After a wildfire, biosolids can help forests regenerate, increasing water retention and providing essential nutrients and organic matter to promote plant and tree growth.

Timeline:
Immediate

Cost:
Less than $400/tonne

CRD | LAND BASED LONG-TERM USE OPTIONS

Wholesale Fertilizer for Landscaping



The nutrient-rich organic material can improve soil conditions to promote lawn and plant growth. Uses include lawns, boulevards, golf courses. It can also improve water retention to reduce water usage as well as reduce reliance on synthetic fertilizers.

Timeline:
Immediate

Cost:
Less than $500/tonne

CRD | LAND BASED LONG-TERM USE OPTIONS

Bagged Fertilizer for Residential Use



The nutrient-rich organic material is bagged and distributed as fertilizer or blended with soil, compost or wood chips and made available for residential use. Biosolids can also be blended with soil, compost or wood chips and made available for residential use.

Timeline:
Immediate

Cost:
Less than $500/tonne

CRD | LAND BASED LONG-TERM USE OPTIONS

Long-term Use Options

Thermal Based

Fuel for Incineration/Combustion



Biosolids are burned or used as an alternative fuel to power facilities, such as cement kilns and pulp mills, reducing reliance on other non-renewable sources like coal or natural gas.

Timeline:
Limited facilities available with no in-region options. The CRD currently utilizes this technology at a plant in Richmond.

Cost:
Less than $500/tonne

CRD | THERMAL BASED LONG-TERM USE OPTIONS

Pyrolysis or Gasification Technology to Create Biochar/Gas



Biosolids are heated to make a gas or "biochar," which can be used to produce heat or electricity. Biochar is a type of charcoal that is made from organic material. It can be used as a soil additive to improve soil fertility and enhance water retention.

Timeline:
7-10 years for permitting, siting and construction of a permanent facility. Advanced thermal technology is not currently used for processing biosolids in Canada.

Cost:
$500-$4,500/tonne

CRD | THERMAL BASED LONG-TERM USE OPTIONS

How will public input be used in decision-making?

Your feedback will be used to inform:

- The development of a Long-Term Biosolids Management Plan
- A What We Heard consultation summary report



CRD | HOW YOUR INPUT IS USED

Are there any questions?

Additional Engagement Meeting Notes

Pacheedaht Meeting Notes

April 11, 2024

Kristine Pearson, Pacheedaht First Nation
Erin Bildfell, CRD
Glenn Harris, CRD
Peter Kickham, CRD
Hannah Keene, 50th Parallel PR

CRD staff met with a representative of the Pacheedaht First Nation and provided a brief presentation and overview of the wastewater treatment project and resulting requirement to beneficially use biosolids. Staff presented the full suite of available options for biosolids management including various land application scenarios, incineration, and advanced thermal treatment. Staff also highlighted the concern raised by several groups regarding land application of biosolids.

The Pacheedaht representative asked several questions, including:

- the CRD's current practices under the Short-term Biosolids Beneficial Use Strategy, and why the CRD has not been able to ship any significant amount of product to the cement kiln,
- How biosolids are used in mine/quarry reclamation projects,
- Whether wastewater residuals from Port Renfrew would or could be incorporated under the long-term strategy, and whether there is an opportunity to work with the CRD regarding wastewater treatment infrastructure upgrades.

The Pacheedaht representative also suggested the CRD approach their private forestry partner to discuss using biosolids for forest fertilization, however highlighted a need to explore this potential carefully. Concerns from members of the nation would have to be carefully considered, with an explanation of potential risk factors from working with biosolids in comparison to the synthetic fertilizer products currently in use.

T'Sou-ke Nation

T'Sou-ke Meeting Notes

April 26, 2024

Sam Coggins, T'Souke Nation
Erin Bildfell, CRD
Peter Kickham, CRD
Stephanie Hagenaars, 50th Parallel PR

CRD staff met with a representative of the T'Souke First Nation and provided a brief presentation and overview of the wastewater treatment project and resulting requirement to beneficially use biosolids. Staff presented the full suite of available options for biosolids management including various land application scenarios, incineration, and advanced thermal treatment. Staff also highlighted the concern raised by several groups regarding land application of biosolids.

The T'Souke representative asked several questions, including:

- What is the contaminant profile for CRD biosolids,
- Industrial inputs to the CRD wastewater system (e.g., biomedical waste from hospitals),
- Potential sites within the T'Souke traditional territory where the CRD is considering land application,
- How to manage potential overland flow and impact to aquatic receiving environment,
- Scenario of a motor vehicle accident resulting in a spill of biosolids into a creek,
- Availability of CRD monitoring reports on biosolids,
- How biosolids are managed in other jurisdictions, and where to find monitoring information from other regional districts.

The T'Souke representative did not have formal comments beyond setting an expectation that the T'Souke Nation be engaged further in the event the CRD considers land application (be it a pilot or full scale) of biosolids anywhere in their traditional territory.



Pauquachin First Nation Meeting Notes

April 29, 2024

Octavio Cruz, Pauquachin First Nation
Peter Kickham, CRD
Stephanie Hagenaars, 50th Parallel PR

CRD staff met with a representative of the Pauquachin First Nation and provided a brief presentation and overview of the wastewater treatment project and resulting requirement to beneficially use biosolids. Staff presented the full suite of available options for biosolids management including various land application scenarios, incineration, and advanced thermal treatment. Staff also highlighted the concern raised by several groups regarding land application of biosolids.

The Pauquachin representative asked several questions, including:

- Whether the CRD had received comments or feedback from other First Nations,
- Whether the CRD had considered export options out of the region or province (e.g., to an area where there is high agricultural output and need for fertilizer).

The Pauquachin representative stressed the importance of engagement on any specific (future) land application projects the CRD considers in the territory of the Pauquachin Nation. The concern is not only environmental, but also cultural, as potential impact to harvesting of traditional plants for food or medicinal use is of the utmost importance. They also recognized that potential application of biosolids is only one of many activities that may impact traditional harvesting activities.



250-360-3090
biosolids@crd.bc.ca
getinvolved.crd.bc.ca/biosolids

Making a difference...together

APPENDIX C

Technical and Community Advisory Committee

Long-term Biosolids Management Strategy Presentations

Presented to TCAC by Peter Kickham on October 27, 2023

Capital Regional District
Long-Term Biosolids Beneficial Use Strategy

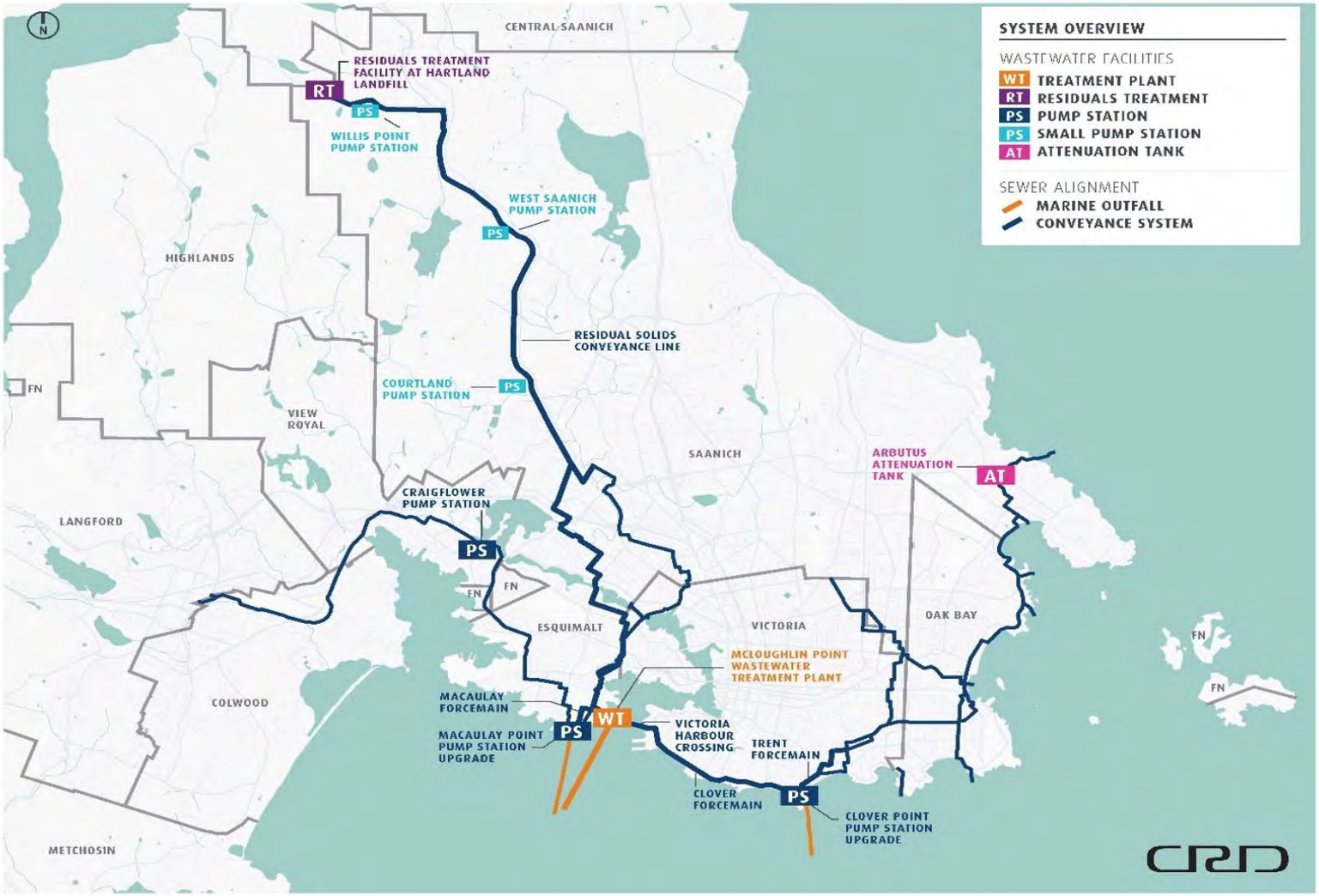
Peter Kickham, Manager, Regulatory Services, Environmental Protection

Technical And Community Advisory Committee

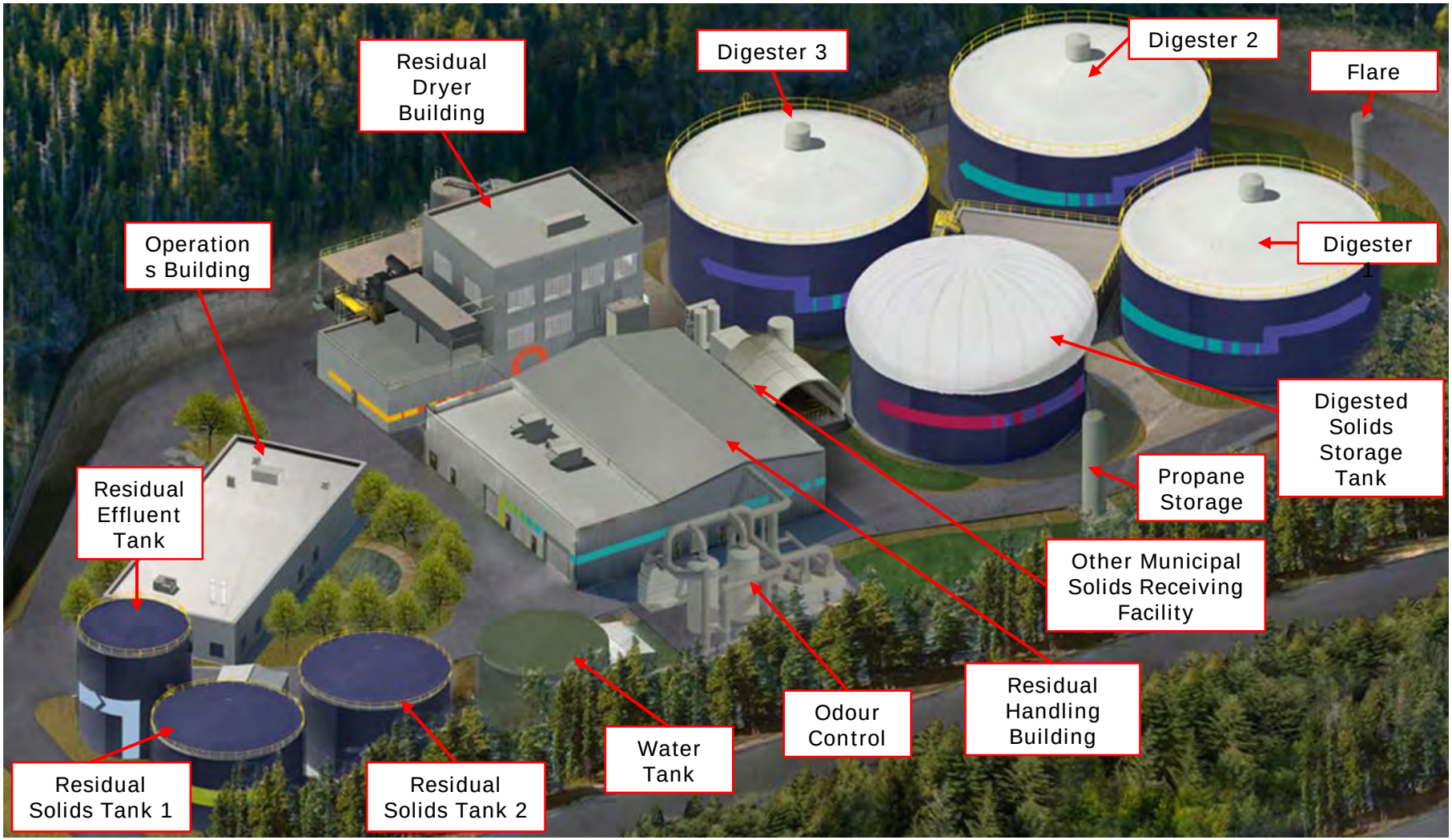
October 27, 2023

CRD Wastewater Treatment

Core Area Wastewater Treatment Overview Map



Residuals Treatment Facility



Dried Class A Biosolids



What is Beneficial Use?

Beneficial use is defined in the *Canadian Council for Ministry of the Environment* (CCME) *Canada-Wide Approach for the Management of Wastewater Biosolids.*

Beneficial use options capitalize on the nutrient and organic matter value and energy content of the municipal biosolids for use in:

- energy production (e.g. combustion)
- compost and soil products
- agricultural land application as a fertilizer or soil conditioner
- forestry application as a fertilizer or soil conditioner
- land reclamation.

When combustion is used for municipal sludge or municipal biosolids management, it may be considered a disposal option or a beneficial use option. To qualify as a beneficial use option, combustion must meet the following three criteria:

- result in a positive energy balance
- emit low levels of nitrous oxides
- recover a significant portion of ash or phosphorus.

Broadly, beneficial use options fit into two categories; land application or energy production.

Short Term Biosolids Beneficial Use Strategy (Definitive Plan): Alternative fuel in cement kiln



Short-Term Biosolids Contingency Plan: Engineered Cover at Hartland Landfill



Short Term Alternative Contingency Plan: Gravel Quarry Reclamation



As a condition to the Provincial approval of the short-term strategy, the CRD must:

a) Consult with the public on all available beneficial use options, and

b) Submit a long term biosolids management strategy by June 2024, to be implemented by January 2025.



Options Analysis

The CRD has hired an external consultant to act as a technical advisor for biosolids planning.

This consultant has completed an analysis of available beneficial use options, and after public and first nations engagement will be drafting the long-term strategy.



Thermal Options

Pyrolysis


(Silicon Valley Clean Water, 2023)

- Absence of oxygen
- 300-800 °C
- Produces syngas, biochar, steam, ash

Gasification


(Water Online, 2022)

- Limited oxygen
- 600-1000 °C
- Produces syngas, biochar, pyrolysis oil, ash

Incineration


(Budimex, 2008)

- Excess oxygen
- 800-1200 °C
- Produces energy (steam, electricity, heat)

Land Application Options

Soil Products


(NW Biosolids, 2021)

- Mixing with soil/sand to create nutrient rich soil
- Mixing with organics for compost

Agricultural


(Metro Vancouver, 2023)

- Fertilizing for agricultural land
- Reduces use of synthetic fertilizers

Forest Fertilization


(Sylvis, 2013)

- Supplementing nutrients in forest soil
- Increases tree production

Mine Reclamation


(Sylvis, 2010)

- Reclaiming barren soils damaged from mining activity
- Minimizes impact of long-term effects of mining sites on ecosystem

Options Portfolios

Regardless of the type of management option selected, the CRD requires a combination of multiple options to ensure redundancy and resiliency as well as consistent service delivery and regulatory compliance.

1. Preferred Option
2. Support Option
3. Contingency Options



Public Engagement



Presented to TCAC by Katie Tavola, Tavola Strategy Group on October 27, 2023

CAPITAL REGIONAL DISTRICT

LONG TERM BIOSOLIDS MANAGEMENT PUBLIC ENGAGEMENT STRATEGY OCTOBER 2023



CRD Making a difference...together

TAVOLA STRATEGY GROUP

BACKGROUND

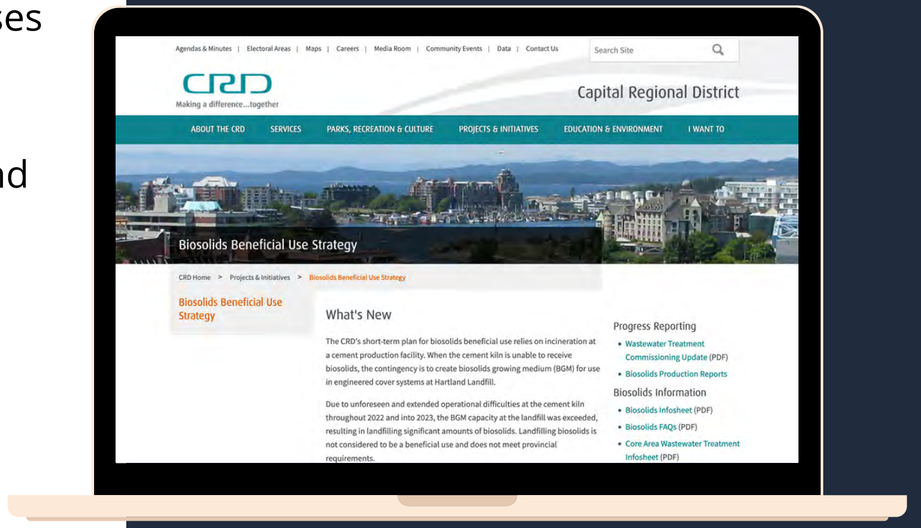
- The leftover material from the sewage treatment process, “biosolids” are a nutrient-rich resource that can benefit the community in a variety of different ways.

- The Province of BC’s Organic Matter Recycling Regulation sets the requirements for the production of high-quality biosolids and subsequent beneficial uses related to land application and composting. The CRD produces Class A biosolids, the highest quality category of biosolids.

- A Definitive (Long-term) Biosolids Management plan must be submitted to the Province by June 2024. The Province of BC has specific requirements for what must be included in the plan. It’s expected that a combination of beneficial uses may need to be considered within the long-term plan.

- Public consultation about the potential in-region beneficial uses, including land application, must be included in the plan.





COMMUNICATIONS AND CONSULTATION OBJECTIVES

1. Raise awareness of the need to develop a long-term biosolids management plan that outlines how the Capital Regional District will utilize the benefits of biosolids in-region.

2. Provide multiple channels and opportunities for the community to learn more and provide input into the development of the definitive biosolids management plan.

3. Seek to understand public awareness, perceptions, concerns and top-of-mind considerations for how biosolids should be managed in the Capital Region.



AUDIENCES

Residents and taxpayers of LWMP Core area
Residents of the Capital Region
CRD Board of Directors
Municipal Councils within the Capital Region
Technical and Community Advisory Committee (Core Area Liquid Waste Management)
News media
Various sectors/groups

a. Environmental organizations (non-profits, advocacy, volunteers)
b. General business
c. Agriculture (farmers, agricultural organizations)
d. Silviculture (forestry companies)
e. Mine reclamation (mining companies)
f. Construction industry
g. Industry and technology providers
h. Research institutions and individuals (universities, research groups, scientists)



AUDIENCES (CON'T)

Community members and groups

a. Biosolid Free BC, Peninsula Biosolids Coalition

Hartland landfill neighbours

a. Community Associations (e.g., Willis Point Community Association, Mount Work Coalition)
b. Local Stream keeper and Watershed Protection Community Groups

Other regional districts in the Province of BC

Communities outside of the Capital Region that are currently receiving CRD biosolids

Provincial Government

Ministry of Environment and Climate Change Strategy

**A parallel engagement effort will occur with Core Area and Regional First Nations.*

STRATEGIC CONSIDERATIONS

- The importance of plain language and visuals to make the topic of biosolids more accessible and ensure those who are less familiar aren't intimidated by the technical jargon or dialogue.
- Establishing a solid context of the need to plan for the long term and the many associated considerations is critical to community and stakeholder understanding and support.
- Recognize that there are different opinions and that all perspectives are welcome, including many less familiar with biosolids and their potential uses.
- Ensure all considerations associated with beneficial uses are presented (e.g. environmental, health, beneficial uses, costs, timelines, siting, etc.)
- Aside from levels of acceptance about various options, it is important to explore how biosolids can be an opportunity and resource, not merely a waste product/problem.
- Important to create a space where people can learn more and understand the community's values and top-of-mind considerations, concerns, and mitigations and avoid a debate over options.
- A transparent process with a detailed *What We Heard Consultation Summary report* will ensure participants to see their input and how it influenced the long-term plan.



KEY TOPICS

What are biosolids	Inform
Why is a long-term plan needed / provincial requirement	Inform
Engagement process and opportunities to provide input	Inform
Potential options for beneficial use of biosolids / and associated considerations	Inform
Level of acceptance for various options	Consult
Top of mind considerations associated with biosolids management and specific options	Consult
Perceived benefits with options	Consult
Perceived concerns and potential mitigations associated with options	Consult
How best to keep you informed about biosolids management	Consult
What we heard during engagement process	Inform



ENGAGEMENT METHODS

AWARENESS-RAISING

- “One-stop” project website with FAQ, videos, interactive features and technical documents
- Fact sheet/FAQ
- Videos
  - What are biosolids and “beneficial uses”, tour of facility
- Social media and digital advertising
- Earned media
- Letter to stakeholders
- Presentation materials



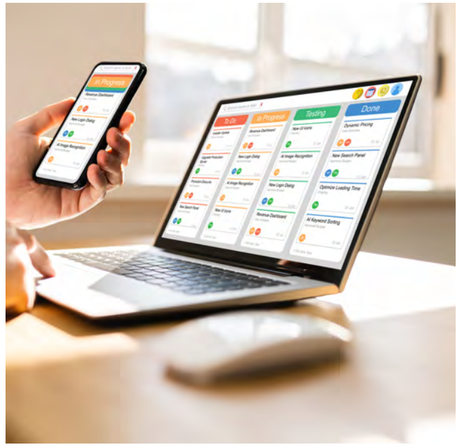
WAYS TO PROVIDE INPUT

- Online survey and interactive engagement platform
- Written submissions
- Online Open House
- Representative focus groups
- Facility Tour*
- Technical and Community Advisory Committee



STAGES IN THE PROCESS

A 3-month consultation process utilizing a variety of engagement methods.



Planning

October 2023



Public Consultation

November -
February 2023



What We Heard

March 2024



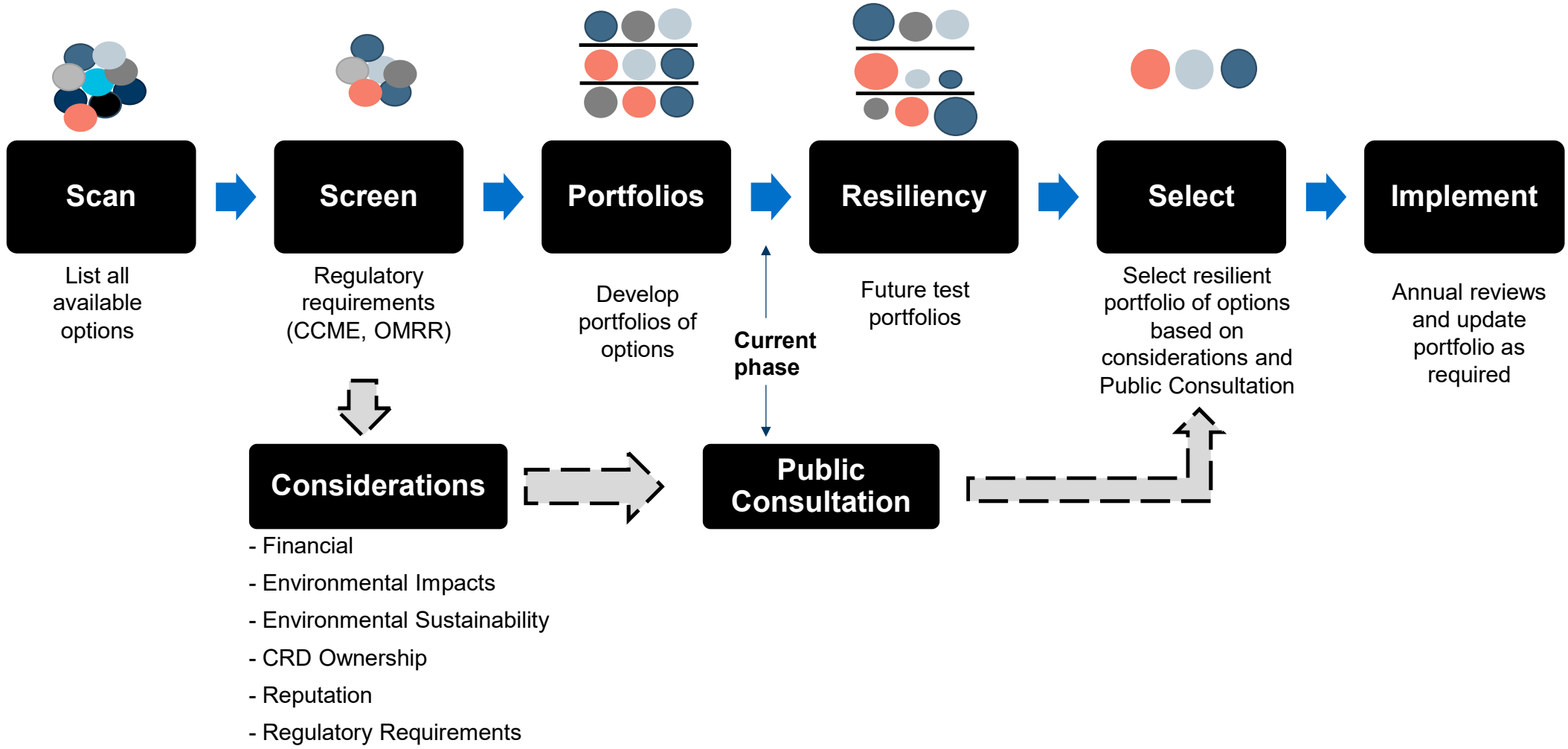
Report to CRD Board

Spring 2024

QUESTIONS?



Approach



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6.3 Options Evaluation

The results of the options evaluations using the proposed evaluation criteria are summarized in Table 6.4 below:

Table 6.4 General Option Pathway Evaluation Results

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
Economic	CAPEX and OPEX	Low CAPEX given no investment for additional infrastructure. Medium OPEX due to labour, transport, materials handling, maintenance, storage, public outreach, etc.			Low CAPEX given no investment for additional infrastructure. Higher OPEX due to increased costs from bagging protocol and materials.	Low CAPEX given no investment for additional infrastructure. Medium OPEX due to labour, transport, materials handling, maintenance, storage, public outreach, etc.	Low to medium CAPEX depending on contract agreement. Some vendors may require investment for additional feedstock storage infrastructure. Medium OPEX due to labour, transport, materials handling, maintenance, storage, etc.	High CAPEX due to capital investment for on-site facility. OPEX induced from labour, utility demands (natural gas, electricity, and water), and the transport of biochar. In comparison to off-site alternatives, OPEX will be low in the long-term due to lack of tip-fees for biosolids. However, OPEX may be higher during the early commercial facility commissioning stage until the process becomes optimized.	
	Potential for revenue generation	Low potential for revenue generation as there are no residual products from this process.			Potential for revenue generation through the distribution of bagged biosolids fertilizer product to partially offset processing costs.	Low potential for revenue generation as CRD may not own the rights to the BGM/composting/soil-products.	Low potential for revenue generation as CRD may not own the rights to the value derived products (electricity, cement, heat, etc.).	Potential for revenue from value derived products (biochar, bio-oil) to partially off-set processing costs.	Potential for revenue from value derived product (biochar) to partially off-set processing costs.
	Estimated cost per tonne (CAPEX and OPEX estimate based on information available at the time of this report)	<$250/tonne	<$400/tonne	<$500/tonne	<$500/tonne	<$500/tonne	<$500/tonne	$500-4,500/tonne[1]	
Environmental Impacts	Odour	Potential for nuisance odour emissions at application site(s). May be mitigated via biosolids stabilization and mixing with soil. Application sites are generally far from population centres.					Minimal odour due to installation of an odour abatement system at the facility.		
	Noise	Noise emitted from land application equipment. However, mines/quarries are generally located far from population centres.			Noise potentially emitted from bagging equipment. However, site is located far from population centres	Noise emitted from land application equipment. However, application sites are generally	Minimal noise due to installation of noise abatement system at the facility.		

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
Environmental Sustainability					and a noise abatement system would be designed as the bagging protocol is developed.	located far from population centres.			
	Estimated Truck Traffic	Truck traffic associated with transport of biosolids from site: Approximately one truck every three days (122 trucks each year)						Truck traffic associated with transport of biochar from site: – Approximately one truck every nine days (41 trucks each year)	
	Air Emissions and Dust	Generally low potential for particulate air emissions/dust.					Minimal air emissions/dust due to installation of advanced capture and treatment systems at facility, though residues from these capture and treatment systems need to be disposed of.		
	Contaminant mass balance	Potential accumulation of contaminants. However, class A biosolids have undergone contaminant reduction processes as per OMRR quality standards.					Contaminants have shown to be reduced through thermal processing. However, the level of reduction and ultimate environmental fate are still under investigation.		
	Production of value derived products e.g., biochar, biocrude, etc.	Biosolids may be considered a fertilizer product derived from a waste stream in the context of land-application, with the added benefit of reducing the need for energy-intensive synthetic fertilizer production.				Produces BGM, compost, soil-products which may be beneficially re-used in various applications and reduces the need for energy-intensive synthetic fertilizer production.	Produces energy which may be beneficially re-used for electricity/heating applications assuming nearby end-users.	Produces steam, syngas, , and bio-oil, which can be beneficially re-used in various applications such as heating, electricity, etc. Also produces biochar, however the potential beneficial applications of this product as a soil amendment are still under investigation.	Produces steam, syngas, and which can be beneficially re-used in various applications such as heating, electricity, etc. Also produces biochar, however the potential beneficial applications of this product as a soil amendment are still under investigation.
	GHG Emission Implications[2]	In comparison to landfilling, GHG emissions are significantly reduced due to lesser methane/nitrous-oxide emissions, carbon sequestration into soil, and an offset usage of synthetic fertilizers. In comparison to alternative beneficial use options, biosolids application to degraded areas (mines, quarries, forests, lands, etc.) presents the lowest potential for GHG emission reduction. Any off-site option will have higher GHG emission implications due to the transport distances and trucking frequency associated with the transport of			In comparison to landfilling, GHG emissions are significantly reduced due to lesser methane/nitrous-oxide emissions, carbon sequestration into soil, and offset usage of synthetic fertilizers. In comparison to alternative beneficial use options, the production and sale of biosolids as a soil fertilizer product through bagging, compost, or BGM, presents medium potential for GHG emission reduction, assuming it has greater potential to offset the usage of synthetic fertilizers.		In comparison to landfilling, GHG emissions are significantly reduced (lesser methane/nitrous-oxide emissions, non-renewable fuel usage offsets). Thermal processing options will have increased GHG implications from the oxidization of any gases produced.	In comparison to landfilling, GHG emissions are significantly reduced (lesser methane/nitrous-oxide emissions, non-renewable fuel usage offsets). Advanced thermal processing options will have increased GHG implications from the oxidization of any gases produced. Like combustion/incineration, pyrolysis and gasification present high potential for GHG emission reduction, if biosolids-derived energy (heat, syngas, or bio-oil from	

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
		biosolids, resulting in increased non-renewable fuel usage.			Any off-site option will have higher GHG emission implications due to the transport distances and trucking frequency associated with the transport of biosolids, resulting in increased non-renewable fuel usage.		In comparison to land application options, utilizing biosolids as renewable fuel for cement combustion or energy production via incineration presents high potential for GHG emission reduction, assuming it offsets the usage of non-renewable fuel sources. Any off-site option will have higher GHG emission implications due to the transport distances and trucking frequency associated with the transport of biosolids, resulting in increased fuel usage.	pyrolysis) is beneficially used to offset the usage of non-renewable fuel sources. Depending on process design, this derived energy may not be reused or recycled, and may result in lower GHG emission reductions. On-site options will have lesser GHG emissions associated with transport, as the trucking frequency of hauling biochar will be less than that required of biosolids.	
	Potential to recover energy and reduce dependence on electric grid and natural gas	No potential to recover energy.					High potential to recover energy from products (steam, heat) to offset dependence on electric grid and natural gas. Fulsome energy recovery would depend on presence of nearby end-users.	High potential to recover energy from products (syngas, steam, heat) to offset dependence on electric grid and natural gas onsite. Fulsome energy recovery would depend on presence of nearby end-users.	
	Potential to co-process additional waste streams	No potential for co-processing.				Potential for co-processing via blending of biosolids with compost generated from organic waste streams.	Low potential to co-process mixed waste streams as CRD would not have control over off-site facility operations.	Potential to co-process mixed waste streams. However, co-processing may increase maintenance/operational costs due to added complexity of feedstock.	
	Soil/groundwater impacts	Supplementing soil cover and improving soil health via biosolids application reduces erosion into lakes and streams. Potential negative impact to soil/groundwater if application plan is not followed correctly as per OMRR.			Bagging process presents minimal impacts to soil/groundwater. End-use of the bagged product may present potential negative impact to soil/groundwater if applied in quantities greater than one bag ($5m^3$) per parcel of land. OMRR does not require a land application plan for application quantities less than or equal to $5m^3$ per parcel of land.	End-use of the products may present potential negative impact to soil/groundwater if application plan is not followed correctly as per OMRR.	Process presents minimal impact to soil/groundwater. End-use of the products (biochar, bio-oil, ash) may present potential negative impact to air/soil/groundwater if proper consideration not taken.		

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
CRD Owned	Yes or no	No. Biosolids would be sent to vendors who would own risk and land application responsibility.			Yes.	No. Biosolids would be sent to vendors who would own risk and responsibility.	No. Biosolids would be sent to off-site facility.	Yes.	
Experience and Reputation	Type of application	Mines/quarries are required by the government to eventually reclaim and close to minimize the long-term environmental effects of operations. Biosolids have shown to be an effective measure in the restoration of former mines/quarries by adding nutrients to promote vegetation growth in their barren soils. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	Biosolids have shown to be an effective measure in the fertilization of forests to increase tree production, reduce soil erosion, and improve soil health. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	Land application has demonstrated commercial success and is one of the commonly used management options worldwide. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	It is unclear if there is a local market for bagged biosolids fertilizer product. A pilot trial would be required to assess demand and feasibility. Biosolids as a bagged product is allowed under OMRR in packages of <5m^3. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	Land application has demonstrated commercial success and is one of the commonly used management options worldwide. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	High technological readiness as combustion/incineration is a commercially proven and widely used biosolids management process. However, the market for biosolids as fuel does not currently exist. Additionally, public acceptance of waste incinerators varies due to concerns regarding intensive energy usage and potential for air pollutant emissions.	Reputation of pyrolysis is gaining interest as an innovative technology which produces value added products from waste streams, however it has demonstrated low technological readiness as there are a limited number of operational facilities which use biosolids as a sole feedstock. In North America, pyrolysis is ahead of gasification with regards to technological readiness based on the number of operational facilities.	Reputation of gasification is gaining interest as an innovative technology which produces value added products from waste streams, however it has demonstrated low technological readiness as there are a limited number of operational facilities which use biosolids as a sole feedstock. In North America, gasification is below pyrolysis with regards to technological readiness based on the number of operational facilities.

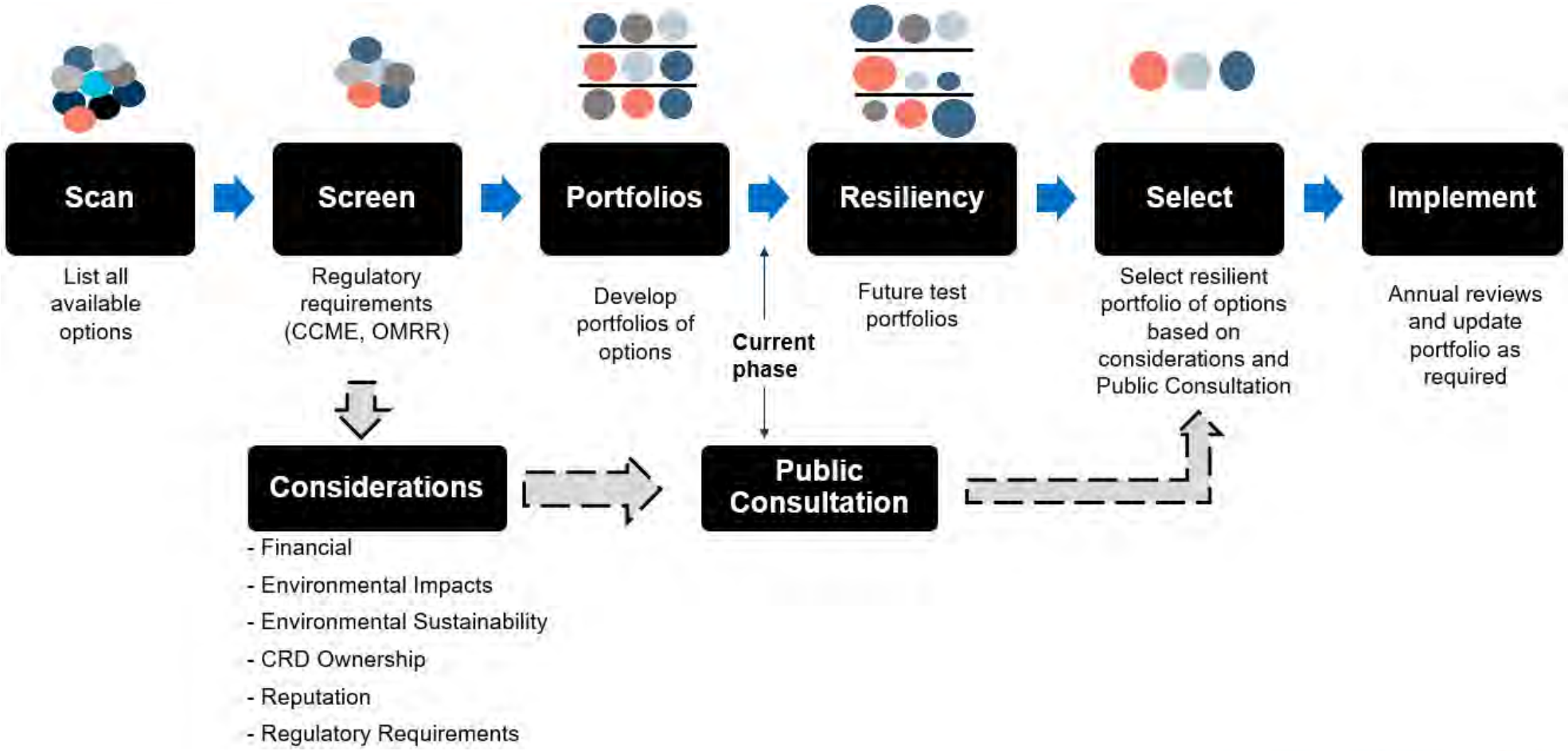
Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
Regulatory	New permitting requirements and impacts to existing permits	May require approvals from: - ENV to ensure land application is carried out safely and does not pose a risk to human health or the environment.					Changes to boiler air mass permits may be required. May require approval from Environmental Management Act Air Quality Permit for any emissions associated with thermal process.	May require approval from Environmental Management Act Air Quality Permit for any emissions associated with thermal process.	

1. Due to pyrolysis and gasification being considered emerging technologies in the biosolids industry there are a number of unknown risks associated with these technologies which have the potential of increasing both CPAEX and OPEX associated these types of projects.
2. GHG Emission Implications are based on the 2022 BEAM Model developed by the Northeast Biosolids and Residuals Association, Northwest Biosolids, Northern Tilth LLC.

Portfolios

Making a difference...together

Risks of interruption may be mitigated through **redundancy of options,** achieved by **portfolios** composed of **multiple contingent options.**



Considerations

Making a difference...together

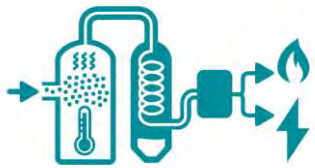
	Thermal Processing  	Land Application     
Financial	– High initial capital cost, low economies of scale – Potential for revenue to partially offset processing costs	– Comparatively low capital cost. Additional investment into storage/transport infrastructure may be required. – No potential for revenue generation
Environmental Impacts	– Facility will have nuisance emission abatement systems (odour, noise, air/dust)	– Potential for nuisance odour, noise, air/dust emissions at application sites (far from population centers)
Environmental Sustainability	– Potential to recover energy from waste product – GHG emissions from transport (off-site combustion)	– Reduction of need for synthetic fertilizer – Potential for soil/groundwater impacts if OMRR not followed – GHG emissions from transport
Experience and Reputational	– Advanced thermal technology is emerging – No advanced thermal plants using biosolids feedstock operating in North America	– Demonstrated commercial implementation
CRD Ownership	– CRD would own advanced thermal facility or send biosolids to third-party for off-site combustion	– Biosolids would be sent to third-parties or be bagged by the CRD and sold commercially
Regulatory	– Facility permits required	– Land application plan required per OMRR
Potential Risks of Interruption	– Multiple years required to implement advanced thermal facility – Unknown market for biochar – Unscheduled shutdowns for operational maintenance/commissioning – Limited commercially operational biosolids thermal facilities in North America	– Fluctuations in need for biosolids (typically project-based, seasonal) – Unclear if market exists for bagged biosolids product

Available Options

Making a difference...together

Available options can be broadly categorized as various forms of **thermal processing** or **land application**.

Pyrolysis or Gasification



- Heating with little to no oxygen
- 300-800 °C (pyrolysis)
- 600-1000 °C (gasification)
- Produces syngas, biochar, steam, ash
- $500 - $4,500/tonne

Incineration or Combustion



- Heating with excess oxygen
- 800-1200 °C cement kilns, pulp mills
- Converts to energy (steam, electricity, heat)
- >$500/tonne

Forest Fertilization



- Supplementing nutrients in forest soil
- >$400/tonne

Industrial Land Reclamation



- Reclaiming barren soils damaged from mining
- >$250/tonne

Wholesale Fertilizer for Landscaping



- Blending with soil, compost, or wood chips
- Wholesale distribution (e.g., golf courses)
- >$500/tonne

Bagged Fertilizer for Residential Use



- Blending with soil, compost, or wood chips
- Residential distribution (e.g., gardens)
- >$500/tonne

Fertilizer for Agriculture



- Fertilizer for crops
- >$500/tonne

Questions?

APPENDIX D

Long-Term Biosolids Management Strategy

April 23, 2024



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Figure 3.1 Outline of the Long-Term Biosolids Management Strategy Development Approach 3

Appendices

Appendix A Long-Term Biosolids Beneficial Use Option Analysis Report

1. Introduction

Under the Capital Regional District's (CRD) provincially approved Core Area Liquid Waste Management Plan (CALWMP) and its amendments, the CRD is obliged to manage wastewater treatment and biosolids in a beneficial manner. As part of the CALWMP, the CRD is required to submit a Long-Term Biosolids Management Strategy to the BC Ministry of Environment and Climate Change Strategy (ENV) by June 18, 2024 and have it implemented January 1, 2025. This technical memorandum is intended to meet the submission requirement.

This Long-Term Biosolids Management Strategy considers the full spectrum of available biosolids beneficial use options to inform biosolids management within the region for the next 5 to 20-years. This strategy includes a portfolio of biosolids beneficial use options for implementation by the CRD to ensure redundancy and resiliency of the management program.

2. Background

In 2011, the CRD Board of Directors passed a motion to restrict the land application of biosolids, the residual, treated solids resulting from typical wastewater treatment processes. In the following year, 2012, the CRD began planning for upgraded wastewater treatment within the region, as federal regulations had been introduced to require a minimum of secondary treatment for wastewater by the end of the decade.

The McLoughlin Point Wastewater Treatment Plant (WWTP) was implemented in 2020 to serve the CRD's core area municipalities, as well as the Esquimalt and Songhees Nations. Residual solids from the WWTP are conveyed by pipe, for further treatment and dewatering, to the Residuals Treatment Facility (RTF), which is located north of Hartland Landfill. The RTF uses mesophilic anaerobic digestion and fluidized bed drying to further treat and dewater the wastewater residual solids from the WWTP into approximately 3,500 tonnes of dried, pelletized Class A biosolids per year (approximately 10 tonnes per day).

The Class A biosolids produced by the RTF were intended to be managed through the CRD's *Biosolids Beneficial Use Strategy (Definitive Plan)* (2019) through 2020 to 2025, which involved the transport of Class A biosolids to a cement manufacturing facility in Richmond, BC, where the Class A biosolids could be beneficially used via thermal processing as an alternative fuel for combustion in the facility's cement kilns.

The ENV had conditionally approved the Definitive Plan on the basis that the CRD develop this Long-Term Biosolids Management Strategy (extended past 2025) that considers the full spectrum of biosolids management options available to the CRD and adheres to the beneficial use guidelines as defined in the *Canada-Wide Approach for the Management of Wastewater Biosolids* (2012) by the Canadian Council of Ministers of the Environment (CCME).

Beginning with the implementation of the Definitive Plan in 2020 to the present day, the CRD had executed several key initiatives to support the development of this Long-Term Biosolids Management Strategy.

These initiatives included but were not limited to:

– Conducting advanced thermal biosolids processing pilot trials with technology vendors
– Development of the *Long-Term Biosolids Beneficial Use Option Analysis* (2023)
– Forming and consulting with a Technical and Community Advisory Committee (TCAC)
– Engaging and consulting with the public and First Nations

Between January and March 2024, the CRD consulted with the public and TCAC, and solicited their feedback on the types of biosolids management options available for inclusion into this Long-Term Biosolids Management strategy. A separate engagement process with First Nations was also carried out, and reporting on public and First Nations engagement processes is included under separate cover.

2.1 Long-Term Biosolids Beneficial Use Options Analysis Report

On July 5, 2023, the CRD completed development of the *Long-Term Biosolids Beneficial Use Option Analysis* report (included as Appendix A). The report was presented at a CRD Board of Directors meeting on August 9, 2023 and has since been used as informational material in the CRD's engagement processes and the overall development of this Long-Term Biosolids Management Strategy.

The *Long-Term Biosolids Beneficial Use Option Analysis* report presents a full account of the regulatory requirements and historical background influencing this Long-Term Biosolids Management Strategy, a jurisdictional scan of biosolids management options used worldwide, an assessment of the advanced thermal pilot trials, an evaluation of long-term of biosolids management options available to the CRD, and potential risks of operational interruptions to biosolids management options as well as recommendations to mitigate them.

2.2 Existing Biosolids Management Plans

Existing biosolids management plans implemented by the CRD to date include the following:

- **Definitive Plan (enacted in 2020):** Alternative fuel for cement manufacturing combustion
- **Contingency Plan (enacted in 2020):** Biosolids Growing Medium (BGM) production for application in engineered cover systems at the Hartland Landfill
- **Short-Term Contingency Plan (enacted in 2023):** Mixing with sand for BGM production for future quarry reclamation

The historical background and details for these plans are discussed in further detail below.

As previously mentioned, upon the commissioning of the RTF, CRD's biosolids were originally intended to be managed under the Definitive Plan, which involved the transport and beneficial use of biosolids through thermal processing (i.e., combustion) at a cement manufacturing facility in Richmond, BC.

In addition, biosolids produced by the RTF were intended to be supplementally managed through the CRD's provincially approved *Contingency Plan* (2019). Under the Contingency Plan, whenever the cement manufacturing facility could not receive biosolids, the biosolids would be mixed with sand and ground wood to produce up to 38 m^3 of BGM for each tonne of biosolids to be beneficially used as final cover material at the Hartland Landfill. The amount of biosolids to be managed under the Contingency Plan was constrained up to 350 tonnes of biosolids per year due to space and storage limitations at the Hartland Landfill as well as only being able to apply BGM when final cover was required.

Due to prolonged, unforeseen operational interruptions at the cement manufacturing facility and malfunctions with the load-out systems at the RTF throughout the course of 2022 and 2023, the CRD could not manage their biosolids through the Definitive Plan and had exhausted the amount of biosolids which could be used under the Contingency Plan. This left the CRD with one remaining emergency option, which was to directly dispose the biosolids at Hartland Landfill until additional short-term management contingencies could be identified, developed, and approved. The landfilling of biosolids failed to utilize the inherent nutrients and energy potential within biosolids and did not meet the beneficial use requirements stipulated by the ENV.

In February 2023, to offset the landfilling of biosolids while the Definitive Plan and Contingency Plan were not available, the CRD Board of Directors amended its previous land-application restriction policy to the allow out-of-region, non-agricultural land application of biosolids as a short-term contingency management alternative.

Following this amendment, an additional Short-Term Contingency Plan was operationalized. The plan involved the mixing of CRD's biosolids with sand and transporting the mixture to a quarry in Cassidy, BC for temporary storage. Owners of the quarry planned to use the biosolids/sand mixture to produce BGM for future land application on closed sections of the quarry. Closed sections of the quarry were to be reclaimed under a provincial Mines Act permit. However, like the original Contingency Plan, only a portion of CRD's biosolids could be managed under the Short-Term Contingency Plan due to restrictions related to space and storage at the quarry. The remaining biosolids not managed under the Short-Term Contingency Plan were landfilled.

The CRD's experience with operational interruptions and limitations in the execution of the Definitive Plan, Contingency Plan, and Short-Term Contingency Plan demonstrated that this Long-Term Biosolids Management Plan requires a portfolio of management options, irrespective of the type of option selected. Through portfolios, when one option is interrupted, the beneficial use of biosolids can be managed under the next option, and if the next option is interrupted, another backup option will support. In addition, having a diversified portfolio of beneficial use options would further mitigate the potential of future interruption. The redundancy of a diversified portfolio-based strategy would ensure the resilient long-term beneficial use of CRD's biosolids.

3. Methodology

The methodology to developing this Long-Term Biosolids Management Strategy follows the same approach as outlined in the *Long-Term Biosolids Beneficial Use Option Analysis* report which is summarized below:

1. Identify all management options available to the CRD
2. Screen the management options against regulatory requirements
3. Curate portfolios of management options for resiliency
4. Future test the portfolios against potential risks of interruption
5. Select the most resilient portfolio that is consistent with feedback from the public, TCAC, and First Nations groups.

Figure 3.1 below presents a graphical summary of the recommended development approach.

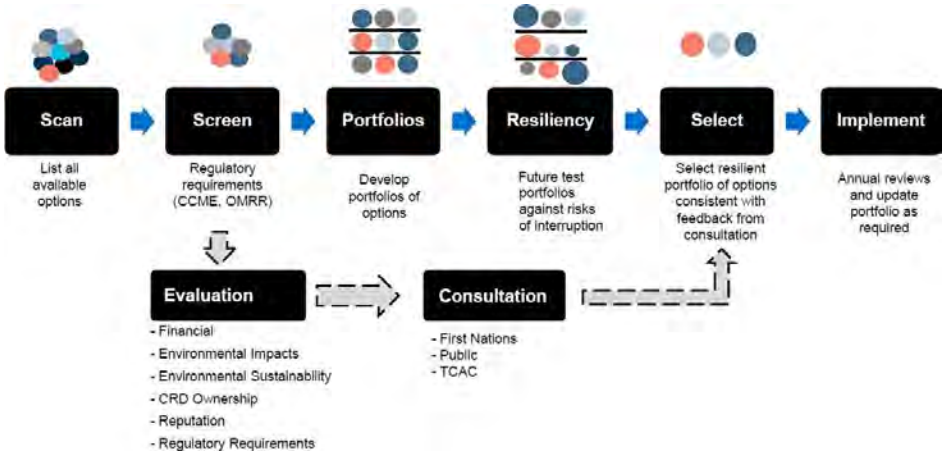


Figure 3.1 Outline of the Long-Term Biosolids Management Strategy Development Approach

4. Recommended Portfolio Framework

Given the management options currently available to the CRD which also meet the definition of beneficial use and regulatory requirements, GHD recommends that the CRD pursue the following portfolio as part of the Long-Term Biosolids Management Strategy:

- Maintain the option of biosolids thermal processing via alternative fuel combustion at the cement manufacturing facility in Richmond BC under the Definitive Plan, for as long as this option is available whenever the facility is operational.
- Procure multiple (ideally at least three) land-application options to act as additional biosolids management alternatives. These options must comply with the Organic Matter Recycling Regulation and should consider guaranteed minimum tonnages and proximity to the RTF to minimize transport distances and consequent greenhouse gas emissions.
- Maintain the option of biosolids application in engineered cover systems at Hartland Landfill under the Contingency Plan to act as an emergency support option; subject to space availability and cover needs of the Hartland Landfill.
- Continued monitoring of the market for potential market driven interruptions and additional available options for consideration to include in the portfolio. Routinely review and update the portfolio as needed.
- Develop a demonstration facility for the advanced thermal processing of biosolids on-site at Hartland Landfill. The implementation of an advanced thermal processing facility at Hartland would add to the robustness and diversification of this proposed portfolio. However, at this time, advanced thermal biosolids processing technologies such as gasification and pyrolysis are considered innovative and have yet to be commercially demonstrated in North America. Further, the expected timeframe to implement such a facility may take up to 7-10-years. As such, this option is not currently available to the CRD but should be explored in the future.

  As noted in the *Long-Term Biosolids Beneficial Use Option Analysis* report, to de-risk the significant capital investment required for such a facility, it is recommended that the CRD first explore the advanced thermal technological feasibility by implementing a smaller-scale demonstration facility before a making a decision to procure a permanent commercial facility.

  If biosolids processing from the demonstration plant proves successful in the future years, advanced thermal processing has the potential to be another important option for the beneficial use of CRD's biosolids. However, it would still be recommended to pursue a portfolio of management options, given the potential risks of interruption when operating major processing facilities due to down time for maintenance, or other operational or market driven interruptions.

Appendix A

Long-Term Biosolids Beneficial Use Option Analysis Report

Long-Term Biosolids Beneficial Use Option Analysis

Capital Regional District

05 July 2023

→ **The Power of Commitment**



Project name		TA - Biosolids and Resource Recovery					
Document title		Long-Term Biosolids Beneficial Use Option Analysis					
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GHD

138 East 7th Avenue, Suite 100

Vancouver, British Columbia V5T 1M6, Canada

T +1 604 214 0510 | **F** +1 604 214 0525 | **E** info-northamerica@ghd.com | **ghd.com**

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Executive Summary

GHD has prepared this Long-Term Biosolids Beneficial Use Strategy report for the Capital Regional District (CRD) to support public and First Nations consultation regarding the beneficial long-term use of Class A biosolids produced by the Residual Treatment Facility (RTF) located adjacent to the Hartland Landfill.

The main purpose of this report is to identify and evaluate the full spectrum of beneficial biosolids management options potentially available to the CRD in preparation for consultation with the public and First Nations groups. To accomplish this, GHD evaluated land-application and thermal biosolids management options, conducted a jurisdictional scan of options used worldwide, evaluated ongoing CRD thermal technology pilot trials, as well as identified, screened, and evaluated all long-term options currently available to the CRD. With this information, GHD then generated long-term strategy portfolios for CRD's consideration which are recommended to provide necessary resilience and redundancy to ensure long term consistent biosolids beneficial use. This report also proposes an evaluation criteria and risk matrix to assist the CRD in implementing a step-by step long-term biosolids beneficial use strategy following the reception of feedback from public and First Nations engagement.

This report concluded the following:

Development and Evaluation of Land Application Options – There are various beneficial use land application methods which meet the Canadian Council Ministers of the Environment (CCME) beneficial use criteria in the form of mine/quarry reclamation, forest fertilization, land improvement, direct land application, biosolids growing medium (BGM), compost, and soil product production. There are various out-of-region land application programs available. There are currently no in-region land application options available at this time due to the long standing CRD policy banning land application. However, this policy was recently expanded to allow for non-agricultural land application as a contingency or emergency option. As such, a number of in-region land application options could be investigated for inclusion in potential long term management portfolios.

Evaluation of Thermal Options – Thermal biosolids management technologies are generally classified as pyrolysis, gasification, or incineration. Among the thermal technologies, incineration is the most commercially proven and widely used thermal treatment process for biosolids. However, incineration is energy intensive and does not result in the beneficial use of ash and as such may not be considered a beneficial use option by the CCME. Pyrolysis and gasification technologies are both still emerging in the biosolids processing space with slightly more pyrolysis facilities anticipated to move into operations in North America over the next few years.

Thermal technologies have the added benefits of generating potential revenue through biochar, syngas, heat recovery as well as the potential to co-process other mixed waste streams. However, there are challenges in thermal co-processing technologies, as mixing biosolids with other waste streams may increase maintenance and operational costs due to the added complexity of handling/treating mixed waste streams. Co-processing also presents challenges in meeting CCME criteria for the beneficial re-use of 25% of ash.

Contaminants of Emerging Concern - Community concerns around the land application of biosolids and its potential impacts to soil quality, surface water, and groundwater are largely based on the presence, or suspected presence, of unregulated CEC's. These potential impacts are the subject of ongoing scientific research. CCME's guidelines note that many CECs are found in low concentrations in biosolids, and that detection does not necessarily mean there is a risk to human health or the environment. Generally, risk assessments for each individual CEC have not been completed, but ecotoxicological testing, used to assess the toxicology of residuals holistically, did not detect significant negative impacts. The CCME is supportive of source control measures as an effective way to improve the quality of biosolids. CRD's biosolids have been treated to Class A standards as per the Organic Matter Recycling Regulation (OMRR).

The Canadian Food Inspection Agency (CFIA) proposed an interim standard for per - and polyfluoroalkyl substances (PFAS) in biosolids used in Canada as fertilizers at 50 ppb PFOS (one type of PFAS). The proposed standard aims to protect human health by preventing the small proportion of biosolids products that are heavily impacted by industrial

inputs from being applied to agricultural land in Canada. The concentration of PFOS in CRD's biosolids is under the proposed standard at approximately 6 ppb (based on two samples).

The fate of CECs in advanced thermal processing of biosolids is still under investigation. While CECs appear to be reduced in biochar products, some can still be found in syngas and bio-oil products, but the concentrations and environmental fate still need to be confirmed.

Jurisdictional Scan – Globally, biosolids, are beneficially used primarily through land application or thermal treatment methods. The majority of countries assessed in the jurisdictional scan primarily land-apply their biosolids for beneficial use, except for Japan, who relies on incineration due to its high population density and limited areas for land application.

Across the world, the decision to beneficially use biosolids through land application or thermal processes is influenced by a range of factors: regulatory requirements, local infrastructure/resources, public perception, as well as the goals and priorities of local municipalities. Identifying and evaluating these factors are key to the implementation of an effective, long-term biosolids management strategy.

Evaluation of Thermal Pilots – In the evaluation of the Biosolids Thermal Pilot technologies/studies explored by the CRD, valuable insight was gained into the discrete operation of each of these technologies. However, the current pilot results alone may not be sufficient to confirm the feasibility of on-site thermal processing of CRD biosolids nor the potential for integration/beneficial use of by-products into other systems at Hartland at this time.

For the upcoming on-site thermal trial, GHD suggests that the CRD capture key operational criteria such as process reliability, operational costs, maintenance requirements, co-processing feasibility, residual product quality, biochar markets, carbon sequestration benefits, and long-term synergies at Hartland.

Long-Term Options & Portfolio Generation – A long-list of biosolids management options available to the CRD was identified and screened against CCME beneficial use criteria.

GHD recommends that the CRD develop of a combination of multiple options within a diverse portfolio to ensure resiliency in the form of strategy redundancy. In the unexpected event that a biosolids management option is interrupted, the inclusion of additional options within a portfolio will allow CRD's biosolids to still be beneficially used in the interim until the interruption is resolved.

General portfolios were generated using the long-list of options available to the CRD. A risk evaluation identified notable potential risk of interruption factors such as contingency option availability and facility ownership changes to consider in the development of the long-term biosolids beneficial use strategy. The risk evaluation also indicated that some form of land-application is likely required in all proposed portfolios to ensure resiliency.

Next Steps – Following public and First Nations consultation, the CRD may further refine the general portfolios outlined in this report. From the list of options approved by the public and First Nations groups, the CRD may develop portfolios using specific options and vendors and future test these portfolios for resiliency using the risk matrix outlined in Section 7. The risk analysis will help inform the selection of a resilient long-term portfolio for the long-term beneficial use of CRD's biosolids.

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1. Introduction

The Capital Regional District's (CRD) Core Area Wastewater Treatment Project included construction of a Residuals Treatment Facility (RTF) located north of Hartland landfill, which processes wastewater residual solids into approximately 3,650 tonnes of dried pelletized Class A biosolids per year using mesophilic anaerobic digestion and a fluidized bed dryer. The CRD has a provincially approved short-term (2021-2025) Biosolids Beneficial Use Strategy (Definitive Plan) that involves the transport of biosolids to the Lafarge cement manufacturing facility (Lafarge) in Richmond, BC where the biosolids are used as an alternative fuel in the plant's combustion processes. The CRD also has an approved Contingency Plan to manage biosolids when Lafarge has planned or unplanned shutdowns and cannot receive the biosolids, which was anticipated to be approximately 35-days per year. That plan involves the production of Biosolids Growing Medium (BGM), which is then beneficially used in final cover materials at the Hartland Landfill.

Over the course of 2022, disposal of biosolids at Lafarge was unavailable for approximately 10-months, due to both planned shutdowns and unplanned operational issues. As a result, CRD managed approximately 2,700 tonnes of biosolids at Hartland Landfill, 600 tonnes of which were used to produce BGM under the Contingency Plan and the remainder were landfilled. In 2022 the biosolids contingency management consumed more than two-years of the five-year Contingency Plan for beneficial use at Hartland Landfill as BGM, and a significant volume of landfill airspace that should be utilized for non-divertible solid waste. The Contingency Plan must also be aligned with landfill operations such as receiving and storing. Producing future biosolids needs to consider space constraints for temporary storage and application of BGM until final cover areas are ready. This constrains how much material can be used for BGM production in any given year. Given the challenges with biosolids management under the Definitive and Contingency Plans, the CRD is interested in investigating and developing alternative strategies for the short-term and long-term beneficial use of Class A biosolids generated through the RTF.

Under a separate cover 'Alternative Short-Term Contingency Biosolids Beneficial Use Options', GHD assessed responses from industry which were obtained during a previous RFEOI (No.40.20.01-02) issued by the CRD and followed up with various vendors to assess their interest, and ability to manage CRD biosolids in accordance with provincial requirements. GHD also assessed information obtained by CRD in their 2022 outreach to industry to identify additional Short-Term contingency options.

Following this report, the CRD will engage with the public and First Nations groups with regards to the biosolids beneficial use options available to the CRD and outlined in this report. Based on feedback from this consultation, the CRD will develop a strategy which will outline the steps required to implement a resilient portfolio for the beneficial use of biosolids.

1.1 Purpose of this Report

The purpose of this report is to identify and evaluate options to support consultation efforts for the beneficial long-term use of Class A biosolids produced by the RTF at the Hartland Landfill. The key objectives are to:

- Assess potential land application and thermal technology options.
- Conduct a jurisdictional scan of biosolids management options currently used worldwide.
- Evaluate and summarize the results from thermal technology pilots commissioned by the CRD.
- Evaluate the full spectrum of long-term options known to be available to the CRD that are permitted by Provincial regulations.
- Present proposed screening, evaluation, and resiliency criteria as well as methodology to be used to evaluate options and portfolios following the results of public and First Nations consultation.

1.2 Scope and Limitations

This technical memorandum has been prepared by GHD for the Capital Regional District. It is not prepared as, and is not represented to be, a deliverable suitable for reliance by any person for any purpose. It is not intended for circulation or incorporation into other documents. The matters discussed in this memorandum are limited to those specifically detailed in the memorandum and are subject to any limitations or assumptions specially set out.

2. Background

The CRD submitted Amendment No.11 to their Core Area Liquid Waste Management Plan (CALWMP) to the BC Ministry of Environment and Climate Change Strategy (ENV) in September 2016, committing to the determination of a long-term management option for the beneficial use of biosolids generated at the RTF. On November 18, 2016, ENV conditionally approved Amendment No.11, with the stipulation that the CRD must first develop a short-term Definitive Plan for utilization of CRD's biosolids which was to be submitted by June 30th, 2019. The Definitive Plan was also required to not include disposal or multi-year storage options at Hartland landfill. Additionally, ENV stipulated that the CRD develop a long-term management beneficial use strategy plan which considers and evaluates the entire spectrum of potential management options with a jurisdictional review of how different municipalities manage their biosolids. This letter of conditional approval can be found in Appendix A.

As of 2023, the RTF produces approximately 10 tonnes of dried biosolids per day, or 3,650 tonnes per year. Biosolids produced by the RTF are currently managed through the following options:

1. Transport to LaFarge for use as alternative cement kiln fuel under the approved Definitive Plan
2. Mix with sand and ground wood to produce BGM for use as a final cover at Hartland Landfill under the approved Contingency Plan
3. Blend with soil and directly landfill (not approved)

As indicated above, these biosolids are primarily transported to Lafarge under the approved Definitive Plan. When Lafarge is unable to accept biosolids, the biosolids are blended with sand and ground wood at a volumetric ratio of 1:5:13 to produce 38 m^3 of BGM for each tonne of biosolids, using up to an approved 350 tonnes of biosolids per year under the Contingency Plan. If the 350 tonnes of biosolids per year used to produce BGM has been exhausted and Lafarge is still unable to take biosolids, the CRD currently has only one remaining emergency option available, which is to blend the biosolids with soil and directly landfill. This process has no beneficial use, is not an approved Canadian Council of Ministers of the Environment (CCME) option and consumes landfill airspace.

The biosolids from the RTF are characterized as Class A, under the BC Organic Matter Recycling Regulation (OMMR). Accordingly, Class A biosolids must have undergone pathogen reduction treatment, vector attraction reduction, and specific sampling protocols. Class A biosolids also have specific limits on their heavy metal and coliform concentrations. The criteria and treatment protocols for Class A designation are outlined in Section 3.2.6. of the OMMR, which regulates the production and land application of compost and biosolids.

BGM must adhere to certain quality criteria outlined in Section 3.4.10 of the OMRR. Schedule 11 of the OMRR stipulates that BGM must be derived from either Class A or Class B biosolids.

The CCME provides guidelines on the beneficial management of biosolids from wastewater treatment plants.

In addition to the above, the CRD's Board currently restricts the land application of biosolids beyond contingency/emergency use at the Hartland Landfill and, more recently, for non-agricultural land application.

Additional information on OMRR requirements, CCME guidelines, CRD Board direction, CRD biosolid characteristics, and thermal processing pilot trials are described in more detail below.

2.1 OMRR Requirements

The production, distribution, storage, sale, and usage of biosolids are regulated under OMRR. OMRR also sets the minimum standards for biosolid product quality criteria in terms of pathogen reduction, vector attraction reduction, pathogen limits, and heavy metals limits.

An official plan must be prepared by a qualified professional for the land application of biosolids. Section 3.1.5 of the OMRR outlines all the requirements for a land application plan. The plan must designate each site where organic matter will be applied, and each scheduled occurrence of application. After each occurrence, the discharger must obtain written certification from a qualified professional that the application was done in accordance with the land application plan.

In terms of distribution requirements, Class A biosolids may only be distributed as follows:

a. In volumes that do not exceed 5 m^3 per vehicle per day.
b. In sealed bags for retail purposes, each not to exceed 5 m^3, with no restrictions on the number of bags distributed per vehicle per day.
c. In volumes greater than 5 m^3 to composting facilities or biosolids growing medium (BGM) facilities.

BGM application does not require a land application plan and may be distributed without volume restrictions as it is considered retail-grade organic matter.

2.2 CCME Beneficial Use Criteria Application

One of ENV's conditions of approval to the CRD's CALWMP was that the proposed long-term management plan for the biosolids generated at the RTF must comply with the requirements for beneficial use specified in the *Canada-Wide Approach for the Management of Wastewater Biosolids* (2012) by the CCME.

According to the CCME, beneficial use of biosolids is based on sound management that includes:

– Consideration of the utility and resource value (product performance).
– Strategies to minimize potential risks to the environment and health.
– Strategies to minimize greenhouse gas emissions and.
– Adherence to federal, provincial, territorial, and municipal standards and regulations.

The policy stated above is upheld by the following principles:

1. Municipal biosolids contain valuable nutrients and organic matter that can be recycled or recovered as energy.
2. Adequate source reduction and treatment of municipal sludge and septage should effectively reduce pathogens, trace metals, vector attraction, odours, and other substances of concern.
3. The beneficial use of municipal biosolids, municipal sludge, and treated septage should minimize the net GHG emissions.
4. Beneficial uses and sound management practices of municipal biosolids, municipal sludge, and treated septage must adhere to all applicable safety, quality, and management standards, requirements, and guidelines.

More details and examples of the beneficial use of biosolids are provided in the CCME supporting document, *Guidance Document for the Beneficial Use of Municipal Biosolids, Municipal Sludge and Treated Septage* (2012). There are opportunities for the beneficial use of biosolids through land application, value-added product development, energy recovery, and combustion. Landfilling is not considered a beneficial use option by the CCME since it results in the loss of nutrients and emits greenhouse gases. Any biosolids management option must be evaluated in accordance with the regulations stated in the OMRR, as well as supported by CCME guidelines and principles.

The CCME guidance document promotes the land application of Class A biosolids in support of its beneficial use guiding principles. In alignment with principle 1, the nutrient-rich concentration of biosolids allows direct land application to be a beneficial use option when properly managed as it enhances soil fertility, soil structure, and plant growth. Furthermore, land application supports principle 3 by reducing the need for energy intensive synthetic fertilizer production as well as increasing carbon storage into the soil, hence minimizing net GHG emissions.

Biosolids may also be thermally treated and pelletized to be used for land application or as a biofuel feedstock for combustion. However, for biofuel combustion to be considered as a beneficial use, per the CCME guidance document there are three requirements:

1. The net energy balance must show that the energy recovered exceeds the energy required to combust with dry matter composing >30% of the biosolids to allow for auto combustion and exothermic reaction.
2. >25% of ash or phosphorus generated from the combustion of biosolids must be recovered.
3. The process must emit low levels of nitrous oxides through continuous temperature monitoring with a minimal combustion temperature >880°C.

2.3 CRD Board Resolution on Land Application of Biosolids

On July 13, 2011 the CRD's Board moved to restrict the land application of biosolids within the CRD. These minutes can be found in Appendix B and the motion referenced below.

"*Be it so moved that the CRD will harmonize current and long-term practices at all CRD-owned regional facilities and parks with the approved policies of the regional treatment strategy, including ending the production, storage, and distribution of biosolids for land application at all CRD facilities and parks; and*

Be it further moved that the CRD does not support the application of biosolids on farmland in the CRD under any circumstances, and let this policy be reflected in the upcoming Regional Sustainability Strategy."

The provincial government conditionally approved the Definitive Plan with the condition that the CRD prepare beneficial use options, for use during Lafarge shutdowns, that did not include landfilling or long-term storage. To comply with these regulatory requirements, the CRD Board moved to partially rescind its land application restriction on February 12, 2020. The motion is referenced below.

"*That the Capital Regional District Board partially rescind its policy to prohibit land application as a beneficial use of biosolids at Hartland landfill only; and 2. That land application of biosolids be approved as a contingency plan for beneficial use at Hartland landfill."*

On February 8, 2023, the CRD board amended its policy to allow non-agricultural land application of biosolids as a short-term contingency alternative. These minutes can be found in Appendix C and the motion referenced below.

"*That the Capital Regional District (CRD) Board amend its policy to allow non-agricultural land application of biosolids as a short-term contingency alternative; and 2. That staff be directed to update the CRD's short-term biosolids contingency plan correspondingly*."

2.4 Short Term Memorandum

A short-term alternative contingency plan was developed to address the immediate challenges with biosolids management under the current Definitive and Contingency Plans.

In 2022, GHD prepared a memorandum which identified and evaluated additional contingency options for the beneficial short-term use of Class A biosolids produced by the RTF. These options included both non-land application and land application options which have the potential to be implemented within two-years. The memorandum concluded the following:

– There is no option currently available that meets the CCME criteria for beneficial use, meets OMRR criteria and meets the CRD Board restriction on land application other than Lafarge and BGM.
– Non-land application options could be developed in 24-months or greater that could partially meet the CCME criteria for beneficial use and CRD Board restriction on land application are presented below:
    - Off-Site Thermal Options – Thermal options in addition to Lafarge are possible in 24-months or greater working with existing facilities such as Envirogreen in Princeton, Lehigh Cement Plant, or the Metro Vancouver WTEF. Changes to ENV permits/approvals, consultation with stakeholders may be needed and biosolids receiving, handling and dust mitigation procedures and potentially equipment would need to be developed. The off-Site thermal options do not beneficially use the ash from the biosolids, and as such may not meet CCME guidelines.
    - On-Site Thermal Options – A pilot pyrolysis or gasification facility could be established at Hartland. This would require construction of the pilot facility, and an approval from ENV to operate the facility, which would require 24-months or greater to develop. During the pilot stage the syngas would be flared, and the pilot would be used to characterize the quantity and quality of the syngas to provide information towards the long-term beneficial use (e.g., as a fuel). The quality of the biochar produced would be evaluated and ultimately marketed as a biochar product if feasible. Fulsome GHG implications would also be determined.
– Land application options exist that meet CCME criteria and are used by other jurisdictions in many cases to cost effectively manage biosolids. If the CRD Board limitation on the land application of biosolids was beyond contingency use at the land fill and for non-agricultural land application, then these options could likely be implemented within 1 to 2-years, with some options being available immediately, and without additional infrastructure.

2.5 Biosolids Characteristics

A Safety Data Sheet (SDS) for the CRD's Class A biosolids can be found in Appendix E.

2.6 Thermal Processing Pilot Trials

In July 2020 the CRD issued a Request for Expressions of Interest (RFEOI) (No.40.20.01-02) as part of the CRD's long term plan to determine avenues for the beneficial use of Class A biosolids produced by the RTF. The intent of the RFEOI was twofold:

a. Understanding what technologies were available to beneficially use biosolids
b. Determine interest from proponents willing to undertake pilot trials

An evaluation of the results from the selected pilot trials has been summarized in Section 5.

Following the pilot trials, on March 29, 2023, the CRD board moved to initiate a Request for Proposals (RFP) for the development of a thermal processing trial on-site. These minutes can be found in Appendix D and the motion referenced below:

"Staff concurrently initiate a Request for Proposals process for a biosolids advanced thermal site trial; and that the RFP be scoped broadly to include potential for co-processing of municipal solids waste streams, and that submission be welcomed from both domestic and international vendors."

The RFP process was initiated June 16, 2023, with a response closing date of July 14, 2023.

3. Biosolids Management Options

The beneficial use of biosolids includes various methods of both land application and thermal treatment, which are discussed in further detail below.

3.1 Land Application Options

Biosolids are rich in nutrients such as phosphorus and nitrogen and as a result can be directly applied to lands at an agronomic rate to promote vegetation growth. The land application of biosolids involves spreading biosolids on the soil surface or incorporating biosolids into the soil as soil amendment and fertilizer. Land application is the most common and cost-effective way to beneficially use biosolids and has been widely practiced for decades. Prior to land application, wastewater solids are required to undergo a stabilization process to minimize odour generation, destroy pathogens (disease causing organisms), and reduce vector attraction potential (potential to attract organisms capable of spreading the material) . Wastewater solids can be converted to stabilized biosolids through several methods including adjustment of pH (lime or alkaline stabilization), aerobic digestion, anaerobic digestion, composting, and heat drying.

The following sections outline the most common land application options for biosolids.

3.1.1 BGM, Compost, and Soil Products

Biosolids can be mixed with mineral feedstocks (typically sand or topsoil) to produce BGM, a nutrient rich soil with similar properties to other fabricated soils with respects to aesthetics, odour, consistency, and performance. BGM can promote vegetation growth when applied to lands. Currently, CRD's Class A biosolids are used to produce BGM under the approved Contingency Plan for use as final cover at Hartland Landfill.

Biosolids are a commonly used feedstock at many compost facilities. Biosolids can be combined with wood chips or green materials as bulk agents to produce a high-quality compost suitable for various land applications. However, composting generally requires a long residence time resulting in increased costs for this option. Wood waste can be mixed with biosolids and cured over time to create a Class A Compost, a nutrient-rich soil amendment which can be regularly tested to ensure it meets both OMRR and the Canadian Food Inspection Agency (CFIA) requirements for land application.

3.1.2 Agricultural Land

Biosolids can be recycled and used as a soil amendment or fertilizer on agricultural land to improve soil productivity, stimulate plant growth, and potentially reduce chemical fertilizer application. Biosolids have been widely applied on agricultural lands due to the cost-effectiveness of this option and its ease of use. Using biosolids on agricultural land has the potential for significant benefits in both the environment and the farming industry.

3.1.3 Forest Fertilization

Forest fertilization is another cost-effective and environmentally safe way to recycle biosolids. Forest soil is usually acidic and deficient in nutrients, thereby applying biosolids can significantly increase the forest lands fertility, total tree production, and build soil foundation for productive forest ecosystems, including wildlife habitat. Furthermore, forestry application can increase vegetation and result in healthier forest soils to improve soil tilth and reduce soil erosion into lakes and streams.

3.1.4 Mine/Quarry Reclamation

Damaged soils impacted by activities such as mining or quarrying can be reclaimed by applying biosolids. Mine/quarry reclamation involves the application of large quantities of biosolids at singular to infrequent periods. Biosolids are often mixed with other materials like wood waste and sand or mixed with stockpiled soil removed from a site prior to disturbance.

Biosolids can be effective in restoring former mines by improving soil conditions, revegetating extensive areas of piled rock and mine tailings and stabilizing slopes. Following biosolids application, the soil is more aerated and lighter, which increases the water infiltration to reduce soil erosion. Unlike nutrients in commercial fertilizers, nutrients added in the biosolids will stay in the topsoil over time and the restored ecosystem will continue to prosper.

The process of mine/quarry reclamation and closure is often required by government to ensure sustainable practices and minimize the long-term effects of mining/quarry operations on the surrounding ecosystems and communities. Ongoing monitoring and maintenance may be required to ensure the success of the reclamation efforts and the long-term stability of the reclaimed site.

3.1.5 Landfill Cover

Biosolids can be beneficially used as an amendment to final cover at landfills acting as a biofilter and mitigating greenhouse gas emissions. Landfills can also benefit from the application of BGM as a topsoil to improve vegetation and prevent erosion on temporarily or permanent closed landfill cells.

3.1.6 Biodiesel and Fuel Crop Production

Biodiesel is an environmentally friendly diesel fuel and renewable alternative to fossil fuels. It is produced from vegetable oils or animal fats through an esterification reaction. High oil seed crops (fuel crops) such as soy and canola and high biomass plants such as willow are considered as suitable feedstock for biodiesel production. Biosolids can be used as fertilizer in growing biodiesel crops and willow plants, in which the biodiesel produced can be beneficially used as fuel for vehicle fleets and farming equipment.

3.2 Knowledge Gaps and Limitations in Land Application

When considering the land application of Class A biosolids, it is important to recognize that knowledge gaps, as well as limitations and barriers to implementation exist. Some of these knowledge gaps and limitations are outlined below.

Nutrient Management: Effective nutrient management is crucial to prevent overapplication or imbalances in soil nutrient levels. Understanding the nutrient content and availability of biosolids is important for determining appropriate application rates and timing. Research can help optimize nutrient management strategies and guidelines specific to biosolids with consideration for the application site soil conditions.

Pathogen and Contaminant Monitoring: Assessing and monitoring the presence of pathogens, heavy metals, pharmaceuticals, and other contaminants of concern in biosolids is essential for reducing risks to public and environmental safety. The presence of ‘per’ and polyfluoroalkyl substances (PFAS) within biosolids has led to public concern regarding land application methods. The potential for groundwater contamination following land application of biosolids and subsequent leaching of PFAS through soil is one of several potential impacts that have generated discussions on banning land application methods. This risk is attributed to how PFAS does not easily decompose. Thermal treatment and destruction technologies at commercial scales are currently limited. Adhering to land application plans can reduce risk of broad environmental contamination.

Public Perception and Acceptance: Public acceptance and understanding of the land application of biosolids play a significant role in its successful implementation. Addressing concerns related to odour, visual appearance, and potential health risks through educational initiatives and public outreach can help foster acceptance and support for this practice.

Logistics and Operational Considerations: Conducting pilot programs and field trials can provide valuable insights into the logistical aspects of land application, such as transportation, storage, application methods, and equipment requirements. These pilot programs can help identify any challenges, evaluate the feasibility of large-scale implementation, and assess the associated costs.

Regulatory Framework and Compliance: Understanding and complying with the existing regulatory framework governing the land application of biosolids is crucial. Identifying any regulatory gaps or barriers can help inform policy development and ensure that appropriate guidelines and standards are in place to regulate the practice effectively.

3.3 Thermal Options

With an increasingly global focus on environmental responsibility, and contaminants of emerging concern (such as microplastics and PFAS), interest in the efficient, safe, and effective thermal processing of biosolids is growing. Employing thermal treatment technologies can produce renewable energy, reduce emissions associated with the transport of biosolids, and result in a higher-value final product.

The thermal management of biosolids refers to application of heat to reduce the volume, reduce contaminants, and utilize the calorific energy of biosolids as heat, steam, electrical power, or combustible material. There are many types of thermal conversion technologies available from many technology providers, however they generally fall into three broad categories: gasification, pyrolysis, and combustion/incineration. Combustion/incineration is the most widely used and commercially proven thermal treatment process for biosolids. Gasification and pyrolysis are innovative technologies gaining interest due to the potential of producing value added products such as syngas and biochar, however, they have limited commercial experience with biosolids as a sole feedstock.

3.3.1 Gasification

Gasification is a thermal treatment technology where any carbon-containing raw material, such as biosolids, can be converted into fuel gas (also known as synthesis gas or syngas) under conditions of high temperature and a highly controlled supply of partial oxygen and/or steam. Gasification can be used to significantly reduce the biosolids volume and produce syngas as a renewable source of energy. Gasification by-products (ash and biochar) can be applied as soil amendments or landfilled. Contaminant reduction also takes place, although the ultimate fate and level of reduction of various classes of organic contaminants is still under investigation.

Syngas can either be utilized as a low calorific gaseous fuel such as in an internal combustion engine (ICE) for cogeneration or can be thermally oxidized to produce heat for beneficial use. Gasification of biosolids typically requires dried biosolids (80% to 90%) as feed, which the RTF already produces. The thermal oxidation of syngas produces heat which can be used to dry biosolids and pre-condition them for gasification.

Close coupled drying with gasification, as shown in Figure 3.1, is an emerging commercial trend for biosolids thermal treatment. Conditioning of syngas for use as fuel in a cogeneration system such as an ICE is still under development. Cleaning of syngas to produce Renewable Natural Gas (RNG) is another avenue of energy recovery which is being explored, however the feasibility of this is still under development.

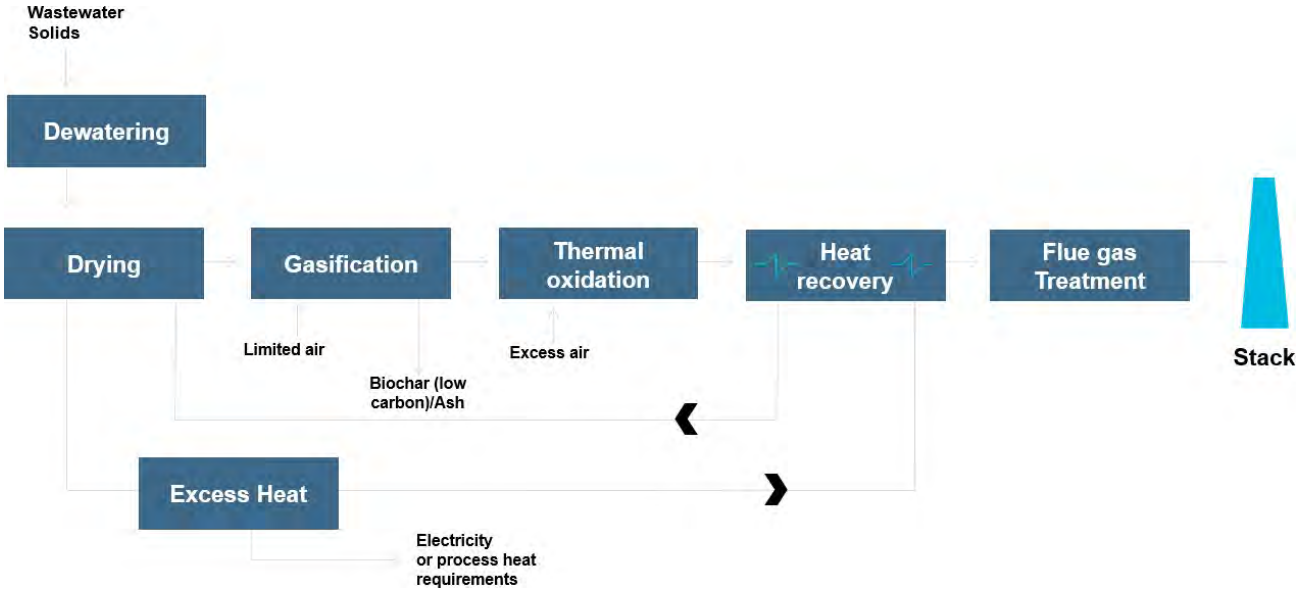


Figure 3.1 Close-Coupled Gasification Process Flow Diagram

3.3.2 Pyrolysis

Pyrolysis is a similar thermal treatment technology to gasification; however, it requires a lower temperature and is carried out without the presence of oxygen under an inert atmosphere (e.g., nitrogen or argon). Like gasification, pyrolysis can decompose and covert biosolids to useful products (syngas, bio-oil, and biochar) while minimizing air emissions and reducing pathogens/contaminants. Like gasification, some contaminant reduction does occur during pyrolysis. However, the contaminant partitioning between the biosolids feedstock and the residual pyrolysis products is yet to be fully understood, and more research is ongoing.

Depending on the temperature and heating rate, pyrolysis can be classified into slow and fast pyrolysis. In slow pyrolysis, known as carbonization, material is pyrolyzed at low to moderate temperatures (around 300 °C) and low heating rates or long reaction times (several hours). The goal of carbonization is to maximize charcoal product (biochar) and generate lower yields of bio-oil and syngas. Fast pyrolysis, carried out at intermediate temperatures (around 500 °C) and short reaction times (a few seconds), produces higher yields of bio-oil in addition to biochar and syngas.

The majority of pyrolysis technologies utilize a close-coupled configuration as shown in Figure 3.2. Syngas produced during pyrolysis is oxidized (combusted) in a thermal oxidizer, and the heat released from thermal oxidation of syngas is recovered and used for biosolids drying. Pyrolysis of biosolids typically requires dried biosolids (80%-90%) as feedstock, which the RTF already produces. A portion of thermal energy is recycled to the pyrolyzer to sustain pyrolysis, and the rest can be recycled to the dryer for beneficial use. Some of the newer pyrolysis technologies do not require continuous heat for their bio-drying process.

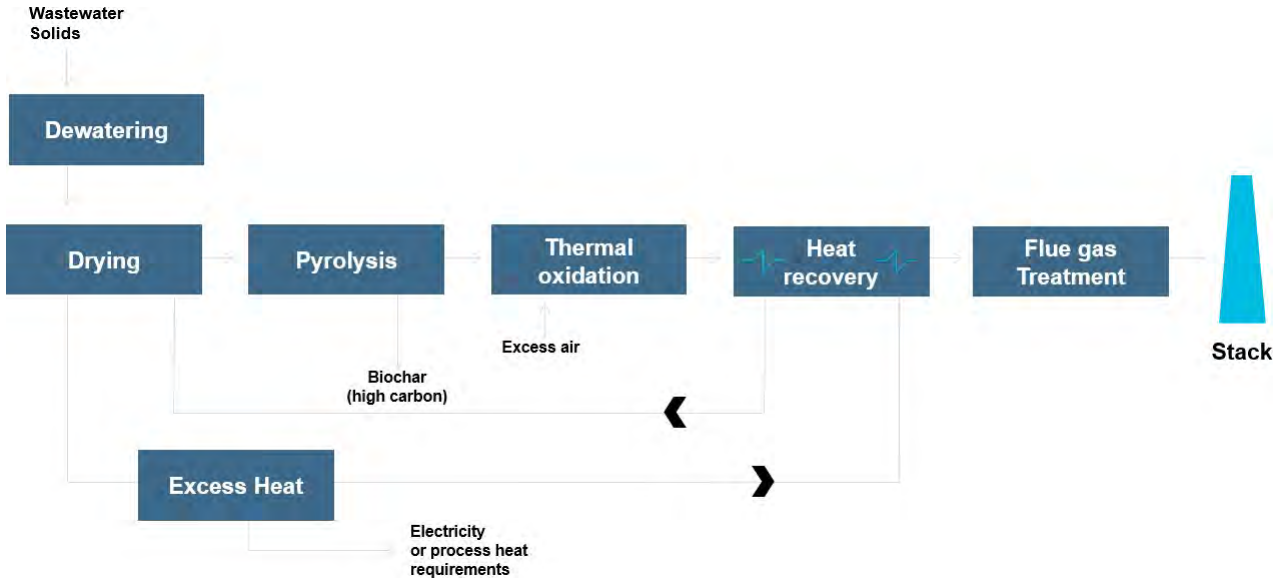


Figure 3.2 Closed Coupled Pyrolysis Process Flow Diagram

3.3.3 Combustion/Incineration

Combustion is a controlled reaction under high temperatures between a fuel and an oxidant that generates carbon dioxide, heat, and water. Incineration is another form of combustion which uses waste as the feedstock fuel material. The primary objective of incineration is feedstock volume reduction and energy recovery. Combustion/incineration residues generally consist of small quantities of HCl, S, volatile compounds, and ash which are typically landfilled. Some biosolids management options utilize biosolids as an alternative fuel for combustion in manufacturing processes such as cement kilns.

Using biosolids as a renewable fuel for combustion/incineration can offset the use of non-renewable fuels and reduce overall GHG emissions. Combustion/incineration without the production of value derived products or energy recovery is commonly not considered an environmentally friendly technology as it is energy intensive and generates a significant amount of greenhouse gas emissions. However, there is ongoing research and development in modern engineering and advanced air pollution control technologies to mitigate the environmental impacts and increase the energy efficiency of the process.

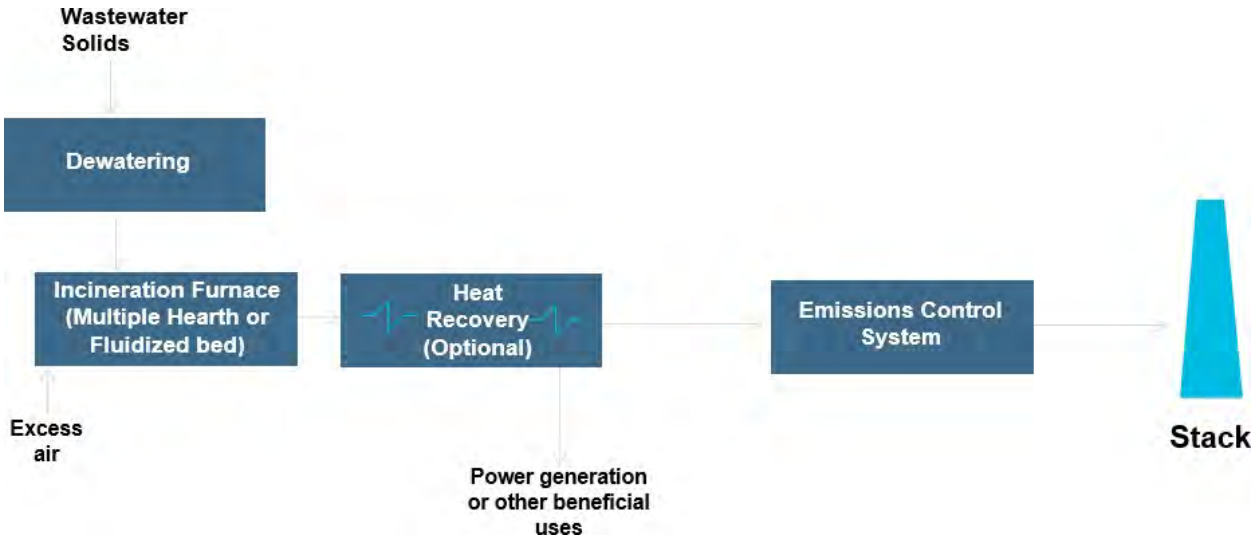


Figure 3.3 Incineration Process Flow Diagram

3.4 Thermal Processing Technologies Summary

Table 3.1 below highlights a few of the key characteristics of the three thermal processing technologies discussed above.

Table 3.1 Thermal Processing Technologies

Technology	Technology Description / Major Differentiators	Benefits	Challenges	End-Products & Utilization
Gasification	– Limited/controlled quantity of oxygen/air required – Temperature Range: 600-1000 °C	– Simplicity – Efficient process – Biochar production to be used as contaminant adsorbent or soil amendment – Can be autogenous – Significant volume reduction	– Syngas refinement for fuel generation is challenging – Gas treatment system usually involves scrubbing, which typically requires media that needs to be disposed of as hazardous waste – GHGs are emitted as part of process – Presence of particulate and tars in the produced gas – Low fixed carbon, high ash – Contaminant fate and destruction effectiveness still not fully understood	– Steam which can be converted to electricity – Syngas which can be used in boilers, gas turbines, internal combustion engines to generate electricity – Fly ash which would be disposed as hazardous waste residue – Biochar which may be beneficially used as a soil amendment, compost, biofilter, or as livestock bedding – Slag which may have to be disposed as hazardous waste residue
Pyrolysis	– Complete absence of oxygen required – Temperature Range: 600-1000 °C	– More energy placed into creating final char product – Lower temperature required than other thermal treatments – High fixed carbon, low ash – Significant volume reduction – Low operation energy consumption – Biochar production to be used as contaminant adsorbent or soil amendment	– Technical difficulties ranging from an inability to scale up to largescale production, and relatively poor heat transfer – Requires a constant supply of fuel – Gas treatment system usually involves scrubbing, which typically requires media that needs to be disposed of as hazardous waste – GHGs are emitted as part of process – Contaminant fate and destruction effectiveness still not fully understood	– Syngas which can be used in boilers, gas turbines, internal combustion engines to generate electricity – Biochar which may be beneficially used as a soil amendment, compost, biofilter, or as livestock bedding – Pyrolysis oil (bio-Oil) which can be used as fuel for engines and boilers, or used to produce electricity/heat via combined heat and power plants – Ash which will be disposed as residue, potentially as hazardous waste
Combustion/ Incineration	– Excess oxygen/air required for combustion of waste	– Significant volume reduction – Proven technology at commercial scale	– Poor public perception from historical plants (strict environmental regulations for	– Steam which can be converted to electricity – Heat which can be used for general heating, hot water supply, etc.

Technology	Technology Description / Major Differentiators	Benefits	Challenges	End-Products & Utilization
	– Temperature Range: 800-1200 °C	– Greater contaminant reduction at higher temperatures	emissions and combustion control) – Energy-intensive if process does not recover/recycle energy – Gas treatment system usually involves scrubbing, which typically requires media that needs to be disposed of as hazardous waste – GHGs are emitted as part of process – Mixing biosolids with wood chips was found to be necessary to prevent fouling and meet emission requirements – Requires emissions treatment systems to capture pollutants	– Bottom ash which will be disposed as hazardous waste residue

3.5 Thermal Co-Processing

Co-processing biosolids with other types of waste through thermal treatment, particularly in municipal waste-to-energy facilities has potential added benefits of reduced capital costs and increased efficiency in resource recovery. However mixing biosolids with other waste streams may also increase maintenance and operational costs due to the complexity of handling and treating mixed waste streams and their end products. In addition, co-processing presents challenges in meeting the requirement set by CCME for the beneficial re-use of 25% of ash.

A few examples of facilities that process, or have processed, biosolids with other types of waste are noted below:

- The Anaergia's Rialto Bioenergy Facility in California will use pyrolysis to process combination of food waste extracted from municipal waste streams, liquid waste, and municipal biosolids to produce carbon-negative RNG. The facility is currently under construction[1].
- The Covanta Huntsville WTE Facility in Huntsville, Alabama, uses incineration to process solid waste and sewage sludge, producing steam and ash. The facility is currently operational.
- The City of Lebanon, Tennessee, operates a gasification plant that utilized biosolids and wood waste as feedstock to produce syngas and biochar in the past. The facility is operational, however, currently only utilizes wood waste as feedstock.

3.6 Biochar Beneficial Use

Biochar is a type of charcoal produced from the pyrolysis or thermal decomposition of organic biomass materials, such as biosolids, agricultural waste, wood chips, or crop residues. Biochar has demonstrated potential to be used as a soil amendment to improve soil fertility, sequester carbon, and mitigate soil erosion.

Below is a summary of the potential beneficial use options for biochar:

- **Soil Amendment**: Biochar may be directly incorporated into the soil to improve its physical, chemical, and biological properties. Some cases have shown to enhance soil water retention, increase nutrient availability, and promote microbial activity, and consequently improve crop productivity.
- **Carbon Sequestration:** Research demonstrates that the use of biochar as a soil amendment has the added benefit of sequestering carbon for up to a mean residence time of 2,000 years. Biochar sequestration can remove carbon dioxide directly from the atmosphere through carbon uptake by plants, allowing, in principle, a reduction of atmospheric carbon dioxide levels[2].
- **Composting**: Biochar can be mixed with organic waste materials for composting. This can enhance the compost's nutrient content, reduce greenhouse gas emissions, and improve its stability. The resulting compost enriched with biochar can be used as a soil amendment or a growing medium in horticulture and landscaping.
- **Livestock Bedding**: Biochar can be used as bedding material in livestock operations. Its high absorbency helps in moisture management, odour control, and the reduction of pathogen build-up. Used biochar bedding can be further recycled as a soil amendment or added to composting systems.
- **Erosion Control**: Biochar can be applied to erosion-prone areas, such as slopes or mine reclamation sites, to stabilize the soil and prevent erosion. Its porous structure and high water-holding capacity can help retain moisture and promote plant establishment, making it beneficial for land reclamation projects.
- **Stormwater Filtration:** Biochar can be used in permeable reactive barriers or biofiltration systems to treat stormwater runoff. It can act as a filter medium, adsorbing and retaining contaminants such as heavy metals and organic pollutants, thereby improving water quality.

1 Rialto Bioenergy Facility | Anaergia
2 Biochar is carbon negative | Nature Geoscience

– **Activated Carbon Production**: Biochar can be upgraded to produce activated carbon via physical and chemical alteration. Biochar can be physically activated through heating under an oxidant environment in the temperature range of 700–900 °C. To chemically activate, biochar is subjected to activating agents such as $ZnCl_2$, H_3PO_4, NaOH, KOH and treated with heat between 300–500 °C.[3] Activated carbon can be utilized as an adsorbent, as it acts as a porous material to capture and retain various pollutants/contaminants in its structure. Its high surface area and porosity make it effective for adsorbing contaminants from water, air, and soil, offering potential environmental remediation, odour control, and purification applications. It is also intended for adsorption applications like gas masks and fixed-bed adsorbers.

Despite the many potential benefits of biochar, research related to the adverse effects of biochar on soil ecosystems and chemistry is still under investigation. There are growing concerns related to the effects of applied biochar soil physiochemical properties, interactions between biochar and other chemicals within the soil, contaminant accumulation, and its potential impact on soil organisms. A 2021 review of 259 studies related to biochar application to soil concluded that the findings on the effects of biochar soil application are often mixed[4]. Studies indicate that these effects, whether net negative, neutral, or beneficial, are dependent on factors such as feedstock, production process, application rate, soil type, environmental/climactic conditions, and therefore cannot be generalised.

Site-specific assessments and research are essential to determine the appropriate application methods and optimize the benefits of biochar in different contexts. It is crucial to assess the quality and safety of the biochar as well as its effect on the soil's microbiological properties and biota prior to application. Adequate testing and quality standards are important to verify that the biochar is free from contaminants (particularly metals) and meets the desired criteria for its intended use. Research and knowledge sharing in this field is currently ongoing to better understand biochar's potential and optimize its use in diverse agricultural and environmental settings.

3.7 Knowledge Gaps and Limitations in Thermal Treatment Technologies

Similar to the land application of biosolids, it is important to recognize that knowledge gaps and limitations exist in regards to biosolids thermal treatment technologies. Some of these gaps/limitations are outlined below:

Technical Limitations: Specific technical limitations can vary depending on the thermal treatment method employed. For example, incineration may have limitations related to the control of emissions and the need for air pollution control equipment. Pyrolysis and gasification may have limitations related to process efficiency, feedstock characteristics, and the quality of the end products.

Environmental Impacts: While thermal treatment can help reduce the volume of biosolids and recover energy, there may be environmental concerns associated with the process. These can include emissions of greenhouse gases, air pollutants, and the potential for the release of harmful compounds during the treatment process. An environmental impact assessment of any employed thermal treatment method is crucial.

Residuals Management: Thermal treatment processes typically generate residues such as ash or char. The management of these residuals can present challenges in regard to their safe disposal or beneficial reuse. Depending on the residue characteristics, there may be potential for contaminant leaching into the environment. Robust handling and storage protocols need to be established in consideration of the end-use of the residues.

Energy Efficiency: While thermal treatment can produce energy in the form of heat or electricity, the overall energy efficiency of the process is an important consideration. Achieving optimal energy recovery and maximizing the net energy output from the treatment process is a crucial consideration for its economic viability and environmental sustainability. Ensuring there is an end-user of the energy output is also critical to ensure beneficial reuse expectations are achieved.

3 Process Intensification: Activated Carbon Production from Biochar Produced by Gasification - technology.matthey.com
4 https://www.sciencedirect.com/science/article/pii/S0048969721038286

Impact on Nutrient Content: Thermal treatment methods can alter the chemical composition of biosolids, potentially affecting the availability and quality of nutrients. For example, high-temperature processes like incineration can result in the loss of certain nutrients, limiting their potential for use as fertilizer or soil amendment.

Cost Considerations: The economics of thermal treatment processes, including capital costs, operational costs, maintenance costs, and residual disposal costs can significantly impact their feasibility and implementation. Understanding the financial implications and comparing them to alternative treatment methods is important for the decision to invest in thermal treatment processes.

3.8 Contaminants of Emerging Concern

The CRD introduced a ban on the land application of biosolids produced at CRD facilities in 2011 based on the precautionary principle and concerns from the community. Community concerns around the land application of biosolids are largely based on the presence, or suspected presence, of unregulated organic chemical compounds, commonly referred to as “contaminants of emerging concern” (CEC’s), or persistent organic pollutants” (POPs). CECs include Volatile and Semi-Volatile Organic Compounds (VOCs & SVOCs), PFAS, polybrominated flame retardants (PBDE), dioxins, pharmaceuticals and personal care products (PPCPs) and microplastics. There is concern that biosolids with detectable levels of unregulated CEC’s could impact soil quality, surface water or groundwater.

In 2011, the CRD retained Stantec to undertake a literature review titled *Land Application of Wastewater Bio-solids, Concise Literature Review of Issues for CRD* on the risks of the land application of biosolids. The literature review assessed heavy metals, pathogens, and legal liability arising from the land application of biosolids. The review concluded “there is no scientific evidence indicating that the risks of environmental damage or public health concerns for either Class A or B bio-solids land application would be high”.

This risk assessment was updated by Golder in 2014 in their report *Biosolids Risk Assessment and Literature Review Update*. The intent of the report was to re-evaluate the previous analysis using recent information and case studies. The review found that Stantec “oversimplifies the risk and concerns associated with the land application of biosolids” and found that the current state of scientific knowledge does not allow us to fully quantify all risks. Despite this finding, the authors conclude that “no risks have been identified for emerging substances that presently warrant imposition of a land application ban”.

The CCME considered CEC’s when developing the beneficial use guidelines. The document notes that many CECs are found in low concentrations in biosolids, and that detection does not necessarily mean there is a risk to human health or the environment. Generally, risk assessments for each individual compound have not been completed, but ecotoxicological testing, used to assess the toxicology of residuals holistically, did not detect significant negative impacts. The CCME is supportive of source control measures as an effective way to improve the quality of biosolids.

In 2017, Metro Vancouver commissioned a risk assessment for their land application based biosolids management plans in a report titled *Biosolids Risk Assessment for Metro Vancouver*. The report looked at 11 different types of pharmaceuticals or organic compounds and concluded ”the results of this risk assessment indicate that the presence of these eleven CECs in biosolids is highly unlikely to result in adverse health effects for the four Metro Vancouver biosolids use exposure scenarios evaluated.”

In recent years, there has been an increased interest in PFAS and their effects on human and environmental health. PFAS are a class of over 4,700 substances that do not occur naturally. PFAS make products non-stick, water repellent and fire resistant, and are found in a wide range of consumer and industrial products, including cookware, food packaging, clothing, and firefighting foams. PFAS are sometimes referred to as “forever chemicals” because the molecules are characterized by a chain of strong fluorine-carbon bonds which result in highly stable and long persisting chemicals. Exposure to PFAS is associated with an increased risk of cancer, increased cholesterol levels, and can affect the immune system.

In June 2022, the ENV released the *Organic Matter Recycling Regulation Project Update*, which contained some discussion of CECs. “Due to advances in analytical chemistry, the ability to measure CECs has generally outpaced the ability to understand the impacts of CECs on human health and the environment. For this reason, the impacts of CECs

in biosolids and wastewater treatment discharges is the subject of on-going scientific research." The ENV intends to add the authority for a director to require the testing of biosolids for CECs but does not intend to regulate the concentration of CEC's in biosolids. The ENV advocates for a prevention first approach to reducing CECs in biosolids, by implementing source control measures to discourage the discharge of certain wastes to the system. Regulatory amendments are targeted for 2023.

On May 19, 2023, The Canadian Food Inspection Agency (CFIA) proposed an interim standard for PFAS in biosolids used in Canada as fertilizers. The CFIA worked with Environment and Climate Change Canada, Health Canada and provincial partners to assess an appropriate standard for PFAS. The proposed standard will protect human health by preventing the small proportion of biosolids products that are heavily impacted by industrial inputs from being applied to agricultural land in Canada. The proposed standard is 50 ppb PFOS (one type of PFAS). The concentration of PFOS in CRD biosolids is under the proposed standard at approximately 6 ppb (based on two samples). For comparison, a 2020 study, found that the PFOS concentration in household dust was 100 ppb (100ng/g).[5]

3.9 Land Application vs Thermal Process Trends

Land application is a well-established practice in British Columbia and many other parts of the world. However, there has been a varied perception and increased regulation towards this practice due to growing concerns over potential environmental and public health risks, including the risk of pathogen regrowth, odours, heavy metals, and CEC's. Scientific literature indicates that when biosolids are properly treated, monitored, and applied in accordance with regulations, the risks associated with contaminants and pathogens are typically low[6]. Land application remains a widely used and accepted approach in many jurisdictions, particularly in areas with access to agricultural land and a demand for fertilizer. Research indicates an increasing trend in the use of biosolids as a soil amendment to support sustainable agriculture and carbon sequestration goals.

Since 2017, there has been a trend towards increased use of thermal processes for biosolids management, particularly in areas where land application is restricted, challenging, or cost prohibitive. However, further research and investment are needed to optimize these technologies and ensure their long-term sustainability.

Overall, the choice between land application and thermal processes for biosolids management will depend on a range of factors, including regulatory requirements, local infrastructure and resources, public perception and acceptance, the need for end-use redundancy, and the specific goals and priorities of the community or organization managing the biosolids.

4. Biosolids Jurisdictional Review Update

Globally, biosolids are primarily managed in three ways, land application, incineration or landfilling. The decision to landfill biosolids rather than using them for beneficial purposes is influenced by several factors, such as:

- **Regulatory Constraints**: Some governments impose restrictions to the land application of biosolids due to concerns over potential environmental and public health risk.
- **Public Perception:** The acceptance of biosolid management options varies widely. In some communities, there persists public resistance to the beneficial use of biosolids based on concerns primarily regarding potential health, environment, and nuisance impacts.
- **Costs and Logistics:** Local circumstances such as land availability, transportation distances, regulatory compliance, and the proximity of technology providers may make landfilling a more logistical and cost-effective option as compared to beneficial reuse.

5 Per- and polyfluoroalkyl substances (PFAS) in dust collected from residential homes and fire stations in North America - PMC (nih.gov)
6 https://www.academia.edu/34682659/Chapter_6_The_environmental_impact_of_biosolids_land_application

The section below presents findings from literature on the reported biosolids management options used in jurisdictions across the globe. It should be noted that the examples presented are not an exhaustive list of all global biosolids management cases as the review is limited to data that is readily available.

4.1 Literature Review

4.1.1 Canada

In Canada, more than 660,000 dry tonnes of stabilized biosolids are produced annually. According to the CCME, land application and landfilling are the most common methods of biosolids management in Canada where approximately 50% of biosolids are applied to land, 41% landfilled and the remainder incinerated (9%) (CCME, 2012a).

In British Columbia, 38,000 dry tonnes of biosolids are produced every year, of which around 94% is beneficially applied to land to support forestry, agriculture, land reclamation and landfill cover, and approximately 6% is landfilled.[7]

In Quebec 49% and 34% of biosolids are incinerated and land applied respectively annually. In Ontario, 44% and 48% of biosolids are incinerated and land applied respectively annually. Both provinces are among the leading provinces in the beneficial use of biosolids[8].

Table 4.1 below summarizes biosolids management in some Canadian provinces in the year 2016. Since then, there has been a lack of available information regarding the current status of Canada's involvement in biosolids beneficial use.

Table 4.1 Biosolids Management in Canada (2016)[2]

Jurisdiction	Land Application	Incineration	Landfill	Percent Beneficial use
British Columbia	94%	0%	6%	94%
Manitoba	75%	0%	25%	75%
Ontario	48%	44%	8%	92%
Alberta	95%	0%	5%	95%
Quebec	34%	49%	17%	83%
Newfoundland/Labrador	0%	0%	100%	0%

4.1.1.1 Examples of Land Application Options in Canada

The CCME Guidance document provides several instances of municipalities across Canada that have beneficially used biosolids through land application. Some examples are:

– The JAMES wastewater plant in Abbotsford, British Columbia, holds a contract with a third party to use municipal biosolids resulting from wastewater treatment as a feedstock addition in the production of fabricated topsoil. The end product is marketed as Val-E-Gro™ and is used as a fertilizer for land application.

– The Lansdowne Wastewater Treatment Plant in Prince George, British Columbia and various treatment plants in the Regional District of Nanaimo, BC have used their biosolids for the fertilization of forests. The fertilization of forests through biosolids is of significant interest to the forest industry, as biosolids allow a slower release of nutrients (>5-years) as compared to the fast action of chemical alternatives (2-3-years). Further, biosolids applied to temporary roads and landings within forests can return these degraded areas into productive land bases quickly, thus resulting in a larger growing area and greater cutting allowance.

7 Biosolids-10 (gov.bc.ca)
8 biosolid_world_map.pdf (gov.bc.ca)

- The Halifax Regional Municipality has treated municipal biosolids with an alkaline stabilization process named N-ViroTM to produce class A biosolids for land application since 2008. The process recycles cement kiln dust as a second residual stream to provide alkalinity for the process. 100% of the biosolids produced have been beneficially used to fertilize sod and agricultural crops such as corn, soybeans, cereals, and forages.
- Locally generated municipal biosolids in Sechelt, British Columbia have been directly applied to barren soils at the Lehigh Materials mine. The community has been supportive of the successful program, and the mine was awarded for its achievements with the 2010 British Columbia Jake McDonald Mine Reclamation Award.

Table 4.2 below summarizes cases of land application of biosolids across Canada:

Table 4.2 Summary of Land Application in Biosolids Management in Canada

Jurisdiction	Product Name	Technology	Program Initiation	Beneficial Reuse of Biosolids
City of Kelowna, BC	Natures Gold	Aerobic composting	Undisclosed	Gardens and lawns fertilization, commercial landscaping and gardening (as mulch)
Metro Vancouver Regional District	Nutrifor	Thermophilic anaerobic digestion	1991	Mine reclamation, landfill closure and reclamation, regional reclamation projects, regional landscaping projects, forest fertilization, and ranch land fertilization
City of Kelowna/City of Vernon	Ogogrow	Aerated static pile composting	1995- 2006	Commercial landscaping, residential gardening, nurseries, orchards, and landfill closure.
Comox/Strathcona Regional District	SkyRocket	Aerated static pile composting	2007	Commercial landscaping, residential, gardening, nurseries and orchards, slope stabilization project, and local reclamation projects.
Regional District of Nanaimo	N/A	Mesophilic and Thermophilic anaerobic digestion	1991	Forest fertilization.
CRD	PenGrow	RDF lime- Pasteurization	2008-2011	Residential gardening and landscaping.
City of Edmonton, AB	N/A	Co-composting with residential organic waste	2002	Horticulture, agriculture, nurseries, commercial landscaping, residential gardening, city reclamation and enhancement projects.
Niagara Region, ON	Niagara N-Rich	N-Viro alkaline stabilization	2007	Agricultural fertilizer.
City of Toronto, ON	N/A	Thermal drying N-Viro alkaline stabilization	2007	Agricultural fertilizer, and mine reclamation.
Greater Moncton, NB	Gardener's Gold	Composting- Gore Cover system	2008	Commercial landscaping, municipal parks and horticultural activities, and residential gardening.
City of Halifax, NS	Halifax N-Rich	N-Viro alkaline stabilization	2007	Agricultural fertilizer, and municipal horticultural activities.

4.1.2 United States

In the US, based on 2018 data, approximately 54% of all biosolids were land applied, 15% were incinerated and 30% disposed of in landfills (excluding the use as daily cover which is considered a beneficial use option)[9]. According to reports from the US EPA in 2021, about 4.5 million dry metric tons of biosolids generated in the United States, of which approximately 43% were land applied, 14% incinerated, and 42% landfilled, which suggests a trend of decreasing land application and increasing landfilling in US over the past few years. This percentage may vary between state and region. For example, land application of biosolids is more common in the Mid-Atlantic and Northeast regions than in other parts of the country[10]. Figure 4.1 shows the latest status of biosolids management in the US.

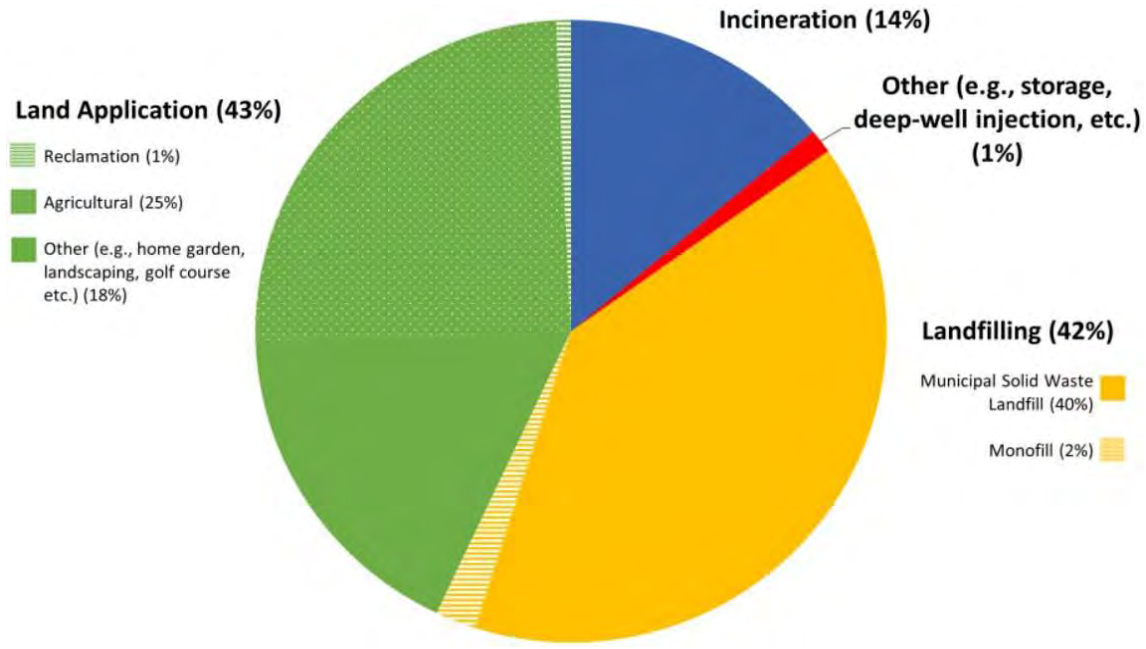


Figure 4.1 2021 Biosolids Management in the US[4]

4.1.3 Europe

In Europe there are rules around the use of sewage sludge as a fertilizer, the sampling and analysis of the sludge, record keeping and the type of treatments and end usages, similar to OMRR in BC. The European Union (EU) developed a Sewage Sludge Directive which aimed to increase the sewage sludge used in agriculture while ensuring heavy metals in soils and sewage sludge did not exceed set limits (also developed as part of the Directive). The Directive would ban the use of sewage sludge on agricultural soils if the concentration of metals in the soil exceeded pre-approved limits. In 2014, it was found that the Directive achieved is objective by increasing the amount of sewage sludge used in agriculture while reducing environmental harm. However, since then, a study was launched in 2020 to evaluate the effectiveness, efficiency, relevance, and coherence of the Directive in all EU countries. The study aimed to complement the results of the initial Directive and better understand the areas where the Directive was successful or challenged[11].

Figure 4.2 below illustrates the proportions of sewage sludge management technologies used by various EU countries:

9 National Summary — National Biosolids Data Project
10 Basic Information about Biosolids | US EPA
11 https://environment.ec.europa.eu/topics/waste-and-recycling/sewage-sludge_en

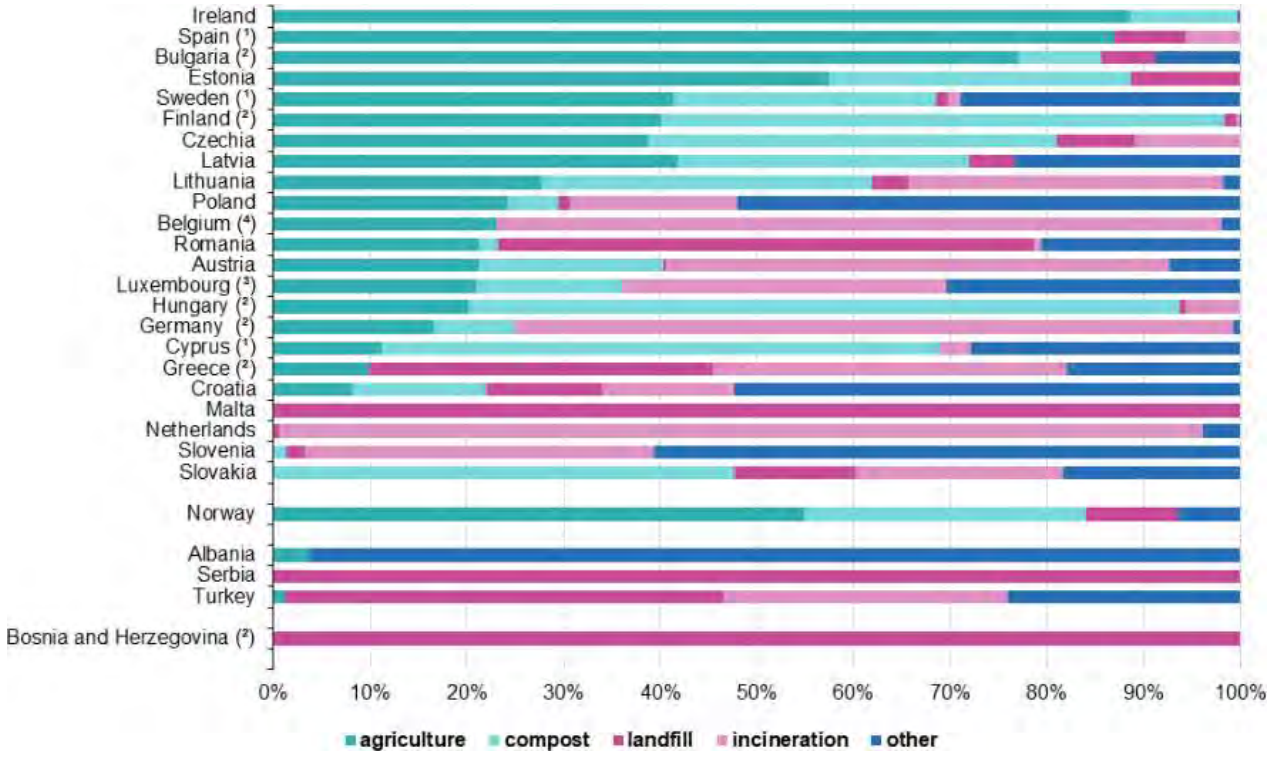


Figure 4.2 2020 European Sewage Sludge Disposal[7]

In Europe, land application of biosolids still constitutes the main method for biosolids management for many countries. In general, 50% of biosolids are land applied on agricultural land (marking an increase from 37% in 2017), 28% incinerated, and 18% landfilled. The remaining fraction is disposed through other methods such as pyrolysis, storage, reuse in green areas and forestry, and landfill cover. The percentage of biosolids managed through each practice may vary depending on factors such as location, available infrastructure, and local regulations. In countries such as Netherlands and Germany, incineration is the primary beneficial use for biosolids due to the low availability of land available for biosolids application. In the Netherlands (96%), Belgium (75%), Germany (74%) [12,13] the majority of biosolids are incinerated.

In France, 44% of biosolids are directly land applied, 29% are composted, 18% are incinerated and 9% are landfilled. In the United Kingdom (UK), approximately 3.6 million tonnes of biosolids are land applied for agricultural use annually and the UK has developed an Biosolids Assurance Scheme (BAS) to provide reassurance that certified biosolids can be safely used in agriculture. According to the UK's BAS, around 3-4 million tonnes of biosolids are applied annually to agricultural land in the UK, representing around 75% of sewage sludge production[14]. In Denmark, based on the 2010 data, 64% of biosolids were land applied, 29% incinerated and 2% of biosolids ended up in landfills. In Portugal, as per 2016 data, 5% of biosolids were disposed in landfills while the rest were used for land application and other uses including agriculture and composting. In Italy (2010), from all the biosolids produced, 34% are land applied, 4% are incinerated, and 49% are landfilled[6].

Europe has been at the forefront of research and development of new thermal technologies for biosolids treatment, such as pyrolysis and gasification. Despite this, many European countries still primarily use land application as the most beneficial method for biosolids utilization. It is noteworthy that there are various approaches to managing PFAS across Europe, both in terms of the presence of regulations and how these regulations are established. Denmark, Germany, the Netherlands, and Sweden established national limits for PFAS in soil, while Germany also set a limit for PFAS in fertilizer, which also applies to biosolids used as fertilizer. As of September 2020, no European countries,

12 https://www.mdpi.com/2071-1050/11/21/6015/htm
13 Water statistics - Statistics Explained (europa.eu)
14 Biosolids-Agric-Good-Practice-Guidance-January-2019.pdf (assuredbiosolids.co.uk)

except for several German states, had implemented specific rules or limitations regarding PFAS concentrations in biosolids for land application [15].

The EU has long been promoting the use of thermal technologies for waste management, including biosolids. The Waste Framework Directive (2008) recommends thermal treatment as a preferred method for waste management. While there are gasification and pyrolysis plants in Europe, they mainly process municipal solid waste. The Netherlands and Germany have the largest sewage sludge incineration capacity among European countries. In Finland, the Helsinki Regional Environmental Services Authority (HSY) implemented a sludge pyrolysis pilot plant with the capacity equivalent to treating wastewater sludge generated by a population of approximately 30,000 people during 2020. In August 2004, a fluidized-bed gasification plant, manufactured by Kopf was constructed at a WWTP in Balingen Germany for processing the digested biosolids and recovering energy. The Balingen plant processes about 230 kg of sewage sludge per hour[16].

4.1.4 Australia

In Australia, approximately 83% of biosolids were beneficially applied to land in 2021, with 72% of that being on agricultural land, which represents an 8% increase compared to the data from 2017. The remaining fraction was disposed of in landfills. Australia is making significant efforts to combat carbon emissions by pledging to reduce them by 43% from 2005 levels by 2030. A step towards this goal has been taken with the opening of Australia's first biosolids gasification plant at the Loganholme Wastewater Treatment Plant in Logan City, Queensland. To further explore the potential applications of the biochar product, the Logan City Council is collaborating with scientists from the Queensland University of Technology to uncover future possibilities for utilizing the biochar product in various ways[17].

4.1.5 New Zealand

In New Zealand, the total percentage of biosolids sent to landfill was 33% in 2021 (down from 38% in 2019). 43% of biosolids were used for land reclamation, 3% of biosolids were used for agricultural purposes, and 2% of biosolids were incinerated. The remaining fraction of biosolids were land applied for forestry, vermicomposting, landfill capping, stockpiling, and other uses.

4.1.6 Japan

Japan heavily relies on thermal processing methods for the management of biosolids. In particular, incineration is commonly used in Japan due to its high population density and limited opportunities for biosolids land application. Sewage sludge in Japan is treated according to regulations that require the removal of harmful substances and pathogens. The treated sludge or biosolids are then typically incinerated or applied to farmland as fertilizer. In 2016, 68% of were biosolids incinerated, 11% were land applied and the rest landfilled[18].

Literature also indicates an increasing trend in the gasification of biosolids in Japan as a means to reduce landfilling. The Kiyose Water Reclamation Center started using a gasification system in 2010 to treat 100 tonnes of dewatered sewage sludge each day[19]. A waste-to-hydrogen facility, located at the Sunamachi Water Reclamation Center near Tokyo Bay, is capable of processing 1 tonne of dried sewage sludge per day to generate 40-50 kg of hydrogen per day[20]. Japan Blue Energy Co., Ltd. (JBEC) has developed an Advanced Gasification Module (AGM), which is a small-scale 1 dry ton per day plant with a goal of producing between 20 and 50 kg of hydrogen per day depending on the system configuration and feedstock quality[21].

15 PFAS in biosolids: A review of international regulations (awa.asn.au)
16 Technology Assessment Report Aqueous Sludge Gasification Technologies (epa.gov)
17 Logan City Biosolids Gasification Project - Australian Renewable Energy Agency (ARENA)
18 biosolid_world_map.pdf (gov.bc.ca)
19 Kiyose Water Reclamation Center Starts Using Gasification System to Treat Sewage Sludge - Bureau of Sewerage Tokyo Metropolitan Government
20 Ways2H Shareholder Japan Blue Energy Launches Tokyo Waste-to-Hydrogen Facility - Hydrogen Central (hydrogen-central.com)
21 Japan Blue Energy – Renewable Hydrogen Production Technology (wipo.int)

4.2 Thermal Processing Facilities Scan

Table 4.3 below outlines some of the biosolids thermal processing facilities globally, the technology implemented, and the stage of the project.

Table 4.3 Thermal Processing Facilities

Location	Facility Name	Technology	End Products	Project Stage
Linden, New Jersey, USA	Aries Linden Biosolids Gasification Facility	Gasification	Syngas, Biochar	Commissioning
Sanford, Florida, USA	Fluidized Bed Biosolids Disposal Gasification Facility	Gasification	Thermal energy	Decommissioned
Kearny, New Jersey, USA	Aries Kearny Biochar Production Facility	Gasification	Biochar	Development
Taunton, Massachusetts, USA	Aries Taunton Biosolids Gasification Facility	Gasification	Biochar	Development
Edmonds, Washington, USA	Edmonds Wastewater Treatment Plant	Gasification	Ash Slurry[22]	Commissioning
Morrisville, Pennsylvania, USA	Ecoremedy Sludge Gasification Pilot Plant	Gasification	Biochar	a three-year pilot project (Decommissioned)
Derry Township, Pennsylvania, USA	Clearwater Road Wastewater Treatment Facility	Gasification	Renewable Thermal Energy, Biochar	Development
Silicon Valley Clean Water (SVCW), California, USA	SVCW Plant	Pyrolysis	Biochar	Operational
Rialto, California, USA	Rialto Bioenergy Facility	Pyrolysis	Biochar	Under construction
Ephrata, Pennsylvania, USA	Ephrata Bioforcetech Pyrolysis Facility	Pyrolysis	Energy, Biochar	Under construction
Niagara Falls, Ontario, Canada	CHAR Technologies' high temperature pyrolysis plant	High Temperature Pyrolysis (HTP)	Syngas, Biocarbon	Development (relocation from London Ontario)
Saint-Félicien, Quebec, Canada	Biomass Power Plant	High Temperature Pyrolysis (HTP)	RNG, Biocarbon	Development
Cuyahoga Heights, Ohio, USA	Southerly Wastewater Treatment Plant (WWTP)	Incineration	Heat and Steam to Energy, Ash	Operational
Los Angeles, California, USA	Biosolids Recovery Plant	Incineration	Steam, Ash	Operational
Pickering, Ontario, Canada	Duffin Creek Water Pollution Control Plant	Fluidized bed incineration	Heat and Steam to Energy, Ash	Operational
London, Ontario, Canada	Greenway Wastewater Treatment plant	Fluidized bed incineration	Heat to energy, Ash	Operational
Mississauga, Ontario, Canada	G.E. Boot Wastewater Treatment Plant	Incineration	Steam, Ash	Operational

22 FlexChar™ has properties similar to activated carbon and can be used as an alternative renewable fuel or a soil amendment.

Location	Facility Name	Technology	End Products	Project Stage
Pickering, Ontario, Canada	Duffin Creek Water Pollution Control Plant	Fluidized bed incineration	Steam, Ash	Development
Espoo, Finland	Pyrolysis Pilot Plant	Pyrolysis	Biochar	Pilot Program
Balingen, Germany	Kopf fluidized-bed Gasification Plant	Gasification	Syngas	Operational
Logan City, Australia	Loganholme Wastewater Treatment Plant	Gasification	Biochar	Operational
Tokyo, Japan	The Kiyose Water Reclamation Center	Gasification	Heat and Electricity	Operational
Tokyo, Japan	Sunamachi Water Reclamation Center	Gasification	Hydrogen	Operational
Japan	Blue Energy Advanced Gasification Module	Gasification	Hydrogen	Operational
Lesna, Poland	Budimex Drying and Incineration Plant	Incineration	Thermal Energy, Ash	Operational

It is important to note that information about advanced thermal facilities in Europe and Asia is limited. There is a lack of available data regarding the status of these facilities, technology providers, and if these providers sell their technology in North America.

In North America, pyrolysis is slightly ahead of gasification in terms of technological readiness with slightly more pyrolysis facilities in operation. Both technologies however are considered innovative and are still emerging in the biosolids processing space.

4.3 Global Trend Summary

Since 2017, the choice of biosolids beneficial reuse has varied across different countries and regions. In Canada, there has been a gradual increase in beneficial reuse, with a focus on land application, composting, and energy recovery. The United States has demonstrated a decrease in land application and an increase in landfilling over the since 2017. However, this trend may vary by state and region. Europe has established well-regulated and advanced biosolids management systems, utilizing land application, composting, and incineration. Australia and New Zealand have actively promoted land application, especially in agriculture, while complying with environmental regulations. In Japan, thermal processing methods such as incineration have been relied upon due to limited land availability stemming from high population density, although efforts are being made to explore alternative reuse options.

The most prevalent biosolid management option in many regions of the world, including North America, is land application (BCWWA 2016, EPA 2017).

The CCME has developed a comprehensive framework for managing wastewater biosolids, including the *Canada-Wide Approach for the Management of Wastewater Biosolids* (CCME, 2012a) and *Guidance Document for the Beneficial Use of Municipal Biosolids, Municipal Sludge and Treated Septage* (CCME, 2012b). This guidance covers biosolids quality, application rates, methods, setbacks, and monitoring. Quality standards are in place to ensure biosolids meet specific criteria, including limits on contaminants like heavy metals and pathogens to protect the environment and human health. Risk assessments are conducted before application to evaluate potential impacts on soil, water, and crops, determining appropriate rates and precautions. Biosolids are recognized for their benefits in improving soil fertility, organic matter, and crop productivity. Best management practices, such as proper storage, transportation, and application methods, are encouraged to ensure safe and effective land application. Compliance with setback distances from sensitive areas is also emphasized. Regular monitoring and reporting are required to assess the efficacy of biosolids management, including soil and crop testing, tracking application rates, and locations. These measures aim to ensure compliance with regulations and promote responsible biosolids land application.

Regulations for wastewater residuals, including biosolids, are implemented at the provincial and territorial levels with varying mechanisms to ensure environmental and public health protection. In Newfoundland and Labrador, the land application of biosolids is not permitted. In New Brunswick, only biosolids meeting Category A requirements outlined in the *Guidelines for Compost Quality* (2005) can be applied to land. Quebec prohibits the land application of biosolids for fruit, vegetables, pastureland, and home gardens unless certified by the Bureau de normalization du Quebec (BNQ). Alberta, British Columbia, Ontario, and Nova Scotia permit the land application of Class A and B biosolids and compost in accordance with regulations. Quebec imposes a green tax on sewage sludge/biosolids landfilled or incinerated, while Nova Scotia prohibits landfilling of organic material. Increasing landfill fees and recognition of the resource value in biosolids are reducing the acceptance of biosolids landfill disposal in Canada (CCME, 2012b).

The EPA and the National Academy of Sciences recognize the value of biosolids as a safe resource for soil conditioning and land reclamation. The EPA regulates biosolids under the Part 503 Biosolids Rule. In the US, approximately 43% of biosolids are land applied, 14% are incinerated and 42% are disposed of in landfills. Land application is supported at the federal level but faces restrictions in some counties. In Northern California, a significant portion of biosolids is used as alternative daily cover or disposed of in landfills due to local weather conditions and waste diversion requirements. Legal cases have upheld state regulations allowing land application over local regulations that try to limit land application in states such as California, Pennsylvania, Virginia, North Carolina, and Maryland. Legal cases in California, Pennsylvania, and Virginia have reinforced the safety and acceptance of land application of biosolids as a crucial recycling practice. In Kern County, California, a court ruling deemed the county's biosolids ban unconstitutional after a two-week trial which provided valuable resources for defending land application practices. The Pennsylvania Supreme Court also upheld the protection of biosolids farming under the state's Right to Farm Act, dismissing claims brought by plaintiffs in a long-running litigation. Additionally, the Richmond, Virginia, Circuit Court upheld regulations for land application, rejecting claims of insufficient protection and excessive phosphorus loading. (USEPA, 2017 and Slaughter, 2017)[23].

In Europe, the main method of reusing biosolids in recent years has been application on agricultural land. According to the European Commission, biosolids can be safely used as fertilizer on agricultural soils if they do not pose any environmental or health risks. However, there are variations in the regulations across member states, deviating from the European Commission directive. To improve policy decisions, actions such as sludge minimization, enhancing biosolids reuse, comprehensive monitoring, proper sludge characterization, and effective planning have been recommended. These measures will help ensure the quality of biosolids, protect the environment, and safeguard public health in sludge management practices.

Currently, within the 28 countries which form the European Union, the primary method of sewage sludge recovery is through land application. Approximately 50% of sewage sludge are spread on agricultural soils, 28% are incinerated, and 18% are disposed of in landfills. The decision-making regarding the alternative routes of sludge recovery/disposal, particularly land spreading, is greatly influenced by population density and the availability of agricultural lands. In regions with limited available land for biosolid spreading, northern European countries like the Netherlands and Germany have opted for incineration as the main recovery method. Additionally, despite the potential to apply all produced sludge to less than 5% of agricultural areas in most European Union Member States, the restricted use of biosolids in agriculture is attributed to low acceptance by farmers and the public. This factor also impacts policy decisions regarding sludge management, resulting in the implementation of national regulations by each Member State.

In Australia, approximately 83% of biosolids were beneficially applied to land in 2021, with 72% of that amount being utilized on agricultural land. In New Zealand, land reclamation accounted for 43% of biosolids utilization, while agricultural purposes comprised 3% of usage. Additionally, 2% of biosolids were subjected to incineration. The remaining portion of biosolids was allocated for forestry, vermicomposting, landfill capping, stockpiling, and various other applications.

On the other hand, Japan heavily relies on thermal processing methods, particularly incineration, for biosolids management. In 2016, 68% of were biosolids incinerated, 11% were land applied and the rest landfilled. Due to its

23 https://www.accesswater.org/publications/proceedings/-279639/biosolids-on-trial---recent-litigation-wins-for-land-application

dense population and limited opportunities for land application, Japan has prioritized the generation of energy as a beneficial use of biosolids processing.

5. Evaluation of Biosolids Thermal Pilots

In July 2020, the CRD issued a RFEOI to understand the advanced thermal technologies available and determine interest from the market to undertake pilot trials. The CRD evaluated the proponent submissions on the basis of adherence to CRD policy, beneficial use, project synergies, reputation/track-record, scalability, and the completeness of information in the proponents' responses. The CRD opted to select one pilot from each type of advanced thermal technology to better understand the respective process and by-product characteristics.

A description and the results to date of each selected pilot trial are outlined below.

5.1 Waste Management

Waste Management (WM) collaborated with the CRD to explore the management of CRD biosolids using pyrolysis technology. WM, through their partner BioForceTech (BFT) have a pyrolysis facility located at the Silicon Valley Clean Water Authority in Redwood, California. The BFT pyrolysis system includes three bio-dryers, a pyrolysis kiln, and a thermal oxidizer. This system dries biosolids, pyrolyzes into a pyrolysis gas and biochar, and oxidizes the pyrolysis gas, recovering heat for use in the pyrolysis kiln and biodryers.

The initial step in this pilot program was a desktop data review, to take advantage of results from previous trials at the facility, as well as other published research. WM engaged two external consultants, Northern Tilth and Brown & Caldwell to assist in this work. Northern Tilth gathered and analyzed relevant data sets from previously pyrolyzed biosolids and compared the quality characteristics to CRD biosolids. Brown & Caldwell conducted a literature review on biosolids pyrolysis air emissions, and reviewed air emission data available from the BFT facility.

Based on the review, which compared CRD biosolids against two North American biosolids samples, WM concluded the following:

- CRD biosolids are similar in quality to other anaerobically digested and thermally dried biosolids from similarly sized municipal wastewater treatment facilities in terms of commonly tested parameters such as nutrients and metals. Thus, the resulting biochar from CRD biosolids is also expected to be similar.
- CRD lacks baseline data on non-regulated compounds of concern, including PFAS, VOCs, SVOCs, pharmaceuticals, and personal care products. WM recommended that the CRD test its dried biosolids for these parameters, so that they can be compared to other biosolids. Samples were submitted to an analytical lab, and the analysis will be updated when results are received.
- A WM pyrolysis trial in 2019, and data from other trials globally, found that the concentration of compounds of concern, including PFAS, within the biosolids used in the trial (of similar quality to CRD biosolids) were significantly reduced in the biochar produced from pyrolysis.
- There is limited data on the fate of PFAS in pyrolysis gas before and after combustion. Bench scale testing has demonstrated that pyrolysis can remove specific PFAS compounds to below detection limits in pyrolysis gas, however, the transformation of PFOS (one type of PFAS) into a different type of PFAS was observed. More research, and the confirmation of bench-scale results in a commercial system is needed.
- The BFT Pyrolysis facility meets the requirements of its air permit. Available data suggests that coupling pyrolysis with appropriate emissions technology can lead to air emissions that comply with BC regulations.
- Currently, there is only one full-scale pyrolysis facility for dried biosolids operating in North America, and available air emissions data from that facility is limited to a few regulated parameters of concern, including NO_X and metals. Full-scale air emissions testing at an operational facility is needed to comprehensively understand the fate of both regulated parameters and compounds of concern, such as PFAS, in air emissions.

The second stage of this pilot project was to conduct additional testing, based on knowledge gaps identified during the first stage. The planned testing included participation in a comprehensive study backed by Water Environment Federation which aims to quantify the extent to which PFAS compounds are destroyed pyrolysis by analysing all inputs and outputs to the system, including the pyrolysis gas. All additional testing has been postponed until mid-2024, while the pyrolysis kiln is upgraded.

5.2 Char Technology

In February 2022, CHAR Technologies (CHAR) completed bench-scale laboratory testing of CRD biosolids. Afterward, they collaborated with the CRD to carry out a pilot-scale high temperature pyrolysis (HTP) test of 800 kilograms of CRD biosolids at CHAR's pilot facility in London, Ontario over two days in October 2022. The results of the pilot test were reported to CRD on March 3, 2023.

CRD provided biosolids for the pilot that had a moisture content of 5.3%, total solids (TS) content of 94.7%, and a particle size of approximately 1 mm. Two tests were performed using 398 kg of biosolids with identical operating conditions, in a HTP pilot test, at 850°C. The feed rate was 50 kg/h and the solids residence time was 1-hour, aimed at optimizing the destruction of PFAS components. Biochar was collected 1-hour after the first batch of biosolids entered the kiln.

CHAR used internally developed and proprietary modelling to predict HTP product yields based on previous test results. According to the results, HTP of biosolids at 850°C yielded 28% biochar, 60% syngas, and 12% condensate, a total solids mass reduction of 72%. The CRD biosolids had a carbon content of 8.26%, volatile matter of 62.35%, and ash of 19.55%. After HTP, volatile matter decreased and fixed carbon and ash increased, resulting in biochar with a fixed carbon content of 23.60%. This high fixed carbon content made the biochar eligible for carbon credits, with each tonne generating 0.7 credits according to Puro.earth, a voluntary market which determined carbon credits that can be allocated per tonne of biochar.

Pyrolysis typically increases the concentration of inorganic matter (including metals) due to the loss of volatile matter at high temperatures. As a result, concentrations of Molybdenum and Zinc in the resulting biochar exceeded limits set by the Fertilizer Act of Canada and BC Class A Biosolids standards. Further analysis is needed to determine how the biochar can be used, which may involve methods such as ash washing or compost blending. Phosphorous and potassium were present in the produced biochar in high concentrations of 54,000 mg/kg and 1,910 mg/kg respectively, making it a potentially valuable fertilizer. Nitrogen was detected in the form of nitrate and nitrite in the feedstock. This was an expected result, as volatile forms of nitrogen were lost during the pyrolysis process while phosphorous and potassium were concentrated in the resulting biochar.

Tests and analysis demonstrated that CHAR's HTP Technology was successful in removing PFAS components from the solid phase of CRD's biosolids feedstock at 850°C. The resulting biochar had PFAS components that were below detection limits and met Canada's Agricultural Use standards.

However, PFAS was detected in the dirty syngas, both pre- and post- oxidizer. The samples were not taken simultaneously, thus leading to non-identical process conditions. The oxidizer operated at 850°C with a minimum residence time of 2-seconds. Volumetric flow rates of syngas could not be measured at the sampling locations, so only concentration data was provided. PFAS tests were conducted on the syngas and gas results for O_2, CO_2, CO, CH_4, N2, and H2 were provided for both pre- and post- oxidizer/combustor. The presence of oxygen in both pre- and post-oxidizer gas was identified and indicated air intrusion. Analysis of the syngas particulate matter suggested that more attention is needed when designing the oxidizer to ensure that the particulate matter emissions do not exceed the stack limits and sufficient destruction of any contaminants that are partitioned to the syngas like PFAS. Higher oxidizing temperatures may be necessary. Based on the presence of sulfur and nitrogen in the dirty syngas, the formation of NOx and SO_2 was anticipated.

The process of contaminant partitioning from biosolids feedstock to end products including biochar and syngas (post-oxidizer) is currently under investigation for a variety of organic and inorganic contaminants of concern. While the conversion process may lead to a reduction in contaminant levels, complete destruction of contaminants is still under

investigation. Furthermore, careful consideration of the end-use of syngas is necessary to ensure potential risks are mitigated.

Overall, additional analysis is necessary to fully comprehend the properties of the syngas generated, as there were concerns that air intrusion may have adversely affected results. To obtain precise gas data and establish reliable emissions control for a commercial-scale system, CharTech suggested installation of an on-site HTP demonstration system with syngas cleaning at a CRD location for further testing.

5.3 CEM

The CRD discussed the opportunity to pelletize and combust biosolids with CEM. The objective was to have CEM complete a lab analysis on a sample of biosolids and provide a professional opinion of the combustion proprieties of the biosolids and comment on the opportunity to bind biosolids with wood waste for use as fuel in a boiler.

CEM retained a lab in Europe to test different mixtures of dried biosolids and wet Hartland Landfill woodchips at four different ratios:

– 100% biosolids
– 20% biosolids and 80% wood chips
– 10% biosolids and 90% wood chips
– 5% biosolids and 95% woodchips

The lab conducted a “BASIC” analysis on all four samples.

Results showed that the in the 100% biosolids test, the Ash Deformation Temperature (ADT) was at 1,000-1,100 ˚C, which was significantly higher than the minimum requirement of 800 ˚C based on the Best Demonstrated Practice (BDP). ADT refers to the temperature at which ash in a combustion chamber begins to soften and deform. This temperature is a critical parameter for combustion operations, as a low ADT can lead to slagging and fouling in the combustion chamber, reducing the efficiency and reliability of the process.

Since the biosolids had high ADT, they may be burned in a biomass boiler as-is using a fines burner or travelling grate. However, the biosolids contained a considerable amount of ash, approximately 24% on a dry basis. Also, burning biosolids produces high levels of NO_X, SO_X, and strong acids such as HCl and HF. NO_X and SO_X emissions may be reduced with Best Available Control Technology (BACT). Burning biosolids can also cause corrosion due to the production of strong acids, but this may be prevented by maintaining a flue gas temperature above 150˚C. As per BACT, mixing biosolids with wood chips was found to be necessary to prevent fouling and meet emission requirements. A mixture of 85% wood chips and 15% biosolids was recommended by CEM to avoid fouling and reduce NOX/SOX emissions significantly, and to meet the BACT emission levels. CEM believed that this was an inefficient utilization of the biosolids. Additionally, the pellets produced would not be appropriate for pellet boilers intended for commercial or residential use as they would contain elevated levels of sulphur and chlorine.

The pelletization of biosolids was found to be unnecessary for their combustion due to their high ADT. The biosolids could be burned directly in a dedicated "fines" burner with wood chips or above the travelling grate along with the wood chips. This was a positive result because it simplified the combustion process and reduced the cost and complexity of preparing the fuel for combustion.

If 15% of the mix is biosolids at a rate of 3,600 tonnes per year and 85% is wood at 20,400 tonnes per year, the weighted average calorific value of the biosolids wood chip mixture would be 4,800 Btu/lb. The as-is calorific value of the biosolids is 17,250 kJ/kg and the as-is calorific value of the wood is 10,080 kJ/kg. The combustion of approximately 24,000 tonnes of the 15%/85% biosolids wood chip mixture would produce around 2,600 tonnes of ash per year, which could then be collected and utilized either in asphalt or land application.

CEM recommended that the CRD perform further proximate and ultimate analyses on their different types of wood chips, including the coastal-like, dirty, and Construction/Demolition (C&D) Waste wood chips, as well as any other sources of biomass they may have. It was recommended that the CRD prioritized assessing the ash content, chlorine,

and fluorine levels in their wood chips to establish a hierarchy of fuel types based on their cleanliness, with the least contaminants of concern being the most favourable option.

CRD was advised to initiate discussions with Natural Resources Canada through their CanmetENERGY laboratory to explore the feasibility of conducting preliminary tests/work on pelletizing a fraction of their biosolids. In addition, it was suggested that CRD conduct an incremental cost/benefit analysis of pelletizing their biosolids (and wood chips) to assess if the additional CAPEX and OPEX involved in this process are worthwhile, considering that alternative, less expensive options may also be available.

Due to the ash content of the fines, CEM recommended the CRD seek out burner OEMs who have the capacity to burn biosolid fines. The OEMs should provide a summary of the advantages and disadvantages of the fines burner option compared to mixing the biosolids and wood chips together and burning them on a grate.

CEM suggested that the ideal location for a biosolids/wood chip combustor would be a thermal-intensive customer within CRD who has a consistent demand for steam, hot water, or hot oil and is interested in reducing their carbon footprint. A biomass combustion system can operate for 8,000-hours per year on 3 tonnes/hour of biosolids/wood chip mixture, resulting in 31.7 mmBtu per hour of heat and 27 mmBtu per hour of useful energy. Assuming an 85% high heat value (HHV) efficiency, this could result in a CO_2 savings of 11,000 tonnes CO_2 equivalent per year. Based on the amount of biosolids available and the recommended blend ratio of 15% biosolids to 85% wood chips, the host site/customer should have a thermal load of around 250,000 mmBtu per year (i.e., equivalent to 10,000 - 11,000 tonnes per year of CO_2 equivalent).

CEM identified at least five fossil fuel users on Vancouver Island with over 10,000 tonnes of CO2 emissions per year who could potentially use all of CRD's biosolids for heat and/or power. It is likely that these operations would require modifications to their systems before pelletized biosolids could be used.

5.4 Aries Clean Technologies

Aries Clean Technologies (Aries) is a US based company which uses Fluidized Bed Gasification technology and is commissioning a new facility in Linden, New Jersey which will operate solely on biosolids. CRD intended to collaborate with Aries to conduct a pilot gasification program of biosolids. However, due to commissioning issues at this new facility, Aries indicated that their facility will not be operational and unable to undergo performance testing until the last quarter of 2023. As such, the pilot trial has been delayed. Staff are currently maintaining communication with Aries Clean Technologies and will make efforts to carry out the pilot study when the facility becomes operational.

5.5 Summary of Thermal Pilot Results

The advanced thermal pilot outcomes/results to date have provided valuable insights into the discrete operation of these technologies and the quality of products that can be obtained from CRD's biosolids. However, the pilots were all completed over a discrete period of time and therefore may not be representative of the long-term day to day operating conditions of the various systems/technologies. In addition, the trials only allowed for limited data to be collected on the characteristics of by-products such as biochar, syngas and wastewater. As such, the current pilot results alone are insufficient to confirm the feasibility of on-site advanced thermal processing of CRD biosolids and the potential for integration/beneficial use of by-products into other systems at Hartland.

5.6 Thermal Pilot Next Steps

Following the pilot trials, on March 29, 2023, the CRD board moved to initiate a request for proposals (RFP) process for an advanced thermal processing trial on-site at Hartland.

GHD recommends the following key objectives for consideration as part of the on-site thermal processing trial:

– Confirm equipment/process reliability
– Determine operating costs and short- and long-term maintenance requirements

– Evaluating the magnitude and quality of flue gases from the process
– Confirm the quantity and quality of syngas, biochar, and liquids
– Identify opportunities for process optimization
– Evaluate the potential for co-processing of other materials arriving at the landfill and assess the effects of co-processing on the quantity and quality of products and waste streams
– Identify and develop local markets for biochar
– Assess carbon sequestration benefits
– Evaluate contaminant partitioning and fate
– Evaluate GHG implications of any oxidized syngas
– Assess potential long-term synergies at Hartland

As noted above, the RFP process was initiated June 16, 2023, with a response closing date of July 14, 2023.

6. Long Term Options

The following section outlines the long-term biosolids beneficial use management options currently available to the CRD at the time this report was developed, along with proposed screening and evaluation criteria used to differentiate between the various options.

6.1 Long-Term Options

As per provincial regulatory direction from ENV, the proposed long-term management plan for biosolids generated at the RTF must comply with the requirements for beneficial use specified by the CCME.

In the context of the CCME beneficial use criteria, the below Table 6.1 screens all known biosolids long-term options available to the CRD:

Table 6.1 Potential Biosolid Options available to the CRD

Type of Operation	Potential Options	Adheres to CCME Beneficial Use?
Land Application		
Mine/Quarry Reclamation	Three potential options: – Two options for quarry reclamation near Nanaimo, BC. – An option for mine reclamation on the mainland.	Yes
Forest Fertilization	Three potential options: – Options for forest fertilization within the CRD and near Nanaimo, BC.	Yes
Land Improvement	One potential option: – An option to land apply biosolids to promote grass growth, help manage invasive species, and develop the potential for land grazing near Courtenay, BC.	Yes

Type of Operation	Potential Options	Adheres to CCME Beneficial Use?
Land Application		
Direct Land Application	One potential option: – Biosolids could be bagged and distributed as a fertilizer product in packages of less than 5 m^3. A pilot project would be required to assess feasibility.	Yes
BGM/Composting/Soil-Product	Multiple potential options with several vendors: – Biosolids could be mixed into BGM and land applied. – Biosolids could be composted with other municipal organic waste and land applied.	Yes
Thermal		
Fuel for Combustion/Incineration	Four potential options: – Co-combustion at two lower mainland cement kilns – As fuel in biomass boilers, either directly or mixed/pelletized with wood. Although possible, a market does not currently exist for use of biosolids as fuel. Changes to air permits would be required, potentially with additional stack testing requirements. Use in traditional residential/commercial units is not recommended as per results of thermal pilot trials. A specially designed “fines” boiler, with emissions control technology, would be required. – Incineration at an off-site waste-to-energy facility. Material handling at the facility would need to be developed.	Potentially – not all options beneficially re-use ash.
Pyrolysis	Two potential options: – On-Site pilot facility - Pyrolysis gas would not be beneficially used in the pilot. – On-Site long-term facility	Partial – Pilot option may not capture energy. Biochar and bio-oil from pyrolysis may not be suitable for land application or combustion, respectively.
Gasification	Two potential options: – On-Site pilot facility - Syngas would not be beneficially used in the pilot. – On-Site long-term facility	Partial – Pilot option may not capture energy. Biochar from gasification may not be suitable for land application.

Options outlined in Table 6.1 may also benefit from the development of additional material handling and storage procedures which may result in increased flexibility for transportation and transportation logistics. Table 6.2 illustrates available materials handling and storage options which could be coupled with options in Table 6.1 above to provide increased flexibility for the CRD.

Table 6.2 Materials, Handling, and Storage Options

Material Handling & Storage	
Materials Handling	Two potential options: – Manually bag biosolids into bulk bags with bag liners for storage and transport. – Bagging for distribution- Class A biosolids can be distributed freely bagged in quantities of less than 5 m^3.
Storage	Two potential options: – Hartland Silo – construct additional silo(s) at Hartland. – Stockpile - stockpiling of biosolids will require blending 1:1 with sand to safely store. Blended biosolids will no longer be suitable for combustion. Stockpiled biosolids must meet OMRR storage requirements. Biosolids could be stockpiled at Hartland landfill or at land application site.

6.2 Proposed Evaluation Criteria

The following table describes a proposed evaluation criteria which could be used to distinguish and identify the benefits and challenges with each of the biosolid beneficial use options outlined above.

Table 6.3 Proposed Evaluation Criteria

Evaluation Criteria	Description
Economic	– Estimated CAPEX and OPEX e.g., cost of capital investment for additional infrastructure and cost of processing – Potential for revenue generation e.g., biochar, biofuel – Estimated cost per tonne e.g., CAPEX and OPEX to process tonne of biosolids; estimated based on information available at the time of this report
Environmental Impacts	– Odour – Noise – Truck Traffic – Air emissions and dust – Contaminant mass balance
Environmental Sustainability	– Production of value derived products e.g., biochar, biocrude, etc. Diversified beneficial use and marketability of products recovered – GHG Emission Implications – Potential to recover energy and reduce dependence on electric grid and natural gas – Potential to co-process additional waste streams – Soil/groundwater impacts
CRD Owned	Yes or no
Reputation	Type of application (thermal treatment, land reclamation, agricultural fertilizer etc.)
Regulatory	New permit requirements and impacts to existing operating permits

6.3 Options Evaluation

The results of the options evaluations using the proposed evaluation criteria are summarized in Table 6.4 below:

Table 6.4 General Option Pathway Evaluation Results

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
Economic	CAPEX and OPEX	Low CAPEX given no investment for additional infrastructure. Medium OPEX due to labour, transport, materials handling, maintenance, storage, public outreach, etc.			Low CAPEX given no investment for additional infrastructure. Higher OPEX due to increased costs from bagging protocol and materials.	Low CAPEX given no investment for additional infrastructure. Medium OPEX due to labour, transport, materials handling, maintenance, storage, public outreach, etc.	Low to medium CAPEX depending on contract agreement. Some vendors may require investment for additional feedstock storage infrastructure. Medium OPEX due to labour, transport, materials handling, maintenance, storage, etc.	High CAPEX due to capital investment for on-site facility. OPEX induced from labour, utility demands (natural gas, electricity, and water), and the transport of biochar. In comparison to off-site alternatives, OPEX will be low in the long-term due to lack of tip-fees for biosolids. However, OPEX may be higher during the early commercial facility commissioning stage until the process becomes optimized.	
	Potential for revenue generation	Low potential for revenue generation as there are no residual products from this process.			Potential for revenue generation through the distribution of bagged biosolids fertilizer product to partially offset processing costs.	Low potential for revenue generation as CRD may not own the rights to the BGM/composting/soil-products.	Low potential for revenue generation as CRD may not own the rights to the value derived products (electricity, cement, heat, etc.).	Potential for revenue from value derived products (biochar, bio-oil) to partially off-set processing costs.	Potential for revenue from value derived product (biochar) to partially off-set processing costs.
	Estimated cost per tonne (CAPEX and OPEX estimate based on information available at the time of this report)	<$250/tonne	<$400/tonne	<$500/tonne	<$500/tonne	<$500/tonne	<$500/tonne	$500-4,500/tonne[1]	
Environmental Impacts	Odour	Potential for nuisance odour emissions at application site(s). May be mitigated via biosolids stabilization and mixing with soil. Application sites are generally far from population centres.					Minimal odour due to installation of an odour abatement system at the facility.		
	Noise	Noise emitted from land application equipment. However, mines/quarries are generally located far from population centres.			Noise potentially emitted from bagging equipment. However, site is located far from population centres	Noise emitted from land application equipment. However, application sites are generally	Minimal noise due to installation of noise abatement system at the facility.		

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
					and a noise abatement system would be designed as the bagging protocol is developed.	located far from population centres.			
	Estimated Truck Traffic	Truck traffic associated with transport of biosolids from site: Approximately one truck every three days (122 trucks each year)						Truck traffic associated with transport of biochar from site: – Approximately one truck every nine days (41 trucks each year)	
	Air Emissions and Dust	Generally low potential for particulate air emissions/dust.					Minimal air emissions/dust due to installation of advanced capture and treatment systems at facility, though residues from these capture and treatment systems need to be disposed of.		
	Contaminant mass balance	Potential accumulation of contaminants. However, class A biosolids have undergone contaminant reduction processes as per OMRR quality standards.					Contaminants have shown to be reduced through thermal processing. However, the level of reduction and ultimate environmental fate are still under investigation.		
Environmental Sustainability	Production of value derived products e.g., biochar, biocrude, etc.	Biosolids may be considered a fertilizer product derived from a waste stream in the context of land-application, with the added benefit of reducing the need for energy-intensive synthetic fertilizer production.				Produces BGM, compost, soil-products which may be beneficially re-used in various applications and reduces the need for energy-intensive synthetic fertilizer production.	Produces energy which may be beneficially re-used for electricity/heating applications assuming nearby end-users.	Produces steam, syngas, , and bio-oil, which can be beneficially re-used in various applications such as heating, electricity, etc. Also produces biochar, however the potential beneficial applications of this product as a soil amendment are still under investigation.	Produces steam, syngas, and which can be beneficially re-used in various applications such as heating, electricity, etc. Also produces biochar, however the potential beneficial applications of this product as a soil amendment are still under investigation.
	GHG Emission Implications[2]	In comparison to landfilling, GHG emissions are significantly reduced due to lesser methane/nitrous-oxide emissions, carbon sequestration into soil, and an offset usage of synthetic fertilizers. In comparison to alternative beneficial use options, biosolids application to degraded areas (mines, quarries, forests, lands, etc.) presents the lowest potential for GHG emission reduction. Any off-site option will have higher GHG emission implications due to the transport distances and trucking frequency associated with the transport of			In comparison to landfilling, GHG emissions are significantly reduced due to lesser methane/nitrous-oxide emissions, carbon sequestration into soil, and offset usage of synthetic fertilizers. In comparison to alternative beneficial use options, the production and sale of biosolids as a soil fertilizer product through bagging, compost, or BGM, presents medium potential for GHG emission reduction, assuming it has greater potential to offset the usage of synthetic fertilizers.		In comparison to landfilling, GHG emissions are significantly reduced (lesser methane/nitrous-oxide emissions, non-renewable fuel usage offsets). Thermal processing options will have increased GHG implications from the oxidization of any gases produced.	In comparison to landfilling, GHG emissions are significantly reduced (lesser methane/nitrous-oxide emissions, non-renewable fuel usage offsets). Advanced thermal processing options will have increased GHG implications from the oxidization of any gases produced. Like combustion/incineration, pyrolysis and gasification present high potential for GHG emission reduction, if biosolids-derived energy (heat, syngas, or bio-oil from	

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
		biosolids, resulting in increased non-renewable fuel usage.			Any off-site option will have higher GHG emission implications due to the transport distances and trucking frequency associated with the transport of biosolids, resulting in increased non-renewable fuel usage.		In comparison to land application options, utilizing biosolids as renewable fuel for cement combustion or energy production via incineration presents high potential for GHG emission reduction, assuming it offsets the usage of non-renewable fuel sources. Any off-site option will have higher GHG emission implications due to the transport distances and trucking frequency associated with the transport of biosolids, resulting in increased fuel usage.	pyrolysis) is beneficially used to offset the usage of non-renewable fuel sources. Depending on process design, this derived energy may not be reused or recycled, and may result in lower GHG emission reductions. On-site options will have lesser GHG emissions associated with transport, as the trucking frequency of hauling biochar will be less than that required of biosolids.	
	Potential to recover energy and reduce dependence on electric grid and natural gas	No potential to recover energy.					High potential to recover energy from products (steam, heat) to offset dependence on electric grid and natural gas. Fulsome energy recovery would depend on presence of nearby end-users.	High potential to recover energy from products (syngas, steam, heat) to offset dependence on electric grid and natural gas onsite. Fulsome energy recovery would depend on presence of nearby end-users.	
	Potential to co-process additional waste streams	No potential for co-processing.				Potential for co-processing via blending of biosolids with compost generated from organic waste streams.	Low potential to co-process mixed waste streams as CRD would not have control over off-site facility operations.	Potential to co-process mixed waste streams. However, co-processing may increase maintenance/operational costs due to added complexity of feedstock.	
	Soil/groundwater impacts	Supplementing soil cover and improving soil health via biosolids application reduces erosion into lakes and streams. Potential negative impact to soil/groundwater if application plan is not followed correctly as per OMRR.			Bagging process presents minimal impacts to soil/groundwater. End-use of the bagged product may present potential negative impact to soil/groundwater if applied in quantities greater than one bag ($5m^3$) per parcel of land. OMRR does not require a land application plan for application quantities less than or equal to $5m^3$ per parcel of land.	End-use of the products may present potential negative impact to soil/groundwater if application plan is not followed correctly as per OMRR.	Process presents minimal impact to soil/groundwater. End-use of the products (biochar, bio-oil, ash) may present potential negative impact to air/soil/groundwater if proper consideration not taken.		

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
CRD Owned	Yes or no	No. Biosolids would be sent to vendors who would own risk and land application responsibility.			Yes.	No. Biosolids would be sent to vendors who would own risk and responsibility.	No. Biosolids would be sent to off-site facility.	Yes.	
Experience and Reputation	Type of application	Mines/quarries are required by the government to eventually reclaim and close to minimize the long-term environmental effects of operations. Biosolids have shown to be an effective measure in the restoration of former mines/quarries by adding nutrients to promote vegetation growth in their barren soils. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	Biosolids have shown to be an effective measure in the fertilization of forests to increase tree production, reduce soil erosion, and improve soil health. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	Land application has demonstrated commercial success and is one of the commonly used management options worldwide. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	It is unclear if there is a local market for bagged biosolids fertilizer product. A pilot trial would be required to assess demand and feasibility. Biosolids as a bagged product is allowed under OMRR in packages of $<5m^3$. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	Land application has demonstrated commercial success and is one of the commonly used management options worldwide. However, general public acceptance regarding land application varies due to concerns on noise, odour, contaminants, etc.	High technological readiness as combustion/incineration is a commercially proven and widely used biosolids management process. However, the market for biosolids as fuel does not currently exist. Additionally, public acceptance of waste incinerators varies due to concerns regarding intensive energy usage and potential for air pollutant emissions.	Reputation of pyrolysis is gaining interest as an innovative technology which produces value added products from waste streams, however it has demonstrated low technological readiness as there are a limited number of operational facilities which use biosolids as a sole feedstock. In North America, pyrolysis is ahead of gasification with regards to technological readiness based on the number of operational facilities.	Reputation of gasification is gaining interest as an innovative technology which produces value added products from waste streams, however it has demonstrated low technological readiness as there are a limited number of operational facilities which use biosolids as a sole feedstock. In North America, gasification is below pyrolysis with regards to technological readiness based on the number of operational facilities.

Evaluation Criteria	Description	Mine/Quarry Reclamation	Forest Fertilization	Land Improvement	Direct Land Application	BGM/Composting/Soil-Product	Fuel for Combustion/Incineration (Off-Site)	Pyrolysis (On-Site)	Gasification (On-Site)
Regulatory	New permitting requirements and impacts to existing permits	May require approvals from: - ENV to ensure land application is carried out safely and does not pose a risk to human health or the environment.					Changes to boiler air mass permits may be required. May require approval from Environmental Management Act Air Quality Permit for any emissions associated with thermal process.	May require approval from Environmental Management Act Air Quality Permit for any emissions associated with thermal process.	

1. Due to pyrolysis and gasification being considered emerging technologies in the biosolids industry there are a number of unknown risks associated with these technologies which have the potential of increasing both CPAEX and OPEX associated these types of projects.
2. GHG Emission Implications are based on the 2022 BEAM Model developed by the Northeast Biosolids and Residuals Association, Northwest Biosolids, Northern Tilth LLC.

6.4 General Option Pathways

The available option types outlined in Table 6.4 fall under four general pathways for CRD's consideration in the long-term:

- **On-Site Thermal:** The CRD invests in an on-site advanced thermal technology to process their biosolids. These processes would yield value-added products such as syngas, biochar, bio-oil, or energy that can be converted into heat/electricity. There is also potential to co-process other waste streams in addition to biosolids, such as municipal solid waste.
- **Off-Site Thermal:** Similar to on-site thermal, the CRD transports biosolids from Hartland to a different facility to process the biosolids via an advanced thermal technology. However, in this scenario there is no need to invest in additional infrastructure.
- **Cement Manufacturing:** The CRD transports biosolids from Hartland to off-site facilities for beneficial use as alternative fuel in cement kilns.
- **Land Application:** The CRD would utilize the biosolids for non-agricultural land-application purposes such as mine/quarry reclamation, forest fertilization, land improvement, direct land application, or the production of BGM/compost/soil-product.

7. Long-Term Portfolios

Irrespective of the type of management option selected for the long-term strategy, GHD recommends that the CRD develop a combination of multiple options within a diverse strategy portfolio to ensure resiliency and further protect the CRD against risks of interruption such as future market forces, regulatory changes, facility shutdowns, or other unplanned circumstances. In the unexpected event that a management option is interrupted due to these risks, the added benefit of strategy diversification in following the portfolio approach will allow CRD's biosolids to still be beneficially used in the interim until the interruption is resolved.

The following sections outline the process for developing biosolids beneficial use portfolios and provide a few general portfolios based on the four general pathways described in the previous section.

A portfolio may be made up of three of more biosolids beneficial use options in order to increase resiliency. These three options may be categorized as follows:

1. **Preferred Option** – This refers to the primary management option. For an option to be categorized as preferred, it should be able to accommodate all biosolids produced by the RTF. A preferred option may be made up of several smaller preferred options in order to meet this requirement.
2. **Support Option** – This refers to a secondary option which would be available to beneficial use biosolids if one or all the preferred options were not available. This option does not have to be capable of accommodating all biosolids produced by the RTF and as such may be seasonal and/or have minimum tonnages associated with it.
3. **Contingency Options** – This refers to options which would serve as back-up options for the beneficial use of biosolids in the unexpected event that the preferred and support options are not available. Contingency may not be as economically or environmentally attractive as the preferred of support options however would be available to accept biosolids on short notice.

7.1 General Portfolios

As noted above, portfolios made consist of the following general biosolids beneficial use option pathways:

- **On-Site Thermal**
- **Off-Site Thermal**

– **Cement Manufacturing**
– **Land Application**

Table 7.1 below outlines a few potential general portfolios. It is important to note that this is not an exhaustive list of all potential portfolios and that there may be additional possible combinations. Following consultation, the portfolios may be further refined to include the specific options approved by the public and First Nations groups.

Table 7.1 General Portfolios

Option Categories	Existing Scenario Portfolio	Short-Term Portfolio	On-Site Thermal Portfolio	Off-Site Thermal Portfolio	Land Application Portfolio
Preferred Option	Cement Manufacturing	Cement Manufacturing	Thermal/Fuel (on-site)	Thermal/Fuel (off-site)	Land Application
Support Option	N/A	Land Application	Land Application	Land Application	Land Application
Contingency Option	On-Site BGM	On-Site BGM	Cement Manufacturing (off-site)	Cement Manufacturing (off-site)	Cement Manufacturing (off-site)

7.1.1 General Portfolio Narratives

Existing Scenario Portfolio:

– This portfolio illustrates CRD's existing biosolids management strategy, in which the biosolids are transported off-site for use alternative fuel in cement manufacturing. As a contingency, 350 tonnes of biosolids are used to produce BGM under the Definitive Plan. This portfolio lacks a support option, and consequently does not have appropriate redundancy. This has led to significant operational challenges as off-site cement manufacturing has been interrupted. Although temporary, this portfolio is included as a comparison to the proposed portfolios.

Short-Term Portfolio:

– This portfolio depicts CRD's current short-term strategy, in which potential land-application options are being investigated to serve as additional support to the existing scenario for added resiliency.

On-Site Thermal Portfolio:

– This portfolio includes the investment and construction of an advanced thermal facility at Hartland Landfill. The potential to construct an on-site pilot facility is currently being investigated with pyrolysis and gasification technologies. Depending on the results and operations of the pilot, the on-site facility may be able to process and beneficially use CRD's biosolids for the long-term.
– During periods of planned shutdown, a portion of the biosolids could be transported to various land application programs. There are several potential land application options being explored by the CRD in the areas of mine/quarry reclamation, forest fertilization, land improvement, and BGM/composting/soil-product.
– In the unlikely event that both preferred and support options are interrupted, the CRD may send biosolids for use as alternative fuel in cement manufacturing. There are two off-site cement manufacturing options known to be available to the CRD which meet beneficial use criteria.

Off-Site Thermal Portfolio:

– This portfolio also considers the processing of biosolids via an advanced thermal treatment technology. However, in this scenario the biosolids would be transported to an off-site facility rather than investing in the construction of an on-site facility. Currently, there is one potential off-site thermal option available to the CRD in the form of incineration at a waste-to-energy facility.
– During periods of planned shutdown, a portion of the biosolids could be transported to various land application programs. There are multiple potential land application options being explored by the CRD.
– In the unlikely event that both preferred and support options are interrupted, the CRD may send biosolids for use as alternative fuel in cement manufacturing. There are two off-site cement manufacturing options known to be available to the CRD which meet beneficial use criteria.

Land Application Portfolio:

– This portfolio considers the transport of biosolids to one of the various potentially available land application programs.
– In the unlikely event that both preferred and support options are interrupted, the CRD may send biosolids for use as alternative fuel in cement manufacturing. There are two off-site cement manufacturing options known to be available to the CRD which meet beneficial use criteria.

7.2 Resiliency Evaluation

The following criteria in Table 7.2 was prepared to identify and evaluate the risk of interruption of potential portfolios:

Table 7.2 Resiliency Criteria and Factors

Resiliency Criteria	Factors
Preferred Option Sufficient Capital for Start-Up/ Operating/Refurbishment	Insufficient capital leading to potential shutdown or service interruptions.
Preferred Option Change in Ownership	New owner does not honour existing contracts (increase in tipping fees exponentially over short period of time).
Preferred Option Market for End-Product	Lack of market for end-product causes facility to turn away biosolids.
Preferred Option New OMRR Requirements	Updated OMRR with standards that current facility does not meet.
Preferred Option Short-term Shutdown	Short term shutdowns for various reasons - feedstock interruption, highway closure, wildfire, etc.
Preferred Option Facility Reputation	CRD being associated with a facility a causing a nuisance (haul route, odour, noise, etc.)
Preferred Option Facility Non-Compliance	Facility is not in compliance with permits or regulations.
Support Option Seasonality	Support option cannot accept biosolids on-demand due to winter, rain, etc.
Support Option Minimum Tonnage	CRD cannot produce/store enough biosolids to meet support or contingency option minimum tonnage requirements during periods of interruption of preferred option.
Contingency Option Unavailable	Support/Contingency option is unavailable (no longer open, at maximum capacity, etc.).

Each proposed portfolio was evaluated against the criteria noted in Table 7.2 using a risk-matrix per the following steps:

1. The probability of each criteria factor occurring was evaluated on a scale of rare (<3%), unlikely (3-10%), moderate (11-50%), likely (51-90%), to certain (>90%).
2. The consequence severity of the criteria factor occurring was evaluated on a scale of insignificant (easily mitigated by day-to-day process), minor (schedule delays up to 10% and CAPEX/OPEX increase up to 10%), moderate (schedule delays up to 50% and CAPEX/OPEX increase up to 50%), major (schedule delays up to 100% and CAPEX/OPEX increase up to 100%), to catastrophic (need to abandon the project).
3. The probability and consequence severity ratings for each criteria factor were correlated to find a risk of interruption value on a scale of negligible (level 1), low (levels 2-4), moderate (levels 5-10), high (levels 11-24), to extreme (level 25) using the risk matrix depicted in Table 7.3 below.
4. The resulting risk of interruption values for each criteria factor were averaged to generate a weighted risk of interruption rating and risk level for the overall portfolio.

Table 7.3 Risk Matrix

Consequence Severity	Probability				
	Rare (<3%)	Unlikely (3-10%)	Moderate (11-50%)	Likely (51-90%)	Certain (>90%)
Insignificant	Negligible (1)	Low (2)	Low (3)	Low (4)	Moderate (5)
Minor	Low (2)	Low (4)	Moderate (6)	Moderate (8)	Moderate (10)
Moderate	Low (3)	Moderate (6)	Moderate (9)	High (12)	High (15)
Major	Low (4)	Moderate (8)	High (12)	High (16)	High (20)
Catastrophic	Moderate (5)	Moderate (10)	High (15)	High (20)	Extreme (25)

The resulting risk of interruption and risk level for each portfolio is summarized in Table 7.4 below:

Table 7.4 Risk Resiliency Evaluation

General Portfolio	Average Portfolio Risk of Interruption Value Rating	Average Portfolio Risk Level	Comments
Existing Scenario	High	11	– Results in a high average portfolio risk of interruption rating (11) as the existing scenario portfolio does not include a support option for redundancy. – Preferred option availability (cement manufacturing) identified as a notable potential risk factor as this option has historically demonstrated operational challenges. – Contingency option availability (on-site BGM) identified as a notable potential risk factor as space for BGM cover at Hartland is limited and may eventually reach maximum capacity.
Short-Term	Moderate	9	– CRD is exploring land-application programs in the short-term to serve as a support option to the existing scenario. This has decreased the average portfolio risk of interruption rating from high (11) to low (9). – Contingency option availability (on-site BGM) identified as a notable potential risk factor as space for BGM cover at Hartland is limited and may eventually reach maximum capacity.

General Portfolio	Average Portfolio Risk of Interruption Value Rating	Average Portfolio Risk Level	Comments
On-Site Thermal	Moderate	7	– CRD ownership of preferred option (on-site thermal facility) decreases potential risk in multiple criteria factors: change in ownership, market for biosolids in-take, facility reputation, and facility non-compliance. – Contingency option availability (cement manufacturing) identified as a notable potential risk factor as this option has historically demonstrated operational challenges.
Off-Site Thermal	Moderate	8	– Contingency option availability (cement manufacturing) identified as a notable potential risk factor as this option has historically demonstrated operational challenges.
Land Application	Moderate	8	– Contingency option availability (cement manufacturing) identified as a notable potential risk factor as this option has historically demonstrated operational challenges.

It was found that the inclusion of some form of land-application reduced the overall risk of interruption within the generated portfolios due to the diversification of option types resulting in increased resiliency.

Based on feedback from the public and First Nations groups, the CRD may further refine the portfolios and conduct a similar risk matrix exercise on alternative portfolios. This will help the CRD identify notable potential risks of interruption and incorporate mitigation plans accordingly. Further, the risk evaluation will assist the CRD in selecting a single, resilient portfolio for the long-term beneficial use of biosolids.

8. Conclusions & Next Steps

8.1 Conclusions

Development and Evaluation of Land Application Options – There are various beneficial use land application methods which meet CCME beneficial use criteria in the form of mine/quarry reclamation, forest fertilization, land improvement, direct land application, BGM, compost, and soil product production. There are various out-of-region land application programs available. There are currently no in-region land application options available at this time due to the long standing CRD policy banning land application. However, this policy was recently expanded to allow for non-agricultural land application as a contingency or emergency option. As such, a number of in-region land application options could be investigated for inclusion in potential long term management portfolios.

Evaluation of Thermal Options – Thermal biosolids management technologies are generally classified as pyrolysis, gasification, or incineration. Among the thermal technologies, incineration is the most commercially proven and widely used thermal treatment process for biosolids. However, incineration is energy intensive and does not result in the beneficial use of ash and as such may not be considered a beneficial use option by the CCME. Pyrolysis and gasification technologies are both still emerging in the biosolids processing space with slightly more pyrolysis facilities anticipated to move into operations in North America over the next few years.

Thermal technologies have the added benefits of generating potential revenue through biochar, syngas, heat recovery as well as the potential to co-process other mixed waste streams. However, there are challenges in thermal co-processing technologies, as mixing biosolids with other waste streams may increase maintenance and operational costs due to the added complexity of handling/treating mixed waste streams. Co-processing also presents challenges in meeting CCME criteria for the beneficial re-use of 25% of ash.

Contaminants of Emerging Concern - Community concerns around the land application of biosolids and its potential impacts to soil quality, surface water, and groundwater are largely based on the presence, or suspected presence, of

unregulated CEC's. These potential impacts are the subject of ongoing scientific research. CCME's guidelines note that many CECs are found in low concentrations in biosolids, and that detection does not necessarily mean there is a risk to human health or the environment. Generally, risk assessments for each individual CEC have not been completed, but ecotoxicological testing, used to assess the toxicology of residuals holistically, did not detect significant negative impacts. The CCME is supportive of source control measures as an effective way to improve the quality of biosolids. CRD's biosolids have been treated to Class A standards as per OMRR.

The CFIA proposed an interim standard for PFAS in biosolids used in Canada as fertilizers at 50 ppb PFOS (one type of PFAS). The proposed standard aims to protect human health by preventing the small proportion of biosolids products that are heavily impacted by industrial inputs from being applied to agricultural land in Canada. The concentration of PFOS in CRD's biosolids is under the proposed standard at approximately 6 ppb (based on two samples).

The fate of CECs in advanced thermal processing of biosolids is still under investigation. While CECs appear to be reduced in biochar products, some can still be found in syngas and bio-oil products, but the concentrations and environmental fate still need to be confirmed.

Jurisdictional Scan – Globally, biosolids, are beneficially used primarily through land application or thermal treatment methods. The majority of countries assessed in the jurisdictional scan primarily land-apply their biosolids for beneficial use, except for Japan, who relies on incineration due to its high population density and limited areas for land application.

Across the world, the decision to beneficially use biosolids through land application or thermal processes is influenced by a range of factors: regulatory requirements, local infrastructure/resources, public perception, as well as the goals and priorities of local municipalities. Identifying and evaluating these factors are key to the implementation of an effective, long-term biosolids management strategy.

Evaluation of Thermal Pilots – In the evaluation of the Biosolids Thermal Pilot technologies/studies explored by the CRD, valuable insight was gained into the discrete operation of each of these technologies. However, the current pilot results alone may not be sufficient to confirm the feasibility of on-site thermal processing of CRD biosolids or the potential for integration/beneficial use of by-products into other systems at Hartland at this time.

For the upcoming on-site thermal trial, GHD suggests that the CRD capture key operational criteria such as process reliability, operational costs, maintenance requirements, co-processing feasibility, residual product quality, biochar markets, carbon sequestration benefits, and long-term synergies at Hartland.

Long-Term Options & Portfolio Generation – A long-list of biosolids management options available to the CRD was identified and screened against CCME beneficial use criteria.

GHD recommends that the CRD develop of a combination of multiple options within a diverse portfolio to ensure resiliency in the form of strategy redundancy. In the unexpected event that a biosolids management option is interrupted, the inclusion of additional options within a portfolio will allow CRD's biosolids to still be beneficially used in the interim until the interruption is resolved.

General portfolios were generated using the long-list of options available to the CRD. A risk evaluation identified notable potential risk of interruption factors such as contingency option availability and facility ownership changes to consider in the development of the long-term biosolids beneficial use strategy. The risk evaluation also indicated that some form of land-application is likely required in all proposed portfolios to ensure resiliency.

8.2 Next Steps

Following public and First Nations consultation, the CRD may further refine the general portfolios outlined in this report. From the list of options approved by the public and First Nations groups, the CRD may develop portfolios using specific options and vendors and future test these portfolios for resiliency using the risk matrix outlined in Section 7. The risk analysis will help inform the selection of a resilient long-term portfolio for the long-term beneficial use of CRD's biosolids.

Appendices

Appendix A

Provincial Conditional Approval Letter

BRITISH
COLUMBIA

Reference: 305517

November 18, 2016

Jane Bird
Chair, Core Area Wastewater Treatment Project Board
Capital Regional District
PO Box 1000, 625 Fisgard Street
Victoria BC V8W 2S6

Dear Ms. Bird:

Thank you for your letter of November 17, 2016, regarding my conditional approval of Amendment No. 11 to the Core Area Liquid Waste Management Plan (CALWMP). As requested in your letter, I will clarify my conditional approval of Amendment No. 11 to the CALWMP and have also considered your request to modify my condition for Integrated Resource Management.

To address your concerns, I am revising my September 30, 2016, Conditional Approval of Amendment No. 11. This revised Conditional Approval of Amendment No. I I supersedes my September 30, 2016, decision.

To clarify, Amendment No. 11 includes, but is not limited to, the following:

1. A single 108 megalitre/day wastewater treatment plant located at McLaughlin Point within the Township of Esquimalt capable of tertiary treatment for flows up to 2 times Average Dry Weather Flow (ADWF) for the Core Area up to 2040. For flows that are greater than 2 times ADWF but not more than 3 times ADWF for the Clover Point catchment and up to 4 times ADWF for the Macaulay catchment, primary treatment will be guaranteed. Construction of the wastewater treatment plant will be completed by December 31, 2020.
2. Commitment to advance studies for a wastewater treatment proposal in Colwood, including up to $2 million to complete the required technical studies and environmental impact assessments.
3. Conveyance of sewage sludge to the Hartland landfill for processing into Class A biosolids, as defined under the Organic Matter Recycling Regulation, for beneficial use and optimization for potential opportunities for integrated resource management.

... 2

Ministry of Environment
Office of the Minister
Mailing Address:
Parliament Buildings
Victoria BC V8V 1X4
Telephone: 250 387-1187
Facsimile: 250 387-1356

As a condition of my approval and in accordance with Section 24 (5) of the *Environmental Management Act,* I require the Capital Regional District (CRD) develop a definitive plan for the beneficial reuse ofbiosolids that does not incorporate multi-year storage of biosolids within a biocell. The Ministry of Environment understands that the plan may need to include short-term storage and/or management options as part of implementing the beneficial reuse plan, but the CRD is strongly encouraged to minimize the need for this. Further, I am amending the deadline for submission of the plan from December 31, 2017, to June 30, 2019, under the condition that the CRD submit, by May 31, 2017, a plan that outlines the procedural steps and schedule it will implement to achieve the definitive plan.

The CRD must ensure that the definitive plan for beneficial reuse of biosolids is supported by an assessment of the full spectrum of beneficial uses and integrated resource management options available for the proposed Class A biosolids produced at the Hartland Landfill, and incorporates a jurisdictional review of how similar-sized and larger municipalities within British Columbia, North America and further abroad, successfully and beneficially reuse biosolids. Ministry staff will assist as necessary and can share the ministry's jurisdictional review of how other similar-sized and larger municipalities reuse biosolids.

The beneficial reuse option selected for treated biosolids must meet the requirements for beneficial use specified in the Canadian Council of Ministers of the Environment *Canada-Wide Approach for the Management of Wastewater Biosolids* (October 11, 2012) and be based on scientific evidence. This definitive plan for the beneficial reuse of biosolids will replace the current proposal to use a biocell for storage.

Please continue to work with staff in the Environmental Protection Division of the Ministry of Environment to ensure that the proposed wastewater treatment facility is registered under the Municipal Wastewater Regulation prior to operation of the plant. Please also inform ministry staff of all beneficial uses of biosolids being considered, in order to ensure all necessary forms of authorization are obtained in advance of discharge.

Additionally, the CRD should continue to engage First Nations and the public on all aspects of theCALWMP.

Be advised that the ministry intends to publically post any reports or other documents received by the CRD on the ministry website related to this conditional approval, the CALWMP and this activity regulated under the *Environmental Management Act.*

...3

Approval of Amendment No.11 to the CALWMP does not authorize entry upon, crossing over or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the local government. This amendment is approved pursuant to the provisions of the *Environmental Management Act,* which asserts it is an offence to discharge waste without proper authorization. It is also the regional district's responsibility to ensure that all activities conducted under this plan amendment are carried out with regard to the rights of third parties and comply with other applicable legislation that may be in force.

Sincerely,

ll/cd_,

Mary Polak
Minister

cc: Honourable Peter Fassbender, Minister of Community, Sport and Cultural Development
AJ Downie, Director, Environmental Protection Division, Ministry of Environment
Robert Lapham, Chief Administrative Officer, Capital Regional District
Larisa Hutcheson, Interim Project Director, Core Area Wastewater Treatment Project, Capital Regional District
Sharon Singh, Associate, Bennett Jones Vancouver

Appendix B

CRD Board Minutes Land Application Restrictions July 13, 2011

Making a difference...together

MINUTES OF THE MEETING OF THE CAPITAL REGIONAL DISTRICT BOARD,
held Wednesday, July 13, 2011 in the Board Room, 625 Fisgard Street, Victoria, BC

PRESENT: **Directors:** G. Young (Chair), S. Brice, J. Brownoff, C. Causton, L. Cross, V. Derman, B. Desjardins, J. Evans, D. Fortin, C. Green (for A. Finall), K. Hancock, G. Hendren, M. Hicks (3:30 p.m.), G. Hill, P. Lucas, F. Leonard (2:37 p.m.), J. Mar, J. Mendum, J. Ranns (2:37 p.m.), D. Saunders, L. Seaton (for D. Blackwell), C. Thornton-Joe and L. Wergeland
Staff: K. Daniels, J. Hull, L. Hutcheson, B. Lapham, L. Rushton, S. Santarossa and N. More (Recorder)
Also Present: Kathryn Stuart, Staples McDannold Stewart, Board Solicitor
ABSENT: J. Brownoff, L. Cross and B. Desjardins,

The Chair called the meeting to order at 2:34 p.m.

1 APPROVAL OF THE AGENDA

MOVED by Director Lucas, **SECONDED** by Director Derman,
That the agenda and supplementary agenda be approved; and

That a Notice of Motion to be presented by Director Derman be added to the agenda under item 8 (New Business).

CARRIED

MOVED by Director Derman, **SECONDED** by Alternate Director Green,
That the late request to speak by C. Bannister (#19) be approved.

DEFEATED
Evans OPPOSED

2 ADOPTION OF MINUTES OF THE MEETING OF JUNE 15, 2011

MOVED by Lucas, **SECONDED** by Director Hancock,
That the minutes of the meeting of June 15, 2011 be adopted.

CARRIED

3 REPORT OF THE CHAIR

Chair Young acknowledged the passing of former Capital Regional District (CRD) Alternate Director Allan Cassidy, highlighting his service to the CRD Board from 1999–2002 and 2007, his role as a Royal and McPherson Theatre Society Board member, 2000–2004, and his involvement with the restoration of the Royal Theatre.

Directors Leonard and Ranns entered the meeting at 2:37 p.m.

4 PRESENTATIONS/DELEGATIONS

a) Canadian Association of Municipal Administrators (CAMA) 2011 Education Award – Bill Holtby

Bill Holtby, CAMA Board representative, recognized the CRD for its leadership in the education of its municipal employees because of the custom training program called iLead, developed in association with Royal Roads University (RRU), and presented the CRD with the 2011 National Municipal Education Award in the form of a plaque. Chair Young expressed appreciation on behalf of the CRD Board and thanked RRU for assisting in designing and implementing the iLead program.

b) Victoria Airport Authority 2010 Report to Nominators – Colin Smith, CRD Nominee and Geoff Dickson, President & CEO

Mr. Smith reported on the 2010 activities of the Victoria Airport Authority, using a PowerPoint presentation to illustrate main points, with the assistance of Mr. Dickson. He also provided an overview of the 2011 Capital Program.

c) Supplementary delegates

1. Ruby Commandeur re Item 5.3.1 – Director Lucas Motion re Biosolids—spoke in favour of the motion because of the toxicity of contaminants in biosolids, the pressures on the food supply due to climate change, how farmland is managed and the difficulty in regulating the use of biosolids on farmland. She urged the Board to think carefully on decisions about land use application of biosolids.
2. Marcie Zemluk re Item 5.3.1 – Director Lucas Motion re Biosolids—spoke about the legal liabilities in American case law and current cases before the Canadian courts on the issue of biosolids land application. She noted the importance of understanding the potential for contaminated sites, ongoing regulatory responsibility and liability for the Province and the CRD, and the hardship that an error in regulation or monitoring can have on farmland in the region.
3. Chloe Donatelli re Item 5.3.1 – Director Lucas Motion re Biosolids—Did not appear to speak when called.

Directors Cross and Mendum left the meeting at 3:10 p.m.

Director Mar excused himself from the meeting at 3:13 p.m., noting that he cannot be present to receive further input on the Peninsula Co-op development proposal as the public hearing has been held.

4. David Lawson re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in favour of the response because the development proposal is inconsistent with the Central Saanich Official Community Plan (OCP) and the Regional Growth Strategy (RGS).

Director Desjardins left the meeting at 3:15 p.m.

5. Mike Achtem re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in favour of the response because of economic impacts of concern related to the development proposal.
6. Jennifer Kay re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in favour of the response because the development proposal is inconsistent with the OCP and the RGS.
7. Don & Shelly Bottrell re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in favour of the response because the development proposal is inconsistent with the OCP.
8. Alexander Marr re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in favour of the response because the development proposal is inconsistent with the RGS.

Director Hicks entered the meeting at 3:30 p.m.

9. David Wilson re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in favour of the response because the development proposal is inconsistent with the OCP.
10. Tom Hall re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—Did not appear to speak when called.
11. Michelle Passmore re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—Did not appear to speak when called.
12. Hanne Kohout re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in favour of the response because the development proposal is inconsistent with the RGS.
13. Carol Pickup re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—withdrawn from agenda prior to the meeting.
14. Constance Christiansen re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—Did not appear to speak when called.
15. Ryan Windsor re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in favour of the response because the development proposal is inconsistent with the OCP and the RGS, and due to the importance of maintaining the integrity of the OCP and RGS.
16. Frances Pugh re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke in appreciation of the RGS and the response.
17. Jack Thornburg re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke of the interests of the larger community and the legacy to future generations in the thoughtful stewardship of land, air and water.
18. John Hannam re Item 5.8.1 – Response to Central Saanich Referral re Peninsula Co-op—spoke of stormwater management issues and inconsistencies with the OCP and the RGS.

Director Mar returned to the meeting at 3:45 p.m.
Directors Brownoff and Mendum left the meeting at 3:45 p.m.

5 REPORTS OF COMMITTEES

5.1 CORE AREA LIQUID WASTE MANAGEMENT COMMITTEE – June 29, 2011

1. Core Area Infrastructure Upgrade Projects for 2011

MOVED by Director Brice, **SECONDED** by Director Leonard,
That the CRD Board authorize proceeding with the infrastructure upgrading projects identified in Appendix A of the staff report, that costs be shared as outlined in Appendix B of the staff report, and that funding be provided by the trunk sewer reserve fund in the amount of $530,000.

CARRIED

5.2 ELECTORAL AREA SERVICES COMMITTEE – June 1, 2011

1. Galiano Island Community Use Building Service Establishment And Loan Authorization Bylaws

MOVED by Director Hancock, **SECONDED** by Director Hicks,
That a second referendum be held concurrently with the November 2011 BC civic election in order to confirm the proposed service area's position regarding the updated service establishment and loan authorization bylaws.

CARRIED

MOVED by Director Hancock, **SECONDED** by Director Hicks,
That Bylaw No. 3792, cited as "Galiano Island Community Use Building Service Establishment Bylaw No. 2, 2011", be introduced and read a first time and second time.

CARRIED

MOVED by Director Hancock, **SECONDED** by Director Hicks,
That Bylaw No. 3792 be read a third time.

CARRIED

Director Mendum returned to the meeting at 3:47 p.m.

MOVED by Director Hancock, **SECONDED** by Director Hicks,
That Bylaw No. 3793, cited as "Galiano Island Community Use Building Loan Authorization Bylaw No. 2, 2011", be introduced and read a first and second time.

CARRIED

MOVED by Director Hancock, **SECONDED** by Director Hicks,
That Bylaw No. 3793 be read a third time.

CARRIED

2. Grants-In-Aid

MOVED by Director Hancock, **SECONDED** by Director Hicks,
That the following grants-in-aid applications be approved for payment:

1. Juan de Fuca Grants-in-Aid as approved by Director Hicks
    a) Shirley Community Association $4,800
2. Salt Spring Island Grants-in-Aid as approved by Director Hendren
    a) Canadian Red Cross $5,014
3. Southern Gulf Islands Grants-in-Aid as approved by Director Hancock
    a) Mayne Island Integrated Water Systems Society $3,607
    b) Pender Community Transition Society $2,000
    c) Saturna Heritage Committee $2,000

CARRIED

5.3 ENVIRONMENTAL SUSTAINABILITY COMMITTEE – May 25, 2011

1. Motion to Protect Local Farmland and to Harmonize Sewage Treatment Strategies within the CRD – Director Lucas

MOVED by Director Lucas, **SECONDED** by Director Derman,
Whereas the CRD is committed to developing regional sewage treatment strategies that have the lowest impact on both the environment and public health, and the highest resource recovery potential;

And Whereas the Core Area Liquid Waste Management Committee has passed a motion banning the land application of biosolids in order to address legitimate public health and environmental concerns about the accumulation and dispersal of Polycyclic Aromatic Hydrocarbons, heavy metals, pharmaceuticals, and other Emerging Compounds of Concern (ECCs) on our land, in our food, and in the regional water table;

And Whereas protecting the "integrity of rural communities" and "regional green and blue spaces", and managing "natural resources and environmental sustainability" are important and explicit goals and responsibilities of the CRD as outlined in the Regional Growth Strategy (http://tinyurl.com/65wdd8p), and "improving population health and regional food security" are noted as Priority Actions in the Capital Region Food and Health Action Plan (http://tinyurl.com/4xetqbz);

Be it so moved that the CRD will harmonize current and long-term practices at all CRD-owned regional facilities and parks with the approved policies of the regional treatment strategy, including ending the production, storage and distribution of biosolids for land application at all CRD facilities and parks; and

Be it further moved that the CRD does not support the application of biosolids on farmland in the CRD under any circumstances, and let this policy be reflected in the upcoming Regional Sustainability Strategy.

MOVED by Director Hendren, **SECONDED** by Director Hancock,
That the motion **be amended** by adding the following:
"That it be further moved that the pasteurized, lime-stabilized Class A biosolids material produced at the Saanich Peninsula Wastewater Treatment Plant may be beneficially used by Hartland Landfill operations to replace chemical fertilizers as the soil amendment blended with soil and compost for use as the final cover material in the closure of Phase 2 Cell 1, in full compliance with all environmental and health regulations."

Concerns were raised that the amendment creates an exception and that other exemptions may need to be considered.

MOVED by Director Evans, **SECONDED** by Director Hill,
That the **amendment be referred** to the Environmental Sustainability Committee for consideration.

CARRIED

MOVED by Director Hendren, **SECONDED** by Director Hill,
That consideration of the main motion be postponed until the Environmental Sustainability Committee reports on exemptions.

DEFEATED
Hicks, Ranns, Evans, Seaton, Young, Brice, Causton and Wergeland IN FAVOUR

The question on the main motion was called. **CARRIED**
Evans, Seaton, Causton OPPOSED

Director Saunders left the meeting at 4:17 p.m.

5.4 ENVIRONMENTAL SUSTAINABILITY COMMITTEE – June 22, 2011

1. #EEP 11-44 Millstream Meadows 2011 Work Plan – Award of Project Management Consulting Contract

Director Causton and Alternate Director Green left the meeting at 4:19 p.m.

MOVED by Director Ranns, **SECONDED** by Director Derman,
That staff be directed to:
1) award a project management consulting contract to Golder Associates Ltd. at a cost of $265,000 excluding HST to implement the Stage 1 work;
2) undertake the design and tendering for the Stage 1 work; and
3) report to the Committee following completion of Stage 1 work.

CARRIED
Director Evans OPPOSED

5.5 FINANCE AND CORPORATE SERVICES COMMITTEE – July 6, 2011

1. Recreation Services and Facilities Fees and Charges 2011/2012

Director Causton and Alternate Director Green returned to the meeting at 4:20 p.m.

MOVED by Director Mar, **SECONDED** by Director Evans,
That Bylaw No. 3794, cited as "Capital Regional District Recreation Services and Facilities Fees and Charges Bylaw No. 1, 2009, Amendment Bylaw No. 2, 2011", be introduced and read a first and second time.

MOVED by Director Evans, **SECONDED** by Director Mar,
That consideration of Bylaw No. 3794, cited as "Capital Regional District Recreation Services and Facilities Fees and Charges Bylaw No. 1, 2009, Amendment Bylaw No. 2, 2011", **be postponed** until the SEAPARC Recreation Commission has reviewed the proposed fee changes.

CARRIED

2. Budget Direction for the Year 2012

MOVED by Director Causton, **SECONDED** by Director Evans,
That staff prepare the draft 2012 financial plan within the following guidelines:
1) no increase in service levels for existing services
2) new services only as previously approved by the Board
3) staff continue to explore innovative practices to absorb inflationary costs, benefits and utility/fuel costs within existing budgets as much as possible
4) the draft budget recognize provisions for new initiatives directly related to the Board's strategic priorities.

Staff noted that an interim budget report will be forwarded to the committee in October.

The question on the motion was called. **CARRIED**

5.6 JUAN DE FUCA LAND USE COMMITTEE – VOTING BLOCK A – June 21, 2011

1. Development Permit with Variance – DP-09-11 – Lot A, Section 74, Renfrew District, Plan VIP71883 (Lynge – 11237 West Coast Road)

MOVED by Director Hicks, **SECONDED** by Director Evans,
That the steep slopes, foreshore and marine shoreline and watercourses, wetlands and riparian areas development permit (DP-09-11) for Lot A, Section 74, Renfrew District, Plan VIP71883 and the request for:

a. Relaxation of the rear yard setback from 15m to 7.5m for the existing deck; and
b. Exemption from floodplain setback regulations of Part 5 of Bylaw No. 2040, as shown in Appendices 1 and 2, be approved subject to the following conditions:
    i. that the proposed development comply with the Steep Slope, Foreshore and Marine Shoreline and Watercourses, Wetlands and Riparian Areas Development Permit Guidelines outlined in the Shirley/Jordan River Official Community Plan, Bylaw No. 3352;

ii. that the driveway proposed to be constructed prior to subdivision comply with CRD Residential Driveway standards;
iii. that the proposed development comply with the recommendations outlined in the environmental report prepared by Brian Wilkes & Associates dated November 18, 2010; and
iv. that the geotechnical report prepared by Ryzuk Geotechnical dated December 15, 2010, as shown in Appendix 4, be recommended to be secured by the Approving Officer as a restrictive covenant as part of the subdivision process.

CARRIED

5.7 JUAN DE FUCA LAND USE COMMITTEE – VOTING BLOCK B – June 21, 2011

1. Development Permit with Variance – DP-08-11 – Block 352, Malahat District, Except Part in VIP84067 and Block 399 Malahat District (Isis Land Corporation/Hawes)

MOVED by Director Hicks, **SECONDED** by Director Mar,
That the steep slope and foreshore, wetland and riparian development permit (DP-08-11) for Block 352, Malahat District, Except Part in VIP84067 and Block 399 Malahat District District, and the request for an exemption of Section 944 of the Local Government Act to relax the requirement that the minimum frontage of a lot shall be one tenth of the perimeter of the lot that fronts on the highway, for the purposes of permitting a 86-lot subdivision, be approved subject to the following conditions:

a. That the proposed subdivision and development comply with the Development Permit Guidelines in the Malahat Official Community Plan, Bylaw No. 3228; and
b. That the geological reports prepared by Thurber Engineering Ltd. dated October 18, 2010, and April 18, 2011 as shown in Appendix 3, be secured by restrictive covenant as part of the building permit process; and
c. That the report prepared by PA Harder and Associates Ltd. dated March 31, 2011, be secured by restrictive covenant as part of the building permit process; and
d. That the applicant register a Statutory Right of Way to provide access to Regional Parks for access to and construction of the portion Trans Canada Trail through the property as shown on Appendix 2.

CARRIED
Leonard and Mendum OPPOSED

5.8 PLANNING, TRANSPORTATION AND PROTECTIVE SERVICES COMMITTEE – June 22, 2011

Director Hicks left the meeting at 4:45 p.m.

Staff reported on legal opinion about the potential for conflict of interest in regard to Directors and Co-op membership. Upon advice to Directors to seek legal advice or make their own decision on whether they have a conflict, it was determined there would not be quorum to hear the item.

MOVED by Director Fortin, **SECONDED** by Director Lucas,
That consideration of the agenda item "Response to Central Saanich Referral re Peninsula Co-op" be postponed until the next meeting to give Directors that are members of the Peninsula Co-op an opportunity to determine whether they have a conflict of interest.

CARRIED

Staff was requested to circulate the legal opinion prepared by Staples McDannold Stewart.

Staff was asked to close the item to further delegations, since it was a postponement on procedural grounds rather than for the addition of new information.

5.9 REGIONAL PARKS COMMITTEE – June 15, 2011

1. E&N Rail Trail Project – Intersection Improvements Esquimalt Road to Admirals/Colville

MOVED by Director Causton, **SECONDED** by Director Hill,
That the single source procurement of rail infrastructure improvements be approved for five intersections and one pedestrian crossing in the amount of $1,672,200 (not including HST) as per the letters from SVI dated May 17, 2011.

CARRIED

MOVED by Director Causton, **SECONDED** by Director Mar,
That commencement of the expenditure is conditional upon confirmation by the provincial and federal governments that they will financially support active use of the E&N rail line.

CARRIED

MOVED by Director Causton, **SECONDED** by Director Evans,
That this motion be included in the Board Chair's letters to the Minister of Transportation and Infrastructure and the federal government regarding rail investment.

CARRIED

2. Elk/Beaver Lake Recreational Use Advisory Group Revised Terms of Reference

MOVED by Director Evans, **SECONDED** by Director Lucas,
That the revised Terms of Reference for the Elk/Beaver Lake Recreational Use Advisory Group be approved.

CARRIED

6 ADMINISTRATION REPORTS

6.1 2011 GENERAL LOCAL ELECTION – APPOINTMENT OF CHIEF ELECTION OFFICER AND DEPUTY CHIEF ELECTION OFFICER – ELECTORAL AREA DIRECTORS

MOVED by Director Evans, **SECONDED** by Director Lucas,
1) That pursuant to Section 41 of the Local Government Act, Thomas F. Moore be appointed Chief Election Officer with the power to appoint such other assistance as may be required for the administration and conduct of the 2011 General Local Election of the Capital Regional District Electoral Area Directors; and

2) That Sonia Santarossa, Sheila Norton, Kerry Fedosenko, Mary Cooper and Anthony Kennedy be appointed Deputy Chief Election Officers

CARRIED

6.2 EXTENSION TO THE CONTRACT WITH LANGFORD FOR CALL RELAY SERVICES

MOVED by Director Seaton, **SECONDED** by Director Evans,
That an extension of the Call Relay Contract with the City of Langford from August 1, 2011 to May 31, 2012 in the amount of $364,574 be approved.

CARRIED

7 BYLAWS AND RESOLUTIONS

7.1 BYLAW NO. 3784, "SOUTHERN GULF ISLANDS ELECTORAL AREA FALSE ALARM REDUCTION BYLAW NO. 1, 2011"

MOVED by Director Hancock, **SECONDED** by Director Evans,
That Bylaw No. 3784 "Southern Gulf Islands Electoral Area False Alarm Reduction Bylaw No. 1, 2011" be adopted.

CARRIED

7.2 BYLAW NO. 3785, "ANIMAL REGULATION AND IMPOUNDING BYLAW NO. 1, 1986, AMENDMENT BYLAW NO. 8, 2011"

MOVED by Director Hancock, **SECONDED** by Director Evans,
That Bylaw No. 3785 "Animal Regulation and Impounding Bylaw No. 1, 1986, Amendment Bylaw No. 8, 2011" be adopted.

CARRIED

8 NEW BUSINESS

8.1 2011 GENERAL LOCAL ELECTION – APPOINTMENT OF CHIEF ELECTION OFFICER AND DEPUTY CHIEF ELECTION OFFICER (ISLANDS TRUST) & ISLANDS TRUST 2011 ELECTION SERVICES AGREEMENT

MOVED by Director Evans, **SECONDED** by Director Leonard,

a) That the Islands Trust 2011 Election Services Agreement between the CRD and the Islands Trust Council be approved and authorized for execution; and
b) That pursuant to Section 41 of the Local Government Act, Thomas F. Moore be appointed Chief Election Officer with the power to appoint such other assistance as may be required for the administration and conduct of the 2011 General Local Election of Island Trustees; and
c) That Sonia Santarossa, Sheila Norton, Kerry Fedosenko, Mary Cooper and Anthony Kennedy be appointed Deputy Chief Election Officers.

CARRIED

8.2 NOTICE OF MOTION – VIC DERMAN – MARINE TRAIL HOLDINGS

Director Derman gave notice of his intention to propose the following motion at the August Board meeting:

That the Board of the Capital Regional District determines that the Marine Trail Holdings Ltd. Rezoning application to build 257cabins, 6 caretaker residences, a resort lodge and two recreation centres in the Juan de Fuca Rural Resource lands is inconsistent with the Regional Growth Strategy and therefore shall not be permitted to proceed.

9 MOTION TO MOVE IN CAMERA

MOVED by Director Hill, **SECONDED** by Director Derman,
That the Board close the meeting and move in camera in accordance with the Community Charter, Part 4, Division 3, 90(1)(a) personal information about an identifiable individual who is being considered for a position appointed by the Board; (i) the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

CARRIED

The Board convened the in camera portion of the meeting at 5:00 p.m. and resumed in open meeting at 5:32 p.m. to rise and report.

10 RISE AND REPORT

- **Water Treatment Upgrade Project**
  That payment is authorized to Ridgeline Mechanical Ltd. in the amount of $190,000 from the Highland and Fernwood Water Treatment Upgrade Project funds to settle a claim related to CRD Contract No. 09-1645.

- **Appointment to Juan de Fuca Economic Development Commission**
  Ken Douch was appointed.

- **Appointment to Port Renfrew Utility Services Committee**
  Dorothy Hunt was appointed.

11 ADJOURNMENT

MOVED by Director Hill, **SECONDED** by Director Derman,
That the meeting be adjourned at 5:35 p.m.

CARRIED

CERTIFIED CORRECT:

_____ _____

CHAIR **CORPORATE OFFICER**

Appendix C

CRD Board Minutes Land Application

February 15, 2023

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Environmental Services Committee

Wednesday, February 15, 2023	**1:30 PM**	**6th Floor Boardroom** **625 Fisgard St.** **Victoria, BC V8W 1R7**

B. Desjardins (Chair), S. Tobias (Vice Chair), J. Brownoff, J. Caradonna, G. Holman, D. Kobayashi, D. Murdock, M. Tait, D. Thompson, A. Wickheim, C. Plant (Board Chair, ex-officio)

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

3.1. 23-156 Minutes of the January 18, 2023 Environmental Services Committee Meeting

Recommendation: That the minutes of the Environmental Services Committee meeting of January 18, 2023 be adopted as circulated.

Attachments: Minutes - January 18, 2023

4. Chair's Remarks

5. Presentations/Delegations

The public are welcome to attend CRD Board meetings in-person.

Delegations will have the option to participate electronically. Please complete the online application at www.crd.bc.ca/address no later than 4:30 pm two days before the meeting and staff will respond with details.

Alternatively, you may email your comments on an agenda item to the CRD Board at crdboard@crd.bc.ca.

5.1. 23-166 Delegation - Dave Cowen; Representing Peninsula Biosolids Coalition: Re: Agenda Item 7.1.: Motion with Notice: Healthy Waters Project for Tod Creek on the Saanich Peninsula (Director Caradonna)

6. Committee Business

6.1. 23-103 2022 Solid Waste Stream Composition Study Results

Recommendation: There is no recommendation. This report is for information only.

Attachments:
- Staff Report: 2022 Solid Waste Stream Composition Study Results
- Appendix A: CRD 2022 Solid Waste Stream Composition Study - Tetra Tech

6.2. 23-130 Recycle BC - Packaging and Printed Paper Product, Extended Producer Responsibility - Draft Program Plan

Recommendation: There is no recommendation. This report is for information only.

Attachments:
- Staff Report: Recycle BC - Packaging & Paper, EPR - Draft Program Plan
- Appendix A: Cont'd Participation in EA Depot Recycling - SR - Feb 7/18
- Appendix B: Depot Impacts Analysis
- Appendix C: Consultation Feedback Ltr to Recycle BC from CRD (Jan 3/23)

6.3. 23-131 Central Saanich Request for CRD Carbon-based Budget Policy

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That the CRD not adopt a policy of carbon budgeting as part of its budget cycle but continue to monitor progress in carbon budget methodologies and implications on CRD financial planning processes and share learnings with local governments through the CRD Inter-Municipal Working Group and Task Force, as appropriate.

Attachments:
- Staff Report: Central Saanich Request for CRD Carbon-based Budget Policy
- Appendix A: Central Saanich Letter to CRD Board - November 8, 2022
- Appendix B: Summary and History of Carbon Budgeting

6.4. 23-138 Bylaw No. 2922 - Sewer Use Bylaw Amendments

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
1. That Bylaw No. 4530, "Capital Regional District Sewer Use Bylaw No. 5, 2001, Amendment Bylaw No. 7, 2023", be introduced and read a first, second, and third time; and
2. That Bylaw No. 4530 be adopted.
3. That Bylaw No. 4531, "Capital Regional District Ticket Information Authorization Bylaw 1990, Amendment Bylaw No. 75, 2023", be introduced and read a first, second, and third time; and
4. That Bylaw No. 4531 be adopted.

Attachments:
- Staff Report: Bylaw No. 2922 - Sewer Use Bylaw Amendments
- Appendix A: Bylaw No. 2922 - Unofficial Consolidated Bylaw with Amendments
- Appendix B: Bylaw No. 4530
- Appendix C: Bylaw No. 4531

7. Motions with Notice

7.1. 23-154 Motion with Notice: Healthy Waters Project for Tod Creek on the Saanich Peninsula (Director Caradonna)

Recommendation: That the Healthy Waters project proposal for Tod Creek watershed be referred to staff to report back, by end of March or within the span of two committee meetings, on project implications including resources, service mandate, and regulatory framework.

Attachments: Motion with Notice: Healthy Waters Project for Tod Creek

8. New Business

9. Adjournment

The next meeting is March 29, 2023 at 9:30 am (Special).

To ensure quorum, please advise Jessica Dorman (jdorman@crd.bc.ca) if you or your alternate cannot attend.

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes

Environmental Services Committee

Wednesday, January 18, 2023 **1:30 PM** **6th Floor Boardroom**
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT
Directors: B. Desjardins (Chair), S. Tobias (Vice Chair), J. Brownoff, J. Caradonna, G. Holman (EP), D. Kobayashi, D. Murdock, M. Tait, D. Thompson

Staff: T. Robbins, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services; G. Harris, Senior Manager, Environmental Protection; S. May, Senior Manager, Environmental Engineering; M. Lagoa, Deputy Corporate Officer; J. Dorman, Committee Clerk (Recorder)

EP - Electronic Participation

Regrets: Director(s) C. Plant, A. Wickheim

The meeting was called to order at 1:30 pm.

1. Territorial Acknowledgement

Vice Chair Tobias provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by Director Caradonna, SECONDED by Director Kobayashi,
That the agenda for the January 18, 2023 Environmental Services Committee meeting be approved.
CARRIED

3. Adoption of Minutes

3.1. 23-065 Minutes of the June 15, 2022 and the minutes of the September 28, 2022 Environmental Services Committee Meeting.

MOVED by Director Tait, SECONDED by Director Murdock,
That the minutes of the Environmental Services Committee meeting of June 15, 2022 and September 28, 2022 be adopted as circulated.
CARRIED

4. Chair's Remarks

I am pleased to continue as the Chair of the Environmental Services Committee and looking forward to working with all of the committee members. We are in exciting times within the mandate and work of the Environmental Services Committee, we are on critical paths towards solutions for solid resources whether they be biosolids, wood solid, or organic resources. We are also coming through the pandemic time, where Hartland received a significant per capita increase, and that adds more pressure to make good decisions and set direction going forward. We need some good decision making for critical movement forward for our climate and solid waste targets.

5. Presentations/Delegations

There were no presentations.

5.1. 23-068 Delegation - Daniel Kenway; Representing Willis Point Community Association: Re: Agenda Item 6.3.: Evaluation of Passing Lane on Willis Point Road

D. Kenway spoke to item 6.3.

5.2. 23-071 Delegation - Philippe Lucas; Representing Biosolid Free BC: Re: Agenda Item 6.2.: Biosolids Short-term Contingency Beneficial Use Plan

P. Lucas spoke to Item 6.2.

5.3. 23-072 Delegation - Hugh Stephens; Representing Peninsula Biosolids Coalition: Re: Agenda Item 6.2.: Biosolids Short-term Contingency Beneficial Use Plan

H. Stephens spoke to Item 6.2.

6. Committee Business

6.1. 23-044 2023 Environmental Services Committee Terms of Reference

L. Hutcheson presented 6.1. for information.

Discussion ensued on clarification of corporate and community climate action.

There is no recommendation. This report is for information only.

6.2. 23-052 Biosolids Short-term Contingency Beneficial Use Plan

G. Harris spoke to Item 6.2.

Discussion ensued on the following:
- water quality testing and monitoring
- thermal process pilot studies and established programs
- consultation and engagement processes
- chemicals and contaminants testing
- contingency planning related to operational changes
- shipping and additional costs
- associated risks of the service
- land application in other jurisdictions
- regulatory process
- gasification or composting possibilities

MOVED by Director Holman, SECONDED by Director Tait,
That the Environmental Services Committee recommends to the Capital Regional District Board:
1. That the Capital Regional District (CRD) Board amend its policy to allow non-agricultural land application of biosolids as a short-term contingency alternative;
and
2. That staff be directed to update the CRD's short-term biosolids contingency plan correspondingly.
DEFEATED
OPPOSED: Caradonna, Desjardins, Kobayashi, Thompson, Tobias

MOVED by Director Caradonna, SECONDED by Director Thompson,
That we move to direct staff to look at alternative options and maintain the status quo for now.
CARRIED
OPPOSED: Brownoff, Holman, Murdock, Tait

6.3. 23-009 Evaluation of Passing Lane on Willis Point Road

S. May presented Item 6.3. for information.

Discussion ensued on the following:
- existing turn lanes off of Willis Point road
- jurisdiction and authority of road
- cost of passing lane

There is no recommendation. This report is for information only.

7. Notice(s) of Motion

Appendix D

CRD Board Minutes On-Site Thermal RFP

March 29, 2023

Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Meeting Minutes

Environmental Services Committee

Wednesday, March 29, 2023 | **9:30 AM** | **6th Floor Boardroom, 625 Fisgard St., Victoria, BC V8W 1R7**

Special Meeting

PRESENT
Directors: B. Desjardins (Chair), S. Tobias (Vice Chair), J. Brownoff, J. Caradonna, G. Holman (9:33 am) (EP), D. Kobayashi (EP), D. Murdock, M. Tait (9:43 am) (EP), D. Thompson (9:51 am) (EP), A. Wickheim, C. Plant (Board Chair, ex-officio)

Staff: T. Robbins, Chief Administrative Officer; L. Hutcheson, General Manager, Parks and Environmental Services; G. Harris, Senior Manager, Environmental Protection; R. Smith, Senior Manager, Environmental Resource Management; N. Elliott, Climate Action Program Coordinator, Environmental Protection; L. Ferris, Manager, Policy & Planning, Environmental Resource Management; M. Lagoa, Deputy Corporate Officer; J. Dorman, Committee Clerk (Recorder)

EP - Electronic Participation

The meeting was called to order at 9:30 am.

1. Territorial Acknowledgement

Vice Chair Tobias provided a Territorial Acknowledgement.

2. Approval of Agenda

MOVED by Director Caradonna, SECONDED by Director Wickheim,
That the agenda for the March 29, 2023 Environmental Services Committee meeting be approved.
CARRIED

3. Presentations/Delegations

3.1. 23-258 Delegation - Philippe Lucas; Representing Biosolid Free BC: Re: Agenda Item 4.1.: Long-term Biosolids Planning and Biosolids Thermal Plan Updates

P. Lucas spoke to Item 4.1.

3.2. 23-259 Delegation - Jonathan O'Riordan; Representing Peninsula Biosolids Coalition: Re: Agenda Item 4.1.: Long-term Biosolids Planning and Biosolids Thermal Plan Updates

J. O'Riordan spoke to Item 4.1.

4. Special Meeting Matters

4.1. 23-253 Long-term Biosolids Planning and Biosolids Thermal Plan Updates

L. Hutcheson spoke to Item 4.1.

Discussion ensued on the following:
- gasification and thermal processing of biosolids in North America
- international participation in RFP
- co-processing of municipal waste streams
- pyrolysis pilot study in Kelowna and pilot study in Esquimalt
- resource recovery and potential innovation grants
- funding for thermal processing pilot studies
- potential collaboration with other regional districts
- air quality and differentiating technologies
- timelines for consolidation, proposal call, and long term plan

Director Tait joined the meeting at 9:43 am.

Director Thompson joined the meeting at 9:51 am.

Director Murdock left the meeting at 9:53 am.

MOVED by Director Caradonna, SECONDED by Director Tobias,
The Environmental Services Committee recommends to the Capital Regional District Board:
1. That staff develop a consultation plan for long-term biosolids management for the July Environmental Services Committee meeting, to be implemented in the fall of 2023; and
2. That staff concurrently initiate a Request for Proposals process for a biosolids advanced thermal site trial.

Director Murdock returned to the meeting at 10:05 am.

Director Tait left the meeting at 10:16 am.

MOVED by Director Caradonna, SECONDED by Director Plant,
That the following words be added following" site trial"; "and that the RFP be scoped broadly to include potential for co-processing of municipal solid waste streams, and that submissions be welcomed from both domestic and international vendors".
CARRIED

The question was called on the main motion as amended.
The Environmental Services Committee recommends to the Capital Regional District Board:
1. That staff develop a consultation plan for long-term biosolids management for the July Environmental Services Committee meeting, to be implemented in the fall of 2023; and
2. That staff concurrently initiate a Request for Proposals process for a biosolids advanced thermal site trial; and that the RFP be scoped broadly to include potential for co-processing of municipal solid waste streams, and that submissions be welcomed from both domestic and international vendors.
CARRIED

4.2. 23-239 Capital Regional District Climate Action Inter-Municipal Task Force

N. Elliott spoke to Item 4.2.

MOVED by Director Brownoff, SECONDED by Director Caradonna,
The Environmental Services Committee recommends to the Capital Regional District Board:
That the Terms of Reference for the Climate Action Inter-Municipal Task force, attached as Appendix A, be approved.
CARRIED

4.3. 23-131 Central Saanich Request for CRD Carbon-based Budget Policy

N. Elliott spoke to Item 4.3

Discussion ensued on the participants and outcomes of the workshop.

Motion Arising:
MOVED by Director Caradonna, SECONDED by Director Plant,
The Environmental Services Committee recommends to the Capital Regional District Board:
That CRD staff host a workshop on the concept of carbon budgeting with municipal and electoral area staff and elected officials.
CARRIED
OPPOSED: Holman

4.4. 23-236 Solid Waste Advisory Committee Motions of March 3, 2023

R. Smith presented Item 4.4. for information.

Discussion ensued on the following:
- organics processing and composting within the region
- current mandates on collection
- waste composition study
- Compost Education Centre

MOVED by Director Plant, SECONDED by Director Caradonna,
The Environmental Services Committee recommends to the Capital Regional District Board:
That staff be directed to explore mandatory curbside organics collection from the municipalities around the region.
CARRIED

4.5. 23-241 Previous Minutes of Other CRD Committees and Commissions for Information

The following minutes were received for information:
a) Climate Action Inter-Municipal Task Force - March 2, 2023
b) Solid Waste Advisory Committee Minutes - February 3 and March 3, 2023

5. Adjournment

MOVED by Director Murdock, SECONDED by Director Tobias,
That the March 29, 2023 Environmental Services Committee meeting be adjourned at 10:58 am.
CARRIED

_____
CHAIR

_____
RECORDER

Appendix E

CRD Class A Biosolids SDS

SAFETY DATA SHEET
Dried, Pelletized, Class A biosolids
(From the CRD Residuals Treatment Facility)

SECTION 1 – IDENTIFICATION

Material Name:	Biosolids from wastewater treatment
Other Designations:	RTF Biosolids, Class A Biosolids
Source:	CRD Residuals Treatment Facility, Saanich, BC
Product Use:	RTF biosolids are currently used at Hartland as a soil amendment (fertilizer) product after mixing with other carbon and nitrogen sources (wood waste/sand/soil). Off site, biosolids are used as an alternative fuel.

SECTION 2 – HAZARD IDENTIFICATION

DANGER: Biosolids may pose a flammability/explosion risk if handled contrary to safety procedures. See Section 16.

Hazard Statements:	Combustible solid – do not expose to moisture/precipitation (exothermic reaction) Combustible dust – dust dispersed in sufficient concentrations in confined spaces, or enclosed areas, may create an explosion hazard in the presence of ignition sources May cause respiratory irritation (dust) May cause eye irritation (dust) Symptoms may be delayed
Precautionary Statements:	No smoking, open flame, sources of heat or ignition. Do not expose to water/moisture unless the material is being blended/mixed with inert material. Do not store as a raw product in large piles for longer than 24 hours. Prompt mixing with inert material recommended.
Other Hazards:	Lung/eye irritant (dust)

SECTION 3 – COMPOSITION

Wastewater biosolids are regulated for use under the BC Organic Matter Recycling Regulation. At Hartland, biosolids are blended with sand, soil and wood waste into a biosolids growing medium (BGM) product and applied as a soil amendment for closure areas, or further blended and applied to open areas for landfill gas mitigation.

Biosolids are a brown/grey granular solids consisting of dried wastewater residuals from the CRD's tertiary wastewater treatment plant (McLoughlin Point). Please refer to Appendix 1 for lab results.

SECTION 4 – FIRST AID MEASURES

Inhalation:	Remove to fresh air. Check for clear airway, breathing, and presence of pulse. Provide cardiopulmonary resuscitation for person without pulse or respirations. Remove victim to fresh air, if safe to do so. Keep at rest and comfortably warm. Seek medical attention.
Skin Contact:	Wash with soap and water
Eye Contact:	Dust may cause eye irritation. Relocate to fresh air and flush with clean water.
Ingestion:	Not an expected route of exposure. If necessary, consult with a physician.

SECTION 5 – FIRE FIGHTING MEASURES

Call fire department immediately and follow site-specific fire safety/response procedures. Do not attempt to extinguish fire.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Avoid exposure to dust. Reload material into containment vessel/bin. Do not allow product to enter surface watercourses.

SECTION 7 – HANDLING AND STORAGE

Safe Storage:	Short-term (<24 hours) Store in cool, well-ventilated place. Do not store raw biosolids in ambient air, or expose to precipitation for more than 24 hours. For longer-term storage, store under controlled conditions in oxygen- reduced/free environment with inert gas (e.g. nitrogen or carbon dioxide blanket).
Safe Handling:	Wear full- or half-face respiratory (P100) protection when disturbing material. Avoid dust generation in enclosed areas/buildings.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits:	WorkSafeBC limit for Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC) – 10 mg/m^3 8-hour average for total dust; and 3 mg/m^3 8-hour average for the respirable portion.
PPE:	Always wear chemical-/liquid-resistant gloves (butyl rubber, natural latex, nitrile rubber) and protective eyewear (goggles) when working around biosolids. Standard protective clothing is required at the landfill (follow all site PPE requirements – high visibility gear, steel-toed boots).
Respiratory Protection:	Use half- or full-face respirator equipped with P100 particulate filter when working in areas that have the potential to exceed WorkSafeBC thresholds.

Ensure adequate ventilation when disturbing the material.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State	solid (<10% total moisture)
Appearance	granular/pelletized, soil-like
Colour	brown
Odour	earthy, musty, compost
Odour Threshold	not applicable
Combustion/Explosion	See Section 10

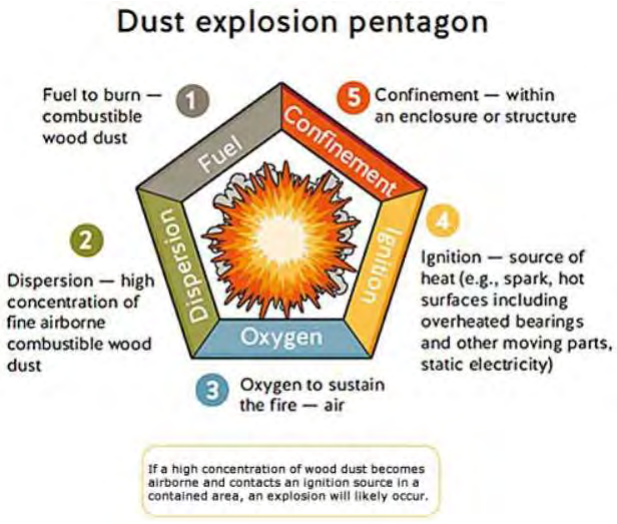
SECTION 10 – STABILITY AND REACTIVITY

Combustion:	Dried biosolids undergo slow exothermic oxidation in the presence of oxygen and water/moisture and can undergo combustion. Avoid prolonged exposure to ambient air and moisture in raw form.
Explosivity:	Explosibility testing was completed for the biosolids and results are provided below. At moisture contents less than 10%, the material is explosive as a dust cloud. This is similar to other operations that manage materials that create dust (e.g., flour/grain processing, sawmills, etc.).

Sample	Moisture content (wt.%)	Concentration (g/m^3)	Explosible
Biosolid dust	5.0	1000	Yes
Biosolid dust	10.0	1000	Yes
Biosolid dust	15.0	2000	No
Biosolid dust	20.0	2000	No

WorkSafeBC indicates: “many dusts are combustible, which means they can catch fire and burn. When fine dust particles catch fire while they’re suspended in the air, known as deflagration, fire can spread rapidly and sometimes leads to an explosion”.

When dust is exposed to enough heat or even a spark, it can ignite. When airborne dust is near a fire, it often results in an explosion. For an explosion to occur, the following five factors must be present.



SECTION 11 – TOXILOGICAL INFORMATION

Routes Of Exposure:	Inhalation, ingestion, skin and eye contact
Immediate Effects:	May cause irritation to skin or mucous membranes
Toxicity:	No acute toxicity

SECTION 12 – ECOLOGICAL INFORMATION

Aquatic Toxicity:	No additional information on aquatic toxicity available.
Additional Ecological Information:	Do not allow biosolids to enter watercourses. Product will cause harm to aquatic organisms (suspended solids/asphyxiation).

SECTION 13 – DISPOSAL CONSIDERATIONS

Do not landfill material (prohibited under provincially approved management plan).

SECTION 14 – TRANSPORT INFORMATION

UN Classification:	Non-regulated material
Other Transport Considerations:	Loads transported long distances (outside of Hartland) require a nitrogen or non-reactive gas blanket (oxygen free).

SECTION 15 – REGULATORY INFORMATION

BC Hazardous Waste Regulation:	Not a Hazardous Waste
Other Regulations:	Management and use of product is regulated under the BC Organic Matter Recycling Regulation.

SECTION 16 – OTHER INFORMATION

None.

APPENDIX 1 – BIOSOLIDS LAB DATA

Summary statistics: RTF biosolids, February 3 to April 26, 2021.

Substance	OMRR Limit * (mg/kg)	Biosolids Samples **		
		Avg ***	Min	Max
Arsenic (As)	75	2.4	1.7	3.7
Cadmium (Cd)	20	1.4	1.1	1.9
Chromium (Cr)	1060	33.2	26.4	45.2
Cobalt (Co)	151	3.0	2.3	3.9
Copper (Cu)	757	744	591	880
Mercury (Hg)	5	0.6	0.4	1.0
Molybdenum (Mo)	20	6.2	4.8	7.7
Nickel (Ni)	181	17.6	13.0	28.7
Lead (Pb)	505	31.5	25.0	39.0
Selenium (Se)	14	3.6	2.0	4.6
Thallium (Tl)	5	0.08	0.0	<0.5
Vanadium (V)	656	20.7	13.3	33.0
Zinc (Zn)	1868	713	576	826
Solids	n/a	96.9%	94.4%	98.4%
Chlorine	n/a	0.066%	0.061%	0.072%
Iron (Fe)	n/a	29363	23000	35100
Fecal Coliforms	n/a	1.9 MPN/g	<3.0 MPN/g	3.5 MPN/g
Acidity	n/a	5.7 pH	5.6 pH	5.8 pH

Note:
- Mercury: 11 samples.
- Arsenic, Cadmium, Chromium, Cobalt, Copper, Molybdenum, Nickel, Lead, Selenium, Thallium, Vanadium and Zinc: 10 samples.
- Solids and Iron: 8 samples.
- Fecal coliforms: 5 samples.
- Chlorine and pH: 2 samples.
** Based on a 4,400 kg/ha/year application rate.*
*** Values in mg/kg unless otherwise noted. Samples taken from February 3 to April 26, 2021.*
**** Values below the detection limit were replaced with values half the detection limit.*



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The Power of Commitment

Biosolids

Class A Biosolids Analysis April 2024

Making a difference...together

Biosolids Beneficial Use Strategy

Biosolids Analysis

During the wastewater treatment process, residual solids are removed from wastewater and conveyed to the Residuals Treatment Facility for further treatment. The residual solids undergo anaerobic digestion in which microorganisms break down biodegradable material in the absence of oxygen and produce biogas. The residual solids are then dewatered and heated at a very high temperature to create Class A biosolids.

In 2022, in support of the biosolids management program under our core area wastewater service, the CRD collected and submitted samples of Class A biosolids being produced at the Residual Treatment Facility for high resolution analysis of a wide range of contaminants, including emerging contaminants of concern.

The classes of contaminants include:

- Pesticides
- Dioxins
- Polybrominated diphenyl ethers (PBDEs)
- Polychlorinated Biphenyls (PCBs)
- Pharmaceuticals and Personal Care Products (PPCPs)
- Per and poly fluorinated alkyl substances (PFAS)
- Volatile and Semi-volatile Organic Compounds (VOCs and SVOCs)

The results indicate low, detectable concentrations of several contaminants, typical of low-industrialized urban communities.

Note: there are no standards for these compounds in the BC Organic Matter Recycling Regulation. These compounds are considered in the provincial and federal regulatory frameworks but standards have not been developed at this time. The provincial government reviews available scientific information and updates the regulations on a regular basis.

Table 1: Pharmaceuticals and Personal Care Products (PPCP)

Parameter	Units	CRD Biosolids-2022-10-28	CRD Biosolids-2022-11-23
		28/10/2022	23/11/2022
Bisphenol A	ng/g	1820	1740
Furosemide	ng/g	30.1	26.8
Gemfibrozil	ng/g	8.50	5.16
Glipizide	ng/g	ND	ND
Glyburidea	ng/g	ND	ND
Hydrochlorothiazide	ng/g	ND	ND
2-Hydroxy-ibuprofen	ng/g	ND	78.7
Ibuprofen	ng/g	103	278
Naproxen	ng/g	16.8	12.9
Triclocarban	ng/g	161	151
Triclosan	ng/g	1870	1300
Warfarin	ng/g	ND	ND
Acetaminophen	ng/g	106	74.6
Azithromycin	ng/g	280	224
Caffeine	ng/g	64.4	44.6
Carbadox	ng/g	9.83	ND
Carbamazepine	ng/g	162	194
Cefotaxime	ng/g	ND	ND
Ciprofloxacin	ng/g	3030	2610
Clarithromycin	ng/g	14.0	19.5
Clinafloxacin	ng/g	ND	3.74
Cloxacillin	ng/g	ND	ND
Dehydronifedipine	ng/g	ND	ND
Diphenhydramine	ng/g	1890	1670
Diltiazem	ng/g	5.45	4.71
Digoxin	ng/g	ND	ND
Digoxigenin	ng/g	ND	ND
Enrofloxacin	ng/g	12.4	7.89
Erythromycin-H2O	ng/g	ND	ND
Flumequine	ng/g	ND	ND
Fluoxetine	ng/g	480	438
Lincomycin	ng/g	16.1	15.7
Lomefloxacin	ng/g	ND	ND
Miconazole	ng/g	561	400
Norfloxacin	ng/g	84.1	70.1
Norgestimate	ng/g	ND	ND
Ofloxacin	ng/g	315	274
Ormetoprim	ng/g	ND	ND
Oxacillin	ng/g	ND	ND
Oxolinic Acid	ng/g	ND	ND
Penicillin G	ng/g	ND	ND
Penicillin V	ng/g	ND	ND
Roxithromycin	ng/g	6.29	8.60
Sarafloxacin	ng/g	ND	ND
Sulfachloropyridazine	ng/g	ND	ND
Sulfadiazine	ng/g	ND	ND
Sulfadimethoxine	ng/g	ND	ND
Sulfamerazine	ng/g	ND	ND
Sulfamethazine	ng/g	ND	ND
Sulfamethizole	ng/g	13.7	ND
Sulfamethoxazole	ng/g	ND	ND
Sulfanilamide	ng/g	32.2	31.9
Sulfathiazole	ng/g	ND	ND
Thiabendazole	ng/g	44.5	32.8
Trimethoprim	ng/g	1.70	1.65
Tylosin	ng/g	ND	ND
Virginiamycin M1	ng/g	ND	ND
1,7-Dimethylxanthine	ng/g	99.4	75.5
ND - Below detection limit			

Table 2: Per- and polyfluoroalkyl substances (PFAS)

Parameter	Units	CRD Biosolids-2022-10-28	CRD Biosolids-2022-11-23
		28/10/2022	23/11/2022
11C1-PF3OUdS	ng/g	ND	ND
3:3 FTCA	ng/g	ND	ND
4:2 FTS	ng/g	ND	ND
5:3 FTCA	ng/g	26.0	26.4
6:2 FTS	ng/g	ND	ND
7:3 FTCA	ng/g	15.6	17.0
8:2 FTS	ng/g	ND	ND
9C1-PF3ONS	ng/g	ND	ND
ADONA	ng/g	ND	ND
EtFOSAA	ng/g	8.19	9.24
HFPO-DA	ng/g	ND	ND
MeFOSAA	ng/g	12.0	12.6
N-EtFOSA	ng/g	ND	ND
N-EtFOSE	ng/g	8.00	6.72
NFDHA	ng/g	ND	ND
N-MeFOSA	ng/g	NDR (1.21)	NDR (0.347)
N-MeFOSE	ng/g	12.4	12.0
PFBA	ng/g	ND	ND
PFBS	ng/g	ND	ND
PFDA	ng/g	1.80	1.89
PFDoA	ng/g	1.20	1.49
PFDoS	ng/g	ND	ND
PFDS	ng/g	ND	ND
PFEESA	ng/g	ND	ND
PFHpA	ng/g	NDR (1.19)	NDR (1.27)
PFHpS	ng/g	ND	ND
PFHxA	ng/g	2.07	2.06
PFHxS	ng/g	NDR (11.8)	NDR (11.3)
PFMBA	ng/g	ND	ND
PFMPA	ng/g	ND	ND
PFNA	ng/g	ND	ND
PFNS	ng/g	ND	ND
PFOA	ng/g	0.846	1.11
PFOS	ng/g	6.12	5.25
PFOSA	ng/g	0.76	0.778
PFPeA	ng/g	1.42	1.61
PFPeS	ng/g	ND	ND
PFTeDA	ng/g	ND	0.599
PFTrDA	ng/g	ND	ND
PFUnA	ng/g	0.739	0.869
ND - Below detection limit			
NDR- Detected, but not quantifiable. Estimated maximum concentration reported in parenthesis			

Table 3: Polychlorinated Biphenyls (PCBs)

Parameter	Units	CRD Biosolids-2022-10-28	CRD Biosolids-2022-11-23
		28/10/2022	23/11/2022
Total Monochloro Biphenyls	pg/g	320	276
Total Dichloro Biphenyls	pg/g	4460	4110
Total Trichloro Biphenyls	pg/g	5610	5740
Total Tetrachloro Biphenyls	pg/g	11200	10700
Total Pentachloro Biphenyls	pg/g	11900	10800
Total Hexochloro Biphenyls	pg/g	8530	8180
Total Heptochloro Biphenyls	pg/g	3540	3380
Total Octochloro Biphenyls	pg/g	840	837
Total Nonochloro Biphenyls	pg/g	258	260
Decachloro Biphenyl	pg/g	164	171
Total PCBs	pg/g	46800	44500

Table 4: Dioxins & Furans

Parameter	Units	CRD Biosolids-2022-10-28	CRD Biosolids-2022-11-23
		28/10/2022	23/11/2022
2,3,7,8-TCDD	pg/g	0.590	0.200
1,2,3,7,8-PECDD	pg/g	0.724	0.628
1,2,3,4,7,8-HXCDD	pg/g	0.839	0.935
1,2,3,6,7,8-HXCDD	pg/g	6.62	6.63
1,2,3,7,8,9-HXCDD	pg/g	3.73	3.65
1,2,3,4,6,7,8-HPCDD	pg/g	134	144
OCDD	pg/g	818	923
2,3,7,8-TCDF	pg/g	2.71	2.70
1,2,3,7,8-PECDF	pg/g	0.675	0.431
2,3,4,7,8-PECDF	pg/g	0.796	0.695
1,2,3,4,7,8-HXCDF	pg/g	1.13	1.16
1,2,3,6,7,8-HXCDF	pg/g	0.979	0.999
1,2,3,7,8,9-HXCDF	pg/g	0.225	0.142
2,3,4,6,7,8-HXCDF	pg/g	0.852	0.873
1,2,3,4,6,7,8-HPCDF	pg/g	9.82	11.3
1,2,3,4,7,8,9-HPCDF	pg/g	0.841	0.840
OCDF	pg/g	17.3	21.1
TOTAL TETRA-DIOXINS	pg/g	32.9	24.9
TOTAL PENTA-DIOXINS	pg/g	43.2	38.2
TOTAL HEXA-DIOXINS	pg/g	64.4	61.1
TOTAL HEPTA-DIOXINS	pg/g	258	278
TOTAL TETRA-FURANS	pg/g	16.7	17.4
TOTAL PENTA-FURANS	pg/g	15.0	14.4
TOTAL HEXA-FURANS	pg/g	15.8	18.1
TOTAL HEPTA-FURANS	pg/g	24.2	28.4
TOTAL TEQ		4.72	4.30
TEQ - Toxicity Equivalency Quotient			

Table 5: Pesticides

Parameter	Units	CRD Biosolids-2022-10-28	CRD Biosolids-2022-11-23
		28/10/2022	23/11/2022
1,3-Dichlorobenzene	ng/g	ND	ND
1,4-Dichlorobenzene	ng/g	58	50.3
1,2-Dichlorobenzene	ng/g	3.01	2.13
1,3,5-Trichlorobenzene	ng/g	0.182	0.157
1,2,4-Trichlorobenzene	ng/g	0.650	0.509
1,2,3-Trichlorobenzene	ng/g	0.131	0.116
1,2,4,5-/1,2,3,5-Tetrachlorobenzene	ng/g	0.154	0.121
1,2,3,4-Tetrachlorobenzene	ng/g	0.165	0.203
Pentachlorobenzene	ng/g	0.547	0.463
Hexachlorobutadiene	ng/g	0.247	0.057
Hexachlorobenzene	ng/g	1.34	1.11
HCH, alpha	ng/g	ND	ND
HCH, beta	ng/g	ND	NDR (0.010)
HCH, gamma	ng/g	ND	ND
HCH, delta	ng/g	ND	ND
Heptachlor	ng/g	ND	ND
Aldrin	ng/g	NDR (0.008)	ND
Octachlorostyrene	ng/g	NDR (0.021)	0.023
Chlordane, oxy-	ng/g	NDR (0.017)	0.021
Chlordane, gamma (trans)	ng/g	0.639	0.722
Chlordane, alpha (cis)	ng/g	0.660	0.695
Nonachlor, trans-	ng/g	0.433	0.482
Nonachlor, cis-	ng/g	0.145	0.156
2,4'-DDD	ng/g	36.6	28.6
4,4'-DDD	ng/g	0.294	0.310
2,4'-DDE	ng/g	0.192	0.158
4,4'-DDE	ng/g	7.55	6.86
2,4'-DDT	ng/g	ND	ND
4,4'-DDT	ng/g	ND	ND
Mirex	ng/g	0.025	0.026
Heptachlor Epoxide	ng/g	NDR (0.071)	NDR (0.167)
alpha-Endosulphan	ng/g	NDR (0.025)	ND
Dieldrin	ng/g	1.84	2.21
Endrin	ng/g	ND	ND
beta-Endosulphan	ng/g	NDR (0.074)	0.053
Endosulphan Sulphate	ng/g	ND	ND
Endrin Aldehyde	ng/g	NQ	NQ
Endrin Ketone	ng/g	ND	ND
Methoxychlor	ng/g	NDR (1.06)	0.522
ND - Below detection limit			
NQ - Data not quantifiable			
NDR- Detected, but not quantifiable. Estimated maximum concentration reported in parenthesis			

Table 6: Semi-Volatile Organic Compounds (SVOCs)

Parameter	Units	CRD Biosolids- 2022-11-23	CRD Biosolids - 2022-12-15
		23/11/2022	15/12/2022
N-Nitrosodimethylamine	ug/g	<200	<2000
2-chloronaphthalene	ug/g	<2.0	<20
Aniline	ug/g	<6.0	<60
1,2-dichlorobenzene	ug/g	<2.0	<20
1,3-dichlorobenzene	ug/g	<2.0	<20
1,4-dichlorobenzene	ug/g	<2.0	<20
Hexachlorobenzene	ug/g	<4.0	<40
1,2,4-trichlorobenzene	ug/g	<4.0	<40
2-chlorophenol	ug/g	<2.0	<20
4-chloro-3-methylphenol	ug/g	<2.0	<20
m,p-Cresol	ug/g	15	<40
o-Cresol	ug/g	<4.0	<40
2,4-dichlorophenol	ug/g	<2.0	<20
2,4-dimethylphenol	ug/g	<2.0	<20
2,4-dinitrophenol	ug/g	<20	<200
4,6-dinitro-2-methylphenol	ug/g	<10	<100
2-nitrophenol	ug/g	<10	<100
4-nitrophenol	ug/g	<10	<100
Pentachlorophenol	ug/g	<4.0	<40
Phenol	ug/g	<4.0	<40
2,4,5-trichlorophenol	ug/g	<2.0	<20
2,4,6-trichlorophenol	ug/g	<2.0	<20
Butyl benzyl phthalate	ug/g	<4.0	<40
Bis(2-chloroethoxy)methane	ug/g	<2.0	<20
Bis(2-chloroisopropyl)ether	ug/g	<2.0	<20
Bis(2-ethylhexyl)phthalate	ug/g	31	<100
4-bromophenyl phenyl ether	ug/g	<2.0	<20
p-Chloroaniline	ug/g	<4.0	<40
4-chlorophenyl phenyl ether	ug/g	<2.0	<20
3,3'-Dichlorobenzidine	ug/g	<10	<100
Diethyl phthalate	ug/g	<4.0	<40
Di-n-butyl phthalate	ug/g	<4.0	<40
Di-n-octyl phthalate	ug/g	<10	<100
2,4-Dinitrotoluene	ug/g	<2.0	<20
2,6-Dinitrotoluene	ug/g	<2.0	<20
Dimethyl phthalate	ug/g	<4.0	<40
Biphenyl	ug/g	<2.0	<20
Bis(2-chloroethyl)ether	ug/g	<4.0	<40
Hexachlorobutadiene	ug/g	<2.0	<20
Hexachlorocyclopentadiene	ug/g	<10	<100
Hexachloroethane	ug/g	<2.0	<20
Isophorone	ug/g	<2.0	<20
Nitrobenzene	ug/g	<2.0	<20
Nitrosodiphenylamine/Diphenylamine	ug/g	<4.0	<40
N-nitroso-di-n-propylamine	ug/g	<2.0	<20
Low Molecular Weight PAH`s	mg/kg	6.4	7.0
High Molecular Weight PAH`s	mg/kg	2.4	2.0
Total PAH	mg/kg	8.8	9.0
Naphthalene	mg/kg	0.74	0.69
1-Methylnaphthalene	mg/kg	0.75	0.70
2-Methylnaphthalene	mg/kg	2.1	1.9
Acenaphthylene	mg/kg	0.019	0.023
Acenaphthene	mg/kg	0.67	0.65
Fluorene	mg/kg	0.55	0.53
Phenanthrene	mg/kg	1.3	1.3
Anthracene	mg/kg	0.30	0.44
Fluoranthene	mg/kg	0.79	0.97
Pyrene	mg/kg	0.64	0.74
Benzo(a)anthracene	mg/kg	<0.10	0.30
Chrysene	mg/kg	<0.10	<0.20

Table 6: Semi-Volatile Organic Compounds (SVOCs) *(Continued)*

Parameter	Units	CRD Biosolids- 2022-11-23	CRD Biosolids - 2022-12-15
		23/11/2022	15/12/2022
Benzo(b)fluoranthene	mg/kg	<0.10	<0.20
Benzo(k)fluoranthene	mg/kg	0.21	<0.20
Benzo(a)pyrene	mg/kg	0.66	<0.20
Indeno(1,2,3-cd)pyrene	mg/kg	0.14	<0.20
Dibenz(a,h)anthracene	mg/kg	<0.10	<0.20
Benzo(g,h,i)perylene	mg/kg	<0.25	<0.50

Table 6: Volatile Organic Compounds (VOCs)

Parameter	Units	CRD Biosolids- 2022-11-23	CRD Biosolids - 2022-12-15
		23/11/2022	15/12/2022
1,1,1,2-tetrachloroethane	mg/kg	<0.020	<0.066
1,1,1-trichloroethane	mg/kg	<0.53	<0.066
1,1,2,2-tetrachloroethane	mg/kg	<0.97	<0.066
1,1,2-trichloroethane	mg/kg	<0.53	<0.066
1,1-dichloroethane	mg/kg	<0.66	<0.082
1,1-dichloroethene	mg/kg	<0.026	<0.082
1,1-dichloropropene	mg/kg	<400	<49
1,2,3-trichlorobenzene	mg/kg	2.3	<0.099
1,2,3-trichloropropane	mg/kg	1.1	<0.099
1,2,4-trichlorobenzene	mg/kg	0.89	<0.099
1,2,4-trimethylbenzene	mg/kg	11	1.1
1,2-dibromo-3-chloropropane	mg/kg	<26	<3.3
1,2-dibromoethane	mg/kg	<0.53	<0.066
1,2-dichlorobenzene	mg/kg	<0.53	<0.066
1,2-dichloroethane	mg/kg	<0.53	<0.066
1,2-dichloropropane	mg/kg	<0.53	<0.066
1,3,5-trimethylbenzene	mg/kg	<5.3	<0.66
1,3-dichlorobenzene	mg/kg	<0.53	<0.066
1,3-dichloropropane	mg/kg	<400	<49
1,4-dichlorobenzene	mg/kg	0.56	<0.066
2-chlorotoluene	mg/kg	<400	<49
2-Butanone (MEK)	mg/kg	<400	<49
4-chlorotoluene	mg/kg	<400	<49
4-Methyl-2-pentanone (MIBK)	mg/kg	<13	<1.6
Acetone	mg/kg	130	<17
Benzene	mg/kg	7.5	0.61
Bromobenzene	mg/kg	<5.3	<0.66
Bromodichloromethane	mg/kg	<1.3	<0.16
Bromoform	mg/kg	<1.3	<0.16
Bromomethane	mg/kg	<7.9	<0.99
Carbon tetrachloride	mg/kg	<0.53	<0.066
Chlorobenzene	mg/kg	<0.53	<0.066
Dibromochloromethane	mg/kg	<0.050	<0.16
Chloroethane	mg/kg	<2.6	<0.33
Chloroform	mg/kg	0.69	<0.066
Chloromethane	mg/kg	0.12	<0.16
cis-1,2-dichloroethene	mg/kg	<0.79	<0.099
cis-1,3-dichloropropene	mg/kg	<0.53	<0.066
Dibromomethane	mg/kg	<5.3	<0.66
Dichlorodifluoromethane	mg/kg	<5.3	<0.66
Ethylbenzene	mg/kg	0.69	0.062
Hexachlorobutadiene	mg/kg	<5.3	<0.66
Isopropylbenzene	mg/kg	<5.3	<0.66
Methyl-tert-butylether (MTBE)	mg/kg	<2.6	<0.33
n-Butylbenzene	mg/kg	<400	<49

Table 6: Volatile Organic Compounds (VOCs) *(Continued)*

Parameter	Units	CRD Biosolids- 2022-11-23	CRD Biosolids - 2022-12-15
		23/11/2022	15/12/2022
n-Propylbenzene	mg/kg	<400	<49
p-Isopropyltoluene	mg/kg	<400	<49
sec-Butylbenzene	mg/kg	<400	<49
tert-Butylbenzene	mg/kg	<400	<49
Styrene	mg/kg	3.1	0.18
Tetrachloroethene	mg/kg	<0.26	<0.033
Toluene	mg/kg	32	1.5
trans-1,2-dichloroethene	mg/kg	<0.79	<0.099
trans-1,3-dichloropropene	mg/kg	<0.53	<0.066
Trichloroethene	mg/kg	<0.009	<0.030
Trichlorofluoromethane	mg/kg	<5.3	<0.66
Vinyl chloride	mg/kg	<1.1	<0.13
m & p-Xylene	mg/kg	35	2.7
o-Xylene	mg/kg	<1.1	<0.13
Xylenes (Total)	mg/kg	35	2.7
Extractable (MeOH) 2-Hexanone	mg/kg	<260	<33
Extractable (MeOH) Acrylonitrile	mg/kg	<53	<6.6
Extractable (MeOH) Carbon disulfide	mg/kg	<400	<49
Extractable (MeOH) Ethyl ether	mg/kg	<260	<33
Extractable (MeOH) Tetrahydrofuran	mg/kg	<400	<49
Extractable (MeOH) Vinyl Acetate	mg/kg	<400	<49

Table 8: Polybrominated Diphenyl Ethers (PBDEs)

Parameter	Units	CRD Biosolids-2022-10-28	CRD Biosolids-2022-11-23
		28/10/2022	23/11/2022
2,4-DiBDE	pg/g	54.2	41.2
2,4'-DiBDE	pg/g	93.8	71.1
2,6-DiBDE	pg/g	ND	ND
3,3'-DiBDE	pg/g	NQ	NQ
3,4-DiBDE	pg/g	47.9	38.8
3,4'-DiBDE	pg/g	NQ	NQ
4,4'-DiBDE	pg/g	147	145
2,2',4-TriBDE	pg/g	1530	1280
2,3',4-TriBDE	pg/g	NQ	NQ
2,4,4'-TriBDE	pg/g	3020	2620
2,4,6-TriBDE	pg/g	ND	ND
2,4',6-TriBDE	pg/g	13.5	11.7
2',3,4-TriBDE	pg/g	NQ	NQ
3,3',4-TriBDE	pg/g	31.5	26.4
3,4,4'-TriBDE	pg/g	46.5	41
2,2',4,4'-TeBDE	pg/g	130000	106000
2,2',4,5'-TeBDE	pg/g	4170	3680
2,2',4,6'-TeBDE	pg/g	538	464
2,3',4,4'-TeBDE	pg/g	2730	2510
2,3',4',6-TeBDE	pg/g	392	383
2,4,4',6-TeBDE	pg/g	183	163
3,3',4,4'-TeBDE	pg/g	11.8	NDR (8.42)
3,3',4,5'-TeBDE	pg/g	78.3	NDR (48.7)
2,2',3,4,4'-PeBDE	pg/g	5850	5360
2,2',4,4',5-PeBDE	pg/g	107000	102000
2,2',4,4',6-PeBDE	pg/g	27800	25000
2,3,3',4,4'-PeBDE	pg/g	ND	ND
2,3,4,5,6-PeBDE	pg/g	ND	ND
2,3',4,4',6-PeBDE	pg/g	310	328
2,3',4,5,5'-PeBDE	pg/g	NQ	NQ
3,3',4,4',5-PeBDE	pg/g	ND	ND
2,2',3,3',4,4'-HxBDE	pg/g	NDR (87.3)	NDR (74.4)
2,2',3,4,4',5'-HxBDE	pg/g	1780	1320
2,2',3,4,4',6'-HxBDE	pg/g	528	508

Table 8: Polybrominated Diphenyl Ethers (PBDEs) *(Continued)*

Parameter	Units	CRD Biosolids-2022-10-28	CRD Biosolids-2022-11-23
		28/10/2022	23/11/2022
2,2',4,4',5,5'-HxBDE	pg/g	13600	12300
2,2',4,4',5,6'-HxBDE	pg/g	10300	9370
2,2',4,4',6,6'-HxBDE	pg/g	537	679
2,3,4,4',5,6-HxBDE	pg/g	NQ	NQ
2,2',3,4,4',5,6-HpBDE	pg/g	ND	ND
2,2',3,4,4',5',6-HpBDE	pg/g	2950	2360
2,3,3',4,4',5,6-HpBDE	pg/g	ND	ND
2,2',3,4,4',5,5',6-OcBDE	pg/g	3820	2820
2,2',3,3',4,4',5,5',6-NoBDE	pg/g	NDR (15600)	NDR (16400)
2,2',3,3',4,4',5,6,6'-NoBDE	pg/g	NDR (38000)	NDR (36100)
2,2',3,3',4,5,5',6,6'-NoBDE	pg/g	NDR (27400)	NDR (25300)
2,2',3,3',4,4',5,5',6,6'-DeBDE	pg/g	394000	447000
ND - Below detection limit			
NQ - Data not quantifiable			
NDR- Detected, but not quantifiable. Estimated maximum concentration reported in parenthesis			



Long-term Biosolids Management Strategy

CRD Board of Directors

May 8, 2024

Agenda

1. Regulatory Requirements
2. Long Term Biosolids Management Strategy
    a) Methodology
    b) Public Consultation
    c) Proposed Strategy
3. Next Steps



Regulatory Requirements

- Biosolids must meet regulatory requirements set by the Province of BC under the Environmental Management Act (EMA) and Organic Matter Recycling Regulation (OMRR).
- Ministry of Environment and Climate Change Strategy (ENV) requires that the CRD submit a Long-term Biosolids Management Strategy by June 2024.

Regulatory Requirements – Long Term Strategy

ENV required (in 2019) that CRD:

- Includes land application in the options analysis and consultation, including but not limited to:
    - forestry,
    - reclamation,
    - landfill closure, and
    - agriculture
- Consults with Citizens, local governments and indigenous communities



Long Term Biosolids Management Strategy

Methodology

The proposed Long Term Biosolids Management Strategy is based on:

1. ENV direction and regulatory requirements
2. CRD's ban on land application of biosolids
3. Public, First Nation and local government consultation processes
4. Technical recommendations that address operational compliance



Public Consultation

- First Nations Consultation: February to Present (Ongoing)
- Active Public Consultation: January to March, 2024
- Technical and Community Advisory Committee (TCAC): Reconstituted November, 2023

Public Consultation: Tavola Group

Presentation: Katie Hamilton, Tavola Strategy Group

Capital Regional District Summary Consultation Report

Public Consultation: IPSOS

Presentation: Kyle Braid, IPSOS

Representative Survey

First Nations Consultation



- 19 First Nations were approached for input
- Conversations with Pacheedaht, T'Souke and Pauquachin Nations took place, overarching themes included:
  - Clear expectation of further consultation with First Nations for any in-region land application projects
  - Questions regarding scenarios specific to their traditional territories
  - General questions regarding biosolids management options

First Nations Consultation

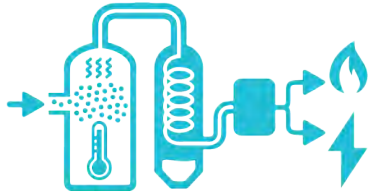
- Opportunities for further feedback are ongoing and will be incorporated in the Long Term Strategy Submission to ENV
- Following approval of the Long Term Strategy, further First Nation engagement will be pivotal as specific land application project are considered

Technical and Community Advisory Committee (TCAC)

- Assessed and ranked all beneficial use options. All options had majority support.
- Indicated that the nutritive value in biosolids outweighed the land contamination risks.
- Agricultural land application had the lowest level support due to these contaminant concerns, but still had majority support.
- Concerns were raised about the greenhouse gas implications, cost/benefit, and feasibility of the advanced thermal option.

Proposed Long Term Strategy

Procure a portfolio of options in alignment with the GHD Long Term Biosolids Strategy, and apply a prioritization structure.





Tier 2: Out-of-Region Compliance Options



Tier 3: In-Region Contingency Options



★ *Fuel combustion in the manufacturing facility in Richmond, BC should be prioritized if option is available.*



Long-term Biosolids Beneficial Use Options

- The CRD will continue to explore beneficial use opportunities with those First Nations that express interest both in-region and out-of-region.
- The CRD will also listen to any concerns Nations may have regarding the beneficial use options and is committed to working with individual Nations to address their concerns.

Next Steps

- With Board endorsement, the draft Long-term Biosolids Management Strategy will be referred back to the TCAC for their final review and comment.
- Feedback can be provided from May 13- June 5 through an online comment form at https://getinvolved.crd.bc.ca/biosolids.
- A summary of the comments received along with the final Long-term Biosolids Management Strategy will be presented at the June 12, 2024 Board meeting for discussion, and with final Board approval, would be submitted to ENV by June 18, 2024.

CAPITAL REGIONAL DISTRICT

Long-Term Biosolids Management Plan

Summary of Public Input

May 2024

TAVOLA
STRATEGY GROUP



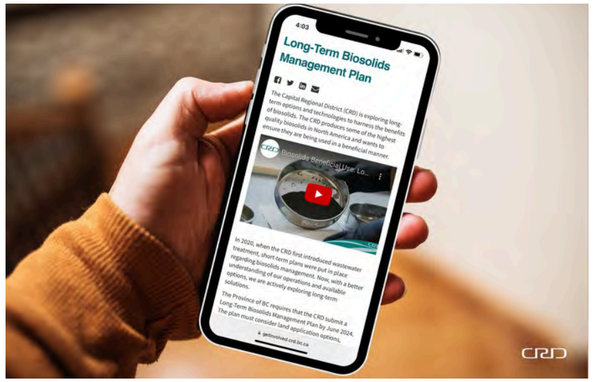
Today's Presentation

01

Process

02

What We Heard





We are grateful to live and do our work on the traditional territories of the Lekwungen people, known today as the Songhees and Esquimalt Nations.

Part 1:

Engagement Process



Engagement Process

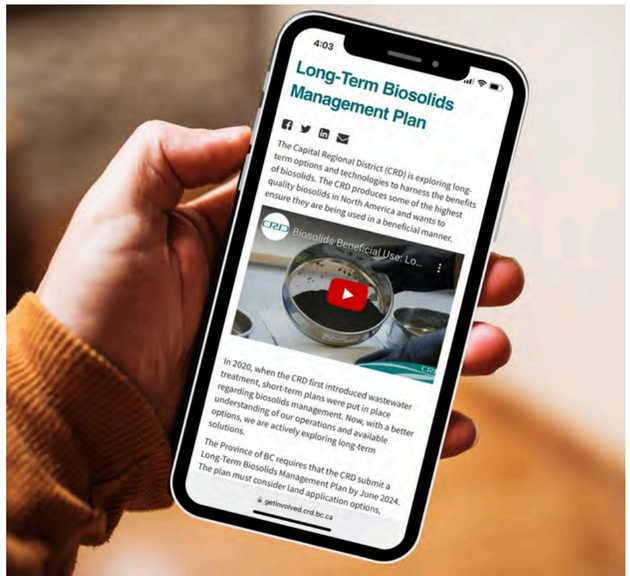
IAP2 Informed Consultation Plan

Establish engagement objectives and methods.



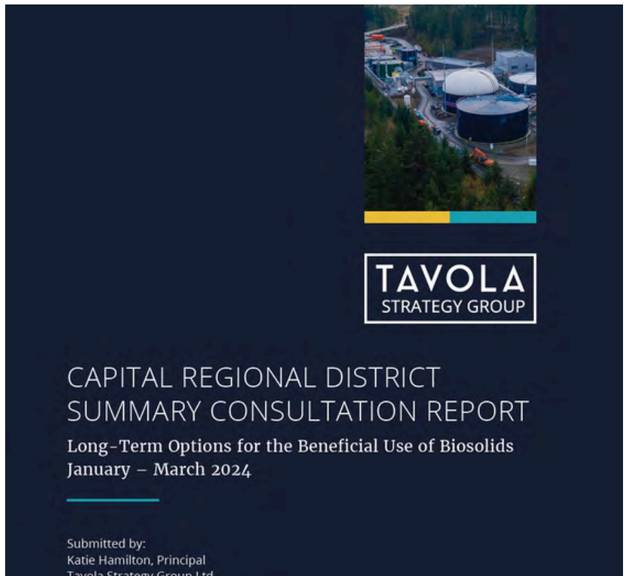
Active Engagement

Awareness-raising and variety of engagement activities to capture input.



Reporting and Closing the Loop

What We Heard report and communicating results to participants and community.



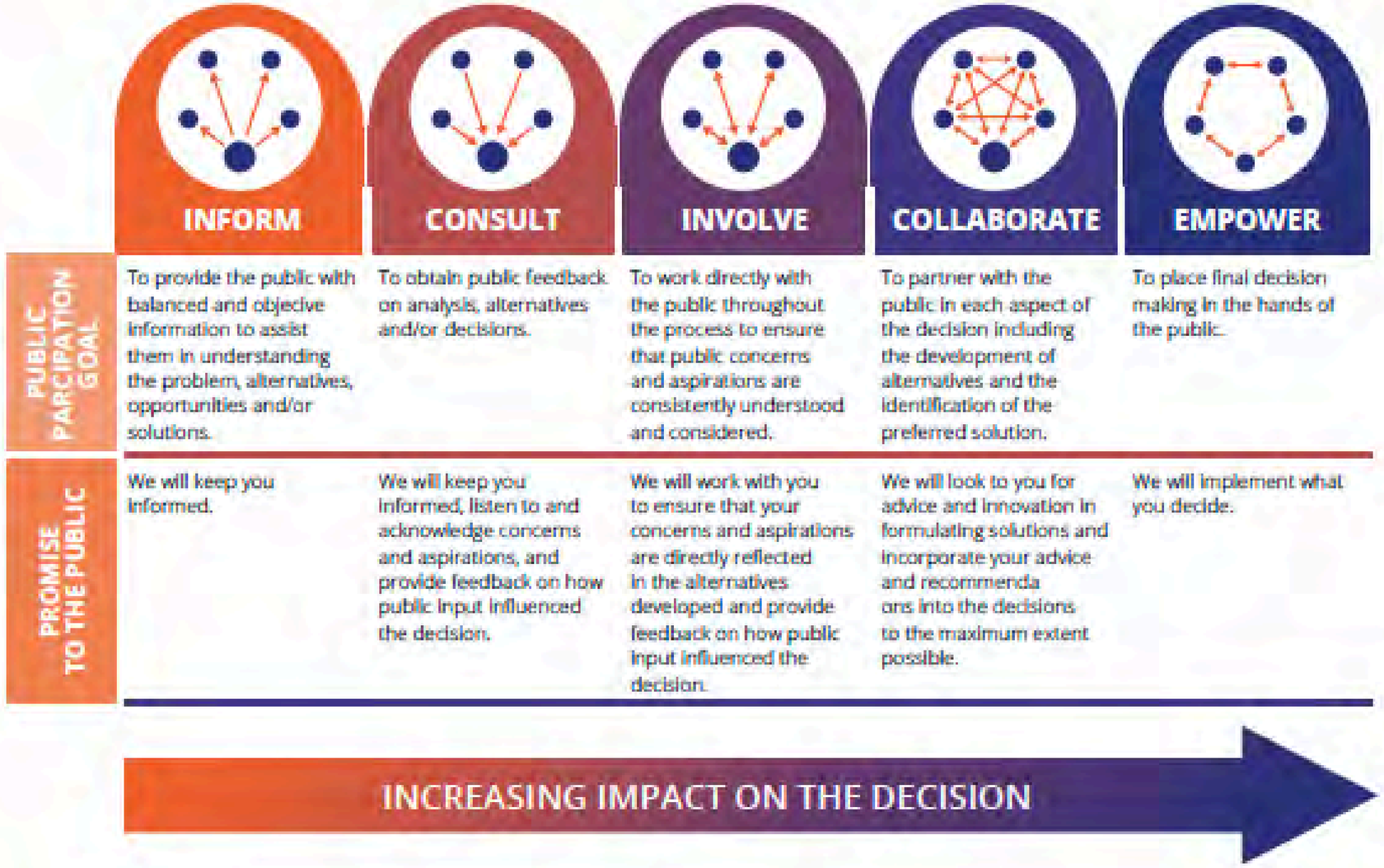
Communications and Consultation Objectives

1. **Raise awareness of the need to develop a long-term biosolids management plan that outlines how the Capital Regional District will utilize the benefits of biosolids in-region.**

2. Provide multiple channels and opportunities for the community to learn more and provide input into the development of the definitive biosolids management plan.

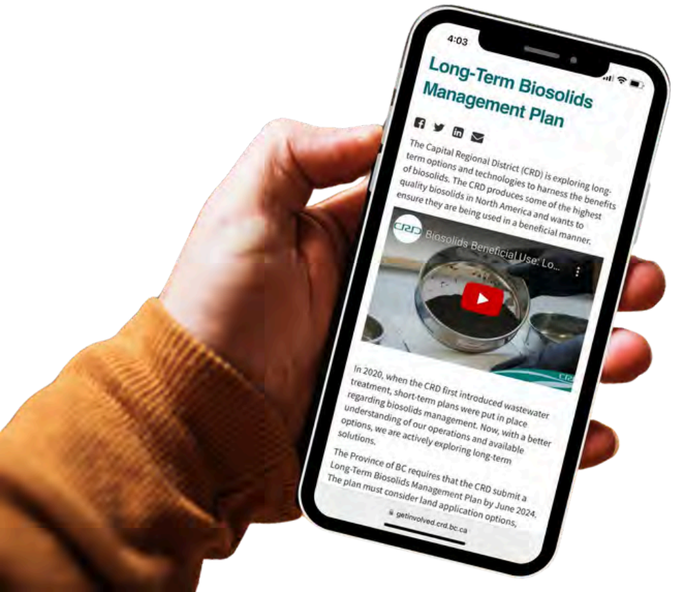
3. Seek to understand public awareness, perceptions, concerns and top-of-mind considerations for how biosolids should be managed in the Capital Region.

IAP2 Spectrum

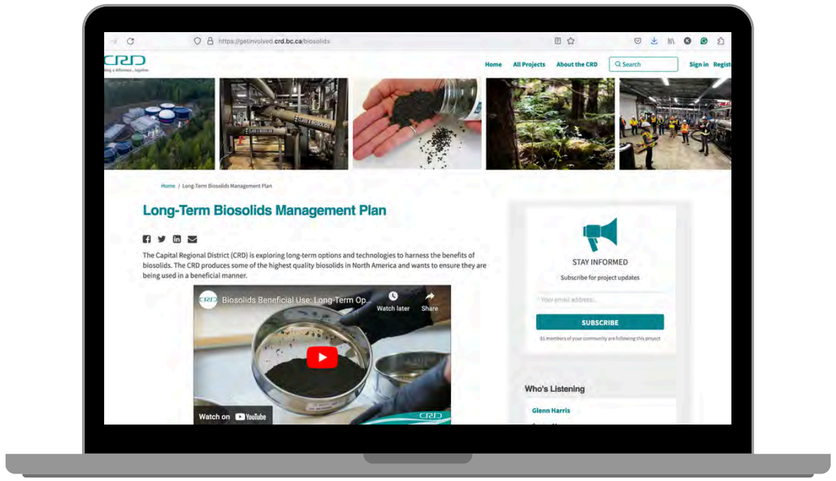


Awareness-Raising

- Project webpage www.getinvolved.crd.bc.ca
- Media releases were distributed on January 11 and February 7, 2024.
- Updates were emailed to project page subscribers.
- Social media posts were shared on CRD Facebook, Twitter, and Instagram
- Print ads appeared in the Times Colonist and BlackPress newspapers.
- Letters to a variety of groups and organizations.



Engagement Activities



CRD Online Survey
January 11 -
March 6, 2024

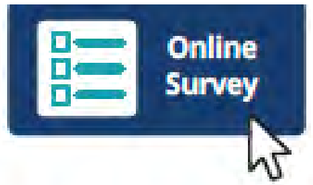


Virtual Open House
Tuesday, February 20, 2024



IPSOS Representative Survey
March 1 - March 11, 2024

Participation



569
Online survey participants



516
Representative survey of Capital Region residents



3,300
Unique web visitors



12
Questions and answers via website



56
Open house attendees



12
Subscribers to project updates



7
Emails to biosolids@crd.bc.ca



Part 2:

What We Heard

Over-Arching Themes

- **Both surveys indicated “Environmental Impacts [air, water and soil contaminants]” were most important consideration.**

- **The 2 surveys solicited very different results in terms of options:**
  - **IPSOS representative survey indicates strong majority support and low levels of opposition to all beneficial uses presented. Support is highest for forest fertilizer and industrial land reclamation.**
  - **CRD survey indicates substantial opposition to most options other than Advanced Thermal, with least support for bagged residential and agricultural fertilizer.**

- **The most popular option (Advanced Thermal) in CRD survey was the least popular for the broader general public in the IPSOS survey.**

- **The level of opposition to all options and associated concerns were much higher in the CRD survey.**

Over-Arching Themes

Comparison of survey results regarding options:

	IPSOS		CRD	
LONG-TERM BIOSOLIDS USE OPTION	***Support***	***Oppose***	***Support***	***Oppose***
Forest fertilizer	85%	4%	41%	51%
Industrial land reclamation (e.g. mine/quarry)	83%	6%	43%	45%
Wholesale fertilizer for landscaping	79%	5%	37%	54%
Agriculture fertilizer	78%	7%	34%	60%
Bagged fertilizer for low-cost residential use	77%	7%	33%	56%
Fuel for incineration/ combustion	66%	9%	49%	38%
Advanced thermal (gasification/pyrolysis technology)	56%	11%	66%	19%

**Numbers may not add to 100% due to summary reporting and rounding.*

Over-Arching Themes

- Many respondents to CRD survey noted concerns:
    - Potential contaminants [e.g. toxicity, PFAS's] and health and environmental risks of land application
    - Felt land application options are not a "beneficial use" due to potential risks.
    - Advanced thermal/biochar options are seen as the most effective method to reduce risks.

- Correspondence, open house, and CRD survey expressed need for more detail about:
    - Piloting advanced thermal options
    - Testing, scientific research and risks associated with land application.
    - Cost-benefit analysis of options and feasibility and case studies of in other jurisdictions.
    -

- The majority of correspondence noted risks associated with land application and encouraged the CRD Board to uphold the existing land application ban.

Next Steps

The *What We Heard* consultation summary report will be submitted to the Ministry of Environment and Climate Change Strategy as part of the Long Term Biosolids Management Plan .

It will be posted on the project website:

www.getinvolved.crd.bc.ca

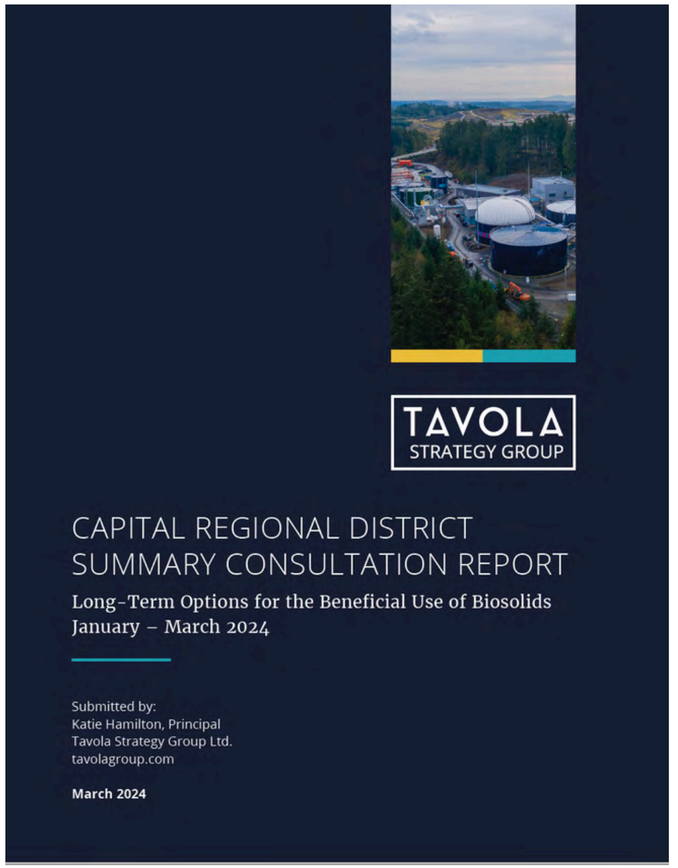


TAVOLA
STRATEGY GROUP

Questions?

We are here to help.

www.tavolagroup.com

LONG-TERM BIOSOLIDS MANAGEMENT PLAN SURVEY



Capital Regional District

PRESENTED BY: Kyle Braid, Senior Vice President, Ipsos

May 8, 2024



OBJECTIVES

- Obtain a representative sampling of residents' opinions about how to harness the benefits of biosolids from wastewater treatment

METHODOLOGY

- Online panel survey of 516 adult (18+ years) CRD residents
- Fielded March 1 to 11, 2024
- Final data weighted by gender/age and region
- Credibility interval: ±4.9 percentage points, 19 times out of 20
- Note: Core Region is defined as Victoria, Saanich, Esquimalt, Oak Bay, Colwood, Langford and View Royal

Survey Preamble

In 2020, when the CRD first introduced wastewater treatment, short-term plans were put in place regarding biosolids management. Now, with a better understanding of their operations and available options, the CRD are actively exploring long-term solutions.

The Province of BC requires that the CRD submit a Long-Term Biosolids Management Plan by June 2024. The plan must consider land application options, which are included with advanced thermal options among others. Since 2011, the CRD Board has banned the land application of biosolids within the capital region.

This survey will be used as input as the CRD considers and implements long-term options. The CRD will need to consider a range of possibilities to maximize the benefits of this nutrient-rich, organic material and ensure a resilient and reliable portfolio of management options.

To learn more about biosolids before answering the questions, please click the links below:

- A short video: https://www.youtube.com/watch?v=COY592vpGPU
- FAQs: https://getinvolved.crd.bc.ca/biosolids/widgets/170487/faqs#34017

Option Information Example

Forest Fertilization



Can help improve soil fertility, prevent erosion, and accelerate plant and tree growth.

In addition, after wildfire, biosolids can help forests regenerate, increasing water-retention and providing essential nutrients and organic matter to promote plant and tree growth. Can reduce reliance on synthetic fertilizers.

Timeline: Immediate

Estimated Cost: less than $400/tonne

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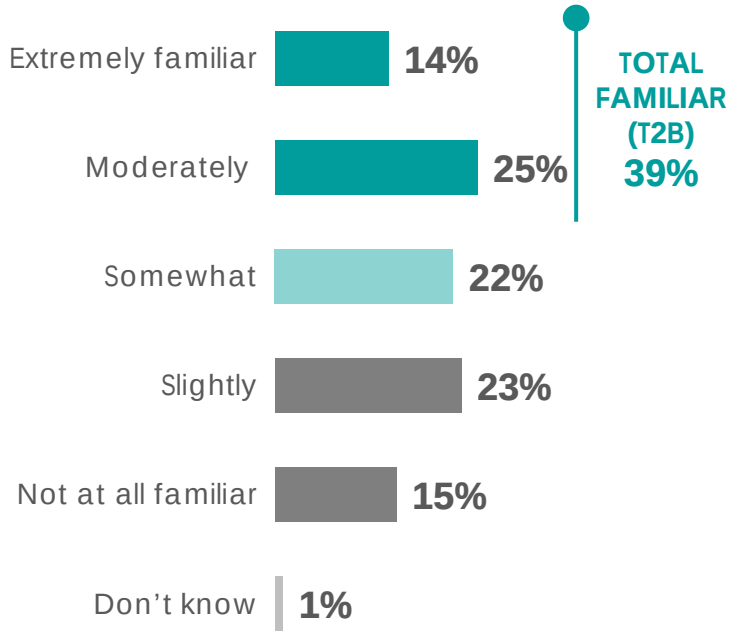
EXECUTIVE SUMMARY

1. Many residents are not familiar with the topics of the CRD wastewater treatment system and biosolids.
2. The topic is relevant to residents.
3. When planning for the beneficial uses of biosolids, residents place the greatest priority on environmental impacts.
4. There is strong majority support and low levels of opposition to all tested potential uses of biosolids.
5. Residents say that TV news is the best way to keep them informed on this topic.

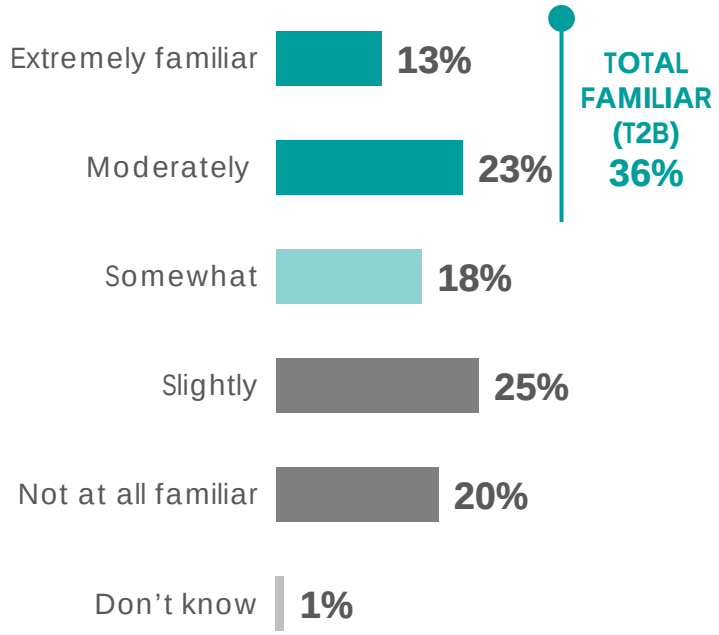
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Familiarity with Topics

CRD WASTEWATER TREATMENT SYSTEM



BIOSOLIDS



Base: All respondents (n=516)
Q1. How familiar are you with the following topics?

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Familiarity with Topics (by Demos)

Total Important (Extremely + Moderately)

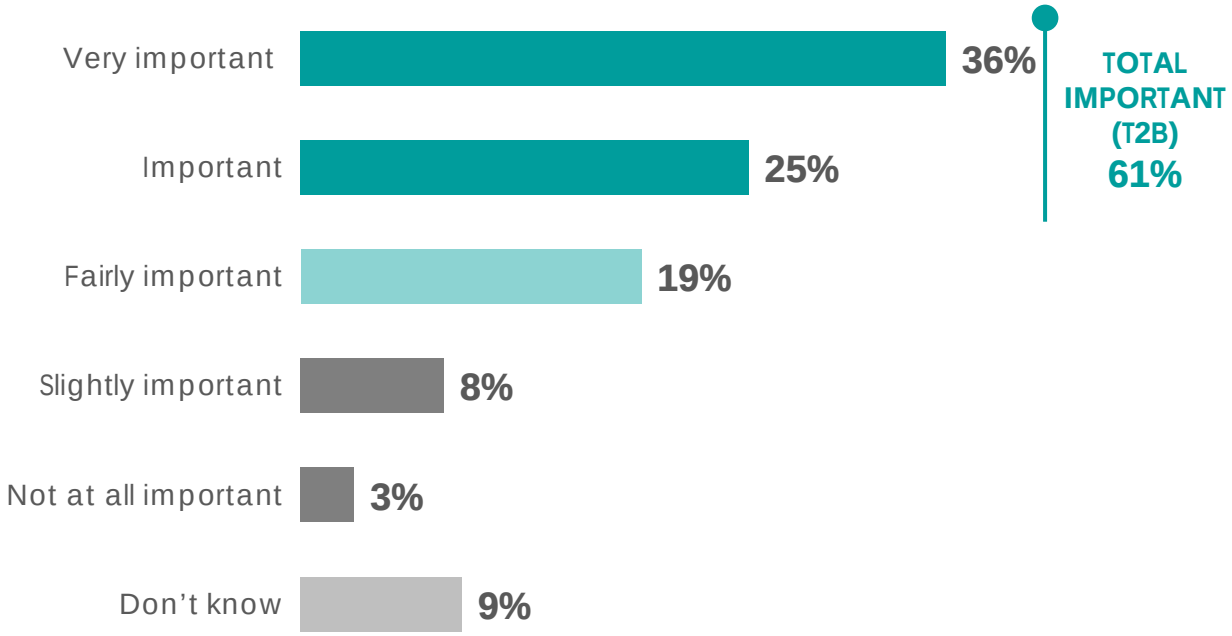
	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
CRD wastewater treatment system	39%	36%	45%	47%	43%	31%	52%	27%
Biosolids	36%	33%	43%	45%	40%	27%	49%	25%

Statistically higher | Statistically lower

Base: All respondents (n=516)
Q1. How familiar are you with the following topics?

 © Ipsos

Importance of Maximizing Biosolids for Community Benefit



Base: All respondents (n=516)
Q2. How important is it to you how biosolids are maximized for community benefit?

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Importance of Maximizing Biosolids for Community Benefit (by Demos)

Total Important (Very Important + Important)

	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
Total important	61%	61%	59%	61%	49%	68%	63%	59%

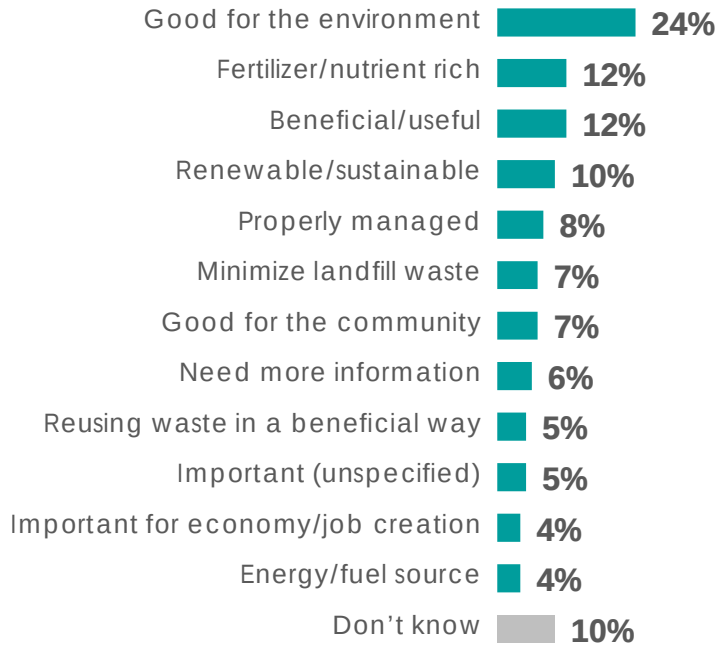
Statistically higher | Statistically lower

Base: All respondents (n=516)
Q2. How important is it to you how biosolids are maximized for community benefit?

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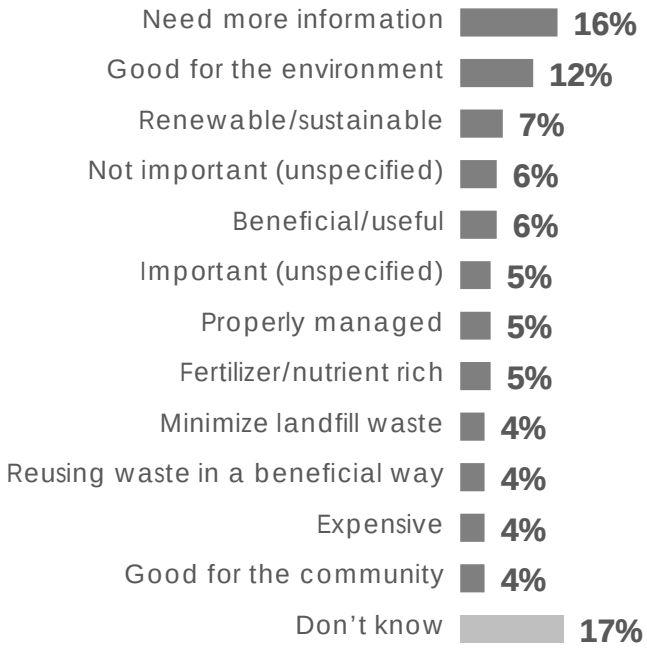
Reasons why Important/Not Important

REASONS WHY IMPORTANT



Mentions <4% not shown.
Base: Those rating very important or important (n=316)
Q3. Please explain why you chose that level of importance.

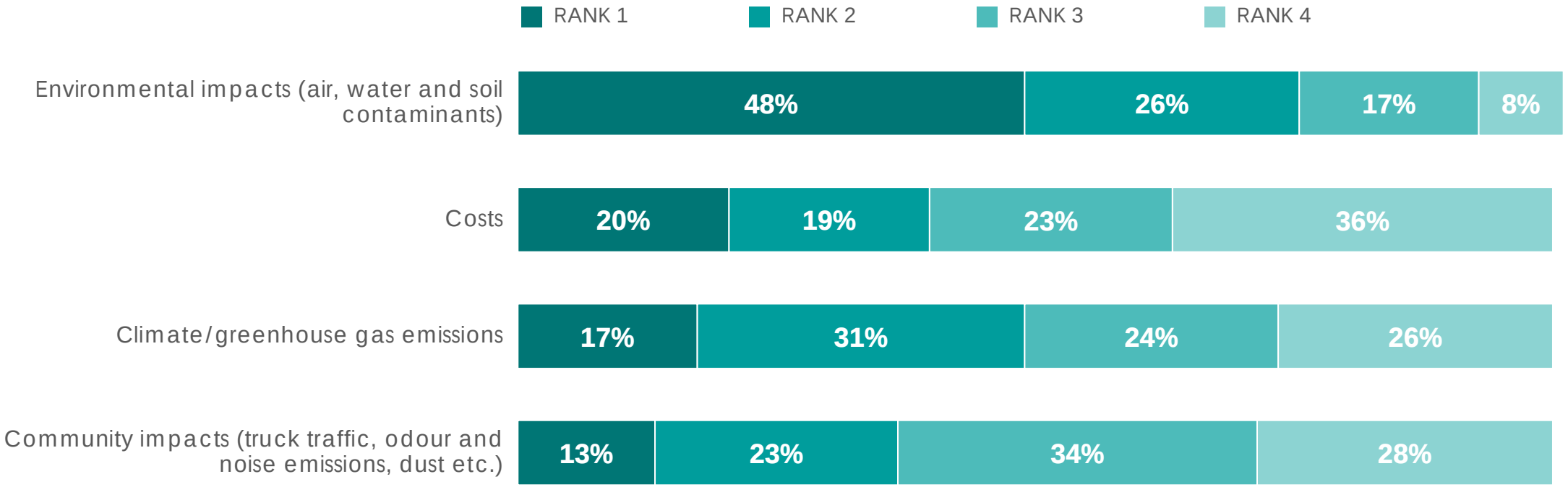
REASONS WHY FAIRLY/SLIGHTLY/NOT IMPORTANT



Mentions <4% not shown.
Base: Those rating fairly important, slightly important, or not at all important (n=159)
Q3. Please explain why you chose that level of importance.

 © Ipsos

Ranked Importance of Considerations when Planning Beneficial Uses of Biosolids



Base: All respondents (n=516)
Q4. When planning for the beneficial uses of biosolids, how important are the following considerations to you? Please rank in order of importance (1 being most important – 4 being least important).

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Ranked Importance of Considerations when Planning Beneficial Uses of Biosolids (by Demos)

Ranked First (Most Important)

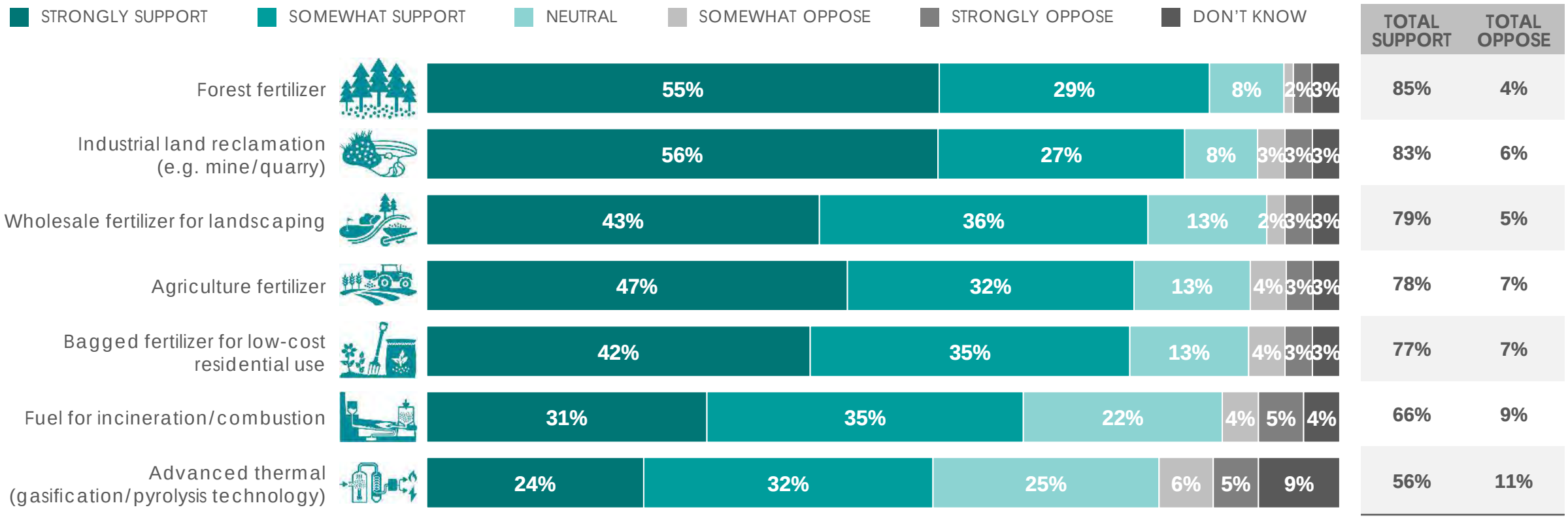
	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
Environmental impacts (air, water and soil contaminants)	48%	48%	50%	40%	45%	55%	43%	52%
Costs	20%	22%	16%	9%	22%	25%	21%	19%
Climate/greenhouse gas emissions	17%	18%	16%	24%	19%	12%	19%	16%
Community impacts (truck traffic, odour and noise emissions, dust etc.)	13%	12%	18%	25%	12%	7%	16%	11%

Statistically higher **Statistically lower**

Base: All respondents (n=516)
Q4. When planning for the beneficial uses of biosolids, how important are the following considerations to you? Please rank in order of importance (1 being most important – 4 being least important).

 © Ipsos

Support for Options



Data labels <2% not shown.
Base: All respondents (n=516)
Q5-Q11. Please indicate your level of support for...?

 © Ipsos

Support for Options (by Demos)

Total Support (Strongly + Somewhat)

	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
Forest fertilizer	85%	87%	80%	81%	83%	88%	84%	86%
Industrial land reclamation (e.g. mine/quarry)	83%	82%	84%	79%	83%	85%	85%	81%
Wholesale fertilizer for landscaping	79%	78%	82%	76%	73%	84%	79%	79%
Agriculture fertilizer	78%	79%	77%	74%	73%	84%	74%	82%
Bagged fertilizer for low-cost residential use	77%	76%	81%	81%	69%	81%	76%	79%
Fuel for incineration/combustion	66%	66%	66%	67%	65%	66%	67%	65%
Advanced thermal (gasification/pyrolysis technology)	56%	56%	56%	70%	55%	48%	56%	55%

Statistically higher | Statistically lower

Data labels <2% not shown.
Base: All respondents (n=516)
Q5-Q11. Please indicate your level of support for…?

 © Ipsos

Best Ways to Keep Informed about Topic



56%
TV NEWS

48%
WEBPAGE

45%
NEWSPAPER

43%
CRD SOCIAL MEDIA

35%
RADIO

5%
OTHER

4%
DON'T KNOW

Base: All respondents (n=516)
Q12. What is the best way to keep you informed about this topic in future?

 © Ipsos

Best Ways to Keep Informed about Topic (by Demos)

Total Familiar (Extremely + Moderately)

	Total	Region		Age			Sex	
		Core	Other	18-34	35-54	55+	Male	Female
Sample Size	516	408	108	99	171	246	237	276
TV news	56%	55%	59%	61%	52%	57%	58%	55%
Webpage	48%	49%	45%	52%	48%	45%	47%	47%
Newspaper	45%	43%	50%	43%	45%	46%	42%	47%
CRD social media	43%	44%	38%	54%	57%	26%	41%	44%
Radio	35%	33%	41%	39%	43%	27%	29%	41%

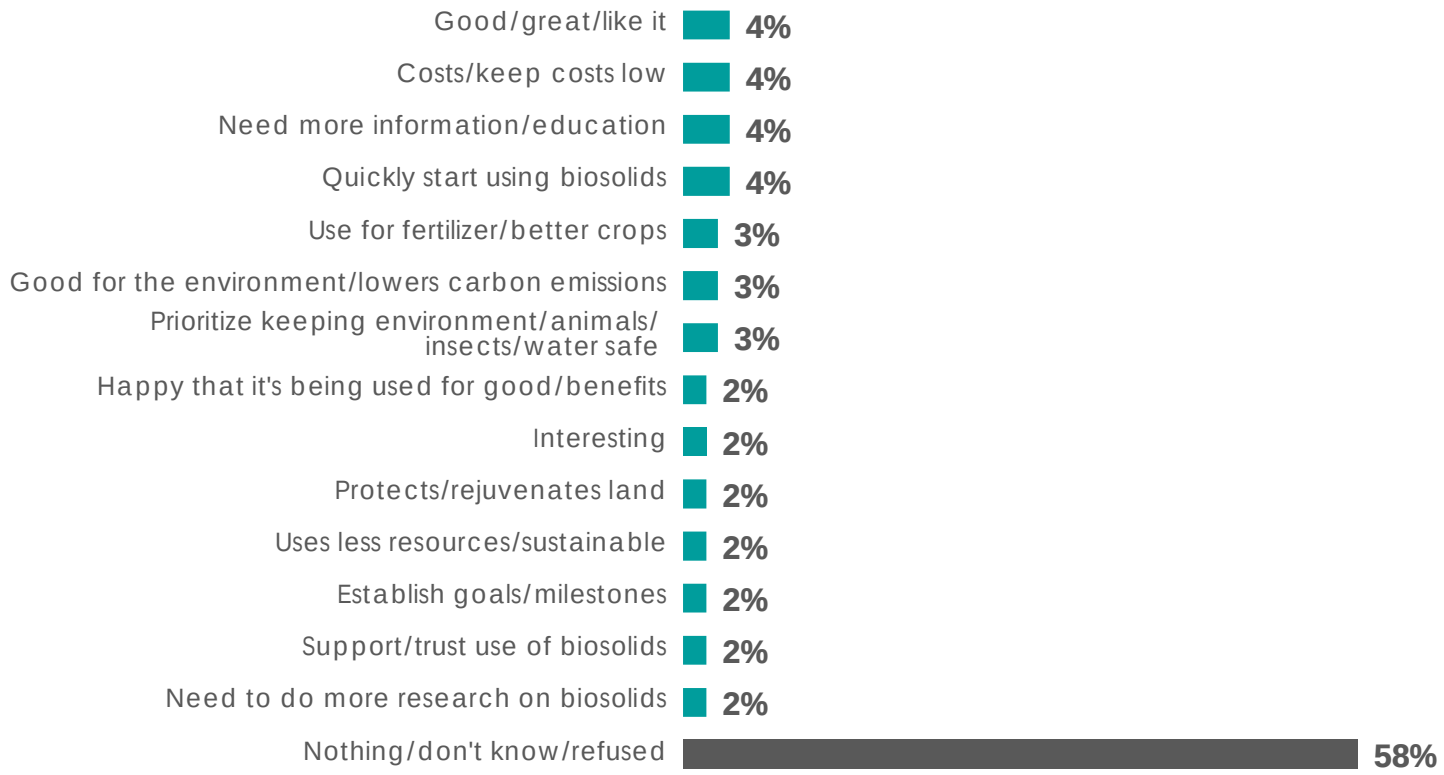
Statistically higher **Statistically lower**

Base: All respondents (n=516)
Q12. What is the best way to keep you informed about this topic in future?

 © Ipsos

Final Comments





Mentions <2% not shown.
Base: All respondents (n=516)
Q13. Do you have any final comments about biosolids and the potential uses being considered by the CRD?

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REPORT TO CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, MAY 08, 2024

SUBJECT **Capital Region Housing Corporation Annual General Meeting**

ISSUE SUMMARY

Complete the Annual General Meeting (AGM) of the Capital Region Housing Corporation (CRHC) by written resolution.

BACKGROUND

The Capital Regional District (CRD) is the sole shareholder of the CRHC, a corporation incorporated under the *Business Corporations Act*.

As a corporation, the CRHC must hold an annual meeting of the shareholders, also called an AGM, within 15 months of its last annual meeting. This may be in writing, which requires no additional administrative time to coordinate and can be included as a standard agenda item at a meeting of the CRD Board.

A shareholder's resolution is attached as Appendix A. At a corporation's AGM, the financial statements (Appendix B) must be received by the shareholder. The corporation's annual report is also attached for shareholder information as Appendix C.

ALTERNATIVES

Alternative 1
That the unanimous shareholder's resolution attached as Appendix A to the Capital Region Housing Corporation Annual General Meeting report be approved, and the Chair and Corporate Officer execute it on behalf of the Capital Regional District.

Alternative 2
That this report be referred to staff for further information based on Capital Regional District Board direction.

IMPLICATIONS

Former Practice at CRD
Starting in 2019, a resolution in writing, signed after a CRD Board meeting, was adopted as the process for holding an AGM. In prior years, the CRD appointed its Board Chair as shareholder representative. The Board Chair would attend a CRHC shareholders meeting, called for that purpose in accordance with the timelines in the legislation and corporate articles. The CRD Board Chair would then vote to adopt the financial statements, auditor's report, and any other business required to be transacted. This was prior to CRHC's governance reorganization.

The former practice of hosting an annual AGM required additional administrative time to be spent organizing an in-person meeting in strict compliance with the legislation and articles. As a sole-shareholder corporation that shares directors with the CRD, such administrative burden is no longer required as the directors of the CRD are those persons appointed as directors of the CRHC.

Economic Implications
By completing a resolution in writing, administration costs of organizing and hosting a formal in-person AGM are avoided.

Public Participation Implications
By moving forward by way of resolution in writing, members of the public may attend to speak to CRHC's business as a delegation on a standard CRD agenda item. This may lead to increased transparency and public involvement.

Record Keeping Implications
By proceeding by way of corporate resolution in writing, it will be easier to track the business conducted by CRD as shareholder. The corporate resolution in writing will be filed in the CRHC's minute book, easily accessible, if necessary, as well as noted in the CRD's minutes.

CONCLUSION

Staff recommend the CRD conduct the annual meeting of the shareholder of the CRHC by way of resolution in writing, and the CRD authorize the Chair and Corporate Officer to execute the unanimous shareholder resolution on its behalf.

RECOMMENDATION

That the unanimous shareholder's resolution attached as Appendix A to the Capital Region Housing Corporation Annual General Meeting report be approved, and the Chair and Corporate Officer execute it on behalf of the Capital Regional District.

Submitted by:	Don Elliott, MUP, Senior Manager, Regional Housing & CRHC
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Acting Chief Administrative Officer

ATTACHMENTS

Appendix A: Unanimous Resolution of the Shareholders of the CRHC
Appendix B: CRHC 2023 Audited Financial Statements
Appendix C: CRHC 2023 Annual Report

Appendix A

CONSENT UNANIMOUS RESOLUTION OF THE SHAREHOLDER OF

THE CAPITAL REGION HOUSING CORPORATION

(the "CRHC")

The Capital Regional District, being the sole shareholder of the CRHC entitled to vote at an Annual General Meeting of the CRHC, hereby consent to the following unanimous resolutions:

RESOLVED that:

1) the financial statements of the CRHC for the period ended December 31, 2023, are hereby approved;

2) all lawful acts, contracts, proceedings, appointments and payments of money by the directors of the CRHC since the last annual general meeting of the CRHC, and which have previously been disclosed to the shareholder, are hereby adopted, ratified and confirmed;

3) that KPMG LLP be appointed auditors for the CRHC until the next annual general meeting or until a successor is appointed; and

4) this resolution may be signed on behalf of the corporate shareholder, the Capital Regional District, by the Chair of the Capital Regional District and the Corporate Officer.

RESOLVED as of _____ May 2024.

Colin Plant Capital Regional District Board Chair	Kristen Morley Corporate Officer

Appendix B



Capital Region Housing Corporation

2023 Financial Statements

British Columbia, Canada
Fiscal year ended December 31, 2023

CRHC
Capital Region Housing Corporation

Capital Region Housing Corporation

Financial Statements

December 31, 2023

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December 31, 2023

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KPMG LLP
St. Andrew's Square II
800-730 View Street
Victoria BC V8W 3Y7
Canada
Telephone 250 480 3500
Fax 250 480 3539

INDEPENDENT AUDITOR'S REPORT

To the Shareholder of the Capital Region Housing Corporation

Opinion

We have audited the financial statements of the Capital Region Housing Corporation (the Corporation), which comprise:

- the statement of financial position as at December 31, 2023
- the statement of operations for the year then ended
- the statement of changes in net assets and remeasurement gains and losses for the year then ended
- the statement of cash flows for the year then ended
- and notes to the financial statements, including a summary of significant accounting policies

(hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Corporation as at December 31, 2023, and its results of operations, its changes in net assets and remeasurement gains and losses, and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "***Auditor's Responsibilities for the Audit of the Financial Statements***" section of our auditor's report.

We are independent of the Corporation in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter – Comparative Information

We draw attention to Note 2 to the financial statements which explains that certain comparative information presented for the year ended December 31, 2022 has been restated. Note 2 explains the reason for the restatement and also explains the adjustments that were applied to restate certain comparative information. Our opinion is not modified in respect of this matter.

KPMG LLP, an Ontario limited liability partnership and member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee. KPMG Canada provides services to KPMG LLP.

Other Matter - Comparative Information

As part of our audit of the financial statements for the year ended December 31, 2023, we also audited the adjustments that were applied to restate certain comparative information presented for the year ended December 31, 2022. In our opinion, such adjustments are appropriate and have been properly applied.

Other Information

Management is responsible for the other information. Other information comprises:

- the information, other than the financial statements and the auditor's report thereon, included in the Annual Report.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit and remain alert for indications that the other information appears to be materially misstated.

We obtained the information, other than the financial statements and the auditor's report thereon, included in the Annual Report as at the date of this auditor's report.

If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in the auditor's report.

We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Corporation's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Corporation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Corporation's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Corporation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor’s report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Corporation to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Chartered Professional Accountants

Victoria, Canada
_____, 2024

Capital Regional District
625 Fisgard Street, PO Box 1000
Victoria, BC V8W 2S6

T: 250.360.3000
F: 250.360.3201
www.crd.bc.ca

Capital Regional District
Capital Region Housing Corporation

MANAGEMENT REPORT

The Financial Statements contained in this report have been prepared by management in accordance with Canadian public sector accounting standards. The integrity and objectivity of these statements are management's responsibility. Management is also responsible for all the statements and schedules, and for ensuring that this information is consistent, where appropriate, with the information contained in the financial statements.

Management is also responsible for implementing and maintaining a system of internal controls to provide reasonable assurance that reliable financial information is produced.

The Board of Directors are responsible for approving the financial statements and for ensuring that management fulfills its responsibilities for financial reporting and internal control.

The external auditors, KPMG LLP, conduct an independent examination, in accordance with Canadian public sector accounting standards, and express their opinion on the financial statements. Their examination includes a review and evaluation of the corporation's system of internal control and appropriate tests and procedures to provide reasonable assurance that the financial statements are presented fairly. The external auditors have full and free access to staff and management. The Independent Auditors' Report outlines the scope of the audit for the year ended December 31, 2023.

On behalf of Capital Regional District and Capital Region Housing Corporation,

_____

Nelson Chan, MBA, CPA, CMA
Chief Financial Officer
May 8, 2024

DRAFT

Statement of Financial Position

As at December 31, 2023

	2023	2022 Restated (Note 2)
Assets		
Current assets:		
Cash and cash equivalents (Note 3)	**$ 14,903,603**	$ 10,350,289
Accounts receivable	**6,031,343**	2,887,911
Prepaid expenses	**890,568**	697,314
Investments	**-**	6,500,000
	21,825,514	20,435,514
Cash and cash equivalents restricted for replacement reserve (Note 3)	**8,543,170**	8,168,045
Capital assets (Note 4 and Schedule C)	**262,404,263**	217,766,993
	$ 292,772,947	$ 246,370,552
Liabilities and Net Assets		
Current liabilities:		
Accounts payable and accrued liabilities	**7,154,414**	4,014,200
Accrued mortgage interest	**381,220**	336,975
Due to Capital Regional District	**284,633**	425,418
Deferred revenue	**743,487**	591,704
Security deposits	**1,214,931**	1,141,108
Short-term capital financing (Note 5)	**27,454,719**	21,157,445
Mortgages payable principal current portion (Schedule D)	**6,193,511**	6,213,290
Mortgages payable principal renewal portion (Note 6 and Schedule D)	**8,233,676**	595,492
	51,660,591	34,475,632
Mortgages payable (Note 6 and Schedule D)	**161,065,397**	151,795,738
Asset retirement obligations (Note 7)	**9,521,426**	8,279,238
Capital stock (Note 8)	**1**	1
Net assets:		
Invested in capital assets (Note 9)	**56,115,448**	38,335,853
Externally restricted (Note 10)	**11,921,941**	12,127,169
Internally restricted (Note 10)	**1,106,227**	1,126,460
Unrestricted: Corporation stabilization reserve (Note 11)	**1,855,850**	865,527
	70,999,466	52,455,009
Accumulated remeasurement losses	**(473,934)**	(635,066)
	70,525,532	51,819,943
Commitments and contingencies (Note 12)		
	$ 292,772,947	$ 246,370,552

See accompanying notes to the financial statements.

On behalf of the Board:

_____ Director _____ Director

Statement of Operations

For the Year Ended December 31, 2023

	Operating Funds		Restricted Funds			
	Corporation	Rental Housing	Capital Fund	Replacement Reserve Fund	Total 2023	Total 2022 Restated (Note 15 and Note 2)
Revenues:						
Tenant rent contributions	$ -	$ 23,002,135	$ -	$ -	**$ 23,002,135**	$ 21,246,546
BCHMC rent subsidy assistance	-	710,400	-	-	**710,400**	302,636
BCHMC umbrella operating agreement funding	-	2,674,751	-	-	**2,674,751**	2,760,874
Rental management fees - third parties	63,342	-	-	-	**63,342**	81,139
Investment income	536,151	-	166,247	479,433	**1,181,831**	529,936
Guest suites, net	1,801	-	-	-	**1,801**	4,371
Miscellaneous	36,887	278,078	-	-	**314,965**	275,547
Government contributions (Note 12d)	-	-	16,135,301	-	**16,135,301**	18,336,829
	638,181	26,665,364	16,301,548	479,433	**44,084,526**	43,537,878
Expenses:						
Administration and property management	3,275,841	-	-	-	**3,275,841**	2,869,235
Amortization	-	-	8,181,223	-	**8,181,223**	7,397,134
Accretion	-	-	377,533	-	**377,533**	361,069
Property taxes	-	33,806	-	-	**33,806**	4,500
Insurance	-	1,464,647	-	-	**1,464,647**	1,267,119
Maintenance	-	2,099,650	-	-	**2,099,650**	1,625,882
Caretakers	-	2,009,149	-	-	**2,009,149**	1,797,648
Landscape	-	422,936	-	-	**422,936**	402,165
Electricity	-	368,374	-	-	**368,374**	342,902
Land and improvement leases	-	307,137	-	-	**307,137**	299,474
Water	-	1,403,759	-	-	**1,403,759**	1,415,924
Oil and gas	-	240,871	-	-	**240,871**	246,876
Garbage	-	466,901	-	-	**466,901**	338,958
Rental management fee	(3,510,088)	3,510,088	-	-	**-**	-
Audit and legal	-	41,438	-	-	**41,438**	33,600
Miscellaneous	-	190,446	-	-	**190,446**	34,425
Hospitality services (Parry Place)	-	492,595	-	-	**492,595**	321,584
Interest on mortgages payable	-	4,163,763	-	-	**4,163,763**	3,573,882
	(234,247)	17,215,560	8,558,756	-	**25,540,069**	22,332,377
Excess of revenues over expenses	**$ 872,428**	**$ 9,449,804**	**$ 7,742,792**	**$ 479,433**	**$ 18,544,457**	$ 21,205,501

See accompanying notes to the financial statements.

Statement of Changes in Net Assets & Remeasurement Gains & Losses

For the Year Ended December 31, 2023

	Operating Funds		Restricted Funds				
	Corporation	Rental Housing	Capital Fund	Replacement Reserve Fund	Remeasurement Gains / (Losses)	Total 2023	Total 2022 Restated (Note 2)
Net assets, beginning of year	$ 1,032,084	$ 4,919,027	$ 38,335,853	$ 8,168,045	$ (635,066)	$ 51,819,943	$ 31,131,957
Excess of revenues over expenses	872,428	9,449,804	7,742,792	479,433	-	18,544,457	21,205,501
Interfund transfers:							
Mortgage principal repayments	-	(6,482,151)	6,482,151	-	-	-	-
Replacement reserve transfers	-	(3,083,416)	-	3,083,416	-	-	-
Replacement reserve expenditures	-	-	3,187,724	(3,187,724)	-	-	-
Capital assets acquired	(152,439)	(600,000)	752,439	-	-	-	-
Fund transfers	183,199	202,312	(385,511)	-	-	-	-
	30,760	(9,963,255)	10,036,803	(104,308)	-	-	-
Unrealized gain (loss) on investments	-	-	-	-	161,132	161,132	(517,515)
Net assets, end of year	$ 1,935,272	$ 4,405,576	$ 56,115,448	$ 8,543,170	$ (473,934)	$ 70,525,532	$ 51,819,943

See accompanying notes to the financial statements.

Statement of Cash Flows

For the Year Ended December 31, 2023

	2023	2022 Restated (Note 2)
Cash provided by (used in):		
Operating activities:		
Excess of revenues over expenses	**$ 18,544,457**	$ 21,205,501
Items not involving cash:		
Amortization	**8,181,223**	7,397,134
Accretion	**377,533**	361,069
Changes in non-cash assets and liabilities:		
(Increase) in accounts receivable	**(3,143,432)**	(1,513,691)
(Increase) in inventory and prepaid expenses	**(193,254)**	(69,132)
Increase in accounts payable and accrued liabilities	**3,140,214**	1,951,267
Increase in accrued mortgage interest	**44,245**	10,492
Increase (decrease) in deferred revenue	**151,783**	(110,046)
Increase in security deposits	**73,823**	106,925
(Decrease) increase due to Capital Regional District	**(140,785)**	344,670
Net change in cash from operating activities	**27,035,807**	29,684,189
Investing activities:		
(Increase) in restricted cash and cash equivalents	**(213,994)**	(1,784,897)
Increase (decrease) in investments	**6,500,000**	(6,500,000)
Net change in cash from investing activities	**6,286,006**	(8,284,897)
Capital activities:		
Acquisition of capital assets	**(51,953,838)**	(36,289,290)
Net change in cash from capital activities	**(51,953,838)**	(36,289,290)
Financing activities:		
Repayment of mortgages payable	**(6,472,741)**	(6,138,211)
Proceeds from long term debt	**23,360,805**	4,500,000
Repayment of short term debt	**(13,933,727)**	(2,151,025)
Proceeds from short term debt	**20,231,002**	21,157,445
	23,185,339	17,368,209
Net change in cash and cash equivalents	**4,553,314**	2,478,211
Cash and cash equivalents, beginning of year	**10,350,289**	7,872,078
Cash and cash equivalents, end of year	**$ 14,903,603**	$ 10,350,289

See accompanying notes to the financial statements.

General

The Capital Region Housing Corporation (the “Corporation”) is incorporated under the laws of British Columbia and its principal activities include the acquisition, construction, and provision of rental accommodation. As a wholly owned subsidiary of the Capital Regional District ("CRD"), the Corporation is exempt from taxation under the Income Tax Act and is regarded as a municipality for GST purposes.

1. Significant Accounting Policies

The financial statements have been prepared in accordance with Canadian public sector accounting standards including the 4200 standards for government not-for-profit organizations.

a. Revenue Recognition

The Corporation follows the restricted fund balance method of accounting for contributions. Unrestricted contributions are recognized as revenue of the Operating Fund in the year received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. Restricted contributions related to general operations are recognized as revenue of the Operating Fund in the year to which the funding relates. All other restricted contributions are recognized as revenue of the appropriate restricted fund in the year received or receivable.

b. Fund Accounting

i. Operating Funds

The Operating Funds reflect the Corporation’s assets, liabilities and transactions relating to the ongoing rental and non-rental operations (“Corporation”). In accordance with the agreements with British Columbia Housing Management Commission (BCHMC), a Portfolio Stabilization Reserve has been established for each portfolio’s accumulated operating surplus. The Corporation has also established a reserve for the No Operating Agreement portfolio. These reserves are used in the event that annual rental revenues and government subsidies are inadequate to meet the portfolio’s mortgage payments and operating costs. The Corporation can also contribute funds from these reserves to the Replacement Reserve Fund, if required. At the discretion of the Board, the unrestricted Corporate Stabilization Reserve provides funding for administration and special projects. The Corporation allocates administration and property management costs incurred in the Corporation Operating Fund to the Rental Housing Operating Fund through Rental management fees.

ii. Capital Fund

The Capital Fund reflects the Corporation’s investment in capital assets and related financial activities.

1. Significant Accounting Policies (continued)

b. Fund Accounting (continued)

iii. Replacement Reserve Fund

A Replacement Reserve Fund has been established for each building to pay for the replacement of worn-out capital equipment and other approved items. The Replacement Reserves are funded by an annual transfer from the Rental Housing Operating Fund. Capital expenditures made from the reserve are transferred to the Capital Fund.

c. Asset Retirement Obligations

An asset retirement obligation (ARO) is a legal obligation to incur costs to retire a tangible capital asset in a future period. AROs are measured at the present value of expected future cash flows including an estimate for inflation. Future cash flows are based on the best information available at the financial reporting date. Accretion expense is recorded annually to reflect the cost associated with an increase in the present value of the ARO over time. The carrying amount of the liability is reassessed annually and updated as new information becomes available. Changes in estimates are recorded prospectively and the liability is derecognized when retirement activities are completed.

The asset retirement cost at initial recognition is capitalized along with the related tangible capital asset and amortized in accordance with the Corporation's tangible capital asset policy Note 1 d).

d. Capital Assets

Land, buildings, equipment and vehicles are stated at cost. Amortization is charged upon the asset becoming available for productive use in the year of acquisition. Amortization over their estimated useful lives is provided on the straight-line basis at the following rates:

Asset	Rate
Prepaid leases	29-60 Years
Buildings	35 Years
Equipment	10 Years
Vehicles	5 Years

All transfers from the Replacement Reserve Fund and office equipment are stated at cost and amortization is taken on the declining balance basis at 20% per annum.

Capital assets are written down when conditions indicate that they no longer contribute to the Corporation's ability to provide goods and services or when the value of the future economic benefits associated with the asset is less than the book value of the asset.

1. Significant Accounting Policies (continued)

e. Debt Retirement

Payment of principal on long-term debt is funded by a transfer from the Rental Housing Operating Fund to the Capital Fund.

f. Operating Agreements

i. Umbrella

Effective April 1, 2012, the Corporation signed a thirty-three month Interim Umbrella Operating Agreement (the "Umbrella Agreement") with BCHMC to consolidate three operating agreements to reduce administrative duplication, allow the Corporation more flexibility to determine priorities for the portfolio maintenance and management and create a stable and predictable funding stream for the Corporation. In addition, the parties agreed to work together to develop a long-range capital planning tool to enable the Corporation and BCHMC to determine the capital replacement needs of the portfolio for the next thirty years and to negotiate on the transfer of the land ownership of the BCHMC projects from the Provincial Rental Housing Corporation to the Corporation. The final agreement was signed on December 2, 2014 with an effective date of January 1, 2015, for a five year term, and was renewed in December 2019 for an additional five year term ending 2024.

Effective August 17, 2020, the Umbrella Agreement was modified to remove three properties, Portage Place, Campus View Court, and Royal Oak Square, whose mortgages had matured and which were originally part of the CMHC Agreement described below. The properties were moved to the CRHC No Operating Agreement portfolio and their corresponding Replacement Reserve balances were moved to the CRHC No Operating Agreement Replacement Reserve. No transfers were made between Portfolio Stabilization Reserves. As a result of this change, the Umbrella Agreement now contains 38 buildings and 1,071 units.

Except as modified by the Umbrella Agreement, all provisions of the original three operating agreements with CMHC, BCHMC and Homes BC will continue to apply to each project in the portfolio.

a) CMHC

Prior to April 1, 2012 the Corporation had entered into agreements with CMHC pursuant to Section 95 (formerly Section 56.1) of the National Housing Act whereby CMHC will provide mortgage assistance grants to the Corporation that reduce interest costs to not less than 2% on all mortgages payable. As of January 1, 2005 when a mortgage loan is renewed the mortgage assistance grants shall increase or decrease by the same dollar amount as the monthly loan payment of principal and interest changes.

b) BCHMC

Prior to April 1, 2012 the Corporation had entered into agreements with BCHMC whereby BCHMC, on behalf of the Provincial and Federal governments, will provide rent subsidy assistance equal to the BCHMC approved difference between tenant rent contributions and BCHMC defined economic rents.

1. Significant Accounting Policies (continued)

f. Operating Agreements (continued)

i. Umbrella (continued)

c) Homes BC Program

Prior to April 1, 2012 the Corporation had entered into agreements with BCHMC under the unilaterally funded Homes BC Program. The Provincial Government agrees to provide rent subsidy assistance for Rent Geared to Income (RGI) units (approximately 60% of total units) based on the difference between the tenant rent contribution and the approved economic rents. The Province also agrees to provide Repayable Assistance equal to the difference between the economic and the approved low-end of market rents for the remaining units.

ii. Independent Living BC II Program

The Corporation has entered into an agreement with BCHMC under the unilaterally funded Independent Living BC II Program. The Provincial Government agrees to provide subsidy assistance for shelter and defined hospitality costs based on the difference between seventy percent (70%) of the residents' net income and the approved operating budget.

iii. Regional Housing First Program

The Regional Housing First Program (RHFP) is a partnership between the Provincial and Federal governments and the CRD to provide one-time capital funding to affordable housing projects in the region. The Corporation has entered into a 40-year agreement with BCHMC on behalf of the RHFP whereby the Corporation provides shelter-rate and affordable rents to low and moderate income tenants. No other financial contribution is received to subsidize the ongoing operation of the buildings.

iv. Investment in Housing Innovation Program

The Corporation has entered into a 40-year agreement with BCHMC under the Investment in Housing Innovation (IHI) program. Capital funding was provided in the form of a forgivable loan to facilitate the construction of the Westview building. No other financial contribution is received to subsidize the ongoing operation of the building.

v. Community Housing Fund

The Corporation has entered into a 60-year agreement with BCHMC under the Community Housing Fund (CHF) program. Capital funding was provided in the form of a forgivable loan to facilitate the construction of the Twenty-Seven Eighty-Two building. An operating subsidy is provided as approved in the annual building operating budget.

vi. CRHC No Operating Agreement

This category includes buildings that receive no mortgage assistance or rent subsidy assistance. Tenant rent contributions are determined by the Corporation.

1. Significant Accounting Policies (continued)

g. Allocation of Investment Income

Funds available for investment are pooled and interest revenue is allocated to restricted funds at the rate of average prime minus 1.31% (2022: average prime plus 0.78%).

h. Financial Instruments

Financial instruments are recorded at fair value on initial recognition. Derivative instruments, bonds, bond funds, and equity instruments that are quoted in an active market are subsequently reported at fair value. All other financial instruments are subsequently recorded at cost or amortized cost unless management has elected to carry the instruments at fair value. The Corporation has not elected to carry any other such financial instruments at fair value.

Unrealized changes in fair value are recognized in the statement of remeasurement gains and losses until they are realized, when they are transferred to the statement of operations.

Transaction costs incurred on the acquisition of financial instruments measured subsequently at fair value are expensed as incurred. All other financial instruments are adjusted by transaction costs incurred on acquisition and financing costs, which are amortized using the straight-line method.

All financial assets are assessed for impairment on an annual basis. When a decline is determined to be other than temporary, the amount of the loss is reported in the statement of operations and any unrealized gain is adjusted through the statement of remeasurement gains and losses.

i. Use of Estimates

The preparation of the financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the year. Significant estimates and assumptions include amortization of capital assets and discount and inflationary rates used to determine ARO balances. Actual results could differ from those estimates.

2. Adoption of New Accounting Standard

On January 1, 2023, the Corporation adopted Public Sector Accounting Standard PS 3280 *Asset Retirement Obligations*. The new accounting standard addresses the reporting of legal obligations associated with the retirement of certain tangible capital assets. The standard was adopted on a modified retroactive basis and prior year balances have been restated to conform to new reporting requirements. The accounting policy is disclosed in Note 1 c) and ARO balances disclosed in Note 7.

2. Adoption of New Accounting Standard (continued)

In accordance with the provisions of the new standard, the Corporation reflected the following adjustments for the year ended December 31, 2022:

	Previously Stated	Adjustment	2022 Restated
Statement of Financial Position			
Assets			
Capital assets	**$ 217,260,292**	**$ 506,701**	**$ 217,766,993**
Liabilities and Net Assets			
Asset retirement obligations	**-**	**8,279,238**	**8,279,238**
Net assets: Invested in capital assets	**46,108,390**	**(7,772,537)**	**38,335,853**
Statement of Operations			
Amortization	**7,359,920**	**37,214**	**7,397,134**
Accretion	**-**	**361,069**	**361,069**
Excess of revenues over expenses	**21,603,784**	**(398,283)**	**21,205,501**
Statement of Changes in Net Assets & Remeasurement Gains & Losses			
Net assets, beginning of year	**38,506,211**	**(7,374,254)**	**31,131,957**
Excess of revenues over expenses	**21,603,784**	**(398,283)**	**21,205,501**
Net assets, end of year	**59,592,480**	**(7,772,537)**	**51,819,943**
Statement of Cash Flows			
Excess of revenues over expenses	**21,603,784**	**(398,283)**	**21,205,501**
Items not involving cash: Amortization	**7,359,920**	**37,214**	**7,397,134**
Items not involving cash: Accretion	**-**	**361,069**	**361,069**
Tangible Capital Assets (Note 4)			
Cost - Buildings	**161,021,997**	**1,787,351**	**162,809,348**
Accumulated amortization - Buildings	**85,336,007**	**1,280,650**	**86,616,657**
Net book value - Buildings	**75,685,990**	**506,701**	**76,192,691**
Investment in Capital Assets (Note 9)			
Capital assets	**217,260,292**	**506,701**	**217,766,993**
Asset retirment obligation adoption adjustment	**-**	**(8,279,238)**	**(8,279,238)**

3. Cash and Cash Equivalents

Cash equivalents have a maturity of three months or less at acquisition and are held for the purpose of meeting short-term cash commitments. Included in cash and cash equivalents are investments in the Municipal Finance Authority of British Columbia (MFA) Short Term Bond Funds. See Schedule A for details of cash and cash equivalents restricted for replacement reserve.

At December 31, 2023, there is $nil (2022: $4,430,279) of cash and cash equivalents from mortgage proceeds restricted in use to finance capital improvements or construction of new properties.

4. Capital Assets

December 31, 2023	Cost	Accumulated Amortization	Net Book Value
Land	$ 9,496,053	$ -	$ 9,496,053
Prepaid leases	148,181,402	14,089,236	134,092,166
Buildings	199,057,658	90,278,565	108,779,093
Equipment and other	45,124,225	35,087,274	10,036,951
	$ 401,859,338	$ 139,455,075	$ 262,404,263

December 31, 2022 - Restated (Note 2)	Cost	Accumulated Amortization	Net Book Value
Land	$ 9,496,053	$ -	$ 9,496,053
Prepaid leases	134,951,377	11,658,345	123,293,032
Buildings	162,809,348	86,616,657	76,192,691
Equipment and other	41,784,069	32,998,852	8,785,217
	$ 349,040,847	$ 131,273,854	$ 217,766,993

5. Short-term capital financing

Short term capital financing of $27,454,719 (2022: $21,157,445) is provided by BCHMC at a variable rate based on that charged to them by the Ministry of Finance plus an administrative spread. The short term debt is converted to a long term mortgage at the completion of each construction project. In 2023, $13,933,727 of short term capital financing was converted to long term mortgage at the completion of the Twenty-Seven Eighty-Two construction project. In 2022, $2,151,025 short term capital financing was forgiven and recorded in Government contributions on the Statement of Operations.

6. Mortgages Payable

Pursuant to Section 5 of the National Housing Act, CMHC has undertaken to insure all mortgages payable by the Corporation except the mortgages on Village on the Green and Vergo. As additional security, the mortgagors hold chattel mortgages and assignments of rent.

Principal due within each of the next five years on these mortgages is as follows:		Assuming no mortgage renewal	Assuming mortgage renewal
	2024	$ 14,427,188	$ 6,173,316
	2025	8,837,329	5,958,720
	2026	6,644,553	5,748,113
	2027	11,452,520	5,607,311
	2028	$ 4,006,294	$ 5,276,183

See Schedule D for details of interest rates, renewal dates, and maturity dates of mortgages. Mortgage renewal amounts are calculated based on existing rates and do not consider current prevailing market rates.

7. Asset Retirement Obligations

The Corporation owns buildings that contain hazardous materials including asbestos and lead. There is a legal obligation to remove these materials in a prescribed manner when they are disturbed. These costs are expected to be incurred over the next 17 years as buildings are demolished or renovated. The retirement costs are estimated to include all costs directly attributable to the abatement of the hazardous materials, including overhead costs.

The Corporation uses the Municipal Finance Authority (MFA) long-term borrowing rate as the discount rate. The 10-year average B.C. consumer price index rate is used to estimate inflation and aligns with the Bank of Canada's target inflation range of 1.00% to 3.00%.

	2022 Restated (Note 2)	ARO Additions	ARO Settlements	Revisions to Estimate	Accretion Expense	2023
Hazardous Materials	$ 8,279,238	$ -	$ -	$ 864,654	$ 377,533	**$ 9,521,426**

Estimated cash flows have been discounted to present value. Discount and inflation rates in the future are estimates and subject to change. These changes can impact ARO values significantly when being applied over an extended duration.

	2023	2022 Restated (Note 2)
Discount Rate	4.17%	4.56%
Inflation rate	2.54%	2.15%
Settlement Timing	10 to 17 years	11 to 18 years

8. Capital Stock

Authorized capital: 2,000 shares with par value of $1 each

Issued capital: 1 share of $1 par value, owned by the Capital Regional District.

9. Invested in Capital Assets

Investment in capital assets is calculated as follows:

	December 31, 2023	December 31, 2022 Restated (Note 2)
Capital assets	$ 262,404,263	$ 217,766,993
Accounts Receivable	5,516,825	2,347,762
Interfund due from rental housing operating fund	553,905	1,832,022
Restricted cash	-	4,430,279
Prepaid expense	109,184	-
Mortgages payable	(175,492,584)	(158,604,520)
Short-term capital financing	(27,454,719)	(21,157,445)
Asset retirement obligations	(9,521,426)	(8,279,238)
	$ 56,115,448	$ 38,335,853

10. Restricted Net Assets

Externally restricted net assets:

	December 31, 2023	December 31, 2022
Replacement reserve fund	$ 8,543,170	$ 8,168,045
CMHC/BCHMC/Homes BC operating agreements	(3,949)	(3,949)
Portfolio stabilization reserve - umbrella agreement	2,903,312	3,410,606
Portfolio stabilization reserve - ILBC2 agreement	(333,578)	(107,961)
Portfolio stabilization reserve - RHFP agreement	369,478	265,650
Portfolio stabilization reserve - IHI	479,065	389,301
Portfolio stabilization reserve - CHF	(35,557)	5,477
	$ 11,921,941	$ 12,127,169

10. Restricted Net Assets (continued)

Internally restricted net assets:

	December 31, 2023	December 31, 2022
Portfolio stabilization reserve - no operating agreement	$ 1,026,805	$ 959,903
Guest suite surplus	41,502	39,701
Vehicle replacement reserve	17,863	101,204
Equipment replacement reserve	20,057	25,652
	$ 1,106,227	$ 1,126,460

Rental housing operating fund balance:

	December 31, 2023	December 31, 2022
Portfolio stabilization reserve - umbrella agreement	$ 2,903,312	$ 3,410,606
Portfolio stabilization reserve - ILBC2 agreement	(333,578)	(107,961)
Portfolio stabilization reserve - RHFP agreement	369,478	265,650
Portfolio stabilization reserve - IHI agreement	479,065	389,301
Portfolio stabilization reserve - CHF agreement	(35,557)	5,477
Portfolio stabilization reserve - no operating agreement	1,026,805	959,903
CMHC/BCHMC/Homes BC operating agreements	(3,949)	(3,949)
	$ 4,405,576	$ 4,919,027

The Portfolio stabilization reserves are detailed in Schedule B.

11. Unrestricted Net Assets

Unrestricted net assets - corporation stabilization reserve:

	December 31, 2023	December 31, 2022
Operating net assets, ending balance	$ 1,935,272	$ 1,032,084
Less: Internally restricted net assets		
Guest suite surplus	(41,502)	(39,701)
Vehicle replacement reserve	(17,863)	(101,204)
Equipment replacement reserve	(20,057)	(25,652)
	$ 1,855,850	$ 865,527

12. Commitments and Contingencies

a. Related Party Transactions

The Corporation is a wholly owned subsidiary of the Capital Regional District (CRD). In 1997, the Corporation committed to a 60-year prepaid land lease at 625 Superior Street from the CRD at the agreed upon price of $525,000 which was recognized as an acquisition in the Corporation Capital Fund. In 2017, the Corporation committed to a 60-year land lease at 3816 Carey Road from the CRD for one dollar, with the land use restricted to affordable housing. In 2021, the Corporation committed to a 60-year land lease at 2782 Spencer Road from the CRD for ten dollars, with the land use restricted to affordable housing.

In 2018, a RHFP project management office was created to support the delivery of the Program. During the year the Corporation contributed $205,842 (2022: $27,538) to the CRD, to cost share in administrative support and project management services.

On January 25, 2019, as part of the RHFP, the CRD purchased Millstream Ridge and entered into a 60-year prepaid lease in the amount of $33,250,194 and a 35-year operator agreement with the Corporation. The Corporation secured 35-year mortgage financing to fund the prepaid lease.

On November 2, 2020, as part of the RHFP, the CRD purchased West Park and entered into a 60-year prepaid lease in the amount of $29,430,822 and a 25-year operator agreement with the Corporation. The CRD's Regional Housing Trust Fund provided a capital grant to the Corporation in the amount of $660,000 for this project. The Corporation secured 35-year mortgage financing to fund the prepaid lease.

On November 20, 2020, as part of the RHFP, the CRD purchased Spencer Close and entered into a 60-year prepaid lease in the amount of $28,419,513 and a 35-year operator agreement with the Corporation. The Corporation secured 35-year mortgage financing to fund the prepaid lease

On March 22, 2021, as part of the RHFP, the CRD purchased Hockley House and entered into a 60-year prepaid lease in the amount of $23,807,370 and a 35-year operator agreement with the Corporation. The Corporation secured 35-year mortgage financing to fund the prepaid lease.

On April 17, 2023, as part of the RHFP, the CRD purchased Prosser Place and entered into a 60-year prepaid lease in the amount of $12,289,721 and a 35-year operator agreement with the Corporation. The Corporation secured 35-year mortgage financing to fund the prepaid lease.

b. Sublease of Kings Place Housing Development

The Corporation entered into agreement with the Cridge Housing Society and the Provincial Rental Housing Corporation to sublease the land and improvements at 1070 Kings Road, Victoria for a term of thirty years commencing August 1, 1997. The Homes BC Program Operating Agreement was assigned to the Corporation from the Cridge Housing Society with the approval of the BCHMC. Current annual lease payments amount to $244,137 and are based on the annual mortgage payments.

12. Commitments and Contingencies (continued)

c. Building Envelope Remediation (BER)

Prior to the signing of the Umbrella Agreement in 2012, BCHMC provided funding for building envelope failure remediation for BCHMC and Homes BC buildings. BCHMC may require repayment of certain BER subsidies. Repayment would be funded by second mortgages. Funding for future BER for all buildings except No Operating Agreement buildings is subject to future negotiations with BCHMC. In 2014, BCHMC entered into an agreement with the Corporation to fund the Heathers BER with a 35-year forgivable mortgage of $1,258,358. In 2023, BCHMC entered into an agreement with the Corporation to fund the Carey Lane BER with a 35-year forgivable mortgage of $5,450,000.

d. Government Contributions

The Corporation has received funding to develop affordable housing units through forgivable loans. If the developments funded are not used for their approved purpose by the grantor, the loan will become repayable.

13. Pension Liability

The Corporation and its employees contribute to the Municipal Pension Plan (the Plan), a jointly trusteed pension plan. The Board of Trustees, representing plan members and employers, is responsible for administering the Plan, including investment of assets and administration of benefits. The Plan is a multi-employer defined benefit pension plan. Basic pension benefits provided are based on a formula.

As at December 31, 2022, the Plan has about 240,000 active members and approximately 124,000 retired members. Active members include approximately 61 contributors from the Corporation.

Every three years an actuarial valuation is performed to assess the financial position of the Plan and the adequacy of plan funding. The actuary determines an appropriate combined employer and member contribution rate to fund the Plan. The actuary's calculated contribution rate is based on the entry-age normal cost method, which produces the long-term rate of member and employer contributions sufficient to provide benefits for average future entrants to the Plan. This rate may be adjusted for the amortization of any actuarial funding surplus and will be adjusted for the amortization of any unfunded actuarial liability.

The most recent valuation for the Municipal Pension Plan as at December 31, 2021 indicated a $3,761 million funding surplus for basic pension benefits on a going concern basis.

13. Pension Liability (continued)

The Corporation's employer contributions to the Plan for the fiscal year ended December 31, 2023 were $291,414 (2022: $258,786). The next valuation will be as at December 31, 2024, with results available in 2025.

Employers participating in the Plan record their pension expense as the amount of employer contributions made during the fiscal year (defined contribution pension plan accounting). This is because the Plan records accrued liabilities and accrued assets for the Plan in aggregate, resulting in no consistent and reliable basis for allocating the obligation, assets and cost to individual employers participating in the Plan.

14. Financial Risks and Concentration of Risk

a. Credit risk

Credit risk refers to the risk that a counter party may default on its contractual obligations resulting in a financial loss. The Corporation is exposed to credit risk with respect to the accounts receivable, cash, and cash equivalents, and investments. The Corporation assesses, on a continuous basis, accounts receivable and provides for any amounts that are not collectible in the allowance for doubtful accounts. The maximum exposure to credit risk of the Corporation at December 31, 2023 is the carrying value of these assets. The carrying amount of accounts receivable is valued with consideration for an allowance for doubtful accounts. The amount of any related impairment loss is recognized in the statement of operations. Subsequent recoveries of impairment losses related to accounts receivable are credited to the statement of operations. The balance of the allowance for doubtful accounts at December 31, 2023 is $0 (2022: $0). There have been no significant changes to the credit risk exposure from 2022.

b. Liquidity risk

Liquidity risk is the risk that the Corporation will be unable to fulfill its obligations on a timely basis or at a reasonable cost. The Corporation manages its liquidity risk by monitoring its operating requirements. The Corporation prepares budget and cash forecasts to ensure it has sufficient funds to fulfill its obligations.

Accounts payable and accrued liabilities are generally due within 30 days of receipt of an invoice. The contractual maturities of mortgages payable are disclosed in Note 6. There have been no significant changes to the liquidity risk exposure from 2022.

c. Market risk:

Market risk is the risk that changes in market prices, such as foreign exchange rates or interest rates will affect the Corporation’s income or the value of its holdings of financial instruments. The objective of market risk management is to control market risk exposures within acceptable parameters while optimizing return on investment.

i. Foreign exchange risk:

The Corporation does not enter into foreign exchange transactions and therefore is not exposed to foreign exchange risk. There have been no significant changes to foreign exchange risk exposure from 2022.

14. Financial Risks and Concentration of Risk (continued)

c. Market risk: (continued)

ii. Interest rate risk:

Interest rate risk is the risk that the fair value of future cash flows or a financial instrument will fluctuate because of changes in the market interest rates.

The Corporation holds cash equivalents in MFA Short Term Bond Fund where changes in fair value have parallel changes in unrealized gains or losses until realized on disposal.

The Corporation's mortgage interest rates are fixed and are subject to interest rate risk upon renewal. The interest rate risk is mitigated by the subsidy assistance received for most properties from BCHMC and CMHC, which is based on mortgage principal and interest payments. At December 31, 2023, there are nine properties which do not receive subsidy assistance based on mortgage interest rates: Village on the Green, Vergo, Royal Oak Square, Millstream Ridge, Westview, Spencer Close, West Park, Hockley House, and Prosser Place. These properties will be subject to interest rate risk upon renewal.

15. Comparative Information

2022 comparative information on the statement of operations has been recast to reflect a change in the presentation of project management fees adopted for the current year. Project management fees, which reflect the allocation of project management costs between the Corporate Operating Fund and the Capital Fund, are no longer presented as a caption on the statement of operations. Total revenue and expenses decreased by $411,000 as a result of presenting internally generated project management fees on a net rather than gross basis. There was no change to prior year annual surplus as a result of the new presentation.

Changes in Replacement Reserve Fund

For the Year Ended December 31, 2023

	Balance at December 31 2022	Transfer from Rental Operating Fund	Transfer from Portfolio Stabilization Reserve	Contribution from BCHMC	Interest	Transfer to Capital Fund	2023
Umbrella Agreement							
Oakwinds	$ 885,128	$ 103,578	$ -	$ -	$ 51,955	$ (50,769)	$ 989,892
James Yates Gardens	151,639	16,572	-	-	8,383	(25,719)	150,875
Pinehurst	467,755	41,431	-	-	2,047	(905,100)	(393,867)
The Brambles	198,128	37,288	-	-	11,309	(36,724)	210,001
The Terraces	657,133	41,431	-	-	38,470	(5,866)	731,168
Michigan Square	339,956	-	-	-	19,254	(4,344)	354,866
Olympic View	69,000	124,294	-	-	5,177	(80,641)	117,830
Swanlea	153,876	29,002	-	-	9,597	-	192,475
Firgrove	105,858	66,290	-	-	5,371	(89,567)	87,952
Beechwood Park	97,989	99,435	-	-	7,221	(42,064)	162,581
Grey Oak Square	51,991	49,718	-	-	3,315	(37,379)	67,645
Willowdene	25,956	31,074	-	-	2,041	(11,371)	47,700
Rosewood	200,268	91,149	-	-	12,267	(61,256)	242,428
Gladstone	62,840	29,002	-	-	3,992	(14,603)	81,231
Camosun Place	75,844	16,572	-	-	4,387	(14,347)	82,456
Parkview	93,833	53,861	-	-	5,440	(50,655)	102,479
Carey Lane	3,590	45,574	-	-	-	(85,020)	(35,856)
Colquitz Green	(12,005)	41,431	-	-	-	(28,051)	1,375
Springtide	245,452	99,435	-	-	10,633	(217,252)	138,268
Greenlea	20,179	43,503	-	-	1,794	(20,925)	44,551
Arbutus View	(55,883)	47,646	-	-	-	(26,418)	(34,655)
Amberlea	287,166	91,149	-	-	17,582	(48,563)	347,334
Cloverhurst	62,455	20,716	-	-	3,958	(6,733)	80,396
Hamlet	2,473	20,716	-	-	-	(39,722)	(16,533)
Viewmont	204,739	74,576	-	-	13,033	(26,764)	265,584
Creekside	62,322	49,718	-	-	1,575	(119,104)	(5,489)
The Birches	196,536	116,008	-	-	10,769	(131,212)	192,101
Caledonia	18,454	-	-	-	1,052	-	19,506
The Heathers	187,272	53,861	-	-	10,791	(49,761)	202,163
Heron Cove	157,773	49,718	-	-	9,197	(42,563)	174,125
Castanea Place	452,970	122,222	-	-	25,182	(144,569)	455,805
Leblond Place	(8,027)	89,077	-	-	210	(65,662)	15,598
Rotary House	68,075	84,934	-	-	3,658	(92,735)	63,932
Cairns Park	(23,081)	12,429	-	-	-	(3,365)	(14,017)
Kings Place	123,991	72,505	-	-	4,446	(131,989)	68,953
Carillon Place	61,913	31,074	-	-	3,564	(29,860)	66,691
Brock Place	102,159	62,147	-	-	6,000	(55,925)	114,381
Harbour Lane	310,653	58,004	-	-	19,213	(5,204)	382,666
Tillicum Station	335,204	82,860	-	-	20,411	(37,148)	401,327
ILBC2 Agreement							
Parry Place	152,676	16,600	-	-	9,028	(5,185)	173,119
No Operating Agreement							
Village on the Green	(247,348)	78,719	-	-	-	(14,975)	(183,604)
Vergo	109,125	37,288	-	-	6,678	(21,225)	131,866
Portage Place	206,692	35,217	-	-	12,516	(9,422)	245,003
Campus View Court	175,197	24,859	-	-	10,406	(10,143)	200,319
Royal Oak Square	226,903	78,719	-	-	11,924	(114,140)	203,406
RHFP Agreement							
Millstream Ridge	364,431	114,048	-	-	22,545	(51,866)	449,158
Spencer Close	207,157	112,320	-	-	14,149	(30,190)	303,436
West Park	243,897	131,328	-	-	16,755	(31,224)	360,756
Hockley House	179,121	103,680	-	-	12,440	(25,442)	269,799
Prosser Place	-	37,454	-	-	960	(3,761)	34,653
IHI Agreement							
Westview	108,620	63,072	-	-	7,402	(27,952)	151,142

Changes in Replacement Reserve Fund

For the Year Ended December 31, 2023

	Balance at December 31 2022	Transfer from Rental Operating Fund	Transfer from Portfolio Stabilization Reserve	Contribution from BCHMC	Interest	Transfer to Capital Fund	2023
CHF Agreement							
Twenty-Seven Eighty-Two	-	50,112	-	-	1,336	(3,249)	48,199
	$ 8,168,045	$ 3,083,416	$ -	$ -	$ 479,433	$ (3,187,724)	$ 8,543,170

Changes in Portfolio Stabilization Reserves

For the Year Ended December 31, 2023

	Balance at December 31, 2022	Reimburse BCHMC	Transfer (to) Replacement Reserve Fund	Transfer from/(to) Rental Operating Fund	Transfer (to) Capital Fund	Balance at December 31, 2023
			(Schedule A)	(Schedule E)		
UOA						
CMHC	$ 8,325,280	$ -	$ -	$ 1,610,188	$ -	$ 9,935,468
BCHMC	(4,612,536)	-	-	(1,384,268)	(600,000)	(6,596,804)
Homes BC	(302,138)	-	-	(133,214)	-	(435,352)
	3,410,606	-	-	92,706	(600,000)	2,903,312
ILBC2						
Parry Place	(107,961)	-	-	(225,617)	-	(333,578)
RHFP						
Millstream Ridge	(243,125)	-	-	(265,260)	-	(508,385)
Spencer Close	461,697	-	-	213,300	-	674,997
West Park	67,033	-	-	83,984	-	151,017
Hockley House	(19,955)	-	-	34,908	-	14,953
Prosser Place	-	-	-	36,896	-	36,896
	265,650	-	-	103,828	-	369,478
IHI						
Westview	389,301	-	-	89,764	-	479,065
CHF						
Twenty-Seven Eighty-Two	5,477	-	-	(41,034)	-	(35,557)
NOA						
Portage Place	271,772	-	-	93,296	-	365,068
Campus View Court	211,817	-	-	82,290	-	294,107
Royal Oak Square	421,039	-	-	(79,392)	-	341,647
Village on the Green	792,087	-	-	95,550	-	887,637
Vergo	(736,812)	-	-	(124,842)	-	(861,654)
	959,903	-	-	66,902	-	1,026,805
	$ 4,922,976	$ -	$ -	$ 86,549	$ (600,000)	$ 4,409,525

Capital Assets

For the Year Ended December 31, 2023

	Completed	Land	Prepaid Lease	Buildings	Equipment and Other	Transfer from Replacement Reserve Fund	Total	Accumulated Amortization	2023	2022 Restated (Note 2)
In Operation										
Umbrella Agreement										
Oakwinds	Feb/85	$ -	$ 830,075	$ 3,150,168	$ 1,681,213	$ 50,769	$ 5,712,225	$ (5,212,455)	**$ 499,770**	$ 453,153
James Yates Gardens	Oct/84	103,200	-	430,232	314,251	25,719	873,402	(676,638)	**196,764**	175,625
Pinehurst	Feb/85	277,692	-	1,320,004	758,201	905,100	3,260,997	(1,989,853)	**1,271,144**	449,350
The Brambles	Jun/85	275,975	-	1,175,645	798,477	36,724	2,286,821	(1,824,892)	**461,929**	416,629
The Terraces	May/85	356,532	-	1,245,544	874,220	5,866	2,482,162	(1,974,512)	**507,650**	476,350
Michigan Square	Sep/85	784,763	-	1,912,803	1,526,030	4,344	4,227,940	(3,313,027)	**914,913**	927,599
Olympic View	Apr/86	900,000	-	3,720,552	2,508,287	80,641	7,209,480	(5,562,950)	**1,646,530**	1,560,531
Swanlea	Dec/85	230,215	-	849,385	520,253	-	1,599,853	(1,242,265)	**357,588**	348,735
Firgrove	Feb/86	480,000	-	1,975,200	1,242,994	89,567	3,787,761	(2,980,468)	**807,293**	699,002
Beechwood Park	Feb/86	888,000	-	2,317,623	3,127,791	42,064	6,375,478	(5,111,477)	**1,264,001**	1,310,677
Grey Oak Square	Apr/86	409,015	-	1,290,394	1,016,477	37,379	2,753,265	(2,167,160)	**586,105**	588,324
Willowdene	Sep/87	-	-	884,186	718,873	11,371	1,614,430	(1,505,392)	**109,038**	123,505
Rosewood	Oct/88	-	255,000	1,864,715	921,193	61,256	3,102,164	(2,795,007)	**307,157**	293,784
Gladstone	Jan/89	-	197,000	912,600	536,984	14,603	1,661,187	(1,498,594)	**162,593**	195,647
Camosun Place	Mar/89	-	108,000	489,700	247,237	14,347	859,284	(760,884)	**98,400**	111,400
Parkview	May/89	-	283,250	1,994,937	1,047,585	50,655	3,376,427	(2,930,807)	**445,620**	432,556
Carey Lane	Aug/89	-	283,250	1,443,751	1,004,774	85,020	2,816,795	(2,472,839)	**343,956**	350,765
Colquitz Green	Nov/89	-	160,250	1,504,000	848,107	28,051	2,540,408	(2,319,890)	**220,518**	273,041
Springtide	May/90	-	324,500	2,793,667	941,952	217,252	4,277,371	(3,593,581)	**683,790**	502,507
Greenlea	Feb/90	-	305,750	1,560,300	914,296	20,925	2,801,271	(2,470,689)	**330,582**	395,093
Arbutus View	Jul/90	-	370,250	1,592,750	1,111,150	26,418	3,100,568	(2,652,362)	**448,206**	530,753
Amberlea	May/90	-	447,501	2,578,479	1,008,409	48,563	4,082,952	(3,569,788)	**513,164**	601,054
Cloverhurst	May/90	-	197,000	651,500	276,134	6,733	1,131,367	(975,489)	**155,878**	183,174
Hamlet	Oct/90	-	152,000	803,000	417,221	39,722	1,411,943	(1,223,786)	**188,157**	193,782
Viewmont	Aug/91	-	402,140	2,378,046	880,400	26,764	3,687,350	(3,205,132)	**482,218**	568,097
Creekside	Apr/92	-	388,250	2,363,830	966,257	119,104	3,837,441	(3,232,003)	**605,438**	600,863
The Birches	Aug/92	-	675,000	3,684,874	1,019,369	131,212	5,510,455	(4,586,858)	**923,597**	965,703
The Heathers	Apr/93	-	436,279	1,974,683	508,942	49,761	2,969,665	(2,386,388)	**583,277**	627,670
Heron Cove	Oct/93	-	270,000	2,274,691	589,778	42,563	3,177,032	(2,642,322)	**534,710**	592,378
Castanea Place	Feb/95	-	1,277,000	4,841,879	1,292,107	144,569	7,555,555	(5,664,279)	**1,891,276**	1,988,625
Leblond Place	Sep/96	-	900,000	4,506,231	1,322,997	65,662	6,794,890	(5,033,908)	**1,760,982**	1,938,601
Rotary House	Nov/06	-	556,600	2,994,000	768,446	92,735	4,411,781	(3,094,436)	**1,317,345**	1,418,947
Cairns Park	Dec/96	-	240,000	415,314	232,004	3,365	890,683	(617,045)	**273,638**	301,365
Kings Place	N/A	-	-	-	763,001	131,989	894,990	(634,267)	**260,723**	177,413

Capital Assets

For the Year Ended December 31, 2023

	Completed	Land	Prepaid Lease	Buildings	Equipment and Other	Transfer from Replacement Reserve Fund	Total	Accumulated Amortization	2023	2022 Restated (Note 2)
Carillon Place	Jul/98	-	525,000	1,280,389	740,037	29,860	2,575,286	(1,773,632)	**801,654**	857,124
Brock Place	Jan/00	-	840,000	3,465,836	1,121,311	55,925	5,483,072	(3,623,714)	**1,859,358**	1,975,991
Harbour Lane	Oct/01	-	825,000	3,607,266	378,201	5,204	4,815,671	(2,993,471)	**1,822,200**	1,952,328
Tillicum Station	Jul/02	-	948,750	4,300,764	650,864	37,148	5,937,526	(3,563,628)	**2,373,898**	2,514,694
Building Envelope Remediation										
Amberlea	2008	-	-	2,367,415	-	-	2,367,415	(2,237,128)	**130,287**	260,577
Cloverhurst	2008	-	-	1,105,204	-	-	1,105,204	(1,044,758)	**60,446**	120,895
The Birches	2006			1,635,610			1,635,610	(1,405,522)	**230,088**	306,783
Heron Cove	2007	-	-	1,756,374	-	-	1,756,374	(1,436,849)	**319,525**	399,409
Castanea Place	2007	-	-	2,531,350	-	-	2,531,350	(1,878,342)	**653,008**	761,841
Leblond Place	2009	-	-	3,337,941	-	-	3,337,941	(2,313,896)	**1,024,045**	1,170,339
The Heathers	2016	-	-	1,258,358	-	-	1,258,358	(837,096)	**421,262**	526,578
ILBC2 Agreement										
Parry Place	Jun/08	1,400,000	-	4,794,269	271,379	5,185	6,470,833	(2,376,454)	**4,094,379**	4,247,440
RHFP Agreement										
Millstream Ridge	Feb/19	-	35,428,849	-	94,782	51,866	35,575,497	(3,001,015)	**32,574,482**	33,131,122
Spencer Close	Nov/20	-	30,257,329	-	26,039	30,190	30,313,558	(1,567,006)	**28,746,552**	29,228,675
West Park	Nov/20	-	31,253,897	-	28,855	31,224	31,313,976	(1,617,359)	**29,696,617**	30,193,810
Hockley House	Apr/21	-	25,409,982	-	9,224	25,442	25,444,648	(1,169,123)	**24,275,525**	24,677,751
Prosser Place	Apr/23	-	13,230,027	-	-	3,761	13,233,788	(165,751)	**13,068,037**	-
IHI Agreement										
Westview	May/20	-	-	14,937,177	66,403	27,952	15,031,532	(1,566,032)	**13,465,500**	13,883,917
CHF Agreement										
Twenty-Seven Eighty-Two	Nov/22	-	-	19,818,317	-	3,249	19,821,566	(674,491)	**19,147,075**	19,719,409
No Operating Agreement										
Village on the Green	May/84	910,171	-	2,186,695	1,708,677	14,975	4,820,518	(3,272,094)	**1,548,424**	1,623,385
Vergo	May/12	1,144,327	-	4,226,787	122,570	21,225	5,514,909	(1,535,305)	**3,979,604**	4,090,609
Portage Place	Aug/83	328,659	-	1,068,173	736,342	9,422	2,142,596	(1,645,060)	**497,536**	494,327
Campus View Court	Sep/83	341,224	-	764,934	616,476	10,143	1,732,777	(1,274,004)	**458,773**	450,617
Royal Oak Square	Mar/84	666,280	-	2,309,146	1,911,064	114,140	5,000,630	(3,768,802)	**1,231,828**	1,149,940
Buildings Under Construction		-	403,473	58,410,970	-	-	58,814,443	(208,463)	**58,605,980**	23,233,773
Office Equipment		-	-	-	601,815	-	601,815	(524,093)	**77,722**	22,961
Vehicles		-	-	-	147,052	-	147,052	(60,544)	**86,508**	-
		$ 9,496,053	$ 148,181,402	$ 199,057,658	$ 41,936,501	$ 3,187,724	$ 401,859,338	$ (139,455,075)	**$ 262,404,263**	$ 217,766,993

Capital Fund - Mortgages Payable

For the Year Ended December 31, 2023

Rental Property	Interest Rate	Renewal Date	Maturity Date	2023	2022
Umbrella Agreement					
Rosewood	2.610%		November 1, 2023	$ -	$ 110,325
Gladstone	2.610%		January 1, 2024	5,316	68,254
Camosun Place	1.860%		March 1, 2024	7,996	39,598
Parkview	1.690%		May 1, 2024	49,575	167,168
Carey Lane	1.690%		August 1, 2024	65,468	162,315
Colquitz Green	1.730%		November 1, 2024	87,245	180,894
Springtide	0.680%		May 1, 2025	223,354	379,730
Greenlea	0.690%		March 1, 2025	131,863	236,541
Arbutus View	0.680%		July 1, 2025	169,367	275,403
Amberlea	0.680%		May 1, 2025	238,605	405,659
Cloverhurst	0.680%		May 1, 2025	66,657	113,325
Hamlet	0.740%		October 1, 2025	97,472	150,088
Viewmont	1.120%		August 1, 2026	386,607	528,642
Creekside	2.600%		April 1, 2027	471,622	605,360
The Birches	2.550%		August 1, 2027	802,817	1,009,145
The Heathers	2.600%		April 1, 2028	513,260	623,759
Heron Cove	4.180%		October 1, 2028	595,491	709,654
Castanea Place	0.690%	June 1, 2025	February 1, 2030	1,822,804	2,111,169
Leblond Place - 1st mortgage	1.280%		September 1, 2031	1,553,387	1,742,867
Leblond Place - 2nd mortgage	2.150%	March 1, 2025	March 1, 2045	2,276,890	2,360,631
Rotary House	2.510%		March 1, 2028	807,209	984,988
Cairns Park	2.589%		December 1, 2031	238,678	265,205
Carillon Place	3.220%	June 1, 2024	July 1, 2033	770,688	838,339
Brock Place	2.840%	January 1, 2030	January 1, 2035	2,164,885	2,328,951
Harbour Lane	2.200%	October 1, 2026	October 1, 2036	2,220,506	2,368,747
Tillicum Station	3.265%	July 1, 2024	July 1, 2037	2,960,113	3,130,825
ILBC2 Agreement					
Parry Place	3.480%	May 1, 2024	May 1, 2043	3,140,823	3,251,814
RHFP Agreement					
Millstream Ridge	2.860%	February 1, 2029	March 1, 2054	32,490,978	33,159,724
Spencer Close	1.519%	January 1, 2031	February 1, 2056	28,495,405	29,180,152
West Park	1.519%	January 1, 2031	February 1, 2056	28,822,333	29,514,936
Hockley House	2.459%	June 1, 2031	July 1, 2056	24,384,028	24,865,357
Prosser Place	3.580%	July 1, 2033	June 1, 2058	9,358,545	-
IHI Agreement					
Westview	1.631%	September 1, 2030	September 1, 2055	6,950,886	7,116,837
No Operating Agreement					
Royal Oak Square	4.320%	July 1, 2027	July 1, 2057	4,419,405	4,477,146
Village on the Green	2.250%	October 1, 2024	October 1, 2039	1,617,869	1,702,077
Vergo	4.950%	September 1, 2027	September 1, 2042	3,332,937	3,438,895
CHF Agreement					
Twenty-Seven Eighty-Two	3.710%	January 1, 2033	January 1, 2058	13,751,500	-
				175,492,584	158,604,520
Principal Current Portion				(6,193,511)	(6,213,290)
Principal Renewal Portion				(8,233,676)	(595,492)
				$ 161,065,397	$ 151,795,738

Operating Fund - Rental Operations

For the Year Ended December 31, 2023

		Revenues					Expenditures and Interfund Transfers						
	Number of units	Tenant rent contributions	BCHMC Rental Subsidy	BCHMC fixed funding	Other	Total	Operating costs	Transfer to Replacement Reserve	Debt charges	Other Interfund Transfers	Total	Surplus (Deficit) from operations after interfund transfers	Allocation from/(to) Portfolio Stabilization Reserves
Umbrella Agreement													
CMHC													
Oakwinds	50	$ 701,853	$ -	$ -	$ 1,684	$ 703,537	$ 322,677	$ 103,578	$ -	$ -	$ 426,255	$ 277,282	$ (277,282)
James Yates Gardens	8	85,946	-	-	-	85,946	54,767	16,572	-	-	71,339	14,607	(14,607)
Pinehurst	20	311,677	-	-	1,521	313,198	128,610	41,431	-	-	170,041	143,157	(143,157)
The Brambles	18	274,116	-	-	1,467	275,583	135,526	37,288	-	-	172,814	102,769	(102,769)
The Terraces	20	277,881	-	-	1,162	279,043	130,707	41,431	-	-	172,138	106,905	(106,905)
Michigan Square	9	91,167	-	-	20	91,187	87,887	-	-	-	87,887	3,300	(3,300)
Olympic View	60	847,746	-	-	2,965	850,711	423,242	124,294	-	-	547,536	303,175	(303,175)
Swanlea	14	205,491	-	-	861	206,352	105,307	29,002	-	-	134,309	72,043	(72,043)
Firgrove	32	414,843	-	-	1,361	416,204	165,622	66,290	-	-	231,912	184,292	(184,292)
Beechwood Park	48	655,301	-	-	5,954	661,255	296,886	99,435	-	-	396,321	264,934	(264,934)
Grey Oak Square	24	343,947	-	-	2,509	346,456	159,014	49,718	-	-	208,732	137,724	(137,724)
	303	4,209,968	-	-	19,504	4,229,472	2,010,245	609,039	-	-	2,619,284	1,610,188	(1,610,188)
BCHMC													
Willowdene	15	135,328	-	-	371	135,699	172,372	31,074	158	-	203,604	(67,905)	67,905
Rosewood	44	258,934	-	71,247	1,588	331,769	276,205	91,149	101,605	-	468,959	(137,190)	137,190
Gladstone	14	141,299	-	63,462	25	204,786	105,718	29,002	63,964	-	198,684	6,102	(6,102)
Camosun Place	8	102,453	-	33,482	-	135,935	66,600	16,572	32,068	-	115,240	20,695	(20,695)
Parkview	26	246,930	-	114,992	549	362,471	185,087	53,861	119,503	-	358,451	4,020	(4,020)
Carey Lane	22	215,674	-	83,519	1,430	300,623	154,958	45,574	98,835	-	299,367	1,256	(1,256)
Colquitz Green	20	243,276	-	76,378	1,300	320,954	144,069	41,431	96,028	-	281,528	39,426	(39,426)
Springtide	48	265,469	-	113,296	1,996	380,761	357,437	99,435	158,468	-	615,340	(234,579)	234,579
Greenlea	21	225,738	-	42,429	1,229	269,396	148,033	43,503	105,977	-	297,513	(28,117)	28,117

Operating Fund - Rental Operations

For the Year Ended December 31, 2023

		Revenues					Expenditures and Interfund Transfers						
	Number of units	Tenant rent contributions	BCHMC Rental Subsidy	BCHMC fixed funding	Other	Total	Operating costs	Transfer to Replacement Reserve	Debt charges	Other Interfund Transfers	Total	Surplus (Deficit) from operations after interfund transfers	Allocation from/(to) Portfolio Stabilization Reserves
Arbutus View	23	230,760	-	49,371	181	280,312	134,510	47,646	107,576	-	289,732	(9,420)	9,420
Amberlea	44	314,903	-	113,244	1,563	429,710	333,002	91,149	169,288	-	593,439	(163,729)	163,729
Cloverhurst	10	70,026	-	41,179	95	111,300	76,388	20,716	47,292	-	144,396	(33,096)	33,096
Hamlet	10	144,395	-	49,703	-	194,098	94,458	20,716	53,547	-	168,721	25,377	(25,377)
Viewmont	36	212,831	-	161,862	1,393	376,086	263,517	74,576	147,215	-	485,308	(109,222)	109,222
Creekside	24	233,857	-	111,848	689	346,394	191,896	49,718	147,813	-	389,427	(43,033)	43,033
The Birches	56	329,367	-	163,923	2,344	495,634	303,781	116,008	229,534	-	649,323	(153,689)	153,689
The Heathers	26	157,795	-	108,553	1,996	268,344	174,314	53,861	125,324	-	353,499	(85,155)	85,155
Heron Cove	24	234,451	-	63,744	922	299,117	161,963	49,718	131,642	-	343,323	(44,206)	44,206
Castanea Place	59	428,305	-	183,142	1,295	612,742	361,868	122,222	302,000	-	786,090	(173,348)	173,348
Leblond Place	43	270,530	-	330,298	1,333	602,161	322,652	89,077	344,072	-	755,801	(153,640)	153,640
Rotary House	41	274,785	-	216,939	224	491,948	251,484	84,934	200,345	-	536,763	(44,815)	44,815
	614	4,737,106	-	2,192,611	20,523	6,950,240	4,280,312	1,271,942	2,782,254	-	8,334,508	(1,384,268)	1,384,268
Homes BC													
Cairns Park	6	52,577	-	23,745	-	76,322	49,138	12,429	33,045	-	94,612	(18,290)	18,290
Kings Place	35	406,973	-	165,424	2,516	574,913	507,826	72,505	-	-	580,331	(5,418)	5,418
Carillon Place	15	189,587	-	33,587	485	223,659	106,865	31,074	93,480	-	231,419	(7,760)	7,760
Brock Place	30	359,763	-	74,278	3,146	437,187	201,942	62,147	227,708	-	491,797	(54,610)	54,610
Harbour Lane	28	335,260	-	88,948	3,573	427,781	205,801	58,004	198,635	-	462,440	(34,659)	34,659
Tillicum Station	40	516,799	-	96,158	1,165	614,122	274,016	82,860	269,723	-	626,599	(12,477)	12,477
	154	1,860,959	-	482,140	10,885	2,353,984	1,345,588	319,019	822,591	-	2,487,198	(133,214)	133,214
	1,071	10,808,033	-	2,674,751	50,912	13,533,696	7,636,145	2,200,000	3,604,845	-	13,440,990	92,706	(92,706)

ILBC2 Agreement

Operating Fund - Rental Operations

For the Year Ended December 31, 2023

		Revenues					Expenditures and Interfund Transfers						
	Number of units	Tenant rent contributions	BCHMC Rental Subsidy	BCHMC fixed funding	Other	Total	Operating costs	Transfer to Replacement Reserve	Debt charges	Other Interfund Transfers	Total	Surplus (Deficit) from operations after interfund transfers	Allocation from/(to) Portfolio Stabilization Reserves
Parry Place	21	357,343	298,464	-	13,503	669,310	656,731	16,600	221,596	-	894,927	(225,617)	225,617
RHFP Agreement													
Millstream Ridge	132	2,259,614	-	-	43,915	2,303,529	855,160	114,048	1,599,581	-	2,568,789	(265,260)	265,260
Spencer Close	130	2,167,087	-	-	42,700	2,209,787	763,189	112,320	1,120,978	-	1,996,487	213,300	(213,300)
West Park	152	2,070,532	-	-	46,679	2,117,211	768,060	131,328	1,133,839	-	2,033,227	83,984	(83,984)
Hockley House	120	1,817,843	-	-	31,965	1,849,808	623,831	103,680	1,087,389	-	1,814,900	34,908	(34,908)
Prosser Place	51	381,156	-	-	22,285	403,441	267,629	37,454	263,774	(202,312)	366,545	36,896	(36,896)
	585	8,696,232	-	-	187,544	8,883,776	3,277,869	498,830	5,205,561	(202,312)	8,779,948	103,828	(103,828)
IHI Agreement													
Westview	73	821,530	-	-	19,348	840,878	407,866	63,072	280,176	-	751,114	89,764	(89,764)
CHF Agreement													
Twenty-Seven Eighty-Two	58	596,378	411,936	-	(705)	1,007,609	305,843	50,112	692,688	-	1,048,643	(41,034)	41,034
No Operating Agreement													
Portage Place	17	238,684	-	-	360	239,044	110,531	35,217	-	-	145,748	93,296	(93,296)
Campus View Court	12	184,023	-	-	1,230	185,253	78,104	24,859	-	-	102,963	82,290	(82,290)
Royal Oak Square	38	505,215	-	-	1,621	506,836	259,414	78,719	248,095	-	586,228	(79,392)	79,392
Village on the Green	38	502,770	-	-	4,265	507,035	211,462	78,719	121,304	-	411,485	95,550	(95,550)
Vergo	18	291,927	-	-	-	291,927	107,834	37,288	271,647	-	416,769	(124,842)	124,842
	123	1,722,619	-	-	7,476	1,730,095	767,345	254,802	641,046	-	1,663,193	66,902	(66,902)
	1,931	$23,002,135	$ 710,400	$ 2,674,751	$ 278,078	$26,665,364	$13,051,799	$ 3,083,416	$10,645,912	$ (202,312)	$ 26,578,815	$ 86,549	$ (86,549)

Appendix C

CAPITAL REGION HOUSING CORPORATION
2023 ANNUAL REPORT



Greater Victoria,
British Columbia, Canada
Year ended December 31, 2023

CRD | CRHC

TERRITORIAL ACKNOWLEDGEMENT

The CRHC conducts its business within the traditional territories of many First Nations, including but not limited to BOḰEĆEN (Pauquachin), MÁLEXEŁ (Malahat), P'a:chi:da?aht (Pacheedaht), Pune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, SȾÁUTW̱ (Tsawout), T'Sou-ke, W̱JOŁEŁP (Tsartlip), W̱SIKEM (Tseycum), and xʷsepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.



Cover image: Prosser Place, *Central Saanich*

Back cover image: Michigan Square, *James Bay*

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Zac de Vries

Board Chair
Capital Region Housing Corporation

Message from the Board Chair

While the Capital Region Housing Corporation (CRHC) continues to make a positive impact in our community, the housing crisis is still very much with us.

We continue to add new homes to the housing inventory to deliver affordable, attractive, inclusive, sustainable housing. In 2023, the average rent for a CRHC two-bedroom home was $1,301 per month, which is $538 per month less than the Canada Mortgage and Housing Corporation (CMHC) average for the region, and up to $1,417 less compared to the private market.

We are continuing to review the condition and capacity of our current housing stock and plan for the future. Investing in existing buildings, like our Carey Lane building envelope remediation, or replacing assets like our Village on the Green and Campus View developments, are examples of critical projects that support affordable housing in the region.

The energy and initiative of the CRHC gives me hope that we will meet the challenges of our housing crisis.



Ted Robbins

Chief Administrative Officer
Capital Regional District
Capital Region Housing Corporation
Capital Regional Hospital District

Message from the Chief Administrative Officer

2023 saw continued progress on the Capital Regional District (CRD) Board's goal to increase the number of affordable and inclusive homes across the region.

The Capital Region Housing Corporation (CRHC) expanded into Central Saanich with the 51-home Prosser Place, while two new projects, Michigan Square and Caledonia, made significant steps towards completion, and two more, Village on the Green and Campus View, moved into the advanced project planning phase.

The CRHC has seen significant growth over the last number of years, adding 645 units since 2019. This growth has added about 129 new affordable rental units per year in the region and represents annual unit growth of about eight per cent. The CRHC is going into 2024 owning and operating 52 buildings and 1,931 homes. Throughout this growth, the CRHC continues to ensure its tenants and their needs remain its key focus.

We look toward 2024 with optimism and that through further partnerships and collaboration, we will continue to make progress on this critical Board goal.



Caledonia redevelopment - Fernwood

The CRD and its subsidiary the CRHC, continue to demonstrate a willingness to be innovative, an ability to partner, and to critically focus on service delivery across the capital region through the provision of affordable housing.

CRHC Profile

Affordable housing is key to a strong economy and healthy region, and the Capital Region Housing Corporation (CRHC) provides 1,931 homes in 52 buildings across eight municipalities.

The CRHC is a wholly owned subsidiary of the Capital Regional District (CRD) and is the largest non-profit housing provider on Vancouver Island, providing homes for almost 4,000 tenants.

The projects recently completed, under development, and planned for the future are highlighted on the following pages listed as 2023 Progress.

The CRHC will continue to develop more homes to meet our community's current and future housing needs. The investments made today have a legacy impact across the region that is focused on those households currently struggling with housing affordability and experiencing, or are at-risk, of homelessness.

Vision

As leaders in non-profit housing in the capital region, the CRHC delivers affordable, attractive, inclusive, sustainable housing.

Mission

The CRHC's mission is to develop and manage affordable housing within the capital region for low to moderate income households.



CRHC Tenant Services Team

Staff Profile: Tenant Services - the Heart of Housing

While it can be said that all divisions of the CRHC put their hearts into their work, Tenant Services (TS) is where potential tenants have their first meetings with the Corporation, and where at the end of their interaction, there's usually a renewed sense of hope in finding a home.

The TS team, comprised of "Tenant Assists", have a wide background of customer service and face-to-face public experience, but followed their heart to work in social housing. They come from social services, other housing providers but all are in unison in identifying the necessity to make a difference in another's life as a key motivator in working at the CRHC.

Sorting out the complexities of finding a home in a difficult housing market and recognizing that successfully finding someone a new home could put that person's life on a new, positive trajectory, is something they say they keep in mind with every interaction.

It is that sense of social responsibility, expert customer service and respect that the TS team brings to the job every day. From the practical elements of providing resource information like saving tenants money on household insurance, to offering advice of helpful local resources, to offering long term hope of housing, the TS team ensures tenants have the support and assistance they need.

The stress of trying to find adequate and safe housing with a predictable rent is overwhelming to most, and the relief felt when that search is successful with the assistance of a TS team member is rewarding. Whether it is huge sighs of relief, or an impassioned "thank you", the reaction to the resolution of a housing struggle is something that the TS team never tire of hearing, and an accomplishment they continually strive towards.

Tenant Advisory Committee

The Tenant Advisory Committee (TAC) reports through the CRD's Hospitals and Housing Committee to advise the CRHC Board of Directors on tenant policies and programs and may include up to eight tenant representatives. The purpose of the TAC is to promote effective communication, engagement, and collaboration between the CRHC and its tenants.

2023 Progress

UNDER DEVELOPMENT



MICHIGAN SQUARE — *under development*

Located in Victoria's James Bay neighbourhood, Michigan Square is a redevelopment project which will replace the three existing apartment buildings on Michigan Street with two, four-storey apartment buildings to provide 97 affordable homes.



CALEDONIA — *under development*

Located in Victoria's Fernwood neighbourhood, Caledonia is a redevelopment project which will feature 158 affordable rental housing homes within two apartment and three townhouse buildings.



PANDORA — *under development*

Pandora is a unique collaboration between the City of Victoria, the Province through BC Housing, and the CRHC to build 205 new, non-market rental homes, with 158 operated by the CRHC. A new community programming space, and child care spaces, are planned for the development.



CAMPUS VIEW — *under development*

Located in Saanich near the University of Victoria, Campus View is a redevelopment project which will replace the existing 12 townhomes with 119 new homes in two apartment style buildings.



VILLAGE ON THE GREEN — *under development*

Located in Victoria's Fernwood neighbourhood, Village on the Green is a redevelopment project which will feature 140 affordable rental homes within two apartment style buildings.

NEW



VERDIER — *NEW development*

Located in Central Saanich's Brentwood Bay, Verdier is a proposed development that combines affordable housing with a planned daycare space. In the early development stages, construction is expected to start in 2025.

COMPLETED



PROSSER PLACE — *completed*

In 2023 the CRHC celebrated affordable housing in its eighth municipality – Central Saanich. Prosser Place is a 51-home affordable housing building which opened in late spring of 2023. Operated by the CRHC it includes 41 units for tenants with low to moderate incomes. Ten units are rented at provincial income assistance rates under the Regional Housing First Program (RHFP). The project aligns with the Saanichton Village Design Plan, a vision to include density and diversity of housing, accommodating people throughout their lifespan.

The project includes:

- 8 studio units
- 31 1-bedroom units
- 12 2-bedroom units
- Underground parking
- Close proximity to Centennial Park and nearby shops and services
- Convenient access to public transportation
- BC Energy Step Code – Step 2 design and constructon

CRHC Overview

Properties

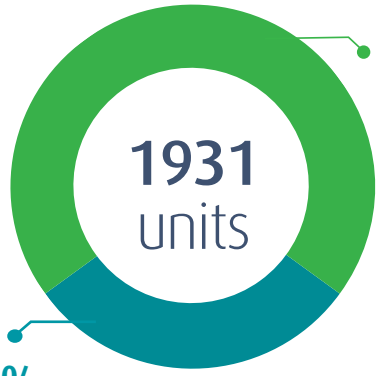
8 Municipalities

52 Complexes

$676M Insured Value

1931 Units

CRHC Rental Rates

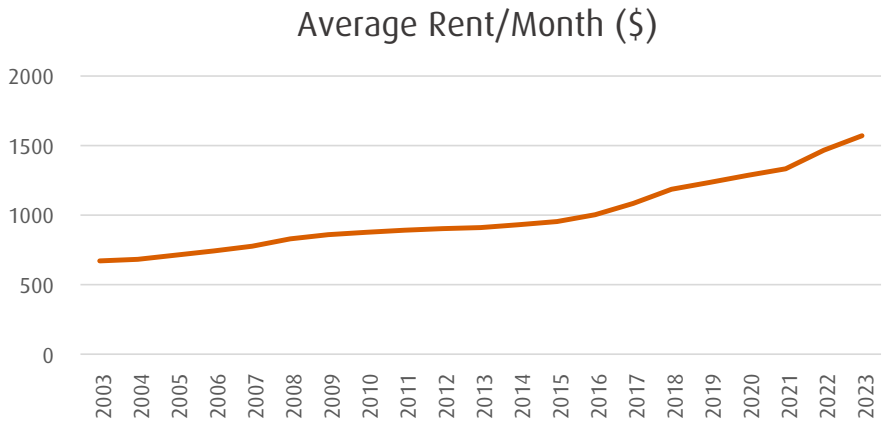


70% Rent geared to income

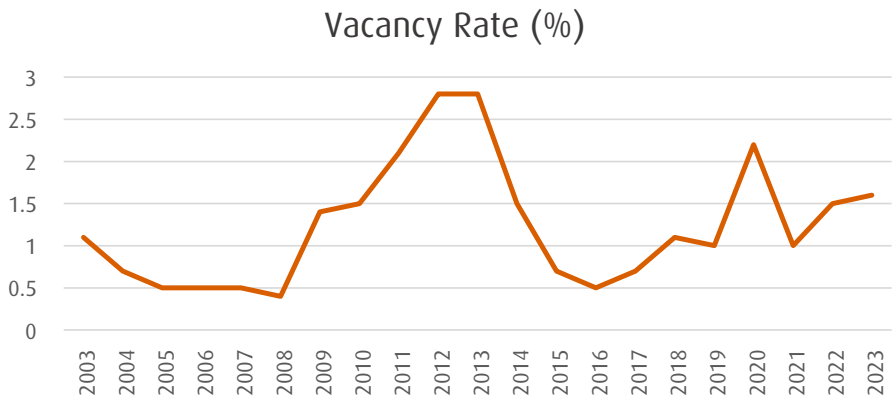
30% Affordable rent

Community Need

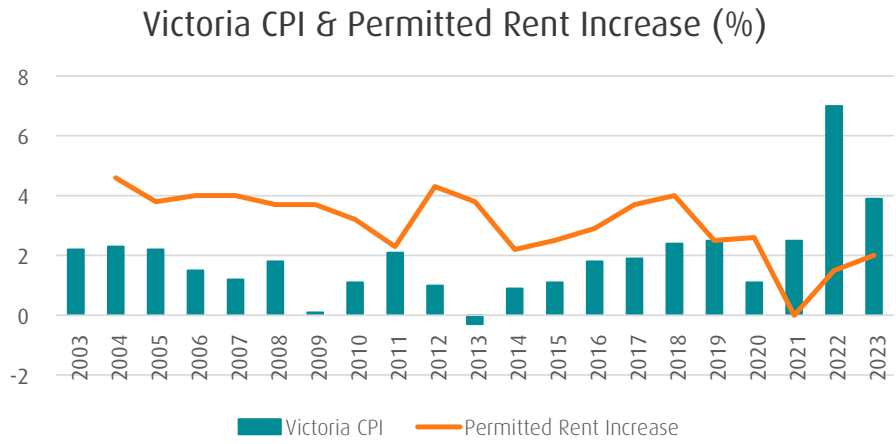
CRHC Regional Operating Environment



In 2003, an average two-bedroom apartment in Victoria was about $789 a month. That escalated to about $1,000 in 2016 but has steeply climbed to more than $1,800 a month in 2023.

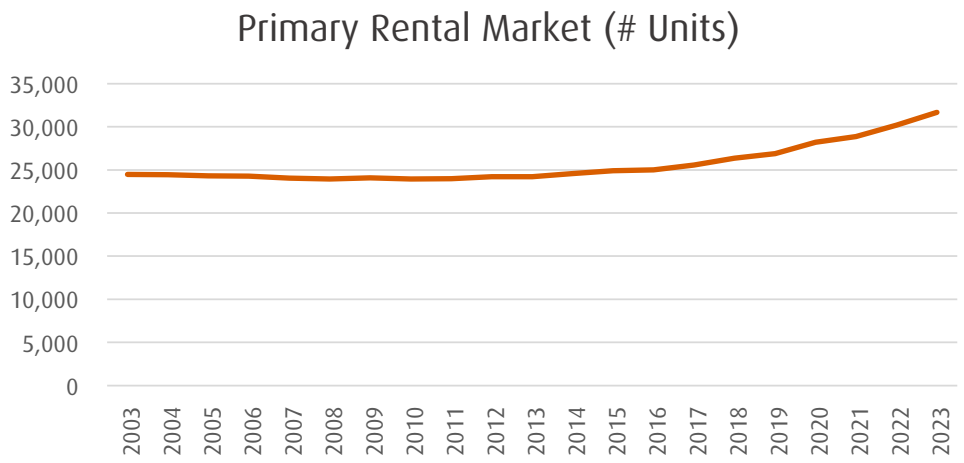


Over a 20-year span, vacancy rates have remained stubbornly tight ranging from as low as 0.4% in 2008 to a peak of 2.8% in 2013, and closing out 2023 at 1.6%.



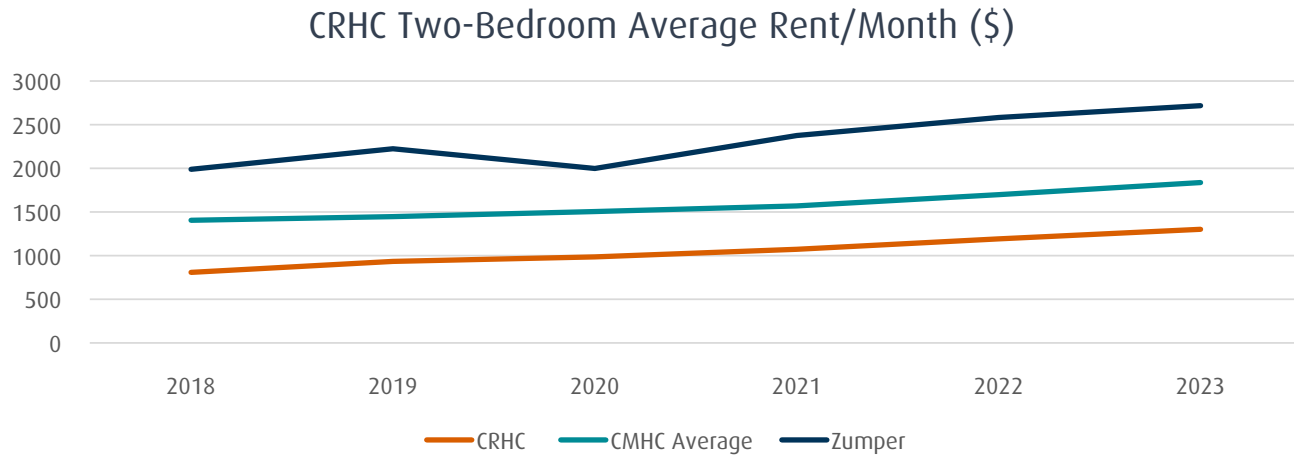
Permitted rent increases were below the Consumer Price Index (CPI) level for Victoria in 2021, 2022 and 2023, creating a compounding impact that places a downward pressure on revenue while the Corporation continues to experience an upward pressure on expenditures.

Rental Stock



Over the last 20 years the Primary Rental Market has seen overall growth of just 29% or less than an average of 1.5% per year, creating only 7,216 rental units in the capital region.

Average Rent for Two-Bedroom Apartments

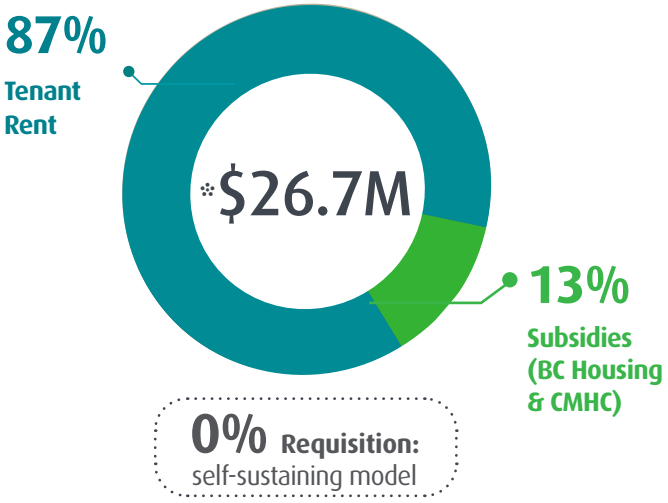


In 2023, the average cost of a CRHC two-bedroom unit was $1,301/month, which is $538/month less than the CMHC average for the region. When compared to average 2-bedroom units in the private rental market (**Zumper market rental website) , CRHC 2-bedroom units are $1,417/month less.

**Zumper, December 2023

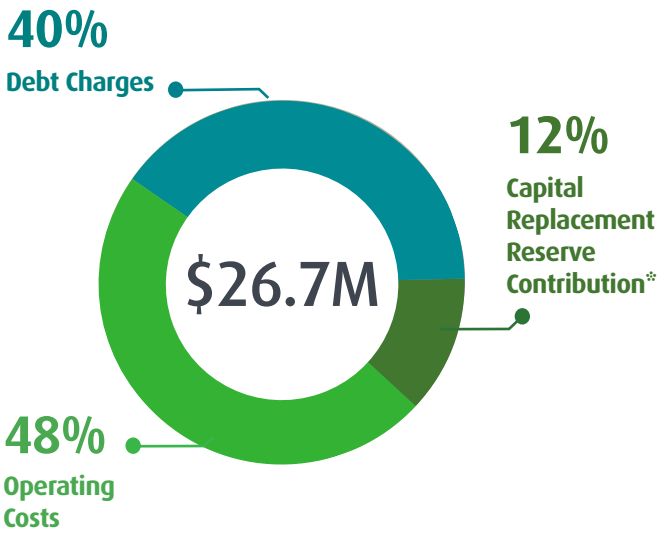
2023 Financial Highlights

Operating Income

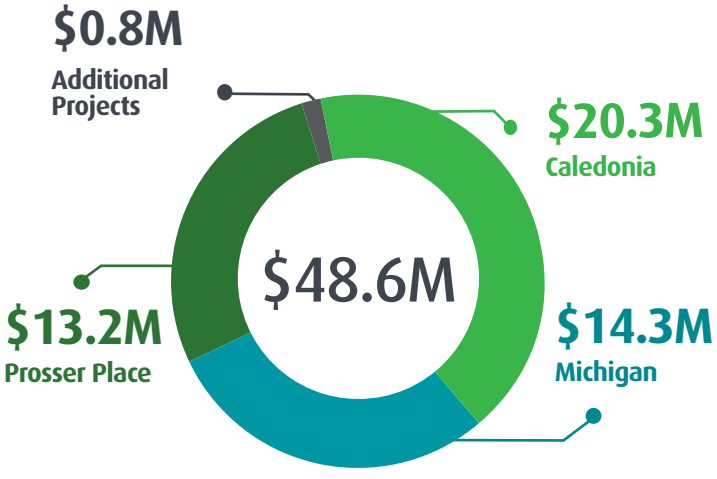


*Based on 2023 Audited Financial Statements. Includes transfers from Corporate Stabalization Reserve and capital project surpluses.

Operating Expenses



Capital Projects



*Includes pre-development and post-construction costs.

Routine Capital Improvements



$3.2M

*Routine capital improvements are investments made to replace building components and appliances and may include such items as roof repair, siding replacement, access and egress improvements, paint, windows and specific units appliance repair/replacement.



CRD | CRHC

625 Fisgard Street
Victoria, BC V8W 1R7
250.388.6422

www.crd.bc.ca/housing
X: @crd_bc
Facebook: Capital Regional District

Making a difference...together

REPORT TO THE CAPITAL REGIONAL DISTRICT BOARD
MEETING OF WEDNESDAY, MAY 08, 2024

SUBJECT **Capital Regional District 2023 Annual Report**

ISSUE SUMMARY

To present the Capital Regional District 2023 Annual Report.

BACKGROUND

The Capital Regional District (CRD) 2023 Annual Report, attached as Appendix A, provides a profile of CRD services and the progress and accomplishments in advancing Board and Corporate priorities, together with service delivery results and financial highlights. The report also features key activities of the CRD's other corporate entities, the Capital Regional Hospital District (CRHD) and Capital Region Housing Corporation (CRHC), and the many CRD Board-appointed Commissions.

The report is prepared to give stakeholders information about the CRD's activities and performance and together with the approval of the 2023 financial statements, the prior year will be considered closed. This report is filed with the provincial government together with the detailed financial statements, circulated to stakeholders and made public through the CRD website, and submitted to the Government Finance Officers Association to share our reporting and performance.

2023 was the first full year of the Board's four-year term and the report provides an opportunity to share the progress on the Board's Strategic Priorities for 2023 – 2026, advancing actions and initiatives related to five regional priority areas: Transportation, Housing, Climate Action & Environment, First Nations, and Governance, and the Community Needs identified in the CRD 2023 – 2026 Corporate Plan.

In 2023, in addition to providing services that are essential to this region, some key initiatives completed include establishing the Salt Spring Island Local Community Commission that brought more on-island elected representation to oversee island-wide service delivery, hosting the 2023 Forum of all Councils that brought First Nations and local governments together, advancing five affordable rental housing projects in the region and completing the CRHC's Prosser Place project, acquiring over 20 hectares of park land to expand the regional parks system, and adopting the Regional Parks and Trails Strategic Plan.

The information contained in the report provides a sense of the breadth and scope of what we do on a daily basis and demonstrates how the CRD strives to contribute to a vibrant, livable, and sustainable region for our residents and visitors. through an efficient, effective, and open organization.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT(S)

Appendix A: Capital Regional District 2023 Annual Report

Appendix A

CAPITAL REGIONAL DISTRICT
2023 ANNUAL REPORT



Greater Victoria,
British Columbia, Canada
Year ended December 31, 2023

Making a difference...together

TERRITORIAL ACKNOWLEDGEMENT

The CRD conducts its business within the traditional territories of many First Nations, including but not limited to BOḰEĆEN (Pauquachin), MÁLEXEŁ (Malahat), P'a:chi:da?aht (Pacheedaht), Pune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, SȾÁUTW̱ (Tsawout), T'Sou-ke, W̱JOŁEŁP (Tsartlip), W̱SIKEM (Tseycum), and xʷsepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.



PHOTO ACKNOWLEDGEMENT

The photos in this document were taken within the boundaries of the Capital Regional District. Thank you to the wonderful local, professional and staff photographers that contributed photos to this report.

Cover: Westshore view to core area

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The Capital Regional District

The Capital Regional District (CRD) is the regional government for 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands, serving more than 450,000 people. The capital region spans the Territory of 19 First Nations.

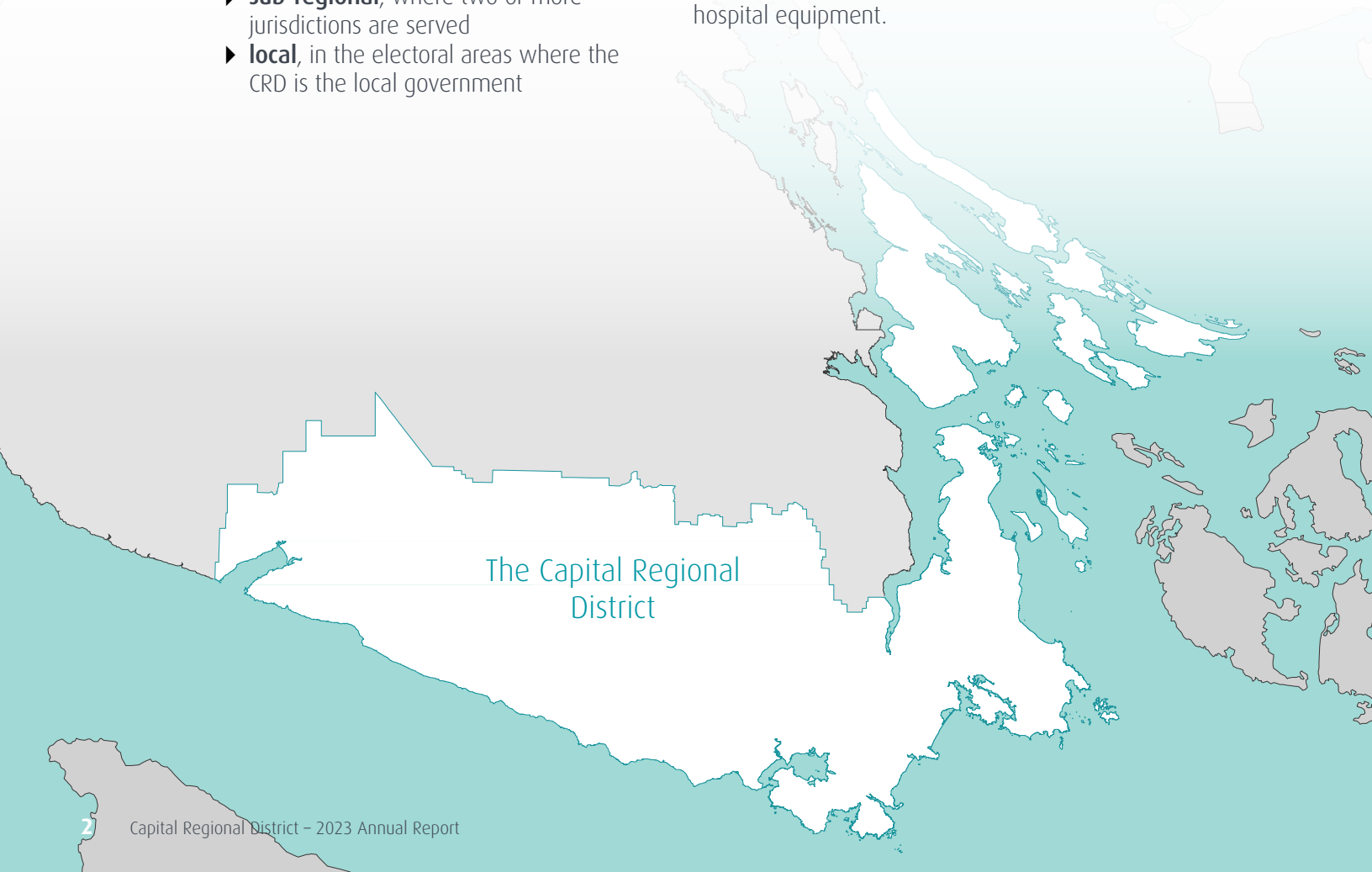
The CRD plays a key role in providing services that can be delivered efficiently and effectively through region-wide or shared service delivery models. These include the regional water supply, solid waste, wastewater treatment, regional parks, housing, 911 call answer and recreation facilities.

The CRD has more than 200 service, infrastructure and financing agreements with municipalities and electoral areas to deliver services in the following categories:

- **regional**, where all municipalities and electoral areas are served
- **sub-regional**, where two or more jurisdictions are served
- **local**, in the electoral areas where the CRD is the local government

The CRD works collaboratively with First Nations and other orders of government and has direct relationships with individuals, businesses, organizations, institutions and communities that access regional utilities and services.

The CRD owns and operates the Capital Region Housing Corporation (CRHC), a non-profit provider of approximately 2,000 affordable rental homes throughout the region, and administers the Capital Regional Hospital District (CRHD). The CRHD invests in traditional health care services and provides capital funding for health care infrastructure, such as health facilities and hospital equipment.





OUR ORGANIZATION

The CRD is the regional government for 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands.

Message from the Board Chair

As we reflect on the past year, I am proud to share with you the remarkable progress made by the Capital Regional District (CRD). When we began this term as the CRD Board, we identified five key priority areas for our region: transportation, housing, climate action & environment, First Nations, and governance. These priorities reflect our shared goals for a livable, sustainable, and resilient region and have shaped our work over the last year.

The CRD Board adopted a revised vision statement and the 2023–2026 Board Strategic Priorities in March 2023. The updated statement reflects our commitment to collaboration, creativity, and decisive leadership in service delivery and emphasizes our dedication to inclusivity. We aim to ensure that all residents have access to a fulfilling quality of life and a healthy environment, now and in the future.

I am very proud of the progress in each of the Board Priority areas, including our commitment to increase affordable housing. In order to build and operate more non-market housing through the Capital Region Housing Corporation (CRHC), we increased the amount we are able to borrow for housing projects.

We explored options to ensure people have access to convenient, green and affordable ways to travel through the region. Our regional parks system was expanded with the acquisition of over 20 hectares of park land.

The 2023 Forum of all Councils brought First Nations and local governments together to strengthen government-to-government relationships and co-create new ways of working together that respect Indigenous self-determination.



We also established the Salt Spring Island Local Community Commission, a unique form of governance under the *Local Government Act*, with commissioners elected from the local community.

These examples represent just a few of the many strides we have made to advance our priorities over the past year. Together, we will continue to address emerging challenges, seize opportunities and build a resilient, vibrant capital region.

Colin **PLANT**
Chair
Capital Regional District Board

Message from the Chief Administrative Officer

I am pleased to share our 2023 Annual Report, which highlights the collective efforts, achievements, and aspirations of our employees. I am grateful for their tireless dedication in advancing our Board and Corporate Priorities while continuing to deliver essential services and programs to our diverse and growing population.

A fully functional organization, one that effectively drives the Board's priorities, hinges on having an engaged and productive staff who consistently fulfill their potential. We have recommitted to our Equity, Diversity and Inclusion principles, embedding them in our everyday practices. It is vital that every employee is celebrated and valued for their unique strengths and experiences. Our first Employee Experience Survey provided a valuable opportunity for all employees to share their perspectives on working at the CRD. The results have offered a deeper understanding of our work environment, organizational climate, and engagement levels. Based on feedback from the survey we are evolving our organizational structure to improve service consistency and create a common vision for how the organization will grow and deliver service in future years.

All this work behind the scenes allows us to better meet the region's community needs and deliver on the Board's Mission, Vision and Priorities. In 2023, we progressed numerous initiatives supporting these priorities.

We are proud to be one of several partners to launch the South Island Indigenous Business Directory, which provides new opportunities for relationships, growth, and partnership between community members and the many Indigenous-owned businesses across the region.

We finalized and adopted our Regional Parks and Trails Strategic Plan in July 2023. This plan defines our vision for the regional parks system and will guide our approach to regional parks and trails over the next 10 years.



We also created community-specific evacuation guides to help Electoral Area residents and visitors prepare for emergency events. These guides include maps of tsunami hazard zones, assembly areas and other important emergency information.

I am proud the CRD was recognized with a Canada's Safest Employers Excellence Award, as it shows that our efforts to create a safe environment for our employees is working. We are encouraged to continue fostering a culture of safety and emphasizing its importance in our policies, programs and practices.

I look forward to working with our diligent staff, partners, and Board in serving the needs of residents, now and into the future. I am confident in the continued progress we will make to benefit our region.

Ted **ROBBINS**
Chief Administrative Officer
Capital Regional District
Capital Region Housing Corporation
Capital Regional Hospital District

Board of Directors

2023–2026 Term

The CRD is governed by a 24-member Board of Directors, supported by more than 75 committees and commissions. The Board is composed of one or more elected officials from each of the municipalities and three electoral areas within the CRD's boundaries. Each municipality has one director for every 25,000 people (or portion thereof). Each electoral area is represented by one director.

The directors also serve on the Capital Region Housing Corporation Board and the Capital Regional Hospital District Board.

Chair Colin **PLANT**, Saanich
Vice-Chair Marie-Térèse **LITTLE,** Metchosin

Chair Zac **DE VRIES**, Saanich
Vice-Chair Jeremy **CARADONNA**, Victoria

Chair Kevin **MURDOCH**, Oak Bay
Acting Vice-Chair Cliff **MCNEIL-SMITH**, Sidney

Directors

front row
- Peter **JONES**, North Saanich
- Doug **KOBAYASHI**, Colwood
- Colin **PLANT**, Saanich
- Gary **HOLMAN**, Salt Spring Island Electoral Area
- Marie-Térèse **LITTLE**, Metchosin
- Maja **TAIT**, Sooke

centre row
- Kevin **MURDOCH**, Oak Bay
- Barbara **DESJARDINS**, Esquimalt
- Cliff **MCNEIL-SMITH**, Sidney
- Ai **WICKHEIM,** Juan de Fuca Electoral Area
- Marianne **ALTO**, Victoria
- Susan **BRICE**, Saanich
- Judy **BROWNOFF**, Saanich
- Lillian **SZPAK**, Langford
- Chris **COLEMAN**, Victoria

back row
- Paul **BRENT,** Southern Gulf Islands Electoral Area
- Ken **WILLIAMS**, Highlands
- Scott **GOODMANSON**, Langford
- Sid **TOBIAS**, View Royal
- Zac **DE VRIES**, Saanich
- Ryan **WINDSOR**, Central Saanich
- Dave **THOMPSON**, Victoria
- Dean **MURDOCK**, Saanich
- Jeremy **CARADONNA**, Victoria



Executive Leadership Team

The Executive Leadership Team (ELT) consists of the Chief Administrative Officer, Chief Financial Officer, Corporate Officer, and the General Managers, who are all Officers of the Corporation.

These Officers direct the departments and divisions across the Corporation and work collaboratively to:

- Consider strategic issues related to the organization
- Discuss solutions to organizational challenges
- Make decisions effectively on behalf of the organization and in the interests of the CRD Board
- Provide direction on corporate-wide policies, systems, projects and initiatives
- Ensure our employees are supported and empowered to achieve organizational goals

The success of the organization is measured by how well the entire organization performs in effectively and efficiently delivering services to the residents of the region and in its ability to advance Board and Corporate Priorities within an approved Board budget. It is a key responsibility of the ELT to ensure that the actions, directions and policies of management are aligned to achieve these objectives, to strengthen our foundational core and to ensure we have an engaged workforce that is valued and supported.

Executive Leadership Team

(from left to right)

- Larisa **HUTCHESON**, General Manager, Parks & Environmental Services
- Kevin **LORETTE**, General Manager, Planning & Protective Services
- Ted **ROBBINS**, Chief Administrative Officer
- Alicia **FRASER,** General Manager, Integrated Water Services
- Nelson **CHAN**, General Manager, Finance & Technology & Chief Financial Officer
- Kristen **MORLEY**, General Manager, Corporate Services & Corporate Officer



Governance Framework

The CRD is governed by a 24-member Board of Directors, which serves as a political forum and a vehicle for advancing the interests of the region as a whole. The Board is composed of one or more elected officials from each of the local governments within the CRD's boundaries:

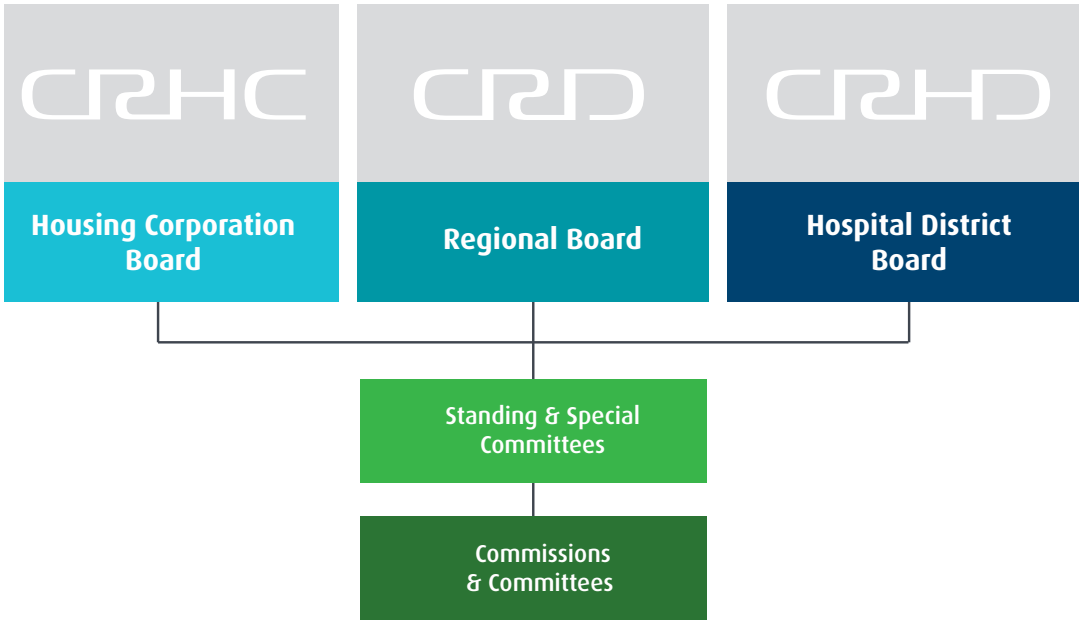
- For areas outside municipal boundaries (electoral areas), citizens elect one director to the Board during general local elections.
- Each municipal council appoints one or more elected officials to the Board. The formula is one director for every 25,000 population (or portion thereof).

All members also sit on the Capital Region Housing Corporation (CRHC) Board and the Capital Regional Hospital District (CRHD) Board. Board meetings are held once a month and are open to the public.

Collectively, these Boards establish the CRD vision, set priorities and provide direction on service delivery, collaboration and partnerships. Various committees and commissions oversee delivery of services and report to the CRD, CRHC and CRHD Boards.

The chair and vice-chair of each regional board are elected from among the directors at an inaugural meeting held each November. Next, the regional board chairs define various committees and their membership.

To make decisions, directors must vote. The CRD uses special voting rules based on population and the combination of participants in each service. Some votes are unweighted (one vote per director) and others are weighted based on population (one vote per 5,000 population or portion thereof).





OUR PROFILE

The CRD has more than 200 service, infrastructure and financing agreements with municipalities and electoral areas to deliver services.


Mount Maxwell, Salt Spring Island


Campbell Bay, Mayne Island, HELI,SET dancers. Photo: H. Epperson


Hope Bay, Pender Island

A Livable, Sustainable and Resilient Region

Encompassing 237,000 hectares, including 70 Gulf Islands, the capital region is a sought-after destination, renowned for its mild climate, beautiful coastlines and natural ecosystems.

The region offers a balance between rural and urban lifestyles, including the farming communities in North Saanich, the evergreen hills of Sooke, the artisan networks on the Gulf Islands and the government and business hub of Victoria, the province's capital city. It is home to the Canadian Pacific Naval Fleet and multiple post-secondary educational institutions, including Camosun College, Royal Roads University and the University of Victoria.

Tourism, technology, health care and government services are key industries in the region, a place where residents and tourists can enjoy the Salish Sea, old-growth rainforests, outdoor adventure and a vibrant arts and culture scene.

The region has experienced a steady increase in population and sustained growth in housing starts and property values. The CRD will continue to work with local residents, community groups, businesses, First Nations, major institutions, municipalities and other partners to ensure we continue to meet the needs of this resilient and growing region through major infrastructure development and services.

A Livable, Sustainable & Resilient Region

457,478
Residents
up 3.3% over 2022

3.7%
Inflation Rate
vs 3.9% nationally

$2.1B
Building Permits

4,992
Housing Starts
in the Victoria CMA

$1,268,000
Price of single family dwelling in CRD
up 2.5% over 2022



*Census Metropolitan Area

Supporting and Responding to the 2023–2026 Community Needs

In hearing and responding to the concerns of constituents, the CRD Board identified 16 community needs, grouped into five categories, to focus and drive work. Through strategic and corporate planning, the strategic course for the CRD is set over a four-year mandate to respond to community needs and to deliver on the Board's mission, vision and priorities and the organization's ongoing service mandates and approved plans.

The CRD budget cycle ensures that we respond to changes in our external and internal environments. The Executive Leadership Team identifies projects that enhance our corporate capacity to ensure we are well-positioned to meet evolving Board and community needs. Each spring, the corporate annual report is presented to demonstrate progress, capture major accomplishments and summarize financial highlights.

Five categories of community needs were identified to guide the work the organization delivered:

- Utility Services
- Community Services
- Corporate Services
- Government Relations
- Local Government





COMMUNITY NEEDS

For each community need identified in our Corporate Plan, the CRD Board approved an outcome statement to capture what we envision our work will accomplish.

Utility Services

Services that are essential to residents' needs and/or mandated by regulation.

Wastewater

Efficient and effective management of the region's wastewater

Water

Safe drinking water and a resilient water supply

Solid Waste & Recycling

Minimize waste disposal and maximize waste diversion



Water main repair

Community Services

Services that address the needs of residents and build a liveable, sustainable region.

Transportation

Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability

Housing & Health

Residents have access to affordable housing and improved health facilities that enhances livability

Climate Action

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts

Regional Parks

Additional land acquisitions and increased access to parks and recreational trails that respect Indigenous culture and conservation values

Planning

Keep approved plans current and monitor for effectiveness

Safety & Emergency Management

Protect public safety and cooperatively mitigate against, prepare for, respond to and recover from emergencies

Arts & Recreation

Residents have access to appropriate and affordable arts and recreation opportunities that enhance quality of life

Corporate Services

Services that support an effective and efficient organizational administration.

People

An organization staff are proud to be a part of

Open Government

Coordinated and collaborative governance, and leadership in organizational performance and service delivery

Business Systems & Processes

Leading systems and policies to respond to best practices, comply with legislative requirements and deliver sustainable budgets



Information Technology helpdesk

Government Relations

Effective and coordinated advocacy.

Advocacy

Effective and coordinated advocacy

First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals



P'a:chi:da?aht (Pacheedaht) Memorandum of Understanding signing

Local Government

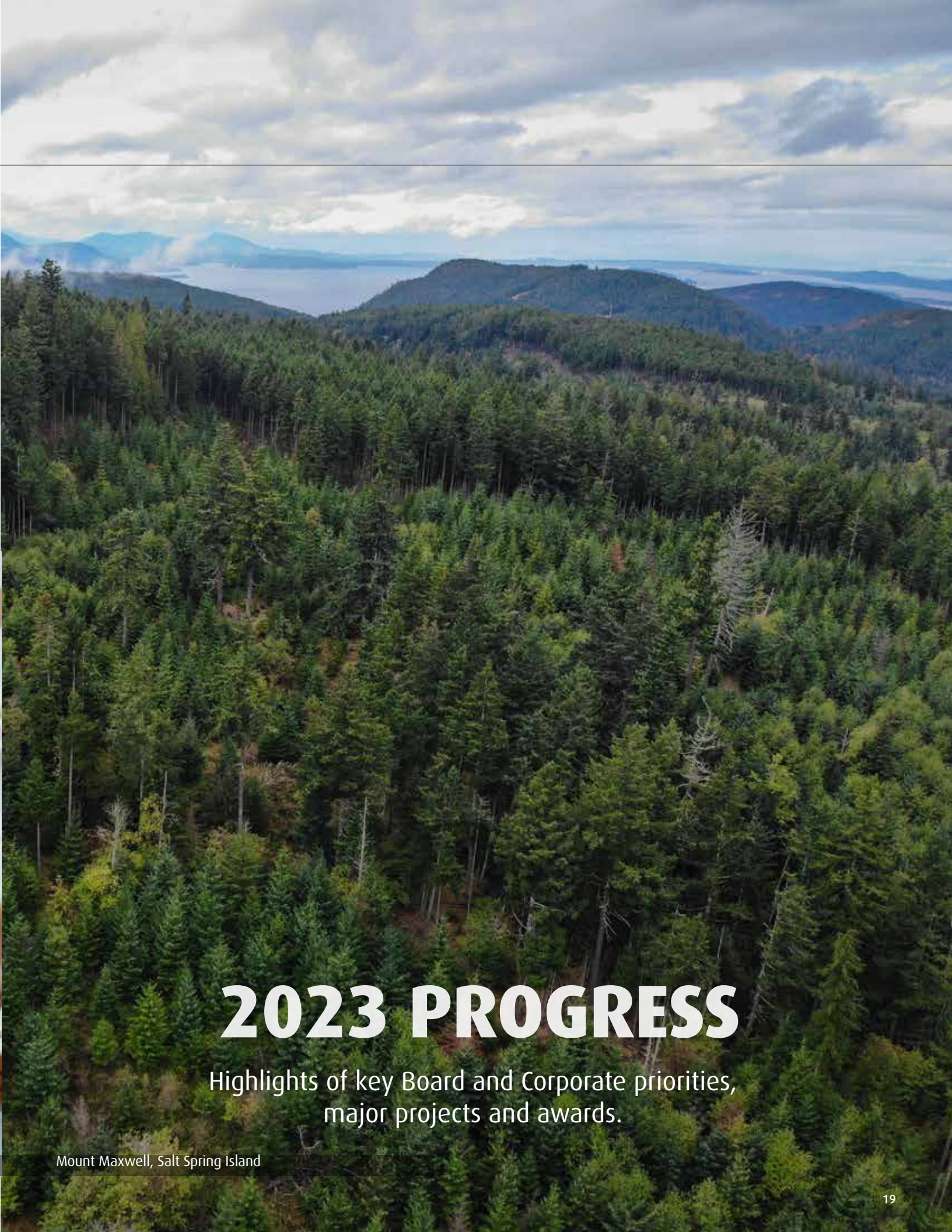
Local services for the residents of the Juan de Fuca, Salt Spring Island and Southern Gulf Islands Electoral Areas.

Local Services

Administer and deliver local services in Juan de Fuca, Salt Spring Island and the Southern Gulf Islands



Pender Island administration



2023 PROGRESS

Highlights of key Board and Corporate priorities, major projects and awards.

Mount Maxwell, Salt Spring Island

Delivering on 2023 Priorities & Projects



Multi-modal transportation


Forum of Councils - First Nations

Board Priorities

To guide the direction and major activities of the CRD for the 2023–2026 mandate, the Board of Directors agreed to focus on five regional priorities:

TRANSPORTATION

Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability.

HOUSING

Residents have access to affordable housing that enhances livability.

CLIMATE ACTION & ENVIRONMENT

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts.

FIRST NATIONS

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals.

GOVERNANCE

Effective advocacy, coordinated and collaborative governance, and leadership in organizational performance and service delivery.

Corporate Priorities, Projects & Awards

To guide effective development and coordination, the Executive Leadership Team identified key priorities and projects to enhance corporate capacity and delivery of services.

CORPORATE PRIORITIES

With a focus on accountability, Corporate Priorities include: Business Capacity & Continuity, Fiscal Responsibility, Transparency, Efficiency, & Collaboration and Customer Service.

MAJOR PROJECTS

As an essential and critical infrastructure service provider, a number of capital projects were progressed and completed in 2023.

AWARDS

The CRD was the recipient of a number of awards in 2023.

As many initiatives and projects span multiple years and involve other organizations, the achievements described here capture only a snapshot of our organization's work.



Fisgard headquarters reception

Board Priorities

Transportation

TRANSPORTATION GOVERNANCE

The CRD is working toward its goal for multi-modal transportation—where people have access to convenient, green and affordable ways to travel through the region. The CRD continues to explore ways to improve decision-making about transportation and accelerate the implementation of the Regional Transportation Plan. In June of 2023, the CRD Board unanimously directed staff to engage with local governments, electoral areas, First Nations, the Province, and relevant partner agencies and gather their input on transportation governance. Following this engagement, the Board directed staff to complete a service design and feasibility study to recommend changes to how the region delivers transportation initiatives. The ultimate objectives for this 2023–2026 Board term are to establish a CRD transportation service and to present options for changes in governance for transportation in the region, including consideration of a new transportation authority.

SALT SPRING ISLAND ACTIVE TRAVEL PLANNING

The CRD has undertaken an island-wide planning process to create a new Active Transportation Network Plan (ATNP) for Salt Spring Island, which has a strong focus on walkability in Ganges Village and active transportation connectivity across the island. Community input was a vital part of planning to help understand the current active transportation network, conditions, and gaps.

The ATNP was released in July of 2023, and directs transportation and infrastructure to focus on implementing five big moves first:

1. 30 km/hr posted speed limit
2. McPhillips Avenue improvements
3. Increasing off-street parking options
4. Land ownership survey of Ganges Village
5. Fulford-Ganges improvements

ELECTORAL AREA EMERGENCY EVACUATION GUIDES

Capital Region electoral area communities now have evacuation guides to help residents and visitors prepare for emergency events. The Household Evacuation Guide provides a quick reference about local hazards and how to prepare for a possible evacuation, including:

- Community-specific Evacuation Guide Map with tsunami hazard zones, assembly areas and reception centres
- Trusted sources of emergency information
- What to do during an evacuation
- Information on alerts, orders and shelter-in-place
- Fill-in-the-blank Emergency Plan
- Evacuation kit checklist

Reading and following the suggestions in the community-specific Household Evacuation Guide and subscribing to the CRD Public Alert Notification System can help residents prepare for an emergency.

Housing

REGIONAL HOUSING FIRST PROGRAM (RHFP)

The RHFP is an equal partnership agreement between the CRD, the Government of BC through BC Housing, and the Government of Canada through the Canada Mortgage and Housing Corporation (CMHC). The equal partnership will see a direct investment of $120 million to create up to 2,000 units of affordable housing as part of the $600 million program, including up to 400 units renting at the provincial income assistance rate to address the needs of people experiencing homelessness on southern Vancouver Island and the Gulf Islands. The RHFP currently includes 11 projects that are in progress or complete:

- Langford – 4 projects (Twenty-Seven Eighty-Two, Hockley House, Millstream Ridge, Spencer Close)
- Central Saanich – 1 project (Prosser Place)
- Salt Spring Island – 1 project (Croftonbrook)
- Sooke – 2 projects (Drennan and Charters)
- Victoria – 2 projects (Cedar Grove, Michigan Square)
- View Royal – 1 project (West Park)



Charters Housing property, Sooke



DESIGNATED COMMUNITIES PROGRAM

From 2019–2024, the CRD is administering a $11.5-million, five-year agreement under the Reaching Home Program. This program continues to fund services that support the needs of those experiencing, or at risk of, homelessness in the region. Funding for the five-year Reaching Home stream is being allocated to initiatives that address outcomes identified in the 2019–2024 Community Plan To End Homelessness, and are recommended by the Reaching Home Community Advisory Board.

COLWOOD LONG-TERM CARE BEDS

The Ministry of Health, Island Health and the CRHD announced on March 16, 2023, that more long-term care beds are coming for people living throughout the Greater Victoria area as Island Health prepares to build a new care home in the Westshore. The facility will be on a two-hectare parcel of land, recently acquired by the CRHD. Island Health will lease the land and build, own and operate the new facility. The three-story facility has entered the procurement phase and will be located near the corner of Metchosin Road and Latoria Boulevard in the Royal Bay area of Colwood. It will bring 306 new care home beds to the region, with construction expected to begin in 2025 and complete in 2027.

HOMES WITH 24/7 SERVICES OPEN IN SAANICH

People experiencing homelessness in Saanich now have access to 52 new homes with support services 24 hours a day, seven days a week thanks to a partnership between the Province, through BC Housing, the federal government, and the CRD. Our Place Society will operate the site at 2933, 2941 and 2949 Albina Street providing services that include security, life-skills training, employment assistance and counselling, physical and mental-health resources, meals, and referrals to addiction treatment and recovery services.

2023 GREATER VICTORIA POINT-IN-TIME COUNT

The CRD, in partnership with the Community Social Planning Council (CSPC) and the Alliance to End Homelessness in the capital region, released the 2023 Greater Victoria Point-in-Time (PiT) Count results August 3, 2023. The 2023 PiT count was conducted on the evening of March 7 and identified 1,665 people who were without a home and experiencing a variety of circumstances.

A Regional PiT Count is one tool a community can use to measure and understand the nature, extent and characteristics of homelessness while raising awareness of the need for action.

An accompanying technical appendix was also developed by the CSPC and released with the key findings of the 2023 Greater Victoria Point-in-Time Homeless Study.

Climate Action & Environment

SOLID WASTE STREAM COMPOSITION STUDY AND POLICY CHANGES

The CRD released the results of the 2022 Solid Waste Stream Composition Study on March 8, 2023. The results of the study have led the CRD to implement policy changes that will see more waste diverted from Hartland Landfill beginning January 2, 2024. Highlights of the policy changes to be made include:

- Banning wood (clean, treated, and salvageable), carpet, and asphalt shingles from being landfilled as they have stable reuse, recycling, and recovery markets.
- Increasing the general refuse tipping fee and introducing reduced tipping fees for separated loads of treated wood, carpet and asphalt shingles.
- Introducing waste hauler incentive rates to Hartland Landfill account customers that voluntarily self-report waste collection data and promote multi-stream collection.
- Implementing a graduated bylaw ticket structure with higher fines for more serious infractions and/or repeated infractions.

These changes have the potential to divert up to 40,500 tonnes of waste away from Hartland Landfill each year.



Hartland Landfill

SALT SPRING ISLAND COMPOST FACILITY

A partnership between the CRD, Salt Spring Island Farmland Trust Society (Farmland Trust), Salt Spring Abattoir Society, and Salt Spring Island Community Services Society will create and oversee an on-island composting facility that will process organic materials generated by the island's food businesses (grocers, restaurants, etc.), health-care institutions, schools and the Salt Spring Abattoir.

The facility will be located at the Burgoyne Valley Community Farm and produce Class A compost for use in agriculture, increasing food production and benefiting the entire community.

LAND ACQUISITION

Since 2000, the CRD has actively expanded the regional parks system. With the support of partners, the CRD has acquired nearly 5,000 hectares of land in that time, growing the regional park system from 8,400 ha to more than 13,300 ha. In 2023, the CRD acquired two parcels of land comprised of 10.92 ha adjacent to Elk/Beaver Lake Regional Park on the site of the former Royal Oak Golf Course, and 10 ha that will be added to East Sooke Regional Park. An update to the Land Acquisition Strategy will be initiated in 2024 to reflect the priorities identified in the Regional Parks & Trails Strategic Plan 2022-2032.

PORTLOCK PARK SITE MASTER PLAN

The CRD's Salt Spring Island Parks, Arts, Recreation and Culture (PARC) department is developing a 20-year site master plan for Portlock Park. This project was identified as a priority in the 2019 Salt Spring Island Parks and Recreation Strategic Plan in response to the community's desire for increased access to recreation facilities and infrastructure development for additional playing fields on Salt Spring Island. The site master plan will assess current and future capacity needs to identify suitable expansion opportunities. This plan will inform a phased capital planning approach for new facilities and program amenities based on input provided from First Nations, key partners, and the public.



Portlock Park, Salt Spring Island

REGIONAL PARKS AND TRAILS STRATEGIC PLAN 2022-2032

An updated Regional Parks and Trails Strategic Plan 2022–2032 was developed through the end of 2021 and into 2022. This plan was developed to guide regional parks and trails over the next decade by defining the vision for the regional parks system and setting the foundation for how the CRD can consistently move towards achieving its desired outcomes.

The plan was developed in consultation with agencies, partners and the public, and with ongoing input from First Nations in the region. On July 13, 2022, the CRD Board approved the Regional Parks and Trails Strategic Plan on an interim basis for one year while engagement with First Nations continued. Feedback received from First Nations was incorporated into the final Regional Parks and Trails Strategic Plan 2022–2032 and the plan was officially adopted by the CRD Board on July 12, 2023.

REGIONAL CANADA GOOSE MANAGEMENT SERVICE BYLAW ADOPTED

In February 2023, the CRD Board approved a Canada Goose Management Service Establishment Bylaw that aims to reduce the impact of the rapidly growing Canada Goose population in the region. Recent population studies commissioned by the CRD have shown that the Canada Goose population in the capital region doubles in size every four years which results in increasing ecological, economic, and social impacts to public and private lands, estuaries, and wetlands.

The CRD intends to establish a Regional Canada Goose Management Working Group to take a coordinated approach to outreach and education, development of an egg addling program, coordination of provincial and federal permits, and conducting strategic harvests. The working group will involve representatives from local government, First Nations, stewardship groups, and key interested parties impacted by the large goose population.

GREENHOUSE GAS INVENTORY

The CRD released its regional and local government Greenhouse Gas (GHG) Inventories for the 2022-year on October 12, 2023. The report is published bi-annually and aims to monitor trends and inform planning and programming focused on reducing pollution in the capital region.

Key findings from the report include:

- The capital region emits approximately 1.86 million tonnes of $C0^2$ emissions annually—a 1% increase from 2020.
- Transportation and buildings account for the most regional carbon pollution (approximately 75%).
- Natural Gas use accounted for most of the building-related carbon pollution in the region.
- There has been a decrease in on-road transportation emissions from 2007, but a substantial increase in the number of vehicles in the region.
- On a per capita basis, the region has seen a 25% decrease in emissions since 2007; including a continued decline between 2020 and 2022.

Given the increase in emissions shown in the report, the CRD Board has directed staff to present new innovative and ambitious options and measures to reduce this trend in future years and achieve our existing 2038 emissions target.

First Nations

ART OF RECONCILIATION COMMUNITY MOSAIC PROJECT

The Art of Reconciliation Community Mosaic Project at Panorama Recreation included two community workshops, as well as an unveiling event. The mosaic was designed by Coast Salish artist Dahlila Charlie from Beecher Bay First Nation and inspired by Orange Shirt Day and National Day of Truth and Reconciliation. The mosaic is on display at Panorama Recreation and will be displayed at several other community spaces in the coming months, before being installed as part of the Art in Reconciliation display.

SOUTH ISLAND INDIGENOUS BUSINESS DIRECTORY

On June 7, 2023, a new Indigenous business directory was launched in Greater Victoria to support Indigenous economic reconciliation by building new relationships and connections.

Created with help from the CRD and various regional partners, the new South Island Indigenous Business Directory provides new opportunities for relationships, growth and partnership between community members and the many Indigenous-owned businesses across the region.

Indigenous businesses and organizations are encouraged to register for the directory, which will continue to grow over time. Participation is free and interested businesses can visit indigenousbusinessdirectoryvi.com/form to register.

AFFORDABLE RENTAL HOMES FOR INDIGENOUS PEOPLE IN SOOKE

On December 13, 2023, BC Housing announced the opening of a new purpose-built rental building at 2170 Charters Road providing access to 75 below-market homes to Indigenous families, Elders and residents in Sooke.

This project is the result of a partnership between the Province, through BC Housing, the federal government, through the Canada Mortgage and Housing Corporation, the CRD, and M'akola Housing Society.

M'akola Housing Society will operate the building and will prioritize Indigenous individuals, seniors and families for the homes. Non-Indigenous residents are also welcome.

PARKS INDIGENOUS PROGRAMMING

The CRD hired a full-time Cultural Programmer in 2020 and rolled out a variety of Exploring Indigenous Perspectives programming, including guided walks, story times, school programs, and special request programs. This programming helps increase visitor connection to, and awareness of, the cultural significance of the land, plants and animals, the seasons for Indigenous Peoples, and helps contribute to cultural safety in regional parks. In 2023, Indigenous Perspectives programming was offered throughout CRD Regional Parks to over 2,000 people of all ages and backgrounds through public, school and special request programs. Staff also provided cultural programming at the Indigenous People's Day event at Royal Roads University.

FORUM OF ALL COUNCILS

The CRD operates within the Territory of many First Nations, and it is a Board Priority to strengthen our government-to-government relationships and co-create new ways of working together that respect Indigenous self-determination. The 2023 Forum of All Councils was held on October 14, 2023, to bring First Nations and local governments together to move beyond a commitment of Reconciliation towards collaborative action. Building on the Forum held in 2019, the 2023 Forum brings Indigenous and non-Indigenous representatives from across the capital region together to begin co-creating a path towards a future with stronger relationships based on trust, mutual respect, partnerships, and working together on shared goals.

NATIONAL DAY FOR TRUTH AND RECONCILIATION

On National Day for Truth and Reconciliation, September 30, 2023 the CRD proudly flew the Xe Xe Smun' Eem "Our Sacred Children" flag for truth and reconciliation from September 26 to October 4. We were deeply honoured to borrow this powerful symbol from Eddy Charlie and his friend Kristin Spray, co-organizers of Victoria Orange Shirt Day and Xe Xe Smun' Eem.

The CRD remains steadfast in our commitment to listening, learning, and forging a path toward stronger relationships with the First Nations in whose Territories we operate. Together, we strive for a future where reconciliation is more than a word; it is a lived reality, where the truth is recognized, the wounds of the past heal, and the respect for Indigenous self-determination grows stronger.



Mosaic Project event

Governance

2023–2026 BOARD PRIORITIES AND CORPORATE PLAN

In March 2023, the CRD Board approved its priorities and affirmed its commitment to climate action and reconciliation. The priorities in transportation, housing, climate action and environment, First Nations and governance, reflect their shared vision and highlight what key work will be advanced over the Board term. The CRD Board undertakes a planning process at the outset of each new term of office. The objective of the planning process is for the Board to confirm the Board vision and set strategic priorities to focus organizational initiatives. Following the endorsement of the Board Priorities, the CRD developed an accompanying Corporate Plan, which was approved in April 2023. The Corporate Plan and divisional service plans align CRD services, programs and activities with Board Priorities and drive organizational performance and service delivery outcomes. The CRD Corporate Plan outlines how the CRD will respond to community needs and deliver on the CRD Board Priorities, ongoing service commitments and approved plans over the four year term. To ensure the CRD is accountable and appropriately resourced, the CRD Board reviews and approves these plans, determines funding and timing and measures progress through quarterly and annual reports.

SALT SPRING ISLAND LOCAL COMMUNITY COMMISSION

On December 14, 2022, the CRD Board adopted Bylaw No. 4507, establishing a Salt Spring Island (SSI) Local Community Commission (LCC), following voter endorsement by referendum. In Spring 2023, a public election was held for four commissioners in accordance with the *Local Government Act*. On May 31, 2023, the CRD announced the final results for the SSI LLC elections, which identifies four commissioners, together with Gary Holman, Salt Spring Island Electoral Area Director, to form the LCC.

An LCC, with an elected membership, is a unique form of governance under the *Local Government Act*, with commissioners elected from the local community to oversee Island-wide CRD service delivery.

GRANT FUNDING FOR ELECTORAL AREAS

Every year, the CRD administers grants and funding for local projects in the Juan de Fuca, Salt Spring Island, and Southern Gulf Islands Electoral Areas. In 2022, the CRD distributed $3 million of funding to 28 projects in these three Electoral Areas through the Government of Canada's Community-Building Fund.

Additionally, the CRD awarded over $149,000 through electoral area Grants-in-Aid to 31 projects for initiatives benefitting local communities, and over $43,000 in COVID-19 Safe Restart Grants-in-Aid to seven projects.

Corporate Priorities

ELECTORAL AREA WILDFIRE EXPOSURE MAPS

New wildfire exposure maps for the CRD Electoral Areas of Juan de Fuca, Salt Spring Island and Southern Gulf Islands will help electoral area residents understand their wildfire risk profile.

The CRD and Islands Trust collaborated on creating the wildfire exposure maps to help prioritize mitigation efforts. This new approach is designed to support wildfire prevention and mitigation efforts across a variety of land ownership classes. Exposure mapping is developed through a simple scientific approach that identifies where wildfires are most likely to impact developed areas.

EQUITY, DIVERSITY AND INCLUSION (EDI)

Through 2023, the CRD EDI steering committee and EDI working team were renewed and expanded. They discuss EDI matters and use their lived and professional experiences to problem-solve and inform sound decision-making.

Across these two groups, there is strong representation not only in the diversity of the work the CRD carries out but also as it relates to the diversity of the people who make up our organization. By intentionally embedding EDI principles in our everyday practices, we will continue to live out our commitment to EDI:

> *At the Capital Regional District, we are committed to creating an inclusive workplace culture that celebrates the uniqueness of individuals – where differences are recognized, appreciated and responded to in ways that fully respect each person's background, lived experiences, talents and strengths.*
>
> *We value equity, diversity, and inclusion and are committed to listening, learning and evolving on this journey to improve the sense of belonging for everyone at the CRD.*



Pride parade CRD staff volunteers



Kuba Oms at Cook Street Village block party. Photo: Emma Rossu

ARTS DEVELOPMENT OPERATING GRANTS, PROJECTS AND FUNDING

CRD Arts and Culture Support Service funded 93 local not-for-profit arts organizations through 2023, with $2,684,670 supporting the creation and presentation of arts programming, and providing stability to the arts, one of the sectors hardest hit economically by the COVID-19 pandemic (based on Statistics Canada, Labour Force Survey 2020). In early 2023, the CRD Arts & Culture Support Service engaged the region's residents to provide their insights to support development of the 2024-27 CRD Arts & Culture Strategic Plan. This engagement included an online survey seeking input from both the arts sector and audiences, as well as focused events and consultations with arts workers and organizations.

CORPORATE SAFETY

Our Corporate Occupational Health & Safety (OHS) Program continues to have a positive impact on our employees and our safety culture. Our approach focuses on preventing injuries and the severity of injuries, as well as following a best practice approach to disability, namely: prevention, management and worksite resources, and early intervention and timely return to work processes. Compared to our peers in our WorkSafeBC Classification Unit, the CRD has a lower injury rate, fewer time loss claims and shorter duration of claims, demonstrating a safer work environment for our employees.

In 2023 we implemented a number of modules in our Safety Management System. These modules included Incident Management, Return to Work Case Management, Hazard Reports, Safety Committees, Worker Certifications, and Inspections, which have resulted in improved safety information reporting and communication.

We have increased our WorkSafeBC Annual Assessment discount from 33% to 37% and received an additional 10% discount from Certificate of Recognition (COR) Certification for a total discount of 47%.

Major Projects

TSUNAMI PORTAL

The CRD and the Province launched the Capital Region Tsunami Information Portal at PrepareYourself.ca to empower residents and visitors to make informed emergency preparedness plans and keep people safe during a tsunami.

The project was developed with input from local governments and First Nations across the capital region, and provincial, federal, community and academic partners.

The Capital Region Tsunami Information Portal is a Regional Emergency Management Partnership (REMP) initiative. The REMP provided project management support for developing the information portal and partnered with GeoBC to create the tool enabling residents and visitors to understand the distribution of tsunami risk across the capital region.

MINERS BAY DOCK

The CRD Southern Gulf Islands Harbour Commission is embarking on a new project to restore the busy Miners Bay Dock with investment support from Island Coastal Economic Trust's Capital and Innovation Program. Miners Bay dock is a critical community gateway into the vibrant business area of Mayne Island relied on heavily by tourists and islanders. The project will include new decking, benches, and railings, a shelter for visitors including water taxi and float plane users, as well as signage and interpretive panels in a later phase.



Miners Bay Dock, Mayne Island



Salt Spring Island Centennial Park plaza

SALT SPRING ISLAND CENTENNIAL PARK PLAZA UPGRADES

The CRD's Salt Spring Island Parks, Arts, Recreation & Culture (PARC) services have received $561,748 in grant funding from Pacific Economic Development Canada (PEDC) to complete additional upgrades to Centennial Park. The Centennial Park Plaza has been identified as the next phase of park upgrades as part of the approved 20-year Master Plan. Work on this phase began in 2022 and included detailed designs to replace the park plaza and install lighting. This upgrade includes the removal and replacement of the existing park concrete and brick paver plaza, additional drainage, lighting, landscaping, and furnishings. Existing trees inside and along the plaza are to be retained. Construction is scheduled to occur during the market off-season, November 1, 2023 to March 31, 2024.

REGIONAL HEALTHCARE INFRASTRUCTURE

The CRHD Board approved a capital bylaw of $6.71 million to authorize funding of healthcare minor capital and equipment projects in the region. This funding was identified in the 2023 CRHD budget, approved in March 2023. The CRHD partners with Island Health and community partner agencies to develop and improve healthcare facilities in the region and provide capital funding for infrastructure such as acute care, residential care, and hospital equipment.

DEVELOPMENT COST CHARGE (DCC) PROGRAM

The CRD is working towards implementing a Regional Water Supply (RWS) DCC Program to help fund eligible growth-related projects identified through the RWS 2022 Master Plan and 2023 RWS Capital Plan. In May 2023, the Regional Water Supply Commission directed staff to proceed with developing and implementing a DCC program and bylaw. Many local governments in BC have established DCC programs in place, including most municipalities in Greater Victoria.

MALIVIEW WASTEWATER TREATMENT PLANT UPGRADE

The CRD received a grant of $1,989,000 in joint federal-provincial funding through the Investing in Canada Infrastructure Program – Rural and Northern Communities Program. The funding will enable completion of much needed upgrades to the Maliview Wastewater System on Salt Spring Island. Upgrades to the Maliview Wastewater System are currently underway. Major equipment has been purchased allowing additional detailed design work for the remainder of the facility to proceed. The project is estimated to be completed by the end of 2025.

REGIONAL WATER SUPPLY 30–YEAR MASTER PLAN

The CRD is continuing work on testing water quality and gathering information to support the future design of various projects identified in the 2022 Regional Water Supply Master Plan. In 2024, the CRD will begin preliminary design of upgrades to two transmission mains and develop decommissioning options for the existing Smith Hill Tank to ensure compatibility with future plans for the site.



Water main upgrades

Awards

SAFEST EMPLOYER AWARD

In 2023, the CRD was recognized with a Canada's Safest Employers Excellence Award. We received this award due to our commitment to human resources policies and programs emphasizing safety and safe practices, our commitment to continued employee professional development, and our continued emphasis on workplace safety.

GREENEST EMPLOYER AWARD

The CRD was recognized as one of Canada's Greenest Employers in 2023. This award recognizes our commitment to environmental sustainability and innovation in our operations and services. The environmental programs and earth-friendly policies recognized by this award include the CRD's ongoing zero-emissions fleet initiative, LEED Gold-certification for CRD Headquarters and the educational workshops and programs the CRD hosts for residents and businesses as part of its Climate Action Strategy.

CONTRIBUTION TO CONSERVATION

Thanks to the CRD's commitment to nature, 33 regional parks on Vancouver Island are now officially recognized as part of Canada's conservation network and are contributing toward Canada's conservation targets. The CRD is a trailblazer for reporting locally protected and conserved areas directly in the national database and is a prime example of how local governments can make meaningful contributions to national and international conservation targets.

BC RECREATION AND PARKS ASSOCIATION (BCRPA) AWARDS

Both CRD Regional Parks and Panorama Recreation received BCRPA Excellence Awards.

Regional Parks received a Program Excellence Award for the Exploring Indigenous Perspectives Program, which enables park visitors to gain a better understanding and respect for the cultural history of the region.

Panorama Recreation received a Facility Excellence Award for projects under $3 million for our Canadian Tire Jumpstart Charities Multi Sport Court. The 13,200 square foot Jumpstart Multi Sport Court has removed barriers to being active by providing free, accessible outdoor options for physical activity and sport to all ages and community members with a variety of abilities.



Jumpstart multi-sport court, Panorama Recreation



2023 FINANCIAL HIGHLIGHTS

CRD Financial Reporting Overview

The CRD is pleased to provide this consolidated financial overview for the 2023 fiscal year.

Our Region

The Canadian economy faced stagnation in the second quarter of 2023, with early indications pointing towards a flat gross domestic product for July and a contraction in August. This slowdown is attributed to muted economic demand and a reduced pace of inflation.

The Bank of Canada increased the key overnight lending rate twice in 11 months (March 2023 through January 2024), moving from 4.5% to 5.0% in an attempt to reign inflation back to their long-standing target of 2.0%.[1]

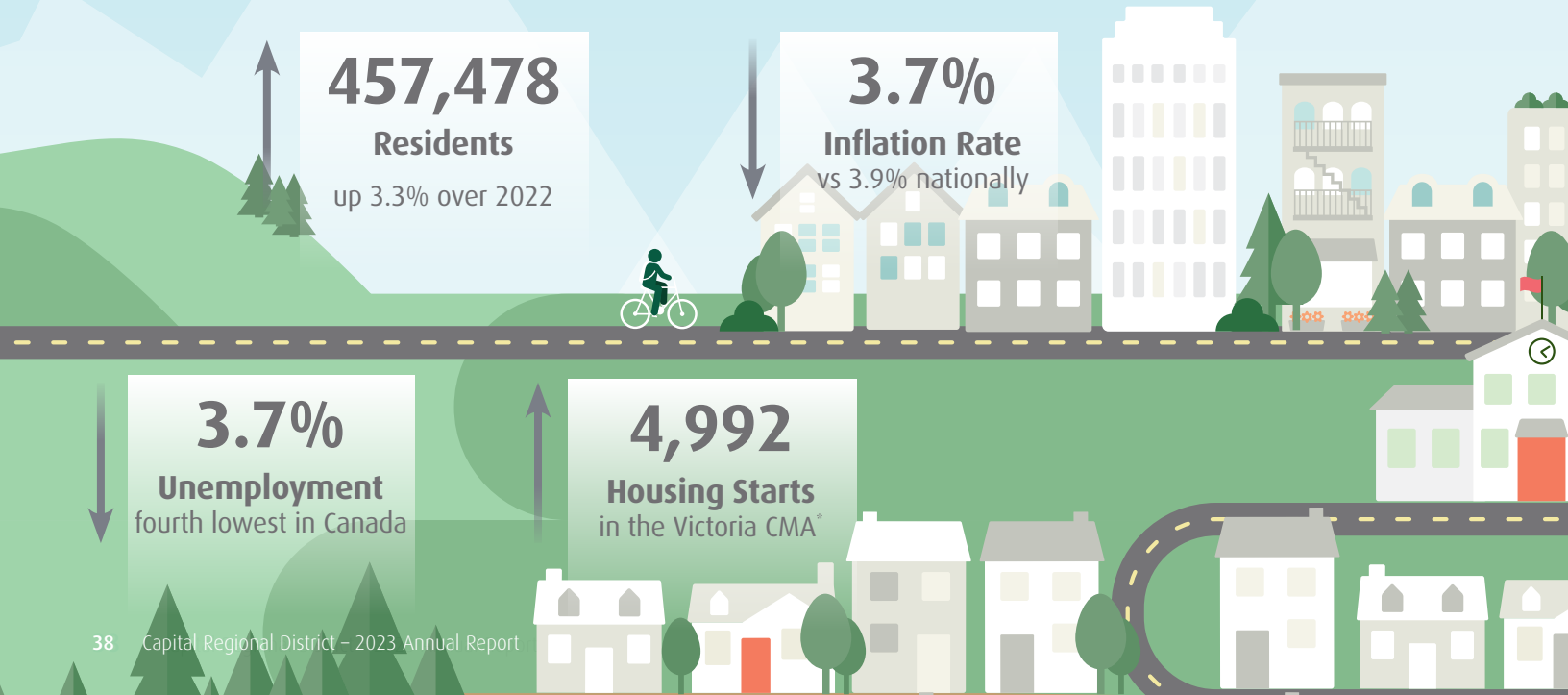
In Greater Victoria, the annual Consumer Price Index (CPI) decreased to 3.7% in December 2023, which was lower than Vancouver at 4.3% and provincially at 3.9%.[2] Meanwhile, the unemployment rate in Greater Victoria climbed to 4.2% in December 2023 but remained below the provincial and national rates of 5.4% and 5.8%.[3]

Population growth in Greater Victoria continues to outpace the province as a whole, with a growth rate of 18.3% over the last 10 years and 3.3% over 2022.[4] In 2023, seven municipalities in the CRD exceeded the average BC municipal population growth rate of 3.0%.

In December 2023, the benchmark home price in the region was reported at $1,268,000, a 2.5% increase from the 2022 measure of $1,236,500.[5] Active listings have surged to 2,132 in December 2023, marking a significant 26.3% increase compared to the 1,688 active listings recorded in 2022. With continued population growth, pressure on housing affordability in the region is expected to persist.

Following a mid-year slowdown in the value of construction permits, the latter half of 2023 returned to historic highs. Although the total number of permits issued for the year decreased by (21.4%) to 3,101, there was a smaller (5.5%) decline in permit values. This trend suggests a market transition towards fewer high-value projects. Permits in 2023 totalled $2.1 billion.[6] Regional housing starts increased by 4.3% to 4,992 for the calendar year 2023 compared to 2022.[7] However, as housing starts typically lag behind building permit issuance, this uptick may be temporary, suggesting a potential slowdown in 2024.

With population growth accelerating through 2023, population is expected to continue to be a significant economic driver locally, pushing demand for housing, jobs and CRD services higher into 2024.



Our Process

This report includes the CRD's Consolidated Statement of Financial Position and the Consolidated Statement of Operations, which form the basis of the audited financial statements.

Each year, the CRD prepares audited financial statements in accordance with legislative requirements and presents them at a public Board meeting for approval. The 2023 financial statements were prepared by management in accordance with Canadian Public Sector Accounting Board (PSAB) standards and were audited by KPMG LLP.

Under PSAB regulations, governments are required to present five statements with explanatory notes:

1. Statement of Financial Position
2. Statement of Operations
3. Statement of Change in Net Debt
4. Statement of Remeasurement Gains and Losses
5. Statement of Cash Flows

The CRD also includes several schedules for additional reference. The consolidated financial statements include all CRD divisions and departments.

Capital Region Housing Corporation

The Capital Region Housing Corporation (CRHC) is a non-profit organization wholly owned by the CRD and is governed by the same 24-member Board of Directors as the CRD.

As an entity of the CRD, the CRHC's financial statements are consolidated within the audited CRD financial statements as required by PSAB standards.

Capital Regional Hospital District

The Capital Regional Hospital District (CRHD) operates under the authority of the *Hospital District Act* and shares the same boundaries, directors and administrative staff as the CRD. It partners with Island Health and community agencies to develop and improve health-related facilities in the region. The CRHD prepares a set of audited financial statements independent from the CRD. Page 47 features a brief summary of the CRHD's financial highlights for 2023.

More Information

Find the complete 2023 Statement of Financial Information and related documents at:
www.crd.bc.ca/about/financial-accountability



*Census Metropolitan Area

[1] www.bankofcanada.ca/core-functions/monetary-policy/key-interest-rate
[2] www2.gov.bc.ca/gov/content/data/statistics/economy/consumer-price-index
[3] www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410038001
[4] www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates
[5] www.vreb.org/media/attachments/view/doc/stats_release_2023_12/pdf/stats_release_2023_12.pdf
[6] www.crd.bc.ca/about/data/regional-information/monthly-permit-reporting-tool
[7] www.cmhc-schl.gc.ca/en/professionals/housing-markets-data-and-research/housing-data/data-tables/housing- market-data/starts-completions-units-under-construction-geography

CRD Statement of Financial Position (Consolidated CRD+CRHC)

This statement presents the organization's assets, liabilities, net debt position and accumulated surplus or equity position. The 2023 annual surplus contributed to the $20.7 million increase in financial assets in the year. The increase in liabilities of $27.5 million reflects the additional short-term debt required for the construction of capital projects and the additional long-term debt due to two new mortgages for CRHC, netted by the decrease in deferred grant revenue that was received in prior years and spent in 2023. Amounts invested in capital assets in 2023 increased by $85.0 million contributing to the net increase in accumulated surplus of $80.5 million.

	2023	2022 Restated	2021 Restated
Financial assets	**(in millions)**	**(in millions)**	**(in millions)**
Cash and investments	$413.0	$401.0	$357.7
Accounts receivable	$36.3	$24.8	$55.7
Member municipality debt	$174.7	$176.4	$185.5
Restricted cash – MFA Debt Reserve Fund	$3.0	$4.1	$4.1
	$627.0	**$606.3**	**$603.0**
Financial liabilities			
Accounts payable and accrued liabilities	$39.9	$37.4	$31.0
Deferred revenue	$33.2	$48.1	$49.0
Short-term debt	$44.4	$23.0	$25.6
Long-term debt	$575.5	$559.0	$582.9
Other long-term liabilities	$1.2	$1.4	$1.6
Asset retirement obligations	$27.3	$25.1	$24.0
	$721.5	**$694.0**	**$714.1**
Net debt	**($94.5)**	**($87.7)**	**($111.1)**
Non-financial assets*			
Tangible capital assets	$2,076.6	$1,991.6	$1,953.7
Inventory of supplies and expenses	$5.8	$3.5	$3.4
	2,082.4	**$1,995.1**	**$1,957.1**
Accumulated surplus	**$1,987.9**	**$1,907.4**	**$1,846.0**

*Non-financial assets are resources that are normally held for service provision over one or more future periods.

CRD Statement of Operations (Consolidated CRD+CRHC)

This statement identifies the results of the organization's financial activities for the year by presenting revenues less expenses, resulting in the organization's annual surplus on a PSAB basis. Overall, in 2023, revenue increased by $52.4 million. This was primarily due to the following:

- $37.2 million increase in government grants
- $6.1 million increase in water sales and recreation centre revenue
- $6.0 million increase investment income

The increase in expenses of $41.4 is reflective of higher cost pressure as inflation was 3.7% for the year and includes the following:

- $25.9 million in general government services due to disbursements of housing grants related to the Rapid Housing Initiative
- $10.2 million in salaries and benefits costs with the collective agreement inflationary increases and a 4.5% increase in full-time staff
- $2.7 million of amortization expense due to organizational growth in capital investment

Financial surpluses generated from operations are generally carried forward to pay for capital and used to make principal debt repayments. In some cases, surpluses are used to reduce the appropriate service requisitions or funding requirements.

	2023	**2022** Restated	**2021** Restated
Revenue	**(in millions)**	**(in millions)**	**(in millions)**
Requisition	$82.1	$78.1	$72.6
Sale of services	$140.7	$134.6	$128.1
Other revenue	$139.5	$96.9	$188.9
Municipal debt servicing	$17.3	$17.6	$15.3
	$379.6	**$327.2**	**$404.9**
Expenses			
General government services	$62.1	$36.2	$29.2
Protective services	$13.4	$11.8	$11.1
Sewer, water and garbage services	$143.1	$136.5	$125.8
Planning and development services	$4.0	$2.9	$2.9
Affordable housing – rental expenses	$22.3	$19.8	$18.7
Recreation and cultural services	$38.4	$34.5	$29.2
Transportation services	$1.0	$0.9	$0.9
Municipal debt servicing	$17.4	$17.7	$15.4
	$301.7	**$260.3**	**$233.2**
Annual surplus	**$77.9**	**$66.9**	**$171.7**

2023 Operating Budget

Capital Regional District
$337M

Capital Regional Hospital District
$33M

Capital Region Housing Corporation
$28M

Total
$398M

2023 Capital Budget

Capital Regional District
$218M

Capital Regional Hospital District
$21M

Capital Region Housing Corporation
$53M

Total
$292M

CRD Financial Health (Consolidated CRD+CRHC)

Current Ratio

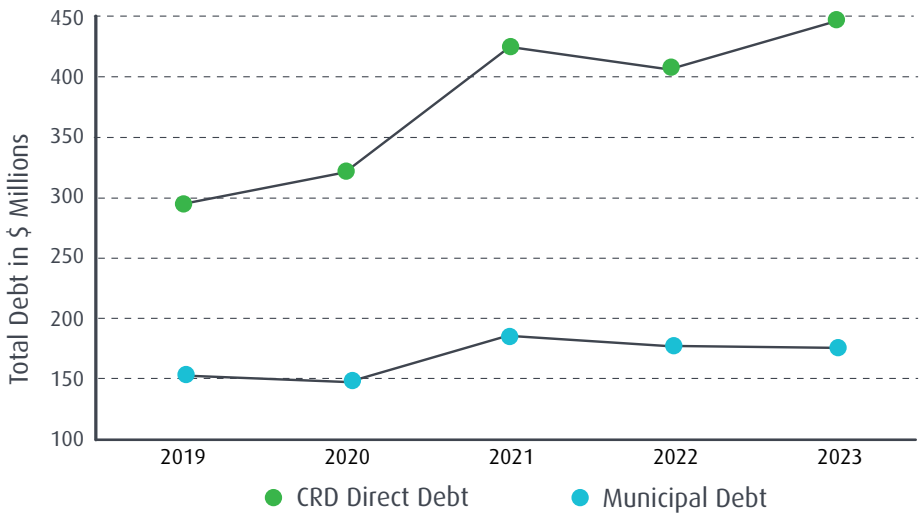
The current ratio is a measure of the liquidity of an organization, meaning the CRD's ability to meet current obligations through current assets. A high ratio indicates a greater ability to meet budgeted and unexpected expenditures. Generally, a current ratio greater than one is considered healthy for a government entity.

CURRENT RATIO

2.0

Debt

Debt includes balances for CRD, CRHC and member municipalities. Short-term debt increased by $21.4 million. This was primarily due to additional temporary financing during construction of housing redevelopment and other capital projects. Long-term debt increased by $16.5 million as two new mortgages were placed for CRHC during the year.



Assets Funded by Debt

The Capital Investment Funded by New Debt ratio measures the current year acquisition of capital assets that are funded by new debt. In 2023, new debt funded $73.0 million out of CRD's capital investment balance of $149.9 million. Debt funding levels are managed through corporate guidelines which set ideal levels of reserve and debt based on asset life matching benefit to community with timing of cost recovery.

CAPITAL INVESTMENT FUNDED BY NEW DEBT

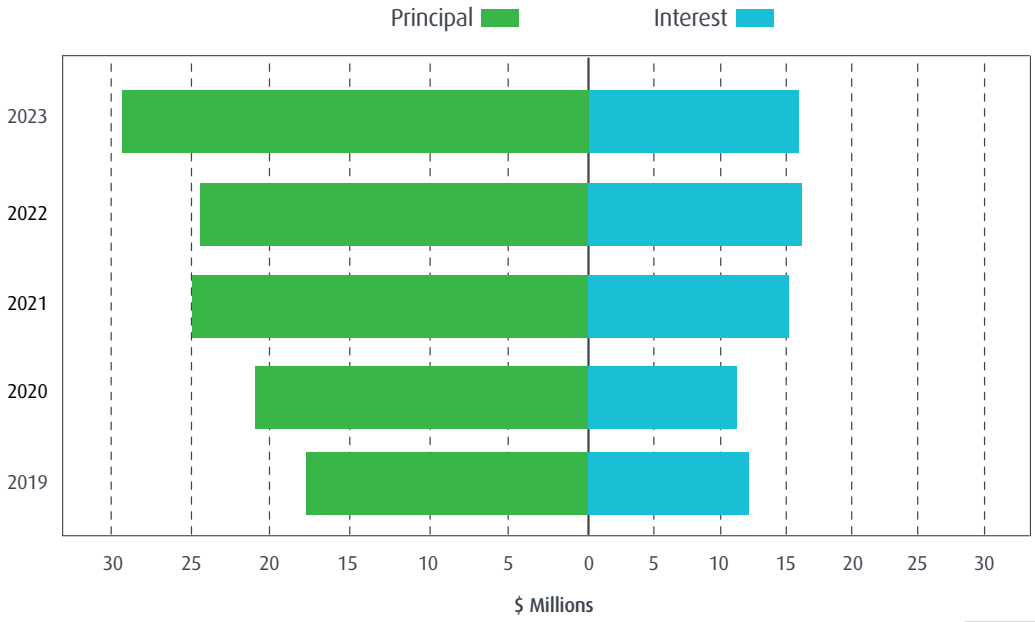
48.7%

Payments on Debt

The table below shows the split between principal and interest of total debt payments in the last five years. The portion of debt payments going to pay interest is trending lower, as a result of reduced principal. In 2023, the portion of debt payments going to principal increased due to the early payment of $4.3 million in long-term debt.

PRINCIPAL PORTION OF DEBT PAYMENTS

65.0%

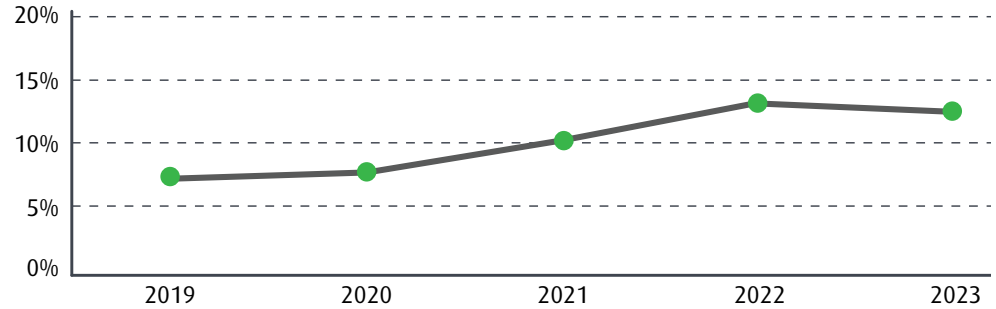


Debt Servicing Costs

The Debt Service Costs to Total Revenue ratio is the percentage of revenue committed to the payment of interest and principal on temporary and long-term debt. A high percentage indicates greater use of revenue for the repayment of debt and less ability to adjust to unplanned events and changing circumstances. The CRD's debt servicing costs (excluding member municipality debt servicing costs) in 2023 was $45.1 million and total revenue was $362.2 million.* Corporate guidelines monitor the percentage of revenue committed to debt repayment limiting commitments to within performance indicator benchmarks.

DEBT SERVICE COSTS TO TOTAL REVENUE

12.5%

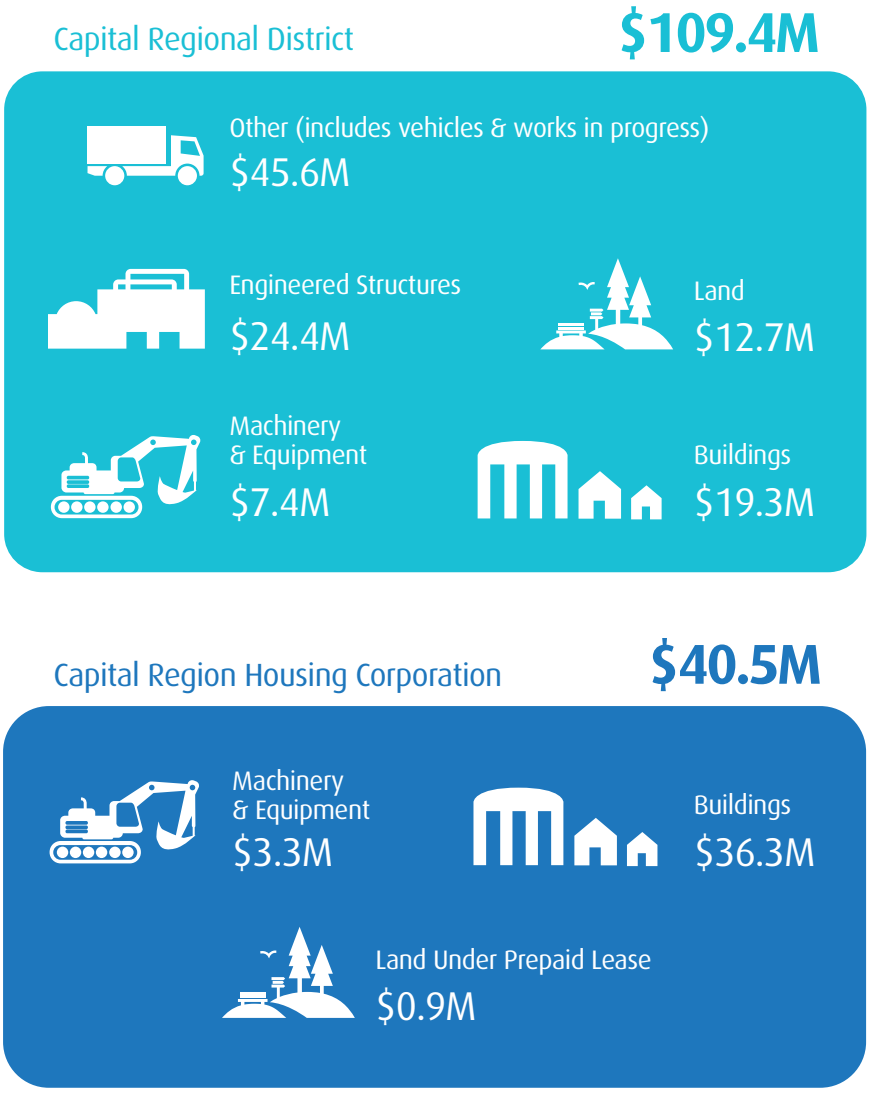


*Revenue excludes debt servicing costs paid by member municipalities and other third parties.

CRD Capital Investment (Consolidated CRD+CRHC)

The CRD's capital assets continue to grow as the organization invests in infrastructure projects to support Board-approved service levels, as well as corporate and strategic priorities.

Additions to Capital Assets in 2023

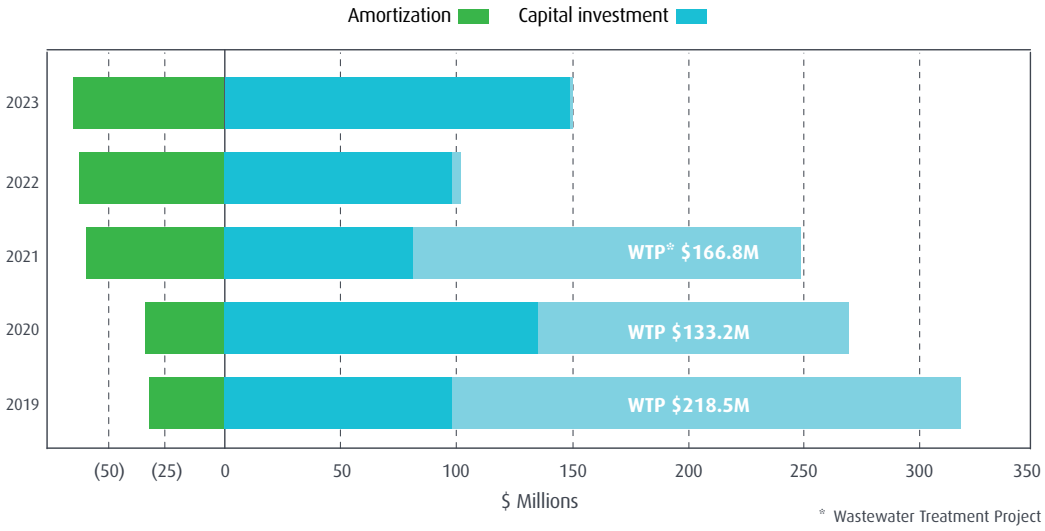


Capital Investment & Amortization

This ratio is the amount of capital invested in infrastructure for every dollar that assets depreciate each year. In 2023, investment in capital was $149.9 million and total amortization was $64.6 million. Sustainable service delivery plans and long-term asset planning address the level of reinvestment as assets depreciate with use over time.

INVESTMENT IN CAPITAL OVER AMORTIZATION

2.3x

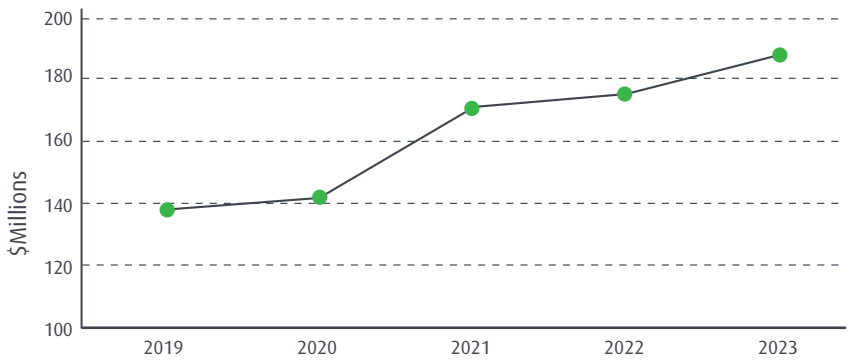


Contributions to Reserves

Contributions to reserves are needed to reduce costs of borrowing for asset renewal, replacement and to mitigate risk of asset failure. Reserves are guided by corporate reserve guidelines which set targets on savings supporting sustainable service delivery while balancing fluctuations in requisition and user fees. Transfers to operating and capital reserves increased the total reserve to $186.9 million in 2023, an increase of $12.4 million.

RESERVE BALANCE

$186.9M



CRHD Statement of Financial Position

This statement presents the Capital Regional Hospital District's (CRHD) assets, liabilities, tangible capital assets and accumulated surplus. The accumulated surplus for 2023, also represented as total assets minus total liabilities, is $39.6 million. The CRHD primarily borrows funds to distribute capital grants to the region's hospitals to purchase equipment and invest in infrastructure. These grants are recorded as expenses rather than assets owned by the CRHD.

The increase in assets of $7.1 million reflects the surplus earnings from operations and the District's investment strategy to move funds on hand into longer-term holdings. The decrease in liabilities of $14.8 million is largely due to long-term debt maturities exceeding new debt borrowings in 2023.

	2023	2022 Restated	2021 Restated
Financial assets	**(in millions)**	**(in millions)**	**(in millions)**
Cash and cash equivalents	$10.2	$18.6	$17.7
Investments	$24.0	$9.0	$5.0
Accounts receivable	$1.4	$0.4	$0.2
Restricted cash – MFA Debt Reserve Fund	$2.8	$3.3	$3.6
	$38.4	**$31.3**	**$26.5**
Financial liabilities			
Accounts payable and other liabilities	$3.9	$3.2	$2.4
Deferred revenue	$0.4	$0.4	$0.4
Due to Capital Regional District	–	–	$1.8
Long-term debt	$98.4	$114.0	$128.3
Asset retirement obligations	$0.6	$0.5	$0.5
	$103.3	**$118.1**	**$133.4**
Net debt	**($64.9)**	**($86.8)**	**($106.9)**
Non-financial assets*			
Tangible capital assets	$104.5	$107.4	$107.2
	$104.5	**$107.4**	**$107.2**
Accumulated surplus	**$39.6**	**$20.6**	**$0.3**

*Non-financial assets are resources that are normally held for service provision over one or more future periods.

CRHD Statement of Operations

This summary identifies the result of the CRHD's financial activities for the year by presenting revenues less expenses, resulting in the organization's annual surplus on a PSAB basis. The annual surplus of $19.0 million was a decrease of $1.3 million from 2022 despite stable requisition revenue in the year. The decrease is largely attributable to more grants paid to district hospitals during the year as construction claims increased.

	2023	2022 Restated	2021 Restated
Revenue	**(in millions)**	**(in millions)**	**(in millions)**
Requisition	$26.5	$26.5	$28.1
Other revenue	$12.1	$11.8	$11.5
	$38.6	**$38.3**	**$39.6**
Expenses			
Grants to district hospitals	$8.8	$6.6	$9.5
Interest and operating expenses	$10.8	$11.4	$11.6
	$19.6	**$18.0**	**$21.1**
Annual surplus	**$19.0**	**$20.3**	**$18.5**

CRHD Financial Health

Current Ratio

The current ratio is a measure of the liquidity of an organization, meaning the CRHD's ability to meet current obligations through current assets. A high ratio indicates a greater ability to meet budgeted and unexpected expenditures. Generally, a current ratio greater than one is considered healthy for a government entity.

CURRENT RATIO

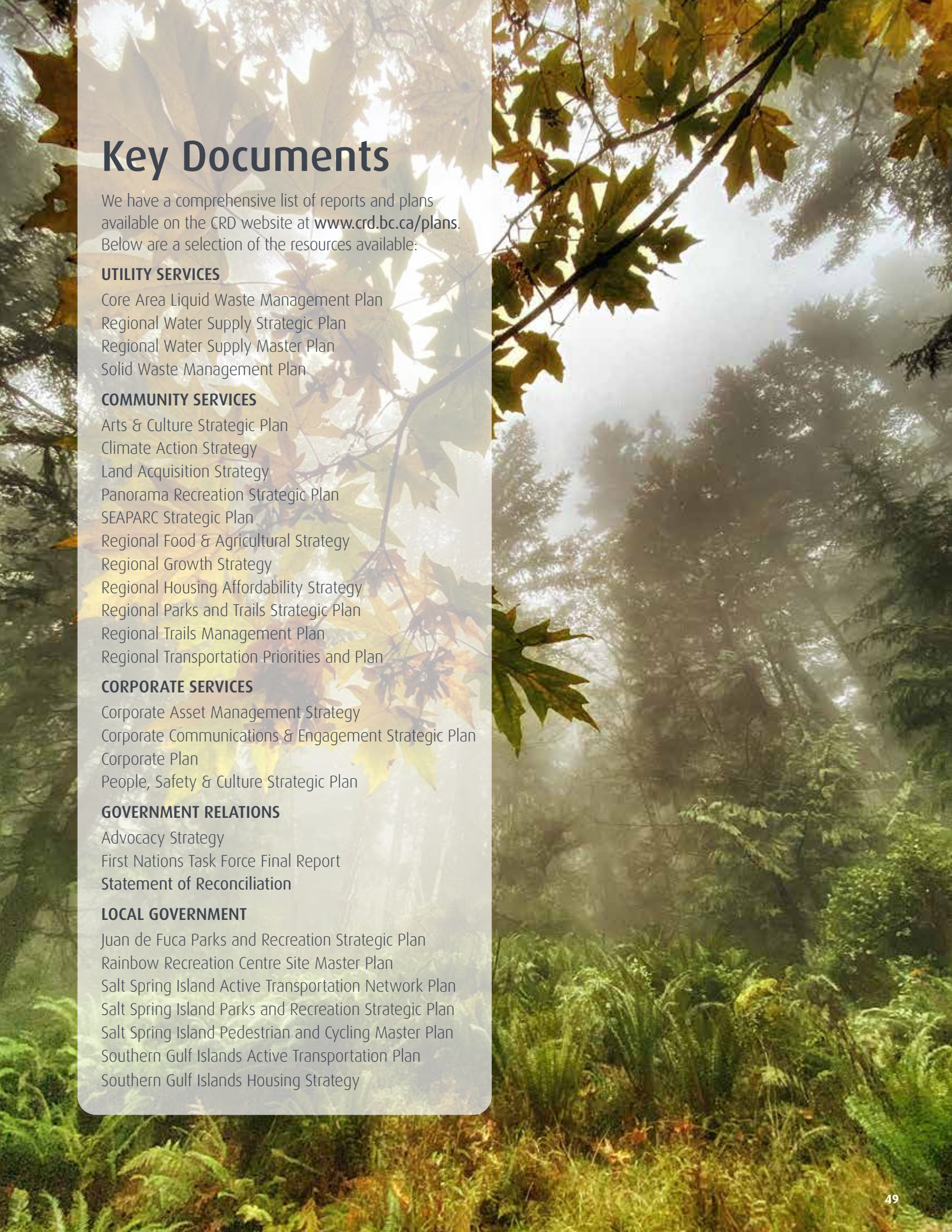
5.7

Interest Coverage Ratio

This ratio is a measure of the organization's ability to meet interest expense obligations on temporary and long-term debt. A high ratio indicates a greater ability to meet budgeted and unexpected expenditures. Generally, an interest coverage ratio greater than two is considered healthy for a government entity.

INTEREST COVERAGE RATIO

6.2X



Key Documents

We have a comprehensive list of reports and plans available on the CRD website at **www.crd.bc.ca/plans**. Below are a selection of the resources available:

UTILITY SERVICES

Core Area Liquid Waste Management Plan
Regional Water Supply Strategic Plan
Regional Water Supply Master Plan
Solid Waste Management Plan

COMMUNITY SERVICES

Arts & Culture Strategic Plan
Climate Action Strategy
Land Acquisition Strategy
Panorama Recreation Strategic Plan
SEAPARC Strategic Plan
Regional Food & Agricultural Strategy
Regional Growth Strategy
Regional Housing Affordability Strategy
Regional Parks and Trails Strategic Plan
Regional Trails Management Plan
Regional Transportation Priorities and Plan

CORPORATE SERVICES

Corporate Asset Management Strategy
Corporate Communications & Engagement Strategic Plan
Corporate Plan
People, Safety & Culture Strategic Plan

GOVERNMENT RELATIONS

Advocacy Strategy
First Nations Task Force Final Report
Statement of Reconciliation

LOCAL GOVERNMENT

Juan de Fuca Parks and Recreation Strategic Plan
Rainbow Recreation Centre Site Master Plan
Salt Spring Island Active Transportation Network Plan
Salt Spring Island Parks and Recreation Strategic Plan
Salt Spring Island Pedestrian and Cycling Master Plan
Southern Gulf Islands Active Transportation Plan
Southern Gulf Islands Housing Strategy



www.crd.bc.ca

Capital Regional District
625 Fisgard Street
Victoria, BC V8W 2S6

Tel: 250.360.3000
X: @crd_bc
Facebook: Capital Regional District

Making a difference...together

REPORT TO THE FINANCE COMMITTEE
MEETING OF WEDNESDAY, MAY 01, 2024

SUBJECT **2025 Service and Financial Planning Guidelines**

ISSUE SUMMARY

This report outlines the service and financial planning annual process and approach for 2025 including key budget drivers for consideration.

BACKGROUND

The Capital Regional District (CRD) 2025 service and financial planning processes have begun. Board Priorities, Corporate Plan initiatives and core service delivery form the foundation of the 2025 to 2029 five-year financial plan. Appendix A highlights the overall corporate planning process while Appendix B details the timeline specific to the planning cycle.

The 2025 cycle plans year three of the Board approved CRD Corporate Plan. The Corporate Plan identifies initiatives that will progress service delivery in alignment with the Board Priorities. The Corporate Plan also includes initiatives that, deliver on core service mandates, are necessary to meet regulatory requirements, and help the organization keep pace with population growth and maintain service levels.

New for 2025, as actioned in the corporate initiative CRD Evolves 2024 to 2025, core services will undergo review and realignment aimed at addressing duplication, centralization and opportunities to scale existing services. Cross functional teams will plan and execute this work for implementation in 2025 and beyond.

Impacts for initiatives will be summarized and presented with the 2025 service plans, also known as Community Need Summaries, and the provisional budget will be presented at the Committee of the Whole meeting scheduled for October 30, 2024. As in prior years, to proactively influence the planning process, this report recommends planning guidelines in consideration of various trends, assumptions and drivers impacting the organization.

ALTERNATIVES

Alternative 1
The Finance Committee recommends to the Capital Regional District Board:
That the service and financial planning guidelines be approved and that staff be directed to prepare the draft financial plan review based on the timeline presented.

Alternative 2
That this report be referred back to staff for additional information.

IMPLICATIONS

Alignment with Board & Corporate Priorities

The guidelines are the policies, practices and assumptions by which the CRD Board and staff determine the most appropriate allocation of resources to deliver the Corporate Plan. The guidelines are reviewed and tailored to current economic trends and in support of financial health targets for the organization.

The alignment of the financial plan with strategic priorities and financial management strategies, provides a delivery of service that is efficient and effective. The 2025 financial planning process will reflect feedback from various commissions, committees and the Board.

In 2025, staff will prioritize programs and initiatives that:

- Advance Board priorities or Corporate Plan initiatives;
- Operationalize capital commitments and investments; and/or
- Are necessary to maintain a core service level following a regulatory change or where there is a safety risk to customers, communities, or staff.

Financial Implications

Financial Planning Guidelines

The financial planning guidelines advise the organization on internal and external drivers to influence management practices with respect to surpluses, reserves, debt and cost containment measures. This will enable the organization to optimize revenue requirements and minimize requisition increases. Analysis of the following areas influence the guidelines: Economic Conditions, Core Service Levels and Infrastructure Investment and Financial Management Strategies.

Economic Conditions

The financial plan relies on ongoing analysis and monitoring by staff of economic drivers and assumptions, with a focus on understanding their impact on both service delivery and financial performance. Highlights of key interrelated economic indicators in this report include interest, inflation and unemployment rates, and population growth.

In January 2024, Canada's gross domestic product (GDP) displayed a strong rebound, easing pressure on the Bank of Canada (BoC) for an early rate cut. Further GDP[1] expansion is expected which is impacting financial markets to lower expectations for a 0.25% rate cut in June 2024. So far, Canada's economy has managed to steer clear of a technical recession despite elevated interest rates. Higher rates continue to place upward pressure on costs in capital investment compounding inflationary cost pressures in local, provincial and national Consumer Price Indices.

[1] https://globalnews.ca/news/10389121/canada-economy-gdp-january-2024/

Through February 2024, the Greater Victoria average annual inflation rate was 3.1%, provincially the value was 3.4%, while Vancouver measured 3.8%[2]. The recently approved BC provincial budget assumes an inflation rate of 2.7%[3] in 2024 in comparison to 2023 actuals of 3.9%. Given historical planning guidelines for the CRD and the economic trends the Executive Leadership Team is setting the target for service and financial planning at 3.0%. This represents the target percentage increase over 2024 budgets; the increase will reflect the change for the consolidated requisition per household excluding municipal debt. As shown in Appendix D, the five-year consolidated requisition forecast includes multi-year projects, programs, and initiatives already underway. Through service optimization and rationalization, staff look to achieve the 2025 planning target.

The CRD continues to address rising costs through core service continuous improvement and optimization. Additionally, the effective use of financing strategies such as revenue diversification, asset leverage and reserve management support the organization in meeting annual budget targets. The CRD polices and strategies on operating and capital reserves monitor funded status and inform debt capacity through uncertain interest rate periods.

Persistent regional challenges in housing availability, transportation and overall affordability directly impact recruitment and retention for the CRD. In February 2024, the Greater Victoria unemployment rate was 4.3%, well below the provincial, national and Vancouver rates of 5.4%, 5.8% and 5.6% respectively[4].

Population growth (3.3% in 2023) compounds regional challenges in addition to driving higher utilization of CRD services. Operational results through early 2024 reflect higher volumes and variable costs of service delivery in water, parks and recreation.

Financial Capacity

Equally pervasive to planning, organizational capacity correlates to the current and forecasted financial capacity of the organization. Based on recently developed CRD financial management strategies, capacity is regularly reviewed informing targets and managing upper bounds on financial implications. While growth continues to place upward pressure on service delivery, forecasts provide visibility on related implications to mitigate and reduce financial risk.

Recognizing the complexity and variability of factors influencing revenue projections, sensitivity analysis is used to inform the executive of approximate financial capacity in future years. The 2025 requisition increase is forecasted to be 6%, with a potential range from 5% to 8%. This uncertainty underscores the need for adaptability in operations and financial management support throughout the cycle.

Debt management is a critical tool of our financial strategy, encompassing a thorough review of operational needs in alignment with asset management performance. Overall debt loads and the availability of borrowing capacity under existing loan authorization bylaws provide the ability to react to the changing environment.

[2] BC Stats CPI report at: https://www2.gov.bc.ca/assets/gov/data/statistics/economy/cpi/cpi_highlights.pdf
[3] BC 2024 Inflation Forecast(Page 93): https://www.bcbudget.gov.bc.ca/2024/pdf/2024_Budget_and_Fiscal_Plan.pdf
[4] Table 14-10-0380-01 Labour force characteristics, three-month moving average, seasonally adjusted: Labour force characteristics, three-month moving average, seasonally adjusted (statcan.gc.ca)

Core Service Levels

The CRD Board's 2023 to 2026 strategic priorities form the basis of the Corporate Plan and related service plans. The rolling five-year financial plan will reflect updated assumptions in timing, scope and cost estimates.

The most significant costs of service delivery are capital and operating expenses such as salaries and benefits, debt servicing, materials and equipment. Changes in these expenditures will be influenced to a greater degree by uncontrollable economic conditions such as unemployment rates, supply and demand of goods and services, as well as contractual agreements.

The organization has experienced growth in many core services in the past five years, driven by community needs in the Corporate Plan. Service Delivery reviews are an effective tool to evaluate efficacy while priorities continue to evolve.

Financial Management Strategies

Financial management strategies ensure critical financial objectives are integrated into organizational decision making and operations. Appendix C provides a summary of current financial management strategies published for corporate planning.

Infrastructure Funding

Community approved master plans are either in place or are under development across the CRD, reflecting a long-term service delivery view for investment in assets and service levels. The Board approved Corporate Asset Management Strategy and Policy set activities and actions required in planning and managing critical assets of the organization.

Initiatives include development and completion of:

- Sustainable Service Delivery plans to maintain and replace existing assets in the short, medium and long-term
- A Lifecycle Costing Framework, integrating quantitative, qualitative, social, environmental and economic measures such as climate action and risk management
- A Library of Financial Guidelines aimed at optimizing financial position, reserves and borrowing capacity while lowering current costs and diversifying revenue

Public Engagement

As in prior years, public engagement on the financial plan is considered an integral part of the process. The CRD continually seeks to improve on this process by developing a plan reflective of community desired methods of engagement. Ongoing opportunities for public input through committee, commission and CRD Board meetings will be available throughout the year.

CONCLUSION

Board Priorities, Corporate Plan initiatives, and core service delivery form the foundation of the 2025 to 2029 five-year financial plan. To proactively influence the planning process, this report recommends planning guidelines in the context of observed trends, assumptions and drivers impacting the organization. The guidelines are the policies and assumptions by which the CRD Board and staff determine the most appropriate allocation of resources to deliver the Corporate Plan.

RECOMMENDATION

The Finance Committee recommends to the Capital Regional District Board:
That the service and financial planning guidelines be approved and that staff be directed to prepare the draft financial plan review based on the timeline presented.

Submitted by:	Rianna Lachance, BCom, CPA, CA, Sr. Mgr., Financial Services / Deputy CFO
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer, GM Finance & IT
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Capital Regional District Corporate Planning Framework
Appendix B: 2025 Capital Regional District Financial Planning Timetable
Appendix C: Financial Management Strategies
Appendix D: Five-Year Consolidated Requisition Forecast

Corporate Planning Framework

Appendix A



Every four years, the Board sets the strategic priorities, policicies and direction that guide the activities of the organization. Board members, other elected officials and, in some cases, First Nations and ratepayers sit on various committees and commissions that receive public input.

Public input happens throughout the planning cycle, through customer satisfaction surveys, financial plan consulting, user statistics, advisory body reports and other public engagement activities. This input drives the Board's Strategic Priorities.

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Service and Financial Planning Guidelines

CRD Timetable for 2025-2029 Financial Plan	
Month	Description
May	Executive Leadership Team - Review and Prioritize initiative Business Cases
June	Financial Plan Guidelines distributed to staff
June - August	Staff - Service Planning and Budget Preparation
September - October	Executive Leadership Team, Committees & Commissions - Review of Budgets, including Initiative Business Cases
October	Electoral Area Committee - Budgets and Intiative Business Cases (Oct 28) Committee of the Whole - Financial Plan and Intiative Business Cases (Oct 30) Board - Approval Provisional Financial Plan (Oct 30)
January	Surplus/Deficits - Budget Recast
March	Board - Final Bylaw Approval
April	Requisition

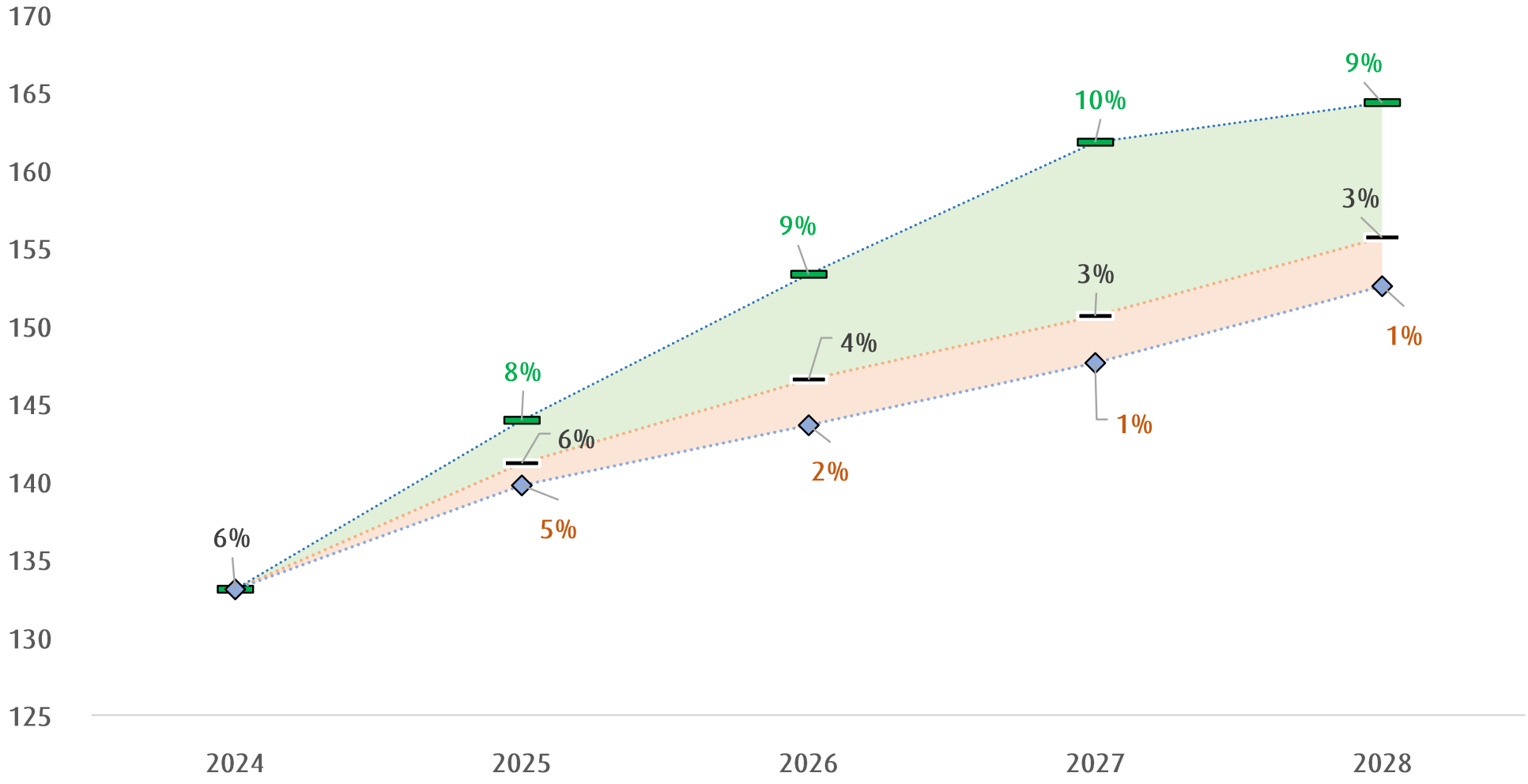
Financial Management Strategies

Financial management strategies ensure critical financial objectives are integrated into organizational decision making and operations. The following outlines the financial management strategies that will generally guide financial planning:

- Set reserve target ranges based on guidelines, determining multi year funding strategies for one-time projects or to stabilize revenue requirements
- Balance debt repayment across time, correlating debt term commitments to asset life based on guideline
- Optimize fees for service revenues and stabilize tax rates to fund operations, maintenance, growth and asset utilization
- One-time variances resulting in surplus transferred to reserve to fund future capital liabilities or reduce future revenue requirements and only applied to reduce tax rates in rare circumstances where the offset is sustainable and stable

Board approved financial policies and guidelines such as the Asset Management Policy, Capital Reserve Guidelines, Operating Reserve Guidelines and Debt Term Guideline inform financial planning in a standard way at a service level whereas the strategies given above provide general corporate direction.

Five-Year Consolidated Requisition Forecast



Future requisition forecasts consider various factors such as inflation, demographic shifts, population growth, and macro-economic conditions. These forecasts are based on current regional population trends and are updated to reflect emerging federal and provincial policies.

Inflation is expected to continue its moderation in 2024 and subsequently decrease, influenced by adjustments in Bank of Canada monetary policy and associated factors. Persistent economic challenges, including unemployment rates, logistics & supply chain, cost of goods including shelter, utilities, and consumables have implications on service delivery.

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REPORT TO THE FINANCE COMMITTEE
MEETING OF WEDNESDAY, MAY 01, 2024

SUBJECT Bylaw No. 4614: 2024 to 2028 Financial Plan Bylaw, 2024, Amendment No. 1, 2024

ISSUE SUMMARY

The 2024 to 2028 Financial Plan was adopted on March 13, 2024. Amendments to the Plan are required to authorize revised operating and capital expenditures.

BACKGROUND

The Capital Regional District (CRD) Board approved the 2024 to 2028 Financial Plan on March 13, 2024. Amendments are required in accordance with Section 374(2) of the *Local Government Act* (LGA), which states that the financial plan may be amended at any time by bylaw to incorporate changes in budget, for certainty. As new information becomes available, and pursuant with Section 374 of the LGA, the CRD Board may approve revisions to the financial plan.

The impact of the proposed amendments to the 2024 budget of the five-year 2024 to 2028 Financial Plan is highlighted in the following table.

SERVICE	DESCRIPTION	BUDGET	FUNDING	NET IMPACT	COMMITTEE / COMMISSION APPROVAL
Environmental Resource Management	Accelerated work plan for Aggregate Production contract at Hartland Landfill	Capital	Reserve Fund	$500,000	Environmental Services Committee 17-April-2024
	Kitchen scraps transfer station relocation at Hartland Landfill	Capital	Reserve Fund, Capital Funds on Hand	$800,000	
Information Technology	SAP Lifecycle Replacement – S/4 Hana	Capital	Capital Funds on Hand	$400,000	Staff Recommended
Community Planning	Port Renfrew Official Community Plan review and update	Capital	Grants	$50,000	Staff Recommended
Juan De Fuca Electoral Areas (JDF EA) – Community Parks	Active Transportation Network Plan	Capital	Grants	$60,000	JDF EA - Community Parks Commission 26-March-2024

SERVICE	DESCRIPTION	BUDGET	FUNDING	NET IMPACT	COMMITTEE / COMMISSION APPROVAL
SEAPARC	Facility HVAC system balancing	Capital	Reserve Fund	$15,000	SEAPARC Commission 2-April-2024
	Facility gutter repair and replacement	Capital	Reserve Fund	$55,000	
Pender Island Community Parks	Accelerated work on baseball park improvements	Capital	Reserve Fund	$20,000	Pender Island Community Parks Commission 4-March-2024
Salt Spring Island Transportation	Postponement of Pathways Standards and Maintenance Development project	Capital	Reserve Fund	$(22,000)	Salt Spring Island Local Community Commission 15-February-2024
	Postponement of Referendum or AAP-funding future projects	Capital	Reserve Fund	$(35,000)	
Mayne Island Community Recreation	Senior citizen fitness and recreation initiatives	Operating	Grant	$10,500	Mayne Island Community Recreation Commission 14-March-2024

The proposed Financial Plan amendment Bylaw No. 4614 incorporates these changes, and is attached as Appendix A, inclusive of an updated Schedule A and Schedule B.

ALTERNATIVES

Alternative 1
The Finance Committee recommends to the Capital Regional District Board:
1. That Bylaw No. 4614, "2024 to 2028 Financial Plan Bylaw, 2024, Amendment Bylaw No. 1, 2024", be introduced and read a first, second, and third time; and
2. That Bylaw No. 4614 be adopted.

Alternative 2
That Bylaw No. 4614 be deferred pending further analysis by Capital Regional District staff.

IMPLICATIONS

Financial Implications

Environmental Resource Management

On April 17, 2024, the Environmental Services Committee approved the acceleration of the Hartland Landfill's Aggregate Production. The project requires an additional $500,000 in 2024 which accelerates the aggregate production work originally planned for 2025. Due to the number of projects under construction in 2024, and a higher operational aggregate consumption as the final contours of cell 3 are reached, the site requires an additional 20,000 m^3 of aggregate production in 2024.

At the same meeting, the Committee also approved an increase in budget for the Hartland kitchen scrap transfer station relocation, from $700,000 to $1,500,000, to ensure a contract can be awarded upon completion of public tendering. The cost is higher than anticipated due to escalation in material/equipment costs, and the station requires additional scope (including civil, electrical and mechanical) that was not included in the conceptual design during the 2023 budget process.

Information Technology

As a result of project discovery work, and after successful request for proposal, the project timeline has been rephased to accelerate work into 2024. As a result, $400,000 of the original project budget needs to be advanced from 2025 to 2024 to ensure sufficient approval to proceed and will be funded from capital on hand.

Additionally, CRD staff have completed a refinement of scope based on project discovery and are recommending the project scope be extended to include critical hardware upgrades, renewed software licensing and to meet all requirements of the financial model. This will increase the total project budget in 2025 and 2026 by $820,000 and $1,149,000 respectively. This will be funded by capital on hand.

Community Planning

Staff have identified that the Port Renfrew official community plan review and update project requires an additional $50,000 in 2024 to bring the budget to $150,000. The quote received during the request for proposal process was higher than budgeted and includes consultation with the Pacheedaht First Nation and a technical review.

Juan de Fuca Electoral Area – Community Parks

The JDF EA Community Parks and Recreation Advisory Commission supported making an application to the British Columbia Active Transportation Infrastructure Grants Program to support the creation of an Active Transportation Network Plan for the JDF EA at its meeting of September 26, 2023. The $30,000 provincial grant was awarded on March 8, 2025. An additional $30,000 community works fund grant will fund the remainder of the project for a total of $60,000. An amendment to add the project to the capital plan was approved at the March 26, 2024 Commission meeting.

SEAPARC

On April 2, 2024, the Sooke and Electoral Areas Parks and Recreation Commission approved $15,000 to complete the facility's air conditioning (HVAC) system balancing. This project is planned to be completed in 2024, ensuring that the six separate heating, ventilation and HVAC systems operating in the facility are in sync. The systems were last balanced in 2019, prior to the opening of the weight room and fitness studio additions.

The Commission also approved an increase of $55,000 to the facility's gutter repair and replacement project. The 2023 to 2027 Capital Plan included $20,000 in funding for gutter repair or replacement as the SEAPARC Recreation Centre gutters have reached end of life. Staff investigated options and costs for this project in 2023 and determined that the best course of action is gutter replacement. This increases the overall project budget from $20,000 to $75,000 to complete this work.

Pender Island Community Parks

The Pender Island Community Parks and Recreation Commission approved an amendment to the ballpark improvements project to include the construction of a $45,000 pump track adjacent to the ballpark. To facilitate the project change, $20,000 in capital reserve funding will be advanced from 2026 to 2024. The total project budget remains unchanged at $65,000.

Salt Spring Island Transportation

On February 15, 2024, the Salt Spring Island Local Community Commission reviewed the Salt Spring Island community transportation service capital plan and approved motions to postpone two reserve funded projects. The $22,000 pathway standards and maintenance development project to develop standards for path design, construction and maintenance will be postponed to 2025. Additionally, the $35,000 referendum or alternative approval process project to seek electors' approval for debt funding of future projects was moved to 2025.

Mayne Island Community Recreation

Mayne Island Parks and Recreation Commission applied for a grant from the New Horizons for Seniors Program in late 2023. The grant application was for $10,500 for recreational expenses including advertising and programming and $14,500 for capital fitness equipment. The 2024 operating budget did not include the $10,500 and at the March 14, 2024 meeting the Commission approved an amendment to include this amount.

CONCLUSION

In compliance with the *Local Government Act*, the proposed amending Bylaw No. 4614 authorizes changes required to Bylaw No. 4603 2024 to 2028 Financial Plan, which the CRD Board approved on March 13, 2024.

RECOMMENDATION

The Finance Committee recommends to the Capital Regional District Board:

1. That Bylaw No. 4614, "2024 to 2028 Financial Plan Bylaw, 2024, Amendment Bylaw No. 1, 2024", be introduced and read a first, second, and third time; and
2. That Bylaw No. 4614 be adopted.

Submitted by:	Rianna Lachance, BCom, CPA, CA, Sr. Mgr., Financial Services / Deputy CFO
Concurrence:	Rianna Lachance, BCom, CPA, CA, Acting Chief Financial Officer
Concurrence:	Stephen Henderson, BSc, P.G.Dip.Eng, MBA, Acting General Manager Corporate Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: Bylaw No. 4614, with Schedule A and Schedule B

APPENDIX A

CAPITAL REGIONAL DISTRICT

BYLAW NO. 4614

****

A BYLAW TO AMEND THE FIVE-YEAR FINANCIAL PLAN FOR THE YEARS 2024 – 2028

****

The Board of the Capital Regional District in open meeting assembled enacts as follows:

1. Bylaw No. 4603, "2024 to 2028 Financial Plan Bylaw, 2024", is hereby amended by replacing Schedule A and Schedule B with the attached schedules hereto.

2. This Bylaw may be cited as “2024 to 2028 Financial Plan Bylaw, 2024, Amendment Bylaw No. 1, 2024.

READ A FIRST TIME THIS	day of	20__
READ A SECOND TIME THIS	day of	20__
READ A THIRD TIME THIS	day of	20__
ADOPTED THIS	day of	20__

_____ _____

CHAIR CORPORATE OFFICER

Attachment: Schedule A and Schedule B

CAPITAL REGIONAL DISTRICT 2024 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2024	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2024	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2024
1.010	Legislative & General Government	39,599,526	37,174,170	-	-	524,890	1,900,466	39,599,526	675,320	21,550,550	3,433,881	1,592,779	95,480	-	12,251,516	12,251,516
1.10X	Facilities Management	4,606,290	4,208,790	-	-	-	397,500	4,606,290	-	4,390,146	-	42,410	-	-	173,734	173,734
1.101	G.I.S.	653,615	585,355	-	-	18,260	50,000	653,615	-	514,396	-	5,972	-	-	133,247	133,247
1.103	Elections	40,580	90	-	-	-	40,490	40,580	-	-	-	271	-	-	40,309	40,309
1.104	U.B.C.M.	13,036	13,036	-	-	-	-	13,036	468	-	-	90	-	-	12,478	12,478
1.109	Electoral Area Admin Exp - JDF	72,645	72,645	-	-	-	-	72,645	-	-	-	246	-	-	72,399	72,399
1.110	Electoral Area Admin Exp - SGI	572,636	571,536	-	-	-	1,100	572,636	-	86,867	52,688	18,921	-	-	414,160	414,160
1.111	Electoral Area Admin Exp - SSI	1,397,753	1,342,753	-	-	20,000	35,000	1,397,753	48,579	683,846	-	5,730	-	-	659,598	659,598
1.112	Regional Grant in Aid	1,609,336	1,609,336	-	-	-	-	1,609,336	1,569,336	-	-	40,000	-	-	-	-
1.114	Grant-in-Aid - Juan de Fuca	29,515	29,515	-	-	-	-	29,515	29,225	-	-	290	-	-	-	-
1.116	Grant-in-Aid - Salt Spring Island	58,785	58,785	-	-	-	-	58,785	14,773	-	-	260	-	-	43,752	43,752
1.117	Grant-in-Aid - Southern Gulf Islands	111,608	111,192	-	416	-	-	111,608	-	-	-	1,254	-	-	110,354	110,354
1.119	Vancouver Island Regional Library	404,447	402,678	-	1,769	-	-	404,447	-	-	-	629	-	-	403,818	403,818
1.121	Sooke Regional Museum	230,107	230,107	-	-	-	-	230,107	1,995	-	-	653	-	-	227,459	227,459
1.123	Prov. Court of B.C. (Family Court)	149,360	-	-	-	-	149,360	149,360	-	-	-	149,360	-	-	-	-
1.124	SSI Economic Development Commission	69,349	69,349	-	-	-	-	69,349	15,000	-	-	650	-	-	53,699	53,699
1.125	SGI Economic Development Commission	155,896	155,896	-	-	-	-	155,896	27,650	-	-	1,468	-	-	126,778	126,778
1.126	Victoria Family Court Committee	58,597	58,597	-	-	-	-	58,597	42,773	-	-	824	-	-	15,000	15,000
1.128	Greater Victoria Police Victim Services	323,215	323,215	-	-	-	-	323,215	3	-	-	15,190	-	-	308,022	308,022
1.129	Vancouver Island Regional Library - Debt	339,366	1,100	338,266	-	-	-	339,366	-	-	-	339,366	-	-	-	-
1.133	Langford E.A. - Greater Victoria Public Library	33,671	33,671	-	-	-	-	33,671	315	-	-	100	-	-	33,256	33,256
1.137	Galiano Island Community Use Building	70,590	38,862	30,653	-	-	1,075	70,590	3,236	-	-	298	-	-	67,056	67,056
1.138	Southern Gulf Islands Regional Library	247,999	247,999	-	-	-	-	247,999	2,735	-	-	2,540	-	-	242,724	242,724
1.141	Salt Spring Island Public Library	718,950	559,044	146,651	-	-	13,255	718,950	-	-	-	1,656	-	-	717,294	717,294
1.15X	Municipalities' Own Debt - M.F.A.	18,229,269	78,720	18,150,549	-	-	-	18,229,269	-	-	-	78,720	-	-	18,150,549	18,150,549
1.170	Gossip Island Electric Power Supply	63,213	592	62,621	-	-	-	63,213	283	-	-	290	-	62,640	-	62,640
1.224	Community Health	1,002,468	1,002,468	-	-	-	-	1,002,468	2,500	-	-	191,389	-	-	808,579	808,579
1.226	Health Facilities - VIHA	1,776,222	741,525	-	-	-	1,034,697	1,776,222	-	-	-	1,776,222	-	-	-	-
1.227	Saturna Island Medical Clinic	26,027	26,027	-	-	-	-	26,027	190	-	-	1,421	-	-	24,416	24,416
1.228	Galiano Health Service	144,768	144,768	-	-	-	-	144,768	15	-	-	124	-	-	144,629	144,629
1.229	Pender Islands Health Care Centre	266,575	266,238	-	337	-	-	266,575	-	-	-	1,974	-	-	264,601	264,601
1.230	Traffic Safety Commission	105,254	105,254	-	-	-	-	105,254	29,182	-	-	3,560	-	-	72,512	72,512
1.232	Port Renfrew Street Lighting	9,199	9,199	-	-	-	-	9,199	1,233	-	-	352	3,892	3,722	-	3,722
1.234	SSI Street Lighting	31,909	31,848	-	61	-	-	31,909	-	-	-	40	-	-	31,869	31,869
1.235	SGI Small Craft Harbour Facilities	483,760	254,855	87,493	-	-	141,412	483,760	-	-	-	7,449	151,150	325,161	-	325,161
1.236	Salt Spring Island Fernwood Dock	16,547	16,547	-	-	-	-	16,547	-	-	-	167	-	16,380	-	16,380
1.238A	Community Transit (SSI)	632,673	632,673	-	-	-	-	632,673	-	-	67,000	211,994	-	-	353,679	353,679
1.238B	Community Transportation (SSI)	88,489	48,489	-	-	-	40,000	88,489	-	-	-	430	-	-	88,059	88,059
1.280	Regional Parks	19,684,346	14,973,908	1,129,207	-	270,000	3,311,231	19,684,346	-	76,018	-	953,827	676,011	-	17,978,490	17,978,490
1.290	Royal Theatre	580,000	100,000	-	-	105,000	375,000	580,000	-	-	-	-	-	-	580,000	580,000
1.295	McPherson Theatre	785,339	349,106	-	-	90,000	346,233	785,339	-	-	-	35,339	-	-	750,000	750,000
1.297	Arts Grants	3,208,277	3,207,277	-	-	-	1,000	3,208,277	-	15,130	49,500	186,993	-	-	2,956,654	2,956,654
1.299	Salt Spring Island Arts	133,806	132,832	-	974	-	-	133,806	-	-	-	90	-	-	133,716	133,716
1.309	Climate Action and Adaptation	2,864,096	2,058,635	-	-	792,961	12,500	2,864,096	-	99,297	190,000	983,434	-	-	1,591,365	1,591,365
1.310	Land Banking & Housing	3,679,545	2,642,012	1,009,463	-	24,000	4,070	3,679,545	260,634	595,481	106,336	820,566	35,130	-	1,861,398	1,861,398
1.311	Regional Housing Trust Fund	4,178,799	4,178,799	-	-	-	-	4,178,799	3,226,193	-	-	233,931	-	-	718,675	718,675
1.312	Regional Goose Management	243,486	243,486	-	-	-	-	243,486	-	-	-	-	-	-	243,486	243,486
1.313	Animal Care Services	1,737,305	1,697,212	-	-	-	40,093	1,737,305	-	-	-	1,232,435	28,330	-	476,540	476,540
1.314	SGI House Numbering	10,111	10,098	-	13	-	-	10,111	-	-	-	124	-	-	9,987	9,987
1.316	SSI Building Numbering	10,285	10,203	-	82	-	-	10,285	-	-	-	20	-	-	10,265	10,265
1.317	JDF Building Numbering	13,884	13,884	-	-	-	-	13,884	84	-	-	50	-	-	13,750	13,750
1.318	Building Inspection	2,241,973	2,184,393	-	-	13,460	44,120	2,241,973	-	32,060	200,183	4,584	1,439,990	-	565,156	565,156
1.319	Soil Deposit Removal	6,180	6,180	-	-	-	-	6,180	-	-	80	40	-	-	6,060	6,060
1.320	Noise Control	65,371	43,371	-	22,000	-	-	65,371	-	-	-	318	-	-	65,053	65,053
1.322	Nuisances & Unsightly Premises	57,419	57,419	-	-	-	-	57,419	-	-	5,519	330	-	-	51,570	51,570
1.323	By-Law Enforcement	639,731	588,873	-	-	-	50,858	639,731	-	603,101	-	36,630	-	-	-	-
1.324	Regional Planning Services	2,227,436	2,224,936	-	-	-	2,500	2,227,436	-	93,180	799,617	63,518	-	-	1,271,121	1,271,121
1.325	Electoral Area Services - Planning	879,137	803,367	-	-	-	75,770	879,137	-	33,180	55,016	2,151	45,000	-	743,790	743,790
1.330	Regional Growth Strategy	331,880	321,880	-	-	-	10,000	331,880	-	-	-	16,675	-	-	315,205	315,205
1.335	Geo-Spatial Referencing System	183,406	119,396	-	-	-	64,010	183,406	-	-	-	8,030	8,660	-	166,716	166,716
1.340	JDF Livestock Injury Compensation	3,158	3,158	-	-	-	-	3,158	3,145	-	-	-	-	-	13	13
1.341	SGI Livestock Injury Compensation	3,180	3,180	-	-	-	-	3,180	3,146	-	-	34	-	-	-	-
1.342	SSI Livestock Injury Compensation	3,158	3,158	-	-	-	-	3,158	3,145	-	-	-	-	-	13	13
1.350	Willis Point Fire Protect & Recreation	203,796	139,637	-	-	6,520	57,639	203,796	16,086	-	-	41,980	-	-	145,730	145,730
1.352	South Galiano Fire Protection	606,587	355,080	141,027	-	10,190	100,290	606,587	-	-	-	1,120	-	141,027	464,440	605,467
1.353	Otter Point Fire Protection	671,460	498,390	-	-	5,870	167,200	671,460	-	-	-	340	-	-	671,120	671,120
1.354	Malahat Fire Protection	73,672	73,672	-	-	-	-	73,672	617	-	-	-	-	-	73,055	73,055
1.355	Durrance Road Fire Protection	3,016	2,716	-	-	-	300	3,016	-	-	-	-	-	3,016	-	3,016
1.356	Pender Fire Protection	1,399,332	1,096,314	111,596	-	-	191,422	1,399,332	-	-	111,596	11,583	-	-	1,276,153	1,276,153
1.357	East Sooke Fire Protection	586,306	330,076	155,109	-	5,000	96,121	586,306	11,043	-	-	27,963	69,350	-	477,950	477,950
1.358	Port Renfrew Fire Protection	202,438	174,186	2,898	-	-	25,354	202,438	-	-	-	1,340	80,698	-	120,400	120,400
1.359	North Galiano Fire Protection	340,969	272,292	53,608	-	5,000	10,069	340,969	24,520	-	-	988	-	24,440	291,021	315,461
1.360	Shirley Fire Protection	200,090	125,634	-	-	10,000	64,456	200,090	-	-	-	210	-	-	199,880	199,880
1.363	Saturna Island Fire	316,453	316,453	-	-	-	-	316,453	1,596	-	-	12,396	-	-	302,461	302,461
1.369	Electoral Area Fire Services	378,064	375,564	-	-	2,500	-	378,064	-	-	171,704	120	-	-	206,240	206,240
1.370	Juan de Fuca Emergency Program	105,295	92,415	-	-	-	12,880	105,295	-	-	-	240	-	-	105,055	105,055
1.371	SSI Emergency Program	144,181	134,181	-	-	10,000	-	144,181	-	-	13,811	200	-	-	130,170	130,170
1.372	Electoral Area Emergency Program	748,997	743,997	-	-	-	5,000	748,997	-	509,530	72,410	967	-	-	166,090	166,090
1.373	SGI Emergency Program	275,218	254,718	-	-	-	20,500	275,218	-	-	25,000	2,735	-	-	247,483	247,483
1.374	Regional Emergency Program Support	148,016	148,016	-	-	-	-	148,016	-	-	-	7,290	-	-	140,726	140,726
1.375	Hazardous Material Incident Response	405,611	396,051	-	-	-	9,560	405,611	-	-	31,600	17,762	-	-	356,249	356,249

CAPITAL REGIONAL DISTRICT 2024 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2024	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2024	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2024
1.377	JDF Search and Rescue	101,252	88,752	-	-	9,500	3,000	101,252	9,450	-	-	21,850	-	-	69,952	69,952
1.378	SSI Search and Rescue	25,804	25,804	-	-	-	-	25,804	2,787	-	-	100	-	-	22,917	22,917
1.40X	SEAPARC	5,243,766	4,669,800	103,966	-	-	470,000	5,243,766	-	-	-	534,684	1,411,200	-	3,297,882	3,297,882
1.405	JDF EA - Community Parks	233,885	215,635	-	-	-	18,250	233,885	-	-	-	912	-	-	232,973	232,973
1.408	JDF EA - Community Recreation	98,812	98,812	-	-	-	-	98,812	6,200	-	-	21,980	-	-	70,632	70,632
1.44X	Panorama Rec. Center.	10,810,738	9,320,141	337,707	-	-	1,152,890	10,810,738	-	-	-	2,081,592	3,229,973	-	5,499,173	5,499,173
1.455	Salt Spring Island - Community Parks	1,025,297	962,085	-	35,212	-	28,000	1,025,297	-	404,570	-	32,200	-	-	588,527	588,527
1.458	Salt Spring Is.- Community Rec	399,235	384,702	-	9,533	-	5,000	399,235	-	-	-	10,040	270,220	-	118,975	118,975
1.459	Salt Spring Is- Pool, Parks, Land, Art & Rec. Prog	2,439,891	2,289,712	-	60,179	-	90,000	2,439,891	8,059	88,420	-	172,599	282,800	-	1,888,013	1,888,013
1.465	Saturna Island Comm. Parks	33,467	28,310	-	-	-	5,157	33,467	3,268	-	-	1,290	-	-	28,909	28,909
1.468	Saturna Island - Community Rec.	20,177	20,177	-	-	-	-	20,177	4,347	-	-	681	-	-	15,149	15,149
1.475	Mayne Is. Com. Parks & Rec	96,569	78,069	-	-	-	18,500	96,569	-	-	-	288	-	-	96,281	96,281
1.476	Mayne Is. Comm. Parks (reserve)	29,771	29,771	-	-	-	-	29,771	19,191	-	-	9,550	1,030	-	-	-
1.478	Mayne Is. Community Rec.	58,682	58,682	-	-	-	-	58,682	11,310	-	-	10,556	-	-	36,816	36,816
1.485	North & South Pender Com. Parks	175,470	158,391	-	-	-	17,079	175,470	-	-	-	2,135	-	-	173,335	173,335
1.488	North & South Pender Com. Rec	70,816	70,816	-	-	-	-	70,816	366	-	-	818	-	-	69,632	69,632
1.495	Galiano Parks	128,309	118,309	-	-	-	10,000	128,309	-	-	20,690	137	-	-	107,482	107,482
1.498	Galiano Community Recreation	43,880	43,876	-	4	-	-	43,880	-	-	-	30	-	-	43,850	43,850
1.521	SWMP -Solid Waste Disposal (Refuse Disposal)	38,751,084	36,632,697	-	-	-	2,118,387	38,751,084	-	-	2,740,000	7,510,100	28,500,984	-	-	-
1.523	Port Renfrew Refuse Disposal	110,631	92,681	-	-	-	17,950	110,631	-	26,440	-	44,815	-	-	39,376	39,376
1.525	Solid Waste Disposal - Debt	1,229,666	122,780	1,106,886	-	-	-	1,229,666	-	-	-	650	1,229,016	-	-	-
1.531	Stormwater Quality Management - Sooke	90,599	90,599	-	-	-	-	90,599	-	-	50,000	156	-	-	40,443	40,443
1.533	Stormwater Quality Management - SGI	41,480	41,480	-	-	-	-	41,480	-	-	-	480	-	-	41,000	41,000
1.535	Stormwater Quality Management - SSI	66,034	66,034	-	-	-	-	66,034	30,000	-	11,394	30	-	-	24,610	24,610
1.536	LWMP-Stormwater Quality Management-Core	857,441	839,287	-	-	-	18,154	857,441	-	-	90,000	90,277	-	-	677,164	677,164
1.537	Stormwater Quality Management - Peninsula	125,095	125,095	-	-	-	-	125,095	-	-	-	4,173	-	-	120,922	120,922
1.538	Source - Stormwater Quality - Peninsula	59,263	59,263	-	-	-	-	59,263	-	-	657	1,653	-	-	56,953	56,953
1.57X	Environmental Services	27,102,054	25,813,219	-	-	475,000	813,835	27,102,054	-	26,405,223	696,831	-	-	-	-	-
1.911	911 Systems	2,606,719	1,592,770	1,011,949	-	-	2,000	2,606,719	-	-	28,000	2,140,093	129,791	-	308,835	308,835
1.912B	911 Call Answer - Municipalities	20,030	-	-	20,030	-	-	20,030	-	681,953	-	-43,435	-	-	(618,488)	(618,488)
1.913	913 Fire Dispatch	372,559	372,559	-	-	-	-	372,559	-	-	33,771	10,648	-	-	328,140	328,140
1.921	Regional CREST Contribution	1,932,993	1,911,008	-	21,985	-	-	1,932,993	-	-	-	99,442	-	-	1,833,551	1,833,551
1.923	Emergency Comm - CREST - SGI	187,299	187,299	-	-	-	-	187,299	214	-	-	1,992	-	-	185,093	185,093
1.924	Emergency Comm - CREST - JDF	160,323	160,323	-	-	-	-	160,323	11,784	-	-	250	-	-	148,289	148,289
1.925	Emergency Comm - CREST - SSI	150,978	150,862	-	116	-	-	150,978	-	-	-	160	-	-	150,818	150,818
2.610	Saanich Peninsula Water Supply	7,892,266	7,000,266	42,000	-	-	850,000	7,892,266	-	-	-	60,500	7,831,766	-	-	-
2.620	SSI Highland Water System	31,988	117	31,871	-	-	-	31,988	172	-	-	90	-	31,726	-	31,726
2.621	Highland / Fernwood Water - SSI	572,602	387,292	44,234	-	-	141,076	572,602	-	-	20,000	940	474,032	77,630	-	77,630
2.622	Cedars of Tuam	48,397	35,982	-	-	-	12,415	48,397	-	-	-	90	48,307	-	-	-
2.624	Beddis Water	293,927	190,277	3,740	-	-	99,910	293,927	-	-	-	150	207,837	85,940	-	85,940
2.626	Fulford Water	259,231	182,005	17,852	-	-	59,374	259,231	-	-	20,000	710	183,291	55,230	-	55,230
2.628	Cedar Lane Water (SSI)	95,342	67,660	12,752	-	-	14,930	95,342	-	-	5,000	190	72,332	17,820	-	17,820
2.630	Magic Lakes Estate Water System	1,009,370	741,546	215,764	-	-	52,060	1,009,370	-	-	-	11,080	418,230	580,060	-	580,060
2.640	Saturna Island Water System (Lyall Harbour)	290,019	205,878	31,001	-	-	53,140	290,019	-	-	20,000	1,008	128,315	140,696	-	140,696
2.642	Skana Water (Mayne)	96,840	62,515	-	-	-	34,325	96,840	-	-	6,000	100	64,160	26,580	-	26,580
2.650	Port Renfrew Water	144,180	124,180	-	-	-	20,000	144,180	-	-	-	1,102	70,830	72,248	-	72,248
2.660	Fernwood Water	14,731	53	14,678	-	-	-	14,731	70	-	-	40	-	14,621	-	14,621
2.665	Sticks Allison Water (Galiano)	75,777	62,277	-	-	-	13,500	75,777	-	-	7,000	100	63,577	5,100	-	5,100
2.667	Surfside Park Estates (Mayne)	129,572	112,572	-	-	-	17,000	129,572	-	-	-	100	104,852	24,620	-	24,620
2.670	Regional Water Supply	42,114,204	21,288,207	2,896,242	-	17,450,000	479,755	42,114,204	-	-	-	836,052	41,278,152	-	-	-
2.680	Juan de Fuca Water Distribution	26,026,524	15,621,033	2,411,815	-	7,346,169	647,507	26,026,524	-	-	-	223,780	25,802,744	-	-	-
2.681	Florence Lake Water System Debt	19,038	-	19,038	-	-	-	19,038	7,288	-	-	37	-	11,713	-	11,713
2.682	Seagirt Water System Debt	114,767	20,000	94,767	-	-	-	114,767	-	-	-	-	-	114,767	-	114,767
2.691	Wilderness Mountain Water Service	171,071	136,407	25,664	3,000	-	6,000	171,071	-	-	4,000	110	99,466	67,495	-	67,495
3.700	Septage Disposal	161,082	161,082	-	-	-	-	161,082	-	-	-	161,082	-	-	-	-
3.701	Millstream Remediation Service	19,812	650	19,162	-	-	-	19,812	-	-	6,262	7,288	-	-	6,262	6,262
3.705	SSI Liquid Waste Disposal	1,208,171	1,029,389	166,782	-	-	12,000	1,208,171	-	-	-	1,796	790,250	416,125	-	416,125
3.707	LWMP - On Site System Management Program	183,866	183,866	-	-	-	-	183,866	-	-	42,260	6,900	-	134,706	-	134,706
3.71X	Core Area Wastewater Operations	34,609,974	33,909,974	-	-	-	700,000	34,609,974	-	630,083	420,849	28,130,868	-	-	5,428,174	5,428,174
3.718	Peninsula Wastewater TP	4,993,969	4,007,733	-	-	-	986,237	4,993,969	-	154,483	180,000	2,576,123	-	-	2,083,363	2,083,363
3.720	LWMP - (Peninsula) - Implementation	57,422	34,200	-	-	-	23,222	57,422	-	-	-	2,208	-	-	55,214	55,214
3.750	LWMP - Core and West Shore	584,072	328,399				255,673	584,072	-	-	-	156,746	200,000	-	227,326	227,326
3.752	LWMP - Harbour Studies	362,174	362,174				-	362,174	-	-	-	22,459	-	-	339,715	339,715
3.755	Regional Source Control	1,674,718	1,674,548	-	-	-	170	1,674,718	-	55,000	43,762	96,970	61,200	-	1,417,786	1,417,786
3.756	Harbours Environmental Action	-	-	-	-	-	-	-	-	-	-	2,031	-	-	(2,031)	(2,031)
3.7XX	Core Area & Legacy Trunk Sewer - Debt	21,889,666	227,343	9,163,127	6,013	5,529,745	6,963,438	21,889,666	211,603	-	-	15,877,551	-	-	5,800,512	5,800,512
3.810	Ganges Sewer	1,264,781	892,885	245,813	-	-	126,083	1,264,781	-	-	80,000	2,357	1,120,290	62,134	-	62,134
3.820	Maliview Estates Sewer System	268,646	203,533	12,243	-	-	52,870	268,646	-	-	40,000	25,270	198,306	5,070	-	5,070
3.830	Magic Lake Estates Sewer System	913,885	679,982	174,103	-	-	59,800	913,885	-	11,590	-	4,613	291,047	606,635	-	606,635
3.830D	Magic Lake Estates Sewer Debt	231,715	1,030	230,685	-	-	-	231,715	-	-	-	2,256	-	229,459	-	229,459
3.850	Port Renfrew Sewer	135,608	114,028	-	-	-	21,580	135,608	-	-	-	1,590	66,999	67,019	-	67,019
21.ALL	Feasibility Study Reserve Fund - All	350,000	350,000	-	-	-	-	350,000	140,891	-	-	-	-	-	209,109	209,109
21.E.A.	Feasibility Study Reserve Fund - E.A.	-	-	-	-	-	-	-	10,000	-	-	-	-	-	(10,000)	(10,000)

CAPITAL REGIONAL DISTRICT 2025 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2025	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2025	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2025
1.010	Legislative & General Government	38,077,102	36,381,372	98,000	-	1,249,690	348,040	38,077,102	450,000	22,113,883	927,368	1,537,996	96,590	-	12,951,265	12,951,265
1.10X	Facilities Management	4,774,914	4,306,664	-	-	-	468,250	4,774,914	-	4,554,526	-	42,487	-	-	177,901	177,901
1.101	G.I.S.	668,193	599,563	-	-	18,630	50,000	668,193	-	524,684	-	6,150	-	-	137,359	137,359
1.103	Elections	65,580	90	-	-	-	65,490	65,580	-	-	-	90	-	-	65,490	65,490
1.104	U.B.C.M.	13,531	13,531	-	-	-	-	13,531	-	-	-	90	-	-	13,441	13,441
1.109	Electoral Area Admin Exp - JDF	74,096	74,096	-	-	-	-	74,096	-	-	-	250	-	-	73,846	73,846
1.110	Electoral Area Admin Exp - SGI	467,005	465,905	-	-	-	1,100	467,005	-	-	15,955	19,390	-	-	431,660	431,660
1.111	Electoral Area Admin Exp - SSI	1,423,396	1,359,396	-	-	-	64,000	1,423,396	-	698,078	-	5,750	-	-	719,568	719,568
1.112	Regional Grant in Aid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.114	Grant-in-Aid - Juan de Fuca	21,727	21,727	-	-	-	-	21,727	-	-	-	290	-	-	21,437	21,437
1.116	Grant-in-Aid - Salt Spring Island	52,904	52,904	-	-	-	-	52,904	-	-	-	260	-	-	52,644	52,644
1.117	Grant-in-Aid - Southern Gulf Islands	111,217	111,217	-	-	-	-	111,217	-	-	-	1,257	-	-	109,960	109,960
1.119	Vancouver Island Regional Library	410,702	410,702	-	-	-	-	410,702	-	-	-	640	-	-	410,062	410,062
1.121	Sooke Regional Museum	234,706	234,706	-	-	-	-	234,706	-	-	-	400	-	-	234,306	234,306
1.123	Prov. Court of B.C. (Family Court)	149,360	-	-	-	-	149,360	149,360	-	-	-	149,360	-	-	-	-
1.124	SSI Economic Development Commission	74,716	69,716	-	-	-	5,000	74,716	-	-	14,205	640	-	-	59,871	59,871
1.125	SGI Economic Development Commission	131,794	131,794	-	-	-	-	131,794	-	-	-	1,550	-	-	130,244	130,244
1.126	Victoria Family Court Committee	15,797	15,797	-	-	-	-	15,797	-	-	-	797	-	-	15,000	15,000
1.128	Greater Victoria Police Victim Services	329,109	329,109	-	-	-	-	329,109	-	-	-	14,634	-	-	314,475	314,475
1.129	Vancouver Island Regional Library - Debt	339,366	1,100	338,266	-	-	-	339,366	-	-	-	339,366	-	-	-	-
1.133	Langford E.A. - Greater Victoria Public Library	34,344	34,344	-	-	-	-	34,344	-	-	-	100	-	-	34,244	34,244
1.137	Galiano Island Community Use Building	71,318	39,665	30,653	-	-	1,000	71,318	-	-	-	293	-	-	71,025	71,025
1.138	Southern Gulf Islands Regional Library	252,969	252,969	-	-	-	-	252,969	-	-	-	2,679	-	-	250,290	250,290
1.141	Salt Spring Island Public Library	784,498	611,277	146,651	-	-	26,570	784,498	-	-	-	1,680	-	-	782,818	782,818
1.15X	Municipalities' Own Debt - M.F.A.	17,229,603	77,040	17,152,563	-	-	-	17,229,603	-	-	-	77,040	-	-	17,152,563	17,152,563
1.170	Gossip Island Electric Power Supply	63,217	596	62,621	-	-	-	63,217	-	-	-	290	-	62,927	-	62,927
1.224	Community Health	837,514	837,514	-	-	-	-	837,514	-	-	-	190,533	-	-	646,981	646,981
1.226	Health Facilities - VIHA	1,811,746	757,423	-	-	-	1,054,323	1,811,746	-	-	-	1,811,746	-	-	-	-
1.227	Saturna Island Medical Clinic	26,547	26,547	-	-	-	-	26,547	-	-	-	1,450	-	-	25,097	25,097
1.228	Galiano Health Service	147,664	147,664	-	-	-	-	147,664	-	-	-	194	-	-	147,470	147,470
1.229	Pender Islands Health Care Centre	279,355	279,355	-	-	-	-	279,355	-	-	-	2,170	-	-	277,185	277,185
1.230	Traffic Safety Commission	78,533	78,533	-	-	-	-	78,533	-	-	-	3,630	-	-	74,903	74,903
1.232	Port Renfrew Street Lighting	9,496	9,496	-	-	-	-	9,496	-	-	-	360	3,970	5,166	-	5,166
1.234	SSI Street Lighting	32,515	32,515	-	-	-	-	32,515	-	-	-	40	-	-	32,475	32,475
1.235	SGI Small Craft Harbour Facilities	484,630	252,134	87,493	-	-	145,003	484,630	-	-	-	7,740	145,380	331,510	-	331,510
1.236	Salt Spring Island Fernwood Dock	27,074	17,074	-	-	-	10,000	27,074	-	-	-	170	-	26,904	-	26,904
1.238A	Community Transit (SSI)	703,649	668,649	-	-	-	35,000	703,649	-	-	-	217,547	-	-	486,102	486,102
1.238B	Community Transportation (SSI)	161,223	52,573	3,920	-	-	104,730	161,223	-	-	-	430	-	-	160,793	160,793
1.280	Regional Parks	20,888,055	15,339,791	1,419,207	-	751,900	3,377,157	20,888,055	-	77,539	-	934,946	637,016	-	19,238,554	19,238,554
1.290	Royal Theatre	580,000	100,000	-	-	105,000	375,000	580,000	-	-	-	-	-	-	580,000	580,000
1.295	McPherson Theatre	785,822	349,589	-	-	90,000	346,233	785,822	-	-	-	35,822	-	-	750,000	750,000
1.297	Arts Grants	3,275,458	3,274,438	-	-	-	1,020	3,275,458	-	15,490	40,552	178,754	-	-	3,040,662	3,040,662
1.299	Salt Spring Island Arts	129,671	129,671	-	-	-	-	129,671	-	-	-	90	-	-	129,581	129,581
1.309	Climate Action and Adaptation	2,387,474	1,534,467	-	-	792,961	60,046	2,387,474	-	-	213,510	657,352	-	-	1,516,612	1,516,612
1.310	Land Banking & Housing	4,734,904	2,612,868	2,117,926	-	-	4,110	4,734,904	-	597,373	100,000	809,456	2,000	-	3,226,075	3,226,075
1.311	Regional Housing Trust Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.312	Regional Goose Management	248,369	248,369	-	-	-	-	248,369	-	-	-	-	-	-	248,369	248,369
1.313	Animal Care Services	1,775,730	1,735,947	-	-	-	39,783	1,775,730	-	-	-	1,255,990	28,900	-	490,840	490,840
1.314	SGI House Numbering	10,298	10,298	-	-	-	-	10,298	-	-	-	145	-	-	10,153	10,153
1.316	SSI Building Numbering	10,428	10,428	-	-	-	-	10,428	-	-	-	20	-	-	10,408	10,408
1.317	JDF Building Numbering	14,157	14,157	-	-	-	-	14,157	-	-	-	50	-	-	14,107	14,107
1.318	Building Inspection	2,303,372	2,240,882	-	-	13,720	48,770	2,303,372	-	32,700	143,742	4,690	1,468,790	-	653,450	653,450
1.319	Soil Deposit Removal	6,312	6,312	-	-	-	-	6,312	-	-	92	40	-	-	6,180	6,180
1.320	Noise Control	44,313	44,313	-	-	-	-	44,313	-	-	-	350	-	-	43,963	43,963
1.322	Nuisances & Unsightly Premises	58,644	58,644	-	-	-	-	58,644	-	-	-	450	-	-	58,194	58,194
1.323	By-Law Enforcement	602,960	551,617	-	-	-	51,343	602,960	-	565,660	-	37,300	-	-	-	-
1.324	Regional Planning Services	1,669,692	1,667,192	-	-	-	2,500	1,669,692	-	95,410	199,918	65,110	-	-	1,309,254	1,309,254
1.325	Electoral Area Services - Planning	905,003	829,233	-	-	-	75,770	905,003	-	33,840	57,853	2,210	45,000	-	766,100	766,100
1.330	Regional Growth Strategy	639,045	629,045	-	-	-	10,000	639,045	-	-	300,000	17,060	-	-	321,985	321,985
1.335	Geo-Spatial Referencing System	187,090	121,800	-	-	-	65,290	187,090	-	-	-	8,000	8,830	-	170,260	170,260
1.340	JDF Livestock Injury Compensation	3,161	3,161	-	-	-	-	3,161	-	-	-	-	-	-	3,161	3,161
1.341	SGI Livestock Injury Compensation	3,181	3,181	-	-	-	-	3,181	-	-	-	34	-	-	3,147	3,147
1.342	SSI Livestock Injury Compensation	3,161	3,161	-	-	-	-	3,161	-	-	-	-	-	-	3,161	3,161
1.350	Willis Point Fire Protect & Recreation	190,790	120,963	-	-	6,650	63,177	190,790	-	-	-	42,150	-	-	148,640	148,640
1.352	South Galiano Fire Protection	629,807	362,170	141,027	-	10,390	116,220	629,807	-	-	-	1,120	-	141,027	487,660	628,687
1.353	Otter Point Fire Protection	687,280	508,490	-	-	5,990	172,800	687,280	-	-	-	340	-	-	686,940	686,940
1.354	Malahat Fire Protection	70,044	70,044	-	-	-	-	70,044	-	-	-	-	-	-	70,044	70,044
1.355	Durrance Road Fire Protection	3,019	2,719	-	-	-	300	3,019	-	-	-	-	-	3,019	-	3,019
1.356	Pender Fire Protection	1,537,418	1,213,722	111,596	-	-	212,100	1,537,418	-	-	111,596	11,820	-	-	1,414,002	1,414,002
1.357	East Sooke Fire Protection	586,874	325,663	155,109	-	5,000	101,102	586,874	-	-	-	28,624	70,740	-	487,510	487,510
1.358	Port Renfrew Fire Protection	206,713	177,713	-	-	-	29,000	206,713	-	-	-	1,350	82,145	-	123,218	123,218
1.359	North Galiano Fire Protection	331,451	264,988	56,363	-	5,000	5,100	331,451	-	-	-	1,000	-	24,440	306,011	330,451
1.360	Shirley Fire Protection	204,090	128,167	-	-	10,000	65,923	204,090	-	-	-	210	-	-	203,880	203,880
1.363	Saturna Island Fire	336,613	336,613	-	-	-	-	336,613	-	-	-	12,753	-	-	323,860	323,860
1.369	Electoral Area Fire Services	332,276	329,776	-	-	2,500	-	332,276	-	-	43,416	120	-	-	288,740	288,740
1.370	Juan de Fuca Emergency Program	124,094	111,214	-	-	-	12,880	124,094	-	-	-	240	-	-	123,854	123,854
1.371	SSI Emergency Program	136,629	136,629	-	-	-	-	136,629	-	-	3,666	190	-	-	132,773	132,773
1.372	Electoral Area Emergency Program	708,055	703,055	-	-	-	5,000	708,055	-	519,720	10,485	990	-	-	176,860	176,860
1.373	SGI Emergency Program	275,268	259,367	-	-	-	15,901	275,268	-	-	25,000	2,890	-	-	247,378	247,378
1.374	Regional Emergency Program Support	151,688	151,688	-	-	-	-	151,688	-	-	-	7,530	-	-	144,158	144,158
1.375	Hazardous Material Incident Response	388,068	378,508	-	-	-	9,560	388,068	-	-	1,250	18,950	-	-	367,868	367,868

CAPITAL REGIONAL DISTRICT 2025 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2025	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2025	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2025
1.377	JDF Search and Rescue	92,232	89,232	-	-	-	3,000	92,232	-	-	-	22,280	-	-	69,952	69,952
1.378	SSI Search and Rescue	25,804	25,804	-	-	-	-	25,804	-	-	-	100	-	-	25,704	25,704
1.40X	SEAPARC	5,389,423	4,806,057	53,966	-	-	529,400	5,389,423	-	-	-	541,857	1,440,106	-	3,407,460	3,407,460
1.405	JDF EA - Community Parks	239,440	220,430	-	-	-	19,010	239,440	-	-	-	900	-	-	238,540	238,540
1.408	JDF EA - Community Recreation	94,470	94,470	-	-	-	-	94,470	-	-	-	22,420	-	-	72,050	72,050
1.44X	Panorama Rec. Center.	11,192,984	9,615,665	313,108	-	-	1,264,211	11,192,984	-	-	-	2,189,590	3,293,799	-	5,709,595	5,709,595
1.455	Salt Spring Island - Community Parks	1,009,980	984,480	-	-	-	25,500	1,009,980	-	412,660	-	32,850	-	-	564,470	564,470
1.458	Salt Spring Is.- Community Rec	397,517	388,167	-	-	-	9,350	397,517	-	-	-	10,240	275,630	-	111,647	111,647
1.459	Salt Spring Is- Pool, Parks, Land, Art & Rec. Prog	2,797,606	2,391,731	18,375	-	-	387,500	2,797,606	-	90,190	15,000	169,790	288,450	-	2,234,176	2,234,176
1.465	Saturna Island Comm. Parks	30,801	25,554	-	-	-	5,247	30,801	-	-	-	1,650	-	-	29,151	29,151
1.468	Saturna Island - Community Rec.	15,120	15,120	-	-	-	-	15,120	-	-	-	690	-	-	14,430	14,430
1.475	Mayne Is. Com. Parks & Rec	98,490	79,480	-	-	-	19,010	98,490	-	-	-	300	-	-	98,190	98,190
1.476	Mayne Is. Comm. Parks (reserve)	10,790	10,790	-	-	-	-	10,790	-	-	-	9,740	1,050	-	-	-
1.478	Mayne Is. Community Rec.	37,610	37,610	-	-	-	-	37,610	-	-	-	60	-	-	37,550	37,550
1.485	North & South Pender Com. Parks	187,630	159,634	-	-	-	27,996	187,630	-	-	-	2,300	-	-	185,330	185,330
1.488	North & South Pender Com. Rec	71,850	71,850	-	-	-	-	71,850	-	-	-	870	-	-	70,980	70,980
1.495	Galiano Parks	131,736	120,736	-	-	-	11,000	131,736	-	-	21,100	120	-	-	110,516	110,516
1.498	Galiano Community Recreation	44,760	44,760	-	-	-	-	44,760	-	-	-	30	-	-	44,730	44,730
1.521	SWMP -Solid Waste Disposal (Refuse Disposal)	42,856,551	37,930,547	-	-	-	4,926,004	42,856,551	-	-	3,080	16,010,637	26,842,834	-	-	-
1.523	Port Renfrew Refuse Disposal	124,649	94,540	-	-	-	30,109	124,649	-	26,969	-	51,565	-	-	46,115	46,115
1.525	Solid Waste Disposal - Debt	2,137,816	77,150	2,060,666	-	-	-	2,137,816	-	-	-	650	2,137,166	-	-	-
1.531	Stormwater Quality Management - Sooke	41,338	25,284	-	-	-	16,054	41,338	-	-	-	86	-	-	41,252	41,252
1.533	Stormwater Quality Management - SGI	42,310	42,310	-	-	-	-	42,310	-	-	-	490	-	-	41,820	41,820
1.535	Stormwater Quality Management - SSI	26,201	26,201	-	-	-	-	26,201	-	-	1,071	30	-	-	25,100	25,100
1.536	LWMP-Stormwater Quality Management-Core	777,746	761,793	-	-	-	15,953	777,746	-	-	-	87,763	-	-	689,983	689,983
1.537	Stormwater Quality Management - Peninsula	127,793	127,793	-	-	-	-	127,793	-	-	-	4,455	-	-	123,338	123,338
1.538	Source - Stormwater Quality - Peninsula	60,528	60,528	-	-	-	-	60,528	-	-	673	1,763	-	-	58,092	58,092
1.57X	Environmental Services	27,046,748	26,106,750	-	-	90,000	849,998	27,046,748	-	26,848,800	105,548	92,400	-	-	-	-
1.911	911 Systems	2,626,347	1,606,948	1,011,949	-	-	7,450	2,626,347	-	-	-	2,119,045	127,195	-	380,107	380,107
1.912B	911 Call Answer - Municipalities	-	-	-	-	-	-	-	-	668,314	-	-43,540	-	-	(624,774)	(624,774)
1.913	913 Fire Dispatch	400,421	400,421	-	-	-	-	400,421	-	-	26,251	9,930	-	-	364,240	364,240
1.921	Regional CREST Contribution	2,004,353	2,004,353	-	-	-	-	2,004,353	-	-	-	101,100	-	-	1,903,253	1,903,253
1.923	Emergency Comm - CREST - SGI	191,031	191,031	-	-	-	-	191,031	-	-	-	2,100	-	-	188,931	188,931
1.924	Emergency Comm - CREST - JDF	152,530	152,530	-	-	-	-	152,530	-	-	-	250	-	-	152,280	152,280
1.925	Emergency Comm - CREST - SSI	153,871	153,871	-	-	-	-	153,871	-	-	-	160	-	-	153,711	153,711
2.610	Saanich Peninsula Water Supply	8,591,464	7,446,514	644,950	-	-	500,000	8,591,464	-	-	-	30,500	8,560,964	-	-	-
2.620	SSI Highland Water System	13,878	117	13,761	-	-	-	13,878	-	-	-	90	-	13,788	-	13,788
2.621	Highland / Fernwood Water - SSI	596,859	384,330	117,864	-	-	94,665	596,859	-	-	-	950	511,289	84,620	-	84,620
2.622	Cedars of Tuam	68,215	45,362	9,353	-	-	13,500	68,215	-	-	-	90	68,125	-	-	-
2.624	Beddis Water	372,429	206,458	40,581	-	-	125,390	372,429	-	-	-	150	257,979	114,300	-	114,300
2.626	Fulford Water	280,549	175,982	44,607	-	-	59,960	280,549	-	-	-	720	213,549	66,280	-	66,280
2.628	Cedar Lane Water (SSI)	109,980	62,037	34,008	-	-	13,935	109,980	-	-	-	160	87,540	22,280	-	22,280
2.630	Magic Lakes Estate Water System	1,016,859	750,132	211,137	-	-	55,590	1,016,859	-	-	-	10,700	426,159	580,000	-	580,000
2.640	Saturna Island Water System (Lyall Harbour)	276,600	192,014	25,016	-	-	59,570	276,600	-	-	-	1,040	131,450	144,110	-	144,110
2.642	Skana Water (Mayne)	95,380	59,147	1,613	-	-	34,620	95,380	-	-	-	100	67,370	27,910	-	27,910
2.650	Port Renfrew Water	172,790	135,836	9,854	-	-	27,100	172,790	-	-	-	1,150	85,000	86,640	-	86,640
2.660	Fernwood Water	7,167	53	7,114	-	-	-	7,167	-	-	-	40	-	7,127	-	7,127
2.665	Sticks Allison Water (Galiano)	70,142	56,367	-	-	-	13,775	70,142	-	-	-	100	64,840	5,202	-	5,202
2.667	Surfside Park Estates (Mayne)	142,522	119,837	5,375	-	-	17,310	142,522	-	-	-	100	115,342	27,080	-	27,080
2.670	Regional Water Supply	45,208,371	21,855,650	3,363,371	-	19,500,000	489,350	45,208,371	-	-	-	784,100	44,424,271	-	-	-
2.680	Juan de Fuca Water Distribution	28,281,890	16,502,454	2,903,661	-	8,220,318	655,457	28,281,890	-	-	-	216,270	28,065,620	-	-	-
2.681	Florence Lake Water System Debt	19,038	-	19,038	-	-	-	19,038	-	-	-	37	-	19,001	-	19,001
2.682	Seagirt Water System Debt	146,552	-	146,552	-	-	-	146,552	-	-	-	-	-	146,552	-	146,552
2.691	Wilderness Mountain Water Service	192,103	147,099	27,814	-	-	17,190	192,103	-	-	10,000	110	108,423	73,570	-	73,570
3.700	Septage Disposal	164,192	164,192	-	-	-	-	164,192	-	-	-	164,192	-	-	-	-
3.701	Millstream Remediation Service	19,710	548	19,162	-	-	-	19,710	-	-	3,717	12,277	-	-	3,716	3,716
3.705	SSI Liquid Waste Disposal	1,257,482	1,079,384	148,023	-	-	30,075	1,257,482	-	-	9,000	1,640	806,050	440,792	-	440,792
3.707	LWMP - On Site System Management Program	176,334	176,334	-	-	-	-	176,334	-	-	-	7,485	-	168,849	-	168,849
3.71X	Core Area Wastewater Operations	35,679,947	34,979,947	-	-	-	700,000	35,679,947	-	642,684	446,400	28,923,580	-	-	5,667,283	5,667,283
3.718	Peninsula Wastewater TP	5,103,255	4,412,525	38,700	-	-	652,030	5,103,255	-	157,580	20,000	2,721,601	-	-	2,204,074	2,204,074
3.720	LWMP - (Peninsula) - Implementation	58,681	34,880	-	-	-	23,801	58,681	-	-	-	2,320	-	-	56,361	56,361
3.750	LWMP - Core and West Shore	757,064	501,851				255,213	757,064	-	-	-	220,895	200,000	-	336,169	336,169
3.752	LWMP - Harbour Studies	368,640	368,640				-	368,640	-	-	-	21,658	-	-	346,982	346,982
3.755	Regional Source Control	1,664,321	1,664,148	-	-	-	173	1,664,321	-	55,000	7,453	93,303	62,424	-	1,446,141	1,446,141
3.756	Harbours Environmental Action	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.7XX	Core Area & Legacy Trunk Sewer - Debt	24,652,059	202,233	10,380,802	-	5,529,745	8,539,279	24,652,059	-	-	-	17,904,221	-	-	6,747,838	6,747,838
3.810	Ganges Sewer	1,297,400	879,956	274,024	-	-	143,420	1,297,400	-	-	30,000	2,360	1,198,710	66,330	-	66,330
3.820	Maliview Estates Sewer System	242,847	165,316	28,196	-	-	49,335	242,847	-	-	-	25,230	212,192	5,425	-	5,425
3.830	Magic Lake Estates Sewer System	932,139	692,041	174,103	-	-	65,995	932,139	-	11,820	-	4,800	296,870	618,649	-	618,649
3.830D	Magic Lake Estates Sewer Debt	231,715	1,030	230,685	-	-	-	231,715	-	-	-	2,200	-	229,515	-	229,515
3.850	Port Renfrew Sewer	138,240	116,320	-	-	-	21,920	138,240	-	-	-	1,540	68,340	68,360	-	68,360
21.ALL	Feasibility Study Reserve Fund - All	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.E.A.	Feasibility Study Reserve Fund - E.A.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CAPITAL REGIONAL DISTRICT 2026 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2026	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2026	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2026
1.010	Legislative & General Government	39,675,257	37,908,576	203,000	-	1,209,690	353,991	39,675,257	450,000	22,799,069	952,904	1,546,756	97,720	-	13,828,808	13,828,808
1.10X	Facilities Management	4,951,028	4,407,013	-	-	-	544,015	4,951,028	-	4,726,085	-	42,778	-	-	182,165	182,165
1.101	G.I.S.	682,401	613,401	-	-	19,000	50,000	682,401	-	535,178	-	6,270	-	-	140,953	140,953
1.103	Elections	273,261	273,261	-	-	-	-	273,261	-	-	125,811	81,960	-	-	65,490	65,490
1.104	U.B.C.M.	13,804	13,804	-	-	-	-	13,804	-	-	-	90	-	-	13,714	13,714
1.109	Electoral Area Admin Exp - JDF	75,576	75,576	-	-	-	-	75,576	-	-	-	250	-	-	75,326	75,326
1.110	Electoral Area Admin Exp - SGI	478,241	477,141	-	-	-	1,100	478,241	-	-	10,171	19,710	-	-	448,360	448,360
1.111	Electoral Area Admin Exp - SSI	1,454,646	1,390,646	-	-	-	64,000	1,454,646	-	714,139	-	5,770	-	-	734,737	734,737
1.112	Regional Grant in Aid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.114	Grant-in-Aid - Juan de Fuca	21,762	21,762	-	-	-	-	21,762	-	-	-	290	-	-	21,472	21,472
1.116	Grant-in-Aid - Salt Spring Island	53,011	53,011	-	-	-	-	53,011	-	-	-	260	-	-	52,751	52,751
1.117	Grant-in-Aid - Southern Gulf Islands	111,326	111,326	-	-	-	-	111,326	-	-	-	1,257	-	-	110,069	110,069
1.119	Vancouver Island Regional Library	418,891	418,891	-	-	-	-	418,891	-	-	-	650	-	-	418,241	418,241
1.121	Sooke Regional Museum	239,397	239,397	-	-	-	-	239,397	-	-	-	410	-	-	238,987	238,987
1.123	Prov. Court of B.C. (Family Court)	149,360	-	-	-	-	149,360	149,360	-	-	-	149,360	-	-	-	-
1.124	SSI Economic Development Commission	75,134	70,134	-	-	-	5,000	75,134	-	-	13,415	650	-	-	61,069	61,069
1.125	SGI Economic Development Commission	133,952	133,952	-	-	-	-	133,952	-	-	-	1,580	-	-	132,372	132,372
1.126	Victoria Family Court Committee	15,797	15,797	-	-	-	-	15,797	-	-	-	797	-	-	15,000	15,000
1.128	Greater Victoria Police Victim Services	335,692	335,692	-	-	-	-	335,692	-	-	-	14,634	-	-	321,058	321,058
1.129	Vancouver Island Regional Library - Debt	339,366	1,100	338,266	-	-	-	339,366	-	-	-	339,366	-	-	-	-
1.133	Langford E.A. - Greater Victoria Public Library	35,027	35,027	-	-	-	-	35,027	-	-	-	100	-	-	34,927	34,927
1.137	Galiano Island Community Use Building	72,739	40,486	30,653	-	-	1,600	72,739	-	-	-	290	-	-	72,449	72,449
1.138	Southern Gulf Islands Regional Library	262,963	262,963	-	-	-	-	262,963	-	-	-	2,747	-	-	260,216	260,216
1.141	Salt Spring Island Public Library	800,147	623,576	146,651	-	-	29,920	800,147	-	-	-	1,700	-	-	798,447	798,447
1.15X	Municipalities' Own Debt - M.F.A.	16,371,186	75,440	16,295,746	-	-	-	16,371,186	-	-	-	75,440	-	-	16,295,746	16,295,746
1.170	Gossip Island Electric Power Supply	63,221	600	62,621	-	-	-	63,221	-	-	-	290	-	62,931	-	62,931
1.224	Community Health	845,152	845,152	-	-	-	-	845,152	-	-	-	190,552	-	-	654,600	654,600
1.226	Health Facilities - VIHA	1,847,981	773,693	-	-	-	1,074,288	1,847,981	-	-	-	1,847,981	-	-	-	-
1.227	Saturna Island Medical Clinic	27,134	27,134	-	-	-	-	27,134	-	-	-	1,480	-	-	25,654	25,654
1.228	Galiano Health Service	150,621	150,621	-	-	-	-	150,621	-	-	-	201	-	-	150,420	150,420
1.229	Pender Islands Health Care Centre	289,022	289,022	-	-	-	-	289,022	-	-	-	2,210	-	-	286,812	286,812
1.230	Traffic Safety Commission	80,073	80,073	-	-	-	-	80,073	-	-	-	3,700	-	-	76,373	76,373
1.232	Port Renfrew Street Lighting	9,656	9,656	-	-	-	-	9,656	-	-	-	370	4,050	5,236	-	5,236
1.234	SSI Street Lighting	33,092	33,092	-	-	-	-	33,092	-	-	-	40	-	-	33,052	33,052
1.235	SGI Small Craft Harbour Facilities	494,180	258,575	87,493	-	-	148,112	494,180	-	-	-	7,890	148,150	338,140	-	338,140
1.236	Salt Spring Island Fernwood Dock	33,622	17,622	-	-	-	16,000	33,622	-	-	-	170	-	33,452	-	33,452
1.238A	Community Transit (SSI)	758,467	709,947	-	-	-	48,520	758,467	-	-	-	219,857	-	-	538,610	538,610
1.238B	Community Transportation (SSI)	184,517	53,549	28,968	-	-	102,000	184,517	-	-	-	430	-	-	184,087	184,087
1.280	Regional Parks	21,924,294	15,734,780	2,464,207	-	280,908	3,444,399	21,924,294	-	79,089	20,000	938,488	648,248	-	20,238,469	20,238,469
1.290	Royal Theatre	580,000	100,000	-	-	105,000	375,000	580,000	-	-	-	-	-	-	580,000	580,000
1.295	McPherson Theatre	785,822	349,589	-	-	90,000	346,233	785,822	-	-	-	35,822	-	-	750,000	750,000
1.297	Arts Grants	3,343,934	3,342,894	-	-	-	1,040	3,343,934	-	15,860	41,589	178,754	-	-	3,107,731	3,107,731
1.299	Salt Spring Island Arts	132,251	132,251	-	-	-	-	132,251	-	-	-	90	-	-	132,161	132,161
1.309	Climate Action and Adaptation	2,326,611	1,473,400	-	-	792,961	60,250	2,326,611	-	-	352,117	657,352	-	-	1,317,142	1,317,142
1.310	Land Banking & Housing	4,555,666	2,175,077	2,376,439	-	-	4,150	4,555,666	-	462,755	-	712,866	2,000	-	3,378,045	3,378,045
1.311	Regional Housing Trust Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.312	Regional Goose Management	253,359	253,359	-	-	-	-	253,359	-	-	-	-	-	-	253,359	253,359
1.313	Animal Care Services	1,816,170	1,775,119	-	-	-	41,051	1,816,170	-	-	-	1,281,120	29,480	-	505,570	505,570
1.314	SGI House Numbering	10,498	10,498	-	-	-	-	10,498	-	-	-	145	-	-	10,353	10,353
1.316	SSI Building Numbering	10,633	10,633	-	-	-	-	10,633	-	-	-	20	-	-	10,613	10,613
1.317	JDF Building Numbering	14,451	14,451	-	-	-	-	14,451	-	-	-	50	-	-	14,401	14,401
1.318	Building Inspection	2,287,639	2,224,399	-	-	13,990	49,250	2,287,639	-	33,350	39,165	4,730	1,498,180	-	712,214	712,214
1.319	Soil Deposit Removal	6,434	6,434	-	-	-	-	6,434	-	-	94	40	-	-	6,300	6,300
1.320	Noise Control	45,710	45,225	-	-	-	485	45,710	-	-	-	350	-	-	45,360	45,360
1.322	Nuisances & Unsightly Premises	59,820	59,820	-	-	-	-	59,820	-	-	-	460	-	-	59,360	59,360
1.323	By-Law Enforcement	615,813	564,398	-	-	-	51,415	615,813	-	577,773	-	38,040	-	-	-	-
1.324	Regional Planning Services	1,720,511	1,718,011	-	-	-	2,500	1,720,511	-	97,700	207,859	66,420	-	-	1,348,532	1,348,532
1.325	Electoral Area Services - Planning	906,373	830,603	-	-	-	75,770	906,373	-	34,520	35,543	2,230	45,000	-	789,080	789,080
1.330	Regional Growth Strategy	347,134	337,134	-	-	-	10,000	347,134	-	-	-	17,380	-	-	329,754	329,754
1.335	Geo-Spatial Referencing System	190,853	124,253	-	-	-	66,600	190,853	-	-	-	8,160	9,010	-	173,683	173,683
1.340	JDF Livestock Injury Compensation	3,164	3,164	-	-	-	-	3,164	-	-	-	-	-	-	3,164	3,164
1.341	SGI Livestock Injury Compensation	3,184	3,184	-	-	-	-	3,184	-	-	-	34	-	-	3,150	3,150
1.342	SSI Livestock Injury Compensation	3,164	3,164	-	-	-	-	3,164	-	-	-	-	-	-	3,164	3,164
1.350	Willis Point Fire Protect & Recreation	193,940	123,425	-	-	6,780	63,735	193,940	-	-	-	42,330	-	-	151,610	151,610
1.352	South Galiano Fire Protection	654,187	369,396	141,027	-	10,600	133,164	654,187	-	-	-	1,120	-	141,027	512,040	653,067
1.353	Otter Point Fire Protection	703,194	518,784	-	-	6,110	178,300	703,194	-	-	-	340	-	-	702,854	702,854
1.354	Malahat Fire Protection	71,442	71,442	-	-	-	-	71,442	-	-	-	-	-	-	71,442	71,442
1.355	Durrance Road Fire Protection	3,021	2,721	-	-	-	300	3,021	-	-	-	-	-	3,021	-	3,021
1.356	Pender Fire Protection	1,610,053	1,289,662	94,931	-	-	225,460	1,610,053	-	-	94,931	12,060	-	-	1,503,062	1,503,062
1.357	East Sooke Fire Protection	598,710	332,428	155,109	-	5,000	106,173	598,710	-	-	-	29,300	72,150	-	497,260	497,260
1.358	Port Renfrew Fire Protection	211,361	181,361	-	-	-	30,000	211,361	-	-	-	1,370	83,996	-	125,995	125,995
1.359	North Galiano Fire Protection	337,429	270,351	56,363	-	5,000	5,715	337,429	-	-	-	1,010	-	24,440	311,979	336,419
1.360	Shirley Fire Protection	208,170	130,740	-	-	10,000	67,430	208,170	-	-	-	210	-	-	207,960	207,960
1.363	Saturna Island Fire	341,782	341,782	-	-	-	-	341,782	-	-	-	13,010	-	-	328,772	328,772
1.369	Electoral Area Fire Services	346,611	337,141	-	-	2,500	6,970	346,611	-	-	-	120	-	-	346,491	346,491
1.370	Juan de Fuca Emergency Program	126,325	113,445	-	-	-	12,880	126,325	-	-	-	240	-	-	126,085	126,085
1.371	SSI Emergency Program	139,125	139,125	-	-	-	-	139,125	-	-	3,507	190	-	-	135,428	135,428
1.372	Electoral Area Emergency Program	724,716	719,716	-	-	-	5,000	724,716	-	530,110	6,135	1,000	-	-	187,471	187,471
1.373	SGI Emergency Program	275,328	264,089	-	-	-	11,239	275,328	-	-	25,000	2,950	-	-	247,378	247,378
1.374	Regional Emergency Program Support	155,244	155,244	-	-	-	-	155,244	-	-	-	7,670	-	-	147,574	147,574
1.375	Hazardous Material Incident Response	398,219	386,079	-	-	-	12,140	398,219	-	-	-	19,320	-	-	378,899	378,899

CAPITAL REGIONAL DISTRICT 2026 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2026	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2026	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2026
1.377	JDF Search and Rescue	92,672	89,672	-	-	-	3,000	92,672	-	-	-	22,720	-	-	69,952	69,952
1.378	SSI Search and Rescue	25,804	25,804	-	-	-	-	25,804	-	-	-	100	-	-	25,704	25,704
1.40X	SEAPARC	5,506,523	4,912,567	53,966	-	-	539,990	5,506,523	-	-	-	552,587	1,468,920	-	3,485,016	3,485,016
1.405	JDF EA - Community Parks	244,229	225,144	-	-	-	19,085	244,229	-	-	-	920	-	-	243,309	243,309
1.408	JDF EA - Community Recreation	96,360	96,360	-	-	-	-	96,360	-	-	-	22,860	-	-	73,500	73,500
1.44X	Panorama Rec. Center.	11,754,386	9,796,963	590,608	-	-	1,366,815	11,754,386	-	-	52,785	2,234,439	3,365,440	-	6,101,722	6,101,722
1.455	Salt Spring Island - Community Parks	1,031,877	1,006,377	-	-	-	25,500	1,031,877	-	420,910	-	33,520	-	-	577,447	577,447
1.458	Salt Spring Is.- Community Rec	405,433	396,533	-	-	-	8,900	405,433	-	-	-	10,440	281,130	-	113,863	113,863
1.459	Salt Spring Is- Pool, Parks, Land, Art & Rec. Prog	2,909,474	2,424,808	107,666	-	-	377,000	2,909,474	-	91,990	-	173,190	294,220	-	2,350,074	2,350,074
1.465	Saturna Island Comm. Parks	31,414	26,067	-	-	-	5,347	31,414	-	-	-	1,680	-	-	29,734	29,734
1.468	Saturna Island - Community Rec.	15,420	15,420	-	-	-	-	15,420	-	-	-	700	-	-	14,720	14,720
1.475	Mayne Is. Com. Parks & Rec	100,450	81,440	-	-	-	19,010	100,450	-	-	-	300	-	-	100,150	100,150
1.476	Mayne Is. Comm. Parks (reserve)	11,000	11,000	-	-	-	-	11,000	-	-	-	9,930	1,070	-	-	-
1.478	Mayne Is. Community Rec.	38,360	38,360	-	-	-	-	38,360	-	-	-	60	-	-	38,300	38,300
1.485	North & South Pender Com. Parks	200,640	162,856	-	-	-	37,784	200,640	-	-	-	2,340	-	-	198,300	198,300
1.488	North & South Pender Com. Rec	73,280	73,280	-	-	-	-	73,280	-	-	-	880	-	-	72,400	72,400
1.495	Galiano Parks	135,225	123,225	-	-	-	12,000	135,225	-	-	21,530	120	-	-	113,575	113,575
1.498	Galiano Community Recreation	45,650	45,650	-	-	-	-	45,650	-	-	-	30	-	-	45,620	45,620
1.521	SWMP -Solid Waste Disposal (Refuse Disposal)	40,868,883	40,205,763	-	-	-	663,120	40,868,883	-	-	314,312	15,950,917	24,603,654	-	-	-
1.523	Port Renfrew Refuse Disposal	127,048	96,442	-	-	-	30,606	127,048	-	27,508	-	52,500	-	-	47,040	47,040
1.525	Solid Waste Disposal - Debt	2,726,996	20,650	2,706,346	-	-	-	2,726,996	-	-	-	650	2,726,346	-	-	-
1.531	Stormwater Quality Management - Sooke	42,162	25,790	-	-	-	16,372	42,162	-	-	-	86	-	-	42,076	42,076
1.533	Stormwater Quality Management - SGI	43,155	43,155	-	-	-	-	43,155	-	-	-	500	-	-	42,655	42,655
1.535	Stormwater Quality Management - SSI	26,399	26,399	-	-	-	-	26,399	-	-	769	30	-	-	25,600	25,600
1.536	LWMP-Stormwater Quality Management-Core	791,544	775,272	-	-	-	16,272	791,544	-	-	-	87,763	-	-	703,781	703,781
1.537	Stormwater Quality Management - Peninsula	130,261	130,261	-	-	-	-	130,261	-	-	-	4,455	-	-	125,806	125,806
1.538	Source - Stormwater Quality - Peninsula	61,699	61,699	-	-	-	-	61,699	-	-	682	1,763	-	-	59,254	59,254
1.57X	Environmental Services	27,566,902	26,762,881	-	-	-	804,021	27,566,902	-	27,429,699	44,803	92,400	-	-	-	-
1.911	911 Systems	2,642,748	1,622,769	1,011,949	-	-	8,030	2,642,748	-	-	-	2,098,466	124,651	-	419,631	419,631
1.912B	911 Call Answer - Municipalities	-	-	-	-	-	-	-	-	654,948	-	-44,410	-	-	(610,538)	(610,538)
1.913	913 Fire Dispatch	413,050	413,050	-	-	-	-	413,050	-	-	2,280	10,110	-	-	400,660	400,660
1.921	Regional CREST Contribution	2,102,272	2,102,272	-	-	-	-	2,102,272	-	-	-	103,080	-	-	1,999,192	1,999,192
1.923	Emergency Comm - CREST - SGI	194,835	194,835	-	-	-	-	194,835	-	-	-	2,140	-	-	192,695	192,695
1.924	Emergency Comm - CREST - JDF	155,570	155,570	-	-	-	-	155,570	-	-	-	250	-	-	155,320	155,320
1.925	Emergency Comm - CREST - SSI	156,940	156,940	-	-	-	-	156,940	-	-	-	160	-	-	156,780	156,780
2.610	Saanich Peninsula Water Supply	9,432,066	7,958,640	923,426	-	-	550,000	9,432,066	-	-	-	30,500	9,401,566	-	-	-
2.620	SSI Highland Water System	13,879	118	13,761	-	-	-	13,879	-	-	-	90	-	13,789	-	13,789
2.621	Highland / Fernwood Water - SSI	757,650	410,255	267,300	-	-	80,095	757,650	-	-	-	960	646,680	110,010	-	110,010
2.622	Cedars of Tuam	115,473	42,023	64,450	-	-	9,000	115,473	-	-	-	90	115,383	-	-	-
2.624	Beddis Water	462,508	197,550	134,958	-	-	130,000	462,508	-	-	-	150	313,768	148,590	-	148,590
2.626	Fulford Water	343,777	177,599	131,273	-	-	34,905	343,777	-	-	-	730	260,857	82,190	-	82,190
2.628	Cedar Lane Water (SSI)	154,560	81,429	50,806	-	-	22,325	154,560	-	-	20,000	160	106,550	27,850	-	27,850
2.630	Magic Lakes Estate Water System	1,064,968	805,362	165,861	-	-	93,745	1,064,968	-	-	40,000	10,730	434,238	580,000	-	580,000
2.640	Saturna Island Water System (Lyall Harbour)	308,108	189,983	62,095	-	-	56,030	308,108	-	-	-	1,060	146,581	160,467	-	160,467
2.642	Skana Water (Mayne)	100,150	60,074	11,618	-	-	28,458	100,150	-	-	-	100	70,740	29,310	-	29,310
2.650	Port Renfrew Water	215,683	131,223	66,940	-	-	17,520	215,683	-	-	-	1,130	106,253	108,300	-	108,300
2.660	Fernwood Water	4,164	54	4,110	-	-	-	4,164	-	-	-	40	-	4,124	-	4,124
2.665	Sticks Allison Water (Galiano)	71,526	57,471	-	-	-	14,055	71,526	-	-	-	100	66,120	5,306	-	5,306
2.667	Surfside Park Estates (Mayne)	192,372	132,155	50,292	-	-	9,925	192,372	-	-	-	100	155,714	36,558	-	36,558
2.670	Regional Water Supply	48,709,758	22,420,426	4,790,195	-	21,000,000	499,137	48,709,758	-	-	-	901,100	47,808,658	-	-	-
2.680	Juan de Fuca Water Distribution	30,670,985	17,359,324	3,176,048	-	9,522,047	613,566	30,670,985	-	-	-	190,270	30,480,715	-	-	-
2.681	Florence Lake Water System Debt	19,038	-	19,038	-	-	-	19,038	-	-	-	37	-	19,001	-	19,001
2.682	Seagirt Water System Debt	146,552	-	146,552	-	-	-	146,552	-	-	-	-	-	146,552	-	146,552
2.691	Wilderness Mountain Water Service	195,211	141,830	39,331	-	-	14,050	195,211	-	-	4,000	110	113,851	77,250	-	77,250
3.700	Septage Disposal	167,427	167,427	-	-	-	-	167,427	-	-	-	167,427	-	-	-	-
3.701	Millstream Remediation Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.705	SSI Liquid Waste Disposal	1,358,256	1,087,423	241,148	-	-	29,685	1,358,256	-	-	15,000	1,660	822,170	519,426	-	519,426
3.707	LWMP - On Site System Management Program	178,753	178,753	-	-	-	-	178,753	-	-	-	7,485	-	171,268	-	171,268
3.71X	Core Area Wastewater Operations	36,594,594	35,394,594	-	-	-	1,200,000	36,594,594	-	655,540	152,830	29,898,875	-	-	5,887,349	5,887,349
3.718	Peninsula Wastewater TP	5,549,495	4,572,978	292,837	-	-	683,680	5,549,495	-	160,730	135,000	2,902,723	-	-	2,351,042	2,351,042
3.720	LWMP - (Peninsula) - Implementation	59,851	35,574	-	-	-	24,277	59,851	-	-	-	2,320	-	-	57,531	57,531
3.750	LWMP - Core and West Shore	1,437,035	1,177,119				259,916	1,437,035	-	-	-	474,384	204,000	-	758,651	758,651
3.752	LWMP - Harbour Studies	376,071	376,071				-	376,071	-	-	-	21,658	-	-	354,413	354,413
3.755	Regional Source Control	1,738,632	1,738,455	-	-	-	177	1,738,632	-	55,000	51,593	93,303	63,672	-	1,475,064	1,475,064
3.756	Harbours Environmental Action	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.7XX	Core Area & Legacy Trunk Sewer - Debt	26,028,065	281,915	11,605,326	-	5,529,745	8,611,079	26,028,065	-	-	-	18,836,582	-	-	7,191,483	7,191,483
3.810	Ganges Sewer	1,381,262	841,594	426,418	-	-	113,250	1,381,262	-	-	-	2,370	1,306,592	72,300	-	72,300
3.820	Maliview Estates Sewer System	258,087	168,599	43,913	-	-	45,575	258,087	-	-	-	25,230	227,052	5,805	-	5,805
3.830	Magic Lake Estates Sewer System	990,770	745,912	174,103	-	-	70,755	990,770	-	12,060	40,000	4,880	302,810	631,020	-	631,020
3.830D	Magic Lake Estates Sewer Debt	231,715	1,030	230,685	-	-	-	231,715	-	-	-	2,220	-	229,495	-	229,495
3.850	Port Renfrew Sewer	141,010	118,640	-	-	-	22,370	141,010	-	-	-	1,570	69,710	69,730	-	69,730
21.ALL	Feasibility Study Reserve Fund - All	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.E.A.	Feasibility Study Reserve Fund - E.A.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CAPITAL REGIONAL DISTRICT 2027 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2027	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2027	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2027
1.010	Legislative & General Government	39,135,867	37,951,581	304,332	-	519,880	360,074	39,135,867	450,000	23,277,506	180,000	1,555,706	98,870	-	13,573,785	13,573,785
1.10X	Facilities Management	5,133,536	4,508,741	-	-	-	624,795	5,133,536	-	4,903,935	-	43,072	-	-	186,529	186,529
1.101	G.I.S.	696,435	627,055	-	-	19,380	50,000	696,435	-	545,882	-	6,390	-	-	144,163	144,163
1.103	Elections	66,080	590	-	-	-	65,490	66,080	-	-	500	90	-	-	65,490	65,490
1.104	U.B.C.M.	14,078	14,078	-	-	-	-	14,078	-	-	-	90	-	-	13,988	13,988
1.109	Electoral Area Admin Exp - JDF	77,081	77,081	-	-	-	-	77,081	-	-	-	250	-	-	76,831	76,831
1.110	Electoral Area Admin Exp - SGI	489,241	488,141	-	-	-	1,100	489,241	-	-	5,136	20,035	-	-	464,070	464,070
1.111	Electoral Area Admin Exp - SSI	1,571,004	1,506,504	-	-	-	64,500	1,571,004	-	729,932	85,000	5,790	-	-	750,282	750,282
1.112	Regional Grant in Aid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.114	Grant-in-Aid - Juan de Fuca	21,797	21,797	-	-	-	-	21,797	-	-	-	290	-	-	21,507	21,507
1.116	Grant-in-Aid - Salt Spring Island	53,119	53,119	-	-	-	-	53,119	-	-	-	260	-	-	52,859	52,859
1.117	Grant-in-Aid - Southern Gulf Islands	111,436	111,436	-	-	-	-	111,436	-	-	-	1,257	-	-	110,179	110,179
1.119	Vancouver Island Regional Library	427,243	427,243	-	-	-	-	427,243	-	-	-	660	-	-	426,583	426,583
1.121	Sooke Regional Museum	244,179	244,179	-	-	-	-	244,179	-	-	-	420	-	-	243,759	243,759
1.123	Prov. Court of B.C. (Family Court)	149,360	-	-	-	-	149,360	149,360	-	-	-	149,360	-	-	-	-
1.124	SSI Economic Development Commission	75,535	70,535	-	-	-	5,000	75,535	-	-	12,585	660	-	-	62,290	62,290
1.125	SGI Economic Development Commission	136,153	136,153	-	-	-	-	136,153	-	-	-	1,610	-	-	134,543	134,543
1.126	Victoria Family Court Committee	15,797	15,797	-	-	-	-	15,797	-	-	-	797	-	-	15,000	15,000
1.128	Greater Victoria Police Victim Services	342,405	342,405	-	-	-	-	342,405	-	-	-	14,634	-	-	327,771	327,771
1.129	Vancouver Island Regional Library - Debt	339,366	1,100	338,266	-	-	-	339,366	-	-	-	339,366	-	-	-	-
1.133	Langford E.A. - Greater Victoria Public Library	35,731	35,731	-	-	-	-	35,731	-	-	-	100	-	-	35,631	35,631
1.137	Galiano Island Community Use Building	74,189	41,316	30,653	-	-	2,220	74,189	-	-	-	290	-	-	73,899	73,899
1.138	Southern Gulf Islands Regional Library	268,233	268,233	-	-	-	-	268,233	-	-	-	2,807	-	-	265,426	265,426
1.141	Salt Spring Island Public Library	815,523	635,545	9,888	-	-	170,090	815,523	-	-	-	1,130	-	-	814,393	814,393
1.15X	Municipalities' Own Debt - M.F.A.	14,832,370	75,100	14,757,270	-	-	-	14,832,370	-	-	-	75,100	-	-	14,757,270	14,757,270
1.170	Gossip Island Electric Power Supply	63,225	604	62,621	-	-	-	63,225	-	-	-	290	-	62,935	-	62,935
1.224	Community Health	596,138	596,138	-	-	-	-	596,138	-	-	-	145,571	-	-	450,567	450,567
1.226	Health Facilities - VIHA	1,884,942	790,342	-	-	-	1,094,600	1,884,942	-	-	-	1,884,942	-	-	-	-
1.227	Saturna Island Medical Clinic	27,739	27,739	-	-	-	-	27,739	-	-	-	1,510	-	-	26,229	26,229
1.228	Galiano Health Service	153,629	153,629	-	-	-	-	153,629	-	-	-	199	-	-	153,430	153,430
1.229	Pender Islands Health Care Centre	299,026	299,026	-	-	-	-	299,026	-	-	-	2,250	-	-	296,776	296,776
1.230	Traffic Safety Commission	81,646	81,646	-	-	-	-	81,646	-	-	-	3,770	-	-	77,876	77,876
1.232	Port Renfrew Street Lighting	9,825	9,825	-	-	-	-	9,825	-	-	-	380	4,130	5,315	-	5,315
1.234	SSI Street Lighting	33,671	33,671	-	-	-	-	33,671	-	-	-	40	-	-	33,631	33,631
1.235	SGI Small Craft Harbour Facilities	503,900	265,109	87,493	-	-	151,298	503,900	-	-	-	8,040	150,960	344,900	-	344,900
1.236	Salt Spring Island Fernwood Dock	36,162	18,162	-	-	-	18,000	36,162	-	-	-	170	-	35,992	-	35,992
1.238A	Community Transit (SSI)	773,624	724,164	-	-	-	49,460	773,624	-	-	-	224,241	-	-	549,383	549,383
1.238B	Community Transportation (SSI)	214,272	54,457	57,815	-	-	102,000	214,272	-	-	-	430	-	-	213,842	213,842
1.280	Regional Parks	23,960,381	16,026,661	4,134,207	-	286,526	3,512,987	23,960,381	-	80,671	-	942,101	659,477	-	22,278,132	22,278,132
1.290	Royal Theatre	580,000	100,000	-	-	109,000	371,000	580,000	-	-	-	-	-	-	580,000	580,000
1.295	McPherson Theatre	785,822	349,589	-	-	94,000	342,233	785,822	-	-	-	35,822	-	-	750,000	750,000
1.297	Arts Grants	3,412,964	3,411,903	-	-	-	1,061	3,412,964	-	16,240	42,168	178,754	-	-	3,175,802	3,175,802
1.299	Salt Spring Island Arts	134,882	134,882	-	-	-	-	134,882	-	-	-	90	-	-	134,792	134,792
1.309	Climate Action and Adaptation	1,544,331	1,319,850	-	-	164,023	60,458	1,544,331	-	-	31,037	196,152	-	-	1,317,142	1,317,142
1.310	Land Banking & Housing	4,494,705	2,114,076	2,376,439	-	-	4,190	4,494,705	-	359,628	-	716,354	2,000	-	3,416,723	3,416,723
1.311	Regional Housing Trust Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.312	Regional Goose Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.313	Animal Care Services	1,857,745	1,815,745	-	-	-	42,000	1,857,745	-	-	-	1,306,740	30,070	-	520,935	520,935
1.314	SGI House Numbering	10,708	10,708	-	-	-	-	10,708	-	-	-	145	-	-	10,563	10,563
1.316	SSI Building Numbering	10,854	10,854	-	-	-	-	10,854	-	-	-	20	-	-	10,834	10,834
1.317	JDF Building Numbering	14,735	14,735	-	-	-	-	14,735	-	-	-	50	-	-	14,685	14,685
1.318	Building Inspection	2,343,536	2,279,516	-	-	14,280	49,740	2,343,536	-	34,020	4,452	4,770	1,528,150	-	772,144	772,144
1.319	Soil Deposit Removal	6,556	6,556	-	-	-	-	6,556	-	-	86	40	-	-	6,430	6,430
1.320	Noise Control	47,303	46,128	-	-	-	1,175	47,303	-	-	-	350	-	-	46,953	46,953
1.322	Nuisances & Unsightly Premises	60,978	60,978	-	-	-	-	60,978	-	-	-	470	-	-	60,508	60,508
1.323	By-Law Enforcement	628,523	577,897	-	-	-	50,626	628,523	-	589,733	-	38,790	-	-	-	-
1.324	Regional Planning Services	2,293,416	2,290,916	-	-	-	2,500	2,293,416	-	100,040	736,628	67,760	-	-	1,388,988	1,388,988
1.325	Electoral Area Services - Planning	943,522	867,752	-	-	-	75,770	943,522	-	35,211	48,311	2,250	45,000	-	812,750	812,750
1.330	Regional Growth Strategy	354,681	344,681	-	-	-	10,000	354,681	-	-	-	17,710	-	-	336,971	336,971
1.335	Geo-Spatial Referencing System	194,675	126,745	-	-	-	67,930	194,675	-	-	-	8,330	9,190	-	177,155	177,155
1.340	JDF Livestock Injury Compensation	3,168	3,168	-	-	-	-	3,168	-	-	-	-	-	-	3,168	3,168
1.341	SGI Livestock Injury Compensation	3,188	3,188	-	-	-	-	3,188	-	-	-	34	-	-	3,154	3,154
1.342	SSI Livestock Injury Compensation	3,168	3,168	-	-	-	-	3,168	-	-	-	-	-	-	3,168	3,168
1.350	Willis Point Fire Protect & Recreation	197,150	125,959	-	-	6,920	64,271	197,150	-	-	-	42,510	-	-	154,640	154,640
1.352	South Galiano Fire Protection	664,427	376,779	141,027	-	10,810	135,811	664,427	-	-	-	1,120	-	141,027	522,280	663,307
1.353	Otter Point Fire Protection	718,546	529,316	-	-	6,230	183,000	718,546	-	-	-	340	-	-	718,206	718,206
1.354	Malahat Fire Protection	72,872	72,872	-	-	-	-	72,872	-	-	-	-	-	-	72,872	72,872
1.355	Durrance Road Fire Protection	3,024	2,724	-	-	-	300	3,024	-	-	-	-	-	3,024	-	3,024
1.356	Pender Fire Protection	1,598,303	1,360,405	-	-	-	237,898	1,598,303	-	-	-	12,310	-	-	1,585,993	1,585,993
1.357	East Sooke Fire Protection	610,788	339,315	155,109	-	5,000	111,364	610,788	-	-	-	29,988	73,590	-	507,210	507,210
1.358	Port Renfrew Fire Protection	215,561	185,061	-	-	-	30,500	215,561	-	-	-	1,390	85,668	-	128,503	128,503
1.359	North Galiano Fire Protection	343,591	275,818	56,363	-	5,000	6,410	343,591	-	-	-	1,020	-	24,440	318,131	342,571
1.360	Shirley Fire Protection	212,330	133,365	-	-	10,000	68,965	212,330	-	-	-	210	-	-	212,120	212,120
1.363	Saturna Island Fire	346,954	346,954	-	-	-	-	346,954	-	-	-	13,270	-	-	333,684	333,684
1.369	Electoral Area Fire Services	353,543	344,679	-	-	2,289	6,575	353,543	-	-	-	120	-	-	353,423	353,423
1.370	Juan de Fuca Emergency Program	128,591	115,711	-	-	-	12,880	128,591	-	-	-	240	-	-	128,351	128,351
1.371	SSI Emergency Program	141,654	141,654	-	-	-	-	141,654	-	-	3,327	190	-	-	138,137	138,137
1.372	Electoral Area Emergency Program	741,034	736,034	-	-	-	5,000	741,034	-	540,708	1,535	1,010	-	-	197,781	197,781
1.373	SGI Emergency Program	250,388	243,887	-	-	-	6,501	250,388	-	-	-	3,010	-	-	247,378	247,378
1.374	Regional Emergency Program Support	158,735	158,735	-	-	-	-	158,735	-	-	-	7,810	-	-	150,925	150,925
1.375	Hazardous Material Incident Response	409,948	393,763	-	-	-	16,185	409,948	-	-	-	19,690	-	-	390,258	390,258

CAPITAL REGIONAL DISTRICT 2027 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2027	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2027	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2027
1.377	JDF Search and Rescue	93,122	90,122	-	-	-	3,000	93,122	-	-	-	23,170	-	-	69,952	69,952
1.378	SSI Search and Rescue	25,804	25,804	-	-	-	-	25,804	-	-	-	100	-	-	25,704	25,704
1.40X	SEAPARC	5,622,710	5,017,954	53,966	-	-	550,790	5,622,710	-	-	-	563,527	1,498,274	-	3,560,909	3,560,909
1.405	JDF EA - Community Parks	249,123	229,828	-	-	-	19,295	249,123	-	-	-	940	-	-	248,183	248,183
1.408	JDF EA - Community Recreation	98,280	98,280	-	-	-	-	98,280	-	-	-	23,310	-	-	74,970	74,970
1.44X	Panorama Rec. Center.	12,000,462	10,015,701	590,608	-	-	1,394,153	12,000,462	-	-	-	2,280,382	3,438,694	-	6,281,386	6,281,386
1.455	Salt Spring Island - Community Parks	1,053,634	1,028,134	-	-	-	25,500	1,053,634	-	429,330	-	34,190	-	-	590,114	590,114
1.458	Salt Spring Is.- Community Rec	413,542	404,892	-	-	-	8,650	413,542	-	-	-	10,650	286,740	-	116,152	116,152
1.459	Salt Spring Is- Pool, Parks, Land, Art & Rec. Prog	2,956,369	2,476,703	107,666	-	-	372,000	2,956,369	-	93,830	-	176,650	300,100	-	2,385,789	2,385,789
1.465	Saturna Island Comm. Parks	32,039	26,590	-	-	-	5,449	32,039	-	-	-	1,710	-	-	30,329	30,329
1.468	Saturna Island - Community Rec.	15,720	15,720	-	-	-	-	15,720	-	-	-	710	-	-	15,010	15,010
1.475	Mayne Is. Com. Parks & Rec	102,450	83,440	-	-	-	19,010	102,450	-	-	-	300	-	-	102,150	102,150
1.476	Mayne Is. Comm. Parks (reserve)	11,220	11,220	-	-	-	-	11,220	-	-	-	10,130	1,090	-	-	-
1.478	Mayne Is. Community Rec.	39,130	39,130	-	-	-	-	39,130	-	-	-	60	-	-	39,070	39,070
1.485	North & South Pender Com. Parks	214,560	166,142	-	-	-	48,418	214,560	-	-	-	2,380	-	-	212,180	212,180
1.488	North & South Pender Com. Rec	74,740	74,740	-	-	-	-	74,740	-	-	-	890	-	-	73,850	73,850
1.495	Galiano Parks	138,777	125,777	-	-	-	13,000	138,777	-	-	21,970	120	-	-	116,687	116,687
1.498	Galiano Community Recreation	46,560	46,560	-	-	-	-	46,560	-	-	-	30	-	-	46,530	46,530
1.521	SWMP -Solid Waste Disposal (Refuse Disposal)	40,434,649	39,771,529	-	-	-	663,120	40,434,649	-	-	119,671	15,900,431	24,414,547	-	-	-
1.523	Port Renfrew Refuse Disposal	129,488	98,375	-	-	-	31,113	129,488	-	28,058	-	53,450	-	-	47,980	47,980
1.525	Solid Waste Disposal - Debt	2,765,453	3,500	2,761,953	-	-	-	2,765,453	-	-	-	-	2,765,453	-	-	-
1.531	Stormwater Quality Management - Sooke	43,003	26,301	-	-	-	16,702	43,003	-	-	-	86	-	-	42,917	42,917
1.533	Stormwater Quality Management - SGI	44,016	44,016	-	-	-	-	44,016	-	-	-	510	-	-	43,506	43,506
1.535	Stormwater Quality Management - SSI	26,589	26,589	-	-	-	-	26,589	-	-	449	30	-	-	26,110	26,110
1.536	LWMP-Stormwater Quality Management-Core	805,613	789,016	-	-	-	16,597	805,613	-	-	-	87,763	-	-	717,850	717,850
1.537	Stormwater Quality Management - Peninsula	132,775	132,775	-	-	-	-	132,775	-	-	-	4,455	-	-	128,320	128,320
1.538	Source - Stormwater Quality - Peninsula	62,918	62,918	-	-	-	-	62,918	-	-	716	1,763	-	-	60,439	60,439
1.57X	Environmental Services	27,918,208	27,023,182	-	-	-	895,026	27,918,208	-	27,764,679	61,129	92,400	-	-	-	-
1.911	911 Systems	2,661,338	1,640,329	1,011,949	-	-	9,060	2,661,338	-	-	-	2,078,369	122,158	-	460,811	460,811
1.912B	911 Call Answer - Municipalities	-	-	-	-	-	-	-	-	641,849	-	-45,300	-	-	(596,549)	(596,549)
1.913	913 Fire Dispatch	451,030	442,935	-	-	-	8,095	451,030	-	-	-	10,300	-	-	440,730	440,730
1.921	Regional CREST Contribution	2,163,064	2,163,064	-	-	-	-	2,163,064	-	-	-	105,100	-	-	2,057,964	2,057,964
1.923	Emergency Comm - CREST - SGI	198,711	198,711	-	-	-	-	198,711	-	-	-	2,180	-	-	196,531	196,531
1.924	Emergency Comm - CREST - JDF	158,680	158,680	-	-	-	-	158,680	-	-	-	250	-	-	158,430	158,430
1.925	Emergency Comm - CREST - SSI	160,070	160,070	-	-	-	-	160,070	-	-	-	160	-	-	159,910	159,910
2.610	Saanich Peninsula Water Supply	10,296,106	8,609,805	1,136,301	-	-	550,000	10,296,106	-	-	-	6,500	10,289,606	-	-	-
2.620	SSI Highland Water System	11,325	118	11,207	-	-	-	11,325	-	-	-	90	-	11,235	-	11,235
2.621	Highland / Fernwood Water - SSI	966,510	406,786	477,699	-	-	82,025	966,510	-	-	-	820	822,680	143,010	-	143,010
2.622	Cedars of Tuam	147,347	42,445	95,902	-	-	9,000	147,347	-	-	-	90	147,257	-	-	-
2.624	Beddis Water	552,290	229,629	186,061	-	-	136,600	552,290	-	-	-	150	369,370	182,770	-	182,770
2.626	Fulford Water	428,720	180,954	205,691	-	-	42,075	428,720	-	-	-	740	324,420	103,560	-	103,560
2.628	Cedar Lane Water (SSI)	165,280	68,427	63,533	-	-	33,320	165,280	-	-	-	160	130,310	34,810	-	34,810
2.630	Magic Lakes Estate Water System	1,033,238	780,895	150,603	-	-	101,740	1,033,238	-	-	-	10,760	442,478	580,000	-	580,000
2.640	Saturna Island Water System (Lyall Harbour)	314,125	193,685	62,095	-	-	58,345	314,125	-	-	-	940	149,505	163,680	-	163,680
2.642	Skana Water (Mayne)	105,157	59,968	18,946	-	-	26,243	105,157	-	-	-	100	74,277	30,780	-	30,780
2.650	Port Renfrew Water	250,151	146,814	80,607	-	-	22,730	250,151	-	-	13,000	1,140	116,881	119,130	-	119,130
2.660	Fernwood Water	3,401	54	3,347	-	-	-	3,401	-	-	-	40	-	3,361	-	3,361
2.665	Sticks Allison Water (Galiano)	72,940	58,595	-	-	-	14,345	72,940	-	-	-	100	67,428	5,412	-	5,412
2.667	Surfside Park Estates (Mayne)	266,667	124,513	136,669	-	-	5,485	266,667	-	-	7,000	100	210,214	49,353	-	49,353
2.670	Regional Water Supply	53,187,300	22,738,009	6,940,171	-	23,000,000	509,120	53,187,300	-	-	-	784,600	52,402,700	-	-	-
2.680	Juan de Fuca Water Distribution	32,242,622	18,481,360	3,205,713	-	9,933,712	621,837	32,242,622	-	-	-	179,270	32,063,352	-	-	-
2.681	Florence Lake Water System Debt	19,038	-	19,038	-	-	-	19,038	-	-	-	37	-	19,001	-	19,001
2.682	Seagirt Water System Debt	146,552	-	146,552	-	-	-	146,552	-	-	-	-	-	146,552	-	146,552
2.691	Wilderness Mountain Water Service	205,031	150,628	34,568	-	-	19,835	205,031	-	-	10,000	110	116,121	78,800	-	78,800
3.700	Septage Disposal	170,727	170,727	-	-	-	-	170,727	-	-	-	170,727	-	-	-	-
3.701	Millstream Remediation Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.705	SSI Liquid Waste Disposal	1,375,111	1,088,822	245,899	-	-	40,390	1,375,111	-	-	-	1,680	838,610	534,821	-	534,821
3.707	LWMP - On Site System Management Program	181,557	181,557	-	-	-	-	181,557	-	-	-	7,485	-	174,072	-	174,072
3.71X	Core Area Wastewater Operations	37,663,832	36,263,832	-	-	-	1,400,000	37,663,832	-	668,656	304,290	30,636,988	-	-	6,053,898	6,053,898
3.718	Peninsula Wastewater TP	5,620,238	4,532,432	372,456	-	-	715,350	5,620,238	-	163,950	30,000	2,997,965	-	-	2,428,323	2,428,323
3.720	LWMP - (Peninsula) - Implementation	61,044	36,281	-	-	-	24,763	61,044	-	-	-	2,320	-	-	58,724	58,724
3.750	LWMP - Core and West Shore	1,448,684	1,183,972				264,712	1,448,684	-	-	-	477,223	208,080	-	763,381	763,381
3.752	LWMP - Harbour Studies	383,639	383,639				-	383,639	-	-	-	21,658	-	-	361,981	361,981
3.755	Regional Source Control	1,729,177	1,728,997	-	-	-	180	1,729,177	-	55,000	11,362	93,303	64,946	-	1,504,566	1,504,566
3.756	Harbours Environmental Action	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
3.7XX	Core Area & Legacy Trunk Sewer - Debt	27,033,368	177,935	12,642,809	-	5,529,745	8,682,879	27,033,368	-	-	-	19,541,701	-	-	7,491,667	7,491,667
3.810	Ganges Sewer	1,475,221	882,435	433,246	-	-	159,540	1,475,221	-	-	25,000	2,380	1,371,921	75,920	-	75,920
3.820	Maliview Estates Sewer System	284,391	179,639	57,157	-	-	47,595	284,391	-	-	10,000	25,230	242,950	6,211	-	6,211
3.830	Magic Lake Estates Sewer System	984,770	735,089	93,471	-	-	156,210	984,770	-	12,300	15,000	4,960	308,870	643,640	-	643,640
3.830D	Magic Lake Estates Sewer Debt	231,715	1,030	230,685	-	-	-	231,715	-	-	-	2,240	-	229,475	-	229,475
3.850	Port Renfrew Sewer	143,828	121,013	-	-	-	22,815	143,828	-	-	-	1,600	71,103	71,125	-	71,125
21.ALL	Feasibility Study Reserve Fund - All	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.E.A.	Feasibility Study Reserve Fund - E.A.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CAPITAL REGIONAL DISTRICT 2028 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2028	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2028	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2028
1.010	Legislative & General Government	40,075,777	38,874,894	304,332	-	530,280	366,271	40,075,777	450,000	23,757,324	180,000	1,564,826	100,050	-	14,023,577	14,023,577
1.10X	Facilities Management	5,308,680	4,608,091	-	-	-	700,589	5,308,680	-	5,074,318	-	43,368	-	-	190,994	190,994
1.101	G.I.S.	711,158	641,388	-	-	19,770	50,000	711,158	-	556,800	-	6,510	-	-	147,848	147,848
1.103	Elections	65,580	90	-	-	-	65,490	65,580	-	-	-	90	-	-	65,490	65,490
1.104	U.B.C.M.	14,361	14,361	-	-	-	-	14,361	-	-	-	90	-	-	14,271	14,271
1.109	Electoral Area Admin Exp - JDF	78,610	78,610	-	-	-	-	78,610	-	-	-	250	-	-	78,360	78,360
1.110	Electoral Area Admin Exp - SGI	500,808	499,332	-	-	-	1,476	500,808	-	-	1,834	20,364	-	-	478,610	478,610
1.111	Electoral Area Admin Exp - SSI	1,518,388	1,453,888	-	-	-	64,500	1,518,388	-	746,499	-	5,810	-	-	766,079	766,079
1.112	Regional Grant in Aid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.114	Grant-in-Aid - Juan de Fuca	21,833	21,833	-	-	-	-	21,833	-	-	-	290	-	-	21,543	21,543
1.116	Grant-in-Aid - Salt Spring Island	53,228	53,228	-	-	-	-	53,228	-	-	-	260	-	-	52,968	52,968
1.117	Grant-in-Aid - Southern Gulf Islands	111,549	111,549	-	-	-	-	111,549	-	-	-	1,257	-	-	110,292	110,292
1.119	Vancouver Island Regional Library	435,758	435,758	-	-	-	-	435,758	-	-	-	670	-	-	435,088	435,088
1.121	Sooke Regional Museum	249,064	249,064	-	-	-	-	249,064	-	-	-	430	-	-	248,634	248,634
1.123	Prov. Court of B.C. (Family Court)	149,360	-	-	-	-	149,360	149,360	-	-	-	149,360	-	-	-	-
1.124	SSI Economic Development Commission	75,947	70,947	-	-	-	5,000	75,947	-	-	11,735	670	-	-	63,542	63,542
1.125	SGI Economic Development Commission	138,277	138,277	-	-	-	-	138,277	-	-	-	1,640	-	-	136,637	136,637
1.126	Victoria Family Court Committee	15,797	15,797	-	-	-	-	15,797	-	-	-	797	-	-	15,000	15,000
1.128	Greater Victoria Police Victim Services	349,254	349,254	-	-	-	-	349,254	-	-	-	14,634	-	-	334,620	334,620
1.129	Vancouver Island Regional Library - Debt	339,366	1,100	338,266	-	-	-	339,366	-	-	-	339,366	-	-	-	-
1.133	Langford E.A. - Greater Victoria Public Library	36,444	36,444	-	-	-	-	36,444	-	-	-	100	-	-	36,344	36,344
1.137	Galiano Island Community Use Building	75,668	42,175	30,653	-	-	2,840	75,668	-	-	-	290	-	-	75,378	75,378
1.138	Southern Gulf Islands Regional Library	273,607	273,607	-	-	-	-	273,607	-	-	-	2,869	-	-	270,738	270,738
1.141	Salt Spring Island Public Library	831,807	648,374	9,888	-	-	173,545	831,807	-	-	-	1,150	-	-	830,657	830,657
1.15X	Municipalities' Own Debt - M.F.A.	14,538,946	71,820	14,467,126	-	-	-	14,538,946	-	-	-	71,820	-	-	14,467,126	14,467,126
1.170	Gossip Island Electric Power Supply	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.224	Community Health	566,956	566,956	-	-	-	-	566,956	-	-	-	130,590	-	-	436,366	436,366
1.226	Health Facilities - VIHA	1,922,639	807,382	-	-	-	1,115,257	1,922,639	-	-	-	1,922,639	-	-	-	-
1.227	Saturna Island Medical Clinic	28,332	28,332	-	-	-	-	28,332	-	-	-	1,540	-	-	26,792	26,792
1.228	Galiano Health Service	156,698	156,698	-	-	-	-	156,698	-	-	-	200	-	-	156,498	156,498
1.229	Pender Islands Health Care Centre	309,379	309,379	-	-	-	-	309,379	-	-	-	2,300	-	-	307,079	307,079
1.230	Traffic Safety Commission	83,251	83,251	-	-	-	-	83,251	-	-	-	3,840	-	-	79,411	79,411
1.232	Port Renfrew Street Lighting	9,995	9,995	-	-	-	-	9,995	-	-	-	390	4,210	5,395	-	5,395
1.234	SSI Street Lighting	34,249	34,249	-	-	-	-	34,249	-	-	-	40	-	-	34,209	34,209
1.235	SGI Small Craft Harbour Facilities	513,850	271,835	87,493	-	-	154,522	513,850	-	-	-	8,190	153,860	351,800	-	351,800
1.236	Salt Spring Island Fernwood Dock	38,723	18,723	-	-	-	20,000	38,723	-	-	-	170	-	38,553	-	38,553
1.238A	Community Transit (SSI)	789,087	738,662	-	-	-	50,425	789,087	-	-	-	228,712	-	-	560,375	560,375
1.238B	Community Transportation (SSI)	243,204	56,405	84,799	-	-	102,000	243,204	-	-	-	430	-	-	242,774	242,774
1.280	Regional Parks	26,044,108	16,404,697	5,764,207	-	292,257	3,582,947	26,044,108	-	82,284	20,000	945,788	672,666	-	24,323,370	24,323,370
1.290	Royal Theatre	580,000	100,000	-	-	109,000	371,000	580,000	-	-	-	-	-	-	580,000	580,000
1.295	McPherson Theatre	785,822	349,589	-	-	94,000	342,233	785,822	-	-	-	35,822	-	-	750,000	750,000
1.297	Arts Grants	3,483,081	3,481,999	-	-	-	1,082	3,483,081	-	16,630	42,178	178,754	-	-	3,245,519	3,245,519
1.299	Salt Spring Island Arts	137,574	137,574	-	-	-	-	137,574	-	-	-	90	-	-	137,484	137,484
1.309	Climate Action and Adaptation	1,398,064	1,337,394	-	-	-	60,670	1,398,064	-	-	5,048	75,874	-	-	1,317,142	1,317,142
1.310	Land Banking & Housing	4,544,422	2,163,753	2,376,439	-	-	4,230	4,544,422	-	368,314	-	719,925	2,000	-	3,454,183	3,454,183
1.311	Regional Housing Trust Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.312	Regional Goose Management	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.313	Animal Care Services	1,900,090	1,855,964	-	-	-	44,126	1,900,090	-	-	-	1,332,870	30,660	-	536,560	536,560
1.314	SGI House Numbering	10,918	10,918	-	-	-	-	10,918	-	-	-	145	-	-	10,773	10,773
1.316	SSI Building Numbering	11,064	11,064	-	-	-	-	11,064	-	-	-	20	-	-	11,044	11,044
1.317	JDF Building Numbering	15,039	15,039	-	-	-	-	15,039	-	-	-	50	-	-	14,989	14,989
1.318	Building Inspection	2,408,344	2,333,054	-	-	14,570	60,720	2,408,344	-	34,700	-	4,810	1,558,730	-	810,104	810,104
1.319	Soil Deposit Removal	6,689	6,689	-	-	-	-	6,689	-	-	89	40	-	-	6,560	6,560
1.320	Noise Control	48,946	47,081	-	-	-	1,865	48,946	-	-	-	350	-	-	48,596	48,596
1.322	Nuisances & Unsightly Premises	62,206	62,206	-	-	-	-	62,206	-	-	-	480	-	-	61,726	61,726
1.323	By-Law Enforcement	641,861	590,698	-	-	-	51,163	641,861	-	602,301	-	39,560	-	-	-	-
1.324	Regional Planning Services	1,703,758	1,701,258	-	-	-	2,500	1,703,758	-	102,440	101,560	69,110	-	-	1,430,648	1,430,648
1.325	Electoral Area Services - Planning	943,545	867,775	-	-	-	75,770	943,545	-	35,910	23,235	2,270	45,000	-	837,130	837,130
1.330	Regional Growth Strategy	362,548	352,548	-	-	-	10,000	362,548	-	-	-	18,040	-	-	344,508	344,508
1.335	Geo-Spatial Referencing System	198,577	129,287	-	-	-	69,290	198,577	-	-	-	8,500	9,370	-	180,707	180,707
1.340	JDF Livestock Injury Compensation	3,171	3,171	-	-	-	-	3,171	-	-	-	-	-	-	3,171	3,171
1.341	SGI Livestock Injury Compensation	3,191	3,191	-	-	-	-	3,191	-	-	-	34	-	-	3,157	3,157
1.342	SSI Livestock Injury Compensation	3,171	3,171	-	-	-	-	3,171	-	-	-	-	-	-	3,171	3,171
1.350	Willis Point Fire Protect & Recreation	200,420	128,545	-	-	7,060	64,815	200,420	-	-	-	42,690	-	-	157,730	157,730
1.352	South Galiano Fire Protection	674,877	384,300	141,027	-	11,030	138,520	674,877	-	-	-	1,120	-	141,027	532,730	673,757
1.353	Otter Point Fire Protection	734,095	540,045	-	-	6,350	187,700	734,095	-	-	-	340	-	-	733,755	733,755
1.354	Malahat Fire Protection	74,333	74,333	-	-	-	-	74,333	-	-	-	-	-	-	74,333	74,333
1.355	Durrance Road Fire Protection	3,027	2,727	-	-	-	300	3,027	-	-	-	-	-	3,027	-	3,027
1.356	Pender Fire Protection	1,632,746	1,389,718	-	-	-	243,028	1,632,746	-	-	-	12,560	-	-	1,620,186	1,620,186
1.357	East Sooke Fire Protection	623,101	346,355	155,109	-	5,000	116,637	623,101	-	-	-	30,691	75,060	-	517,350	517,350
1.358	Port Renfrew Fire Protection	219,834	188,834	-	-	-	31,000	219,834	-	-	-	1,410	87,370	-	131,054	131,054
1.359	North Galiano Fire Protection	349,872	281,399	56,363	-	5,000	7,110	349,872	-	-	-	1,030	-	24,440	324,402	348,842
1.360	Shirley Fire Protection	216,570	136,063	-	-	10,000	70,507	216,570	-	-	-	210	-	-	216,360	216,360
1.363	Saturna Island Fire	347,127	347,127	-	-	-	-	347,127	-	-	-	13,540	-	-	333,587	333,587
1.369	Electoral Area Fire Services	360,613	352,375	-	-	1,918	6,320	360,613	-	-	-	120	-	-	360,493	360,493
1.370	Juan de Fuca Emergency Program	130,946	118,066	-	-	-	12,880	130,946	-	-	-	240	-	-	130,706	130,706
1.371	SSI Emergency Program	144,235	144,235	-	-	-	-	144,235	-	-	3,145	190	-	-	140,900	140,900
1.372	Electoral Area Emergency Program	760,212	753,272	-	-	-	6,940	760,212	-	551,520	-	1,020	-	-	207,672	207,672
1.373	SGI Emergency Program	254,219	248,809	-	-	-	5,410	254,219	-	-	3,771	3,070	-	-	247,378	247,378
1.374	Regional Emergency Program Support	162,409	162,409	-	-	-	-	162,409	-	-	-	7,950	-	-	154,459	154,459
1.375	Hazardous Material Incident Response	422,030	401,634	-	-	-	20,396	422,030	-	-	-	20,070	-	-	401,960	401,960

CAPITAL REGIONAL DISTRICT 2028 FINANCIAL PLAN — **Schedule A**

		Expenditures						*Revenue*								
		Total 2028	Operations	Interest & Principal	Deficit	Capital	Transfers to Reserves	Total 2028	Surplus from Prior Year	Recovery from Other Services	Transfers from Reserves	Other Revenue	Fees & Charges	Parcel Tax	Property Value Tax	Requisition 2028
1.377	JDF Search and Rescue	93,582	90,582	-	-	-	3,000	93,582	-	-	-	23,630	-	-	69,952	69,952
1.378	SSI Search and Rescue	25,804	25,804	-	-	-	-	25,804	-	-	-	100	-	-	25,704	25,704
1.40X	SEAPARC	5,759,642	5,143,876	53,966	-	-	561,800	5,759,642	-	-	-	574,667	1,527,520	-	3,657,455	3,657,455
1.405	JDF EA - Community Parks	254,110	234,725	-	-	-	19,385	254,110	-	-	-	960	-	-	253,150	253,150
1.408	JDF EA - Community Recreation	100,240	100,240	-	-	-	-	100,240	-	-	-	23,770	-	-	76,470	76,470
1.44X	Panorama Rec. Center.	12,272,029	10,259,384	590,608	-	-	1,422,037	12,272,029	-	-	-	2,327,451	3,513,594	-	6,430,984	6,430,984
1.455	Salt Spring Island - Community Parks	1,076,320	1,050,820	-	-	-	25,500	1,076,320	-	437,920	-	34,880	-	-	603,520	603,520
1.458	Salt Spring Is.- Community Rec	421,793	413,563	-	-	-	8,230	421,793	-	-	-	10,860	292,470	-	118,463	118,463
1.459	Salt Spring Is- Pool, Parks, Land, Art & Rec. Prog	3,001,613	2,524,947	107,666	-	-	369,000	3,001,613	-	95,710	-	180,190	306,100	-	2,419,613	2,419,613
1.465	Saturna Island Comm. Parks	32,676	27,124	-	-	-	5,552	32,676	-	-	-	1,740	-	-	30,936	30,936
1.468	Saturna Island - Community Rec.	16,030	16,030	-	-	-	-	16,030	-	-	-	720	-	-	15,310	15,310
1.475	Mayne Is. Com. Parks & Rec	104,490	85,480	-	-	-	19,010	104,490	-	-	-	300	-	-	104,190	104,190
1.476	Mayne Is. Comm. Parks (reserve)	11,440	11,440	-	-	-	-	11,440	-	-	-	10,330	1,110	-	-	-
1.478	Mayne Is. Community Rec.	39,910	39,910	-	-	-	-	39,910	-	-	-	60	-	-	39,850	39,850
1.485	North & South Pender Com. Parks	229,450	169,491	-	-	-	59,959	229,450	-	-	-	2,420	-	-	227,030	227,030
1.488	North & South Pender Com. Rec	76,230	76,230	-	-	-	-	76,230	-	-	-	900	-	-	75,330	75,330
1.495	Galiano Parks	142,361	128,361	-	-	-	14,000	142,361	-	-	22,410	120	-	-	119,831	119,831
1.498	Galiano Community Recreation	47,490	47,490	-	-	-	-	47,490	-	-	-	30	-	-	47,460	47,460
1.521	SWMP -Solid Waste Disposal (Refuse Disposal)	41,079,081	40,415,961	-	-	-	663,120	41,079,081	-	-	1,031,363	15,859,171	24,188,547	-	-	-
1.523	Port Renfrew Refuse Disposal	131,980	100,350	-	-	-	31,630	131,980	-	28,620	-	54,420	-	-	48,940	48,940
1.525	Solid Waste Disposal - Debt	2,791,453	-	2,791,453	-	-	-	2,791,453	-	-	-	-	2,791,453	-	-	-
1.531	Stormwater Quality Management - Sooke	43,844	26,808	-	-	-	17,036	43,844	-	-	-	86	-	-	43,758	43,758
1.533	Stormwater Quality Management - SGI	44,894	44,894	-	-	-	-	44,894	-	-	-	520	-	-	44,374	44,374
1.535	Stormwater Quality Management - SSI	26,790	26,790	-	-	-	-	26,790	-	-	130	30	-	-	26,630	26,630
1.536	LWMP-Stormwater Quality Management-Core	821,761	804,832	-	-	-	16,929	821,761	-	-	-	87,763	-	-	733,998	733,998
1.537	Stormwater Quality Management - Peninsula	135,198	135,198	-	-	-	-	135,198	-	-	-	4,455	-	-	130,743	130,743
1.538	Source - Stormwater Quality - Peninsula	64,141	64,141	-	-	-	-	64,141	-	-	730	1,763	-	-	61,648	61,648
1.57X	Environmental Services	28,595,888	27,657,704	-	-	-	938,184	28,595,888	-	28,442,102	61,386	92,400	-	-	-	-
1.911	911 Systems	2,682,196	1,659,692	1,011,949	-	-	10,555	2,682,196	-	-	-	2,058,734	119,715	-	503,747	503,747
1.912B	911 Call Answer - Municipalities	-	-	-	-	-	-	-	-	629,012	-	-46,200	-	-	-582,812	-582,812
1.913	913 Fire Dispatch	486,480	456,968	-	-	-	29,512	486,480	-	-	-	10,490	-	-	475,990	475,990
1.921	Regional CREST Contribution	2,206,210	2,206,210	-	-	-	-	2,206,210	-	-	-	107,150	-	-	2,099,060	2,099,060
1.923	Emergency Comm - CREST - SGI	202,668	202,668	-	-	-	-	202,668	-	-	-	2,220	-	-	200,448	200,448
1.924	Emergency Comm - CREST - JDF	161,850	161,850	-	-	-	-	161,850	-	-	-	250	-	-	161,600	161,600
1.925	Emergency Comm - CREST - SSI	163,262	163,262	-	-	-	-	163,262	-	-	-	160	-	-	163,102	163,102
2.610	Saanich Peninsula Water Supply	11,170,003	9,386,207	1,183,796	-	-	600,000	11,170,003	-	-	-	3,500	11,166,503	-	-	-
2.620	SSI Highland Water System	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.621	Highland / Fernwood Water - SSI	1,102,371	414,481	659,810	-	-	28,080	1,102,371	-	-	-	830	937,081	164,460	-	164,460
2.622	Cedars of Tuam	168,780	38,828	120,952	-	-	9,000	168,780	-	-	-	90	168,690	-	-	-
2.624	Beddis Water	648,310	230,264	395,609	-	-	22,437	648,310	-	-	-	150	428,840	219,320	-	219,320
2.626	Fulford Water	490,412	184,344	269,593	-	-	36,475	490,412	-	-	-	700	370,622	119,090	-	119,090
2.628	Cedar Lane Water (SSI)	196,000	69,363	109,337	-	-	17,300	196,000	-	-	-	160	154,070	41,770	-	41,770
2.630	Magic Lakes Estate Water System	1,041,690	796,765	78,945	-	-	165,980	1,041,690	-	-	-	10,800	450,890	580,000	-	580,000
2.640	Saturna Island Water System (Lyall Harbour)	320,413	197,618	62,095	-	-	60,700	320,413	-	-	-	960	152,503	166,950	-	166,950
2.642	Skana Water (Mayne)	107,263	61,169	18,946	-	-	27,148	107,263	-	-	-	100	75,763	31,400	-	31,400
2.650	Port Renfrew Water	256,043	134,454	89,974	-	-	31,615	256,043	-	-	-	1,150	126,233	128,660	-	128,660
2.660	Fernwood Water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.665	Sticks Allison Water (Galiano)	74,381	59,746	-	-	-	14,635	74,381	-	-	-	100	68,761	5,520	-	5,520
2.667	Surfside Park Estates (Mayne)	270,058	119,889	136,669	-	-	13,500	270,058	-	-	-	100	218,624	51,334	-	51,334
2.670	Regional Water Supply	58,394,753	23,065,843	7,809,608	-	27,000,000	519,302	58,394,753	-	-	-	666,100	57,728,653	-	-	-
2.680	Juan de Fuca Water Distribution	33,289,391	19,776,516	2,948,889	-	9,933,712	630,274	33,289,391	-	-	-	179,270	33,110,121	-	-	-
2.681	Florence Lake Water System Debt	19,038	-	19,038	-	-	-	19,038	-	-	-	37	-	19,001	-	19,001
2.682	Seagirt Water System Debt	146,552	-	146,552	-	-	-	146,552	-	-	-	-	-	146,552	-	146,552
2.691	Wilderness Mountain Water Service	202,870	147,418	13,667	-	-	41,785	202,870	-	-	4,000	50	118,440	80,380	-	80,380
3.700	Septage Disposal	174,093	174,093	-	-	-	-	174,093	-	-	-	174,093	-	-	-	-
3.701	Millstream Remediation Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.705	SSI Liquid Waste Disposal	1,402,452	1,103,503	245,899	-	-	53,050	1,402,452	-	-	-	1,700	855,380	545,372	-	545,372
3.707	LWMP - On Site System Management Program	185,014	185,014	-	-	-	-	185,014	-	-	-	7,485	-	177,529	-	177,529
3.71X	Core Area Wastewater Operations	38,298,901	36,798,901	-	-	-	1,500,000	38,298,901	-	682,031	100,780	31,310,274	-	-	6,205,816	6,205,816
3.718	Peninsula Wastewater TP	5,902,008	4,727,652	427,306	-	-	747,050	5,902,008	-	167,220	130,000	3,096,506	-	-	2,508,282	2,508,282
3.720	LWMP - (Peninsula) - Implementation	62,260	37,013	-	-	-	25,247	62,260	-	-	-	2,320	-	-	59,940	59,940
3.750	LWMP - Core and West Shore	1,460,563	1,190,962				269,601	1,460,563	-	-	-	480,117	212,240	-	768,206	768,206
3.752	LWMP - Harbour Studies	390,879	390,879				-	390,879	-	-	-	21,658	-	-	369,221	369,221
3.755	Regional Source Control	1,762,620	1,762,436	-	-	-	184	1,762,620	-	55,000	13,415	93,303	66,245	-	1,534,657	1,534,657
3.756	Harbours Environmental Action	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.7XX	Core Area & Legacy Trunk Sewer - Debt	28,795,726	138,110	23,656,745	-	5,529,745	-528,874	28,795,726	-	-	-	20,777,819	-	-	8,017,907	8,017,907
3.810	Ganges Sewer	1,479,188	874,832	433,246	-	-	171,110	1,479,188	-	-	-	2,390	1,399,358	77,440	-	77,440
3.820	Maliview Estates Sewer System	279,375	173,058	57,157	-	-	49,160	279,375	-	-	-	25,230	247,810	6,335	-	6,335
3.830	Magic Lake Estates Sewer System	989,150	734,515	63,788	-	-	190,847	989,150	-	12,550	-	5,040	315,050	656,510	-	656,510
3.830D	Magic Lake Estates Sewer Debt	231,715	1,030	230,685	-	-	-	231,715	-	-	-	2,260	-	229,455	-	229,455
3.850	Port Renfrew Sewer	146,706	123,436	-	-	-	23,270	146,706	-	-	-	1,630	72,528	72,548	-	72,548
21.ALL	Feasibility Study Reserve Fund - All	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21.E.A.	Feasibility Study Reserve Fund - E.A.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

SCHEDULE B

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CAPITAL REGIONAL DISTRICT

CAPITAL EXPENDITURE PLAN SUMMARY - 2024 to 2028

EXPENDITURE / FUNDING SUMMARY (ALL SERVICES)	2024	2025	2026	2027	2028	TOTAL
EXPENDITURE						
Buildings	31,852,500	30,892,500	4,086,500	1,237,000	4,749,500	72,818,000
Equipment	35,157,860	10,947,405	11,057,859	4,352,920	3,795,636	65,311,680
Land	10,722,000	6,457,000	5,342,000	5,270,000	5,230,000	33,021,000
Engineered Structures	176,661,767	129,184,926	100,570,875	86,460,400	80,030,500	572,908,468
Vehicles	8,593,000	3,308,750	2,920,000	3,802,000	3,438,000	22,061,750
	262,987,127	**180,790,581**	**123,977,234**	**101,122,320**	**97,243,636**	**766,120,898**
SOURCE OF FUNDS						
Capital Funds on Hand	87,726,523	30,409,541	29,952,483	28,368,745	29,961,120	206,418,412
Debenture Debt	84,414,500	110,095,478	66,863,356	51,910,000	41,215,000	354,498,334
ERF	13,262,247	7,313,893	5,698,778	6,479,897	6,243,136	38,997,951
Grants (Federal, Provincial)	21,127,396	10,856,701	5,479,117	4,610,278	9,065,000	51,138,492
Reserve Fund	49,835,461	19,099,968	15,783,500	9,753,400	10,759,380	105,231,709
Other	6,621,000	3,015,000	200,000	-	-	9,836,000
	262,987,127	**180,790,581**	**123,977,234**	**101,122,320**	**97,243,636**	**766,120,898**

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2024 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.011	Board Expenditures	764,500					764,500			764,500				764,500
1.014	CAO / Corporate Services	14,796					14,796			14,796				14,796
1.015	Real Estate	1,500					1,500			1,500				1,500
1.016	Human Resources	6,576					6,576			6,576			-	6,576
1.017	Finance	506,549		850,000			1,356,549	525,000	-	81,549			750,000	1,356,549
1.018	Health & Capital Planning Strategies	1,500					1,500			1,500				1,500
1.022	Information Technology	5,702,552	170,000	50,000			5,922,552	5,875,952		46,600				5,922,552
1.024	GM - Planning & Protective Services	-					-			-				-
1.025	Corporate Emergency	8,000					8,000			8,000				8,000
1.027	First Nations Relations	1,644					1,644			1,644				1,644
1.105	Facilities Management	10,000	15,000				25,000			25,000				25,000
1.106	Facilities and Risk			1,090,000	25,000		1,115,000	825,000					290,000	1,115,000
1.107	Corporate Satellite Facilities			25,000			25,000						25,000	25,000
1.109	JDF Admin. Expenditures	2,000					2,000			2,000				2,000
1.110	SGI Admin. Expenditures	6,600					6,600			6,600				6,600
1.111	SSI Admin. Expenditures	46,100	-				46,100			46,100				46,100
1.118	Corporate Communications	453,288					453,288			3,288			450,000	453,288
1.123	Family Court Building			1,352,500			1,352,500	47,500				700,000	605,000	1,352,500
1.137	Galiano Island Community Use Building			12,000			12,000						12,000	12,000
1.141	SSI Public Library			90,000			90,000				70,000		20,000	90,000
1.226	Health Facilities - VIHA	440,000		3,155,000	-		3,595,000	615,000				375,000	2,605,000	3,595,000
1.235	SGI Small Craft Harbour Facilities				482,000		482,000	247,000				20,000	215,000	482,000
1.236	SSI Small Craft Harbour (Fernwood Dock)				70,000		70,000				-		70,000	70,000
1.238A	Community Transit (SSI)				110,000		110,000	50,000			60,000		-	110,000
1.238B	Community Transportation (SSI)	55,000			290,000		345,000	45,000	-		210,000		90,000	345,000
1.280	Regional Parks	445,200	1,772,000	145,000	6,197,657	5,000,000	13,559,857	843,172	6,300,000	1,516,200	1,954,485	76,000	2,870,000	13,559,857
1.290	Royal Theatre	-		867,000			867,000	-			-	350,000	517,000	867,000
1.295	McPherson Theatre	57,000		275,000			332,000						332,000	332,000
1.297	Arts Grants and Development	2,100					2,100			2,100				2,100
1.309	Climate Action and Adaptation	792,961					792,961	211,483			581,478			792,961
1.310	Land Banking and Housing	10,000		9,400,000		700,000	10,110,000		9,400,000	10,000	700,000			10,110,000
1.313	Animal Care Services	40,000	42,000	185,000	65,000		332,000	302,000		30,000				332,000
1.318	Building Inspection	60,500	125,000				185,500			185,500				185,500
1.323	ByLaw Services	2,500	100,000				102,500			102,500				102,500
1.324	Regional Planning Services	44,000					44,000			44,000				44,000
1.325	Community Planning	49,355			325,000		374,355			49,355	325,000			374,355
1.335	Geo-Spatial Referencing	190,000					190,000			190,000				190,000
1.350	Willis Point Fire	155,500		15,000			170,500	-		11,500	108,000		51,000	170,500
1.352	South Galiano Fire	29,000	420,000				449,000			429,000			20,000	449,000
1.353	Otter Point Fire	15,000	-	40,000			55,000			15,000			40,000	55,000
1.356	Pender Island Fire	60,000	-	18,000			78,000	-		60,000			18,000	78,000
1.357	East Sooke Fire	51,551	300,000				351,551			324,551			27,000	351,551
1.358	Port Renfrew Fire	51,000		30,000	5,000		86,000			51,000			35,000	86,000
1.359	North Galiano Fire	-					-			-				-
1.360	Shirley Fire Department	10,000					10,000			10,000				10,000
1.371	SSI Emergency Program	20,000					20,000						20,000	20,000
1.372	Emergency Planning Coordination	2,500	-				2,500			2,500				2,500
1.373	SGI Emergency Program	25,000					25,000						25,000	25,000
1.375	Hazardous Material Incident Response	75,000	-				75,000			75,000				75,000
1.377	JDF Search and Rescue	92,000					92,000			92,000				92,000

Making a difference...together

2024 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.405	JDF EA Community Parks & Recreation		100,000		589,000	50,000	739,000	379,000		100,000	260,000			739,000
1.40X	SEAPARC	429,000		295,500	1,122,000	-	1,846,500	69,300	-	234,700	778,000		764,500	1,846,500
1.44x	Panorama Recreation	869,072	57,000	3,809,500	4,828,408		9,563,980	390,000	5,201,500	776,072	2,104,408		1,092,000	9,563,980
1.455	SSI Community Parks	15,000	90,000		420,000		525,000	40,000		45,000	440,000		-	525,000
1.458	SSI Community Recreation	40,000			202,500		242,500			5,000	100,000		137,500	242,500
1.459	SSI Park Land & Rec Programs	103,200	30,000	895,000	450,000	15,000	1,493,200		-	51,300	826,900	450,000	165,000	1,493,200
1.465	Saturna Island Community Parks				38,000		38,000	5,000					33,000	38,000
1.475	Mayne Island Community Parks	15,000		53,000	9,000		77,000	20,000			30,000		27,000	77,000
1.485	Pender Island Community Parks	45,000			1,157,752	30,000	1,232,752	33,808			700,000	200,000	298,944	1,232,752
1.495	Galiano Community Parks	2,616			43,922		46,538	25,808		2,616			18,114	46,538
1.521	Environmental Resource Management	603,000		350,000	53,656,000		54,609,000	15,600,000	14,213,000	1,103,000			23,693,000	54,609,000
1.523	Port Renfrew Refuse Disposal				304,500		304,500				292,500		12,000	304,500
1.575	Environmental Administration Services	6,000					6,000			6,000				6,000
1.576	Environmental Engineering Services	40,000	105,000				145,000			145,000				145,000
1.577	IW - Environmental Operations	125,000	1,614,000				1,739,000			1,739,000	-			1,739,000
1.578	Environmental Protection	514,600	220,000				734,600	380,000		354,600				734,600
1.911	911 Call Answer	-					-			-				-
2.610	Saanich Peninsula Water Supply	850,000			11,013,028		11,863,028		6,000,000	200,000			5,663,028	11,863,028
2.620	Highland Water (SSI)				20,000		20,000	20,000						20,000
2.621	Highland & Fernwood Water (SSI)				1,028,500		1,028,500		913,000		-		115,500	1,028,500
2.622	Cedars of Tuam Water (SSI)				55,000		55,000	5,000	-		42,000		8,000	55,000
2.624	Beddis Water (SSI)				428,000		428,000		340,000		-		88,000	428,000
2.626	Fulford Water (SSI)	103,000			302,000		405,000	7,000	220,000		90,000		88,000	405,000
2.628	Cedar Lane Water (SSI)				468,000		468,000		448,000				20,000	468,000
2.630	Magic Lake Estates Water (Pender)	15,000			145,000		160,000	15,000					145,000	160,000
2.640	Lyall Harbour Boot Cove Water (Saturna)	66,000			335,000		401,000	268,000	88,000		30,000		15,000	401,000
2.642	Skana Water (Mayne)	10,000			50,000		60,000	30,000	-		-		30,000	60,000
2.650	Port Renfrew Water	20,000			275,000		295,000		-		275,000		20,000	295,000
2.665	Sticks Allison Water (Galiano)				5,000		5,000						5,000	5,000
2.667	Surfside Park Estates (Mayne)	-			15,000		15,000		-				15,000	15,000
2.670	Regional Water Supply	18,697,750	1,991,000	8,740,000	27,580,000	4,510,000	61,518,750	42,407,750	7,300,000	1,361,000	6,000,000	4,450,000		61,518,750
2.680	JDF Water Distribution	498,750	1,365,000	80,000	20,800,000		22,743,750	16,058,750	4,500,000	1,165,000			1,020,000	22,743,750
2.682	Seagirt Water System	-			2,250,000		2,250,000	250,000	2,000,000					2,250,000
2.691	Wilderness Mountain Water Service				50,000		50,000		-		45,000		5,000	50,000
3.701	Millstream Site Remediation					417,000	417,000	300,000			117,000			417,000
3.705	SSI Septage / Composting			30,000	190,000		220,000	20,000	120,000		-		80,000	220,000
3.718	Saanich Peninsula Wastewater	570,000			2,245,000		2,815,000		-	905,000			1,910,000	2,815,000
3.798C	Debt - Core Area Wastewater Treatment Program	550,000			32,219,000		32,769,000	375,000	27,271,000	855,000	450,000		3,818,000	32,769,000
3.810	Ganges Sewer Utility (SSI)	575,000	77,000		332,500		984,500		-		712,625		271,875	984,500
3.820	Maliview Sewer Utility (SSI)				1,050,000		1,050,000		100,000		850,000		100,000	1,050,000
3.830	Magic Lake Sewer Utility (Pender)	60,000			4,200,000		4,260,000	1,400,000	-		2,800,000		60,000	4,260,000
3.850	Port Renfrew Sewer				215,000		215,000	40,000			175,000		-	215,000
1.579	Environmental Water Quality	30,000					30,000						30,000	30,000
3.750	L.W.M.P. - Core and West Shore				1,000,000		1,000,000		-				1,000,000	1,000,000
1.370	JDF Emergency Program	4,100					4,100			4,100				4,100
Total		**35,157,860**	**8,593,000**	**31,852,500**	**176,661,767**	**10,722,000**	**262,987,127**	**87,726,523**	**84,414,500**	**13,262,247**	**21,127,396**	**6,621,000**	**49,835,461**	**262,987,127**

Making a difference...together

2025 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.011	Board Expenditures	91,500					91,500			91,500				91,500
1.014	CAO / Corporate Services	3,288					3,288			3,288				3,288
1.015	Real Estate	-					-			-				-
1.016	Human Resources	6,765					6,765			6,765			-	6,765
1.017	Finance	228,994		4,250,000			4,478,994	200,000	3,000,000	28,994			1,250,000	4,478,994
1.018	Health & Capital Planning Strategies	-					-			-				-
1.022	Information Technology	1,876,551	100,000	-			1,976,551	1,824,551		152,000				1,976,551
1.024	GM - Planning & Protective Services	-					-			-				-
1.025	Corporate Emergency	6,000					6,000			6,000				6,000
1.027	First Nations Relations	-					-			-				-
1.105	Facilities Management	10,000	150,000				160,000			160,000				160,000
1.106	Facilities and Risk			265,000	-		265,000	-					265,000	265,000
1.107	Corporate Satellite Facilities			-			-						-	-
1.109	JDF Admin. Expenditures	-					-			-				-
1.110	SGI Admin. Expenditures	-					-			-				-
1.111	SSI Admin. Expenditures	4,900	65,000				69,900			69,900				69,900
1.118	Corporate Communications	4,932					4,932			4,932			-	4,932
1.123	Family Court Building			10,000			10,000	-				-	10,000	10,000
1.137	Galiano Island Community Use Building			-			-						-	-
1.141	SSI Public Library			-			-				-		-	-
1.226	Health Facilities - VIHA	-		955,000	75,000		1,030,000	-				660,000	370,000	1,030,000
1.235	SGI Small Craft Harbour Facilities				304,000		304,000	179,000				-	125,000	304,000
1.236	SSI Small Craft Harbour (Fernwood Dock)				130,000		130,000				75,000		55,000	130,000
1.238A	Community Transit (SSI)				60,000		60,000	-			50,000		10,000	60,000
1.238B	Community Transportation (SSI)	-			1,327,000		1,327,000	-	320,000		840,000		167,000	1,327,000
1.280	Regional Parks	68,400	350,000	585,000	10,720,015	5,000,000	16,723,415	-	13,067,515	418,400	270,000	-	2,967,500	16,723,415
1.290	Royal Theatre	462,000		2,337,000			2,799,000	112,000			680,000	1,055,000	952,000	2,799,000
1.295	McPherson Theatre	15,000		300,000			315,000						315,000	315,000
1.297	Arts Grants and Development	-					-			-				-
1.309	Climate Action and Adaptation	792,961					792,961	211,483			581,478			792,961
1.310	Land Banking and Housing	5,000		16,100,000		-	16,105,000		16,100,000	5,000	-			16,105,000
1.313	Animal Care Services	5,000	25,000	-	-		30,000	-		30,000				30,000
1.318	Building Inspection	4,500	-				4,500			4,500				4,500
1.323	ByLaw Services	2,500	25,000				27,500			27,500				27,500
1.324	Regional Planning Services	4,000					4,000			4,000				4,000
1.325	Community Planning	3,290			-		3,290			3,290	-			3,290
1.335	Geo-Spatial Referencing	60,000					60,000			60,000				60,000
1.350	Willis Point Fire	44,750		-			44,750	12,280		7,500	-		24,970	44,750
1.352	South Galiano Fire	45,200	85,000				130,200			95,200			35,000	130,200
1.353	Otter Point Fire	15,000	-	40,000			55,000			15,000			40,000	55,000
1.356	Pender Island Fire	5,000	-	-			5,000	-		5,000			-	5,000
1.357	East Sooke Fire	19,512	-				19,512			19,512			-	19,512
1.358	Port Renfrew Fire	16,000		10,000	-		26,000			16,000			10,000	26,000
1.359	North Galiano Fire	150,000					150,000			150,000				150,000
1.360	Shirley Fire Department	-					-			-				-
1.371	SSI Emergency Program	-					-						-	-
1.372	Emergency Planning Coordination	-	-				-			-				-
1.373	SGI Emergency Program	-					-						-	-
1.375	Hazardous Material Incident Response	-	-				-			-				-
1.377	JDF Search and Rescue	-					-			-				-
1.405	JDF EA Community Parks & Recreation		-		-	100,000	100,000	-		-	100,000			100,000
1.40X	SEAPARC	417,150		710,500	-	500,000	1,627,650	-	700,000	171,650	-		756,000	1,627,650
1.44x	Panorama Recreation	486,612	-	400,000	70,000		956,612	-	-	411,612	-		545,000	956,612
1.455	SSI Community Parks	60,000	-		70,000		130,000	-		30,000	40,000		60,000	130,000
1.458	SSI Community Recreation	10,000			2,500		12,500			5,000	-		7,500	12,500

Making a difference...together

2025 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.459	SSI Park Land & Rec Programs	40,000	-	1,500,000	45,000	50,000	1,635,000		1,500,000	30,000	-	-	105,000	1,635,000
1.465	Saturna Island Community Parks				35,225		35,225	727					34,498	35,225
1.475	Mayne Island Community Parks	-		-	25,000		25,000	-			-		25,000	25,000
1.485	Pender Island Community Parks	20,000			1,092,500	-	1,112,500	12,500			625,000	300,000	175,000	1,112,500
1.495	Galiano Community Parks	1,000			11,000		12,000	-		1,000			11,000	12,000
1.521	Environmental Resource Management	355,000		-	14,475,000		14,830,000	225,000	7,650,000	355,000			6,600,000	14,830,000
1.523	Port Renfrew Refuse Disposal				30,000		30,000				-		30,000	30,000
1.575	Environmental Administration Services	6,000					6,000			6,000				6,000
1.576	Environmental Engineering Services	40,000	55,000				95,000			95,000				95,000
1.577	IW - Environmental Operations	125,000	683,500				808,500			808,500	-			808,500
1.578	Environmental Protection	145,600	180,000				325,600	-		325,600				325,600
1.911	911 Call Answer	1,000,000					1,000,000			1,000,000				1,000,000
2.610	Saanich Peninsula Water Supply	300,000			4,404,000		4,704,000		3,000,000	200,000			1,504,000	4,704,000
2.620	Highland Water (SSI)				-		-	-						-
2.621	Highland & Fernwood Water (SSI)				1,981,500		1,981,500		1,895,000		-		86,500	1,981,500
2.622	Cedars of Tuam Water (SSI)				885,000		885,000	-	870,000		-		15,000	885,000
2.624	Beddis Water (SSI)				1,674,000		1,674,000		1,582,000		-		92,000	1,674,000
2.626	Fulford Water (SSI)	-			1,320,000		1,320,000	-	1,295,000		-		25,000	1,320,000
2.628	Cedar Lane Water (SSI)				274,000		274,000		274,000				-	274,000
2.630	Magic Lake Estates Water (Pender)	-			22,000		22,000	-					22,000	22,000
2.640	Lyall Harbour Boot Cove Water (Saturna)	-			580,000		580,000	-	580,000		-		-	580,000
2.642	Skana Water (Mayne)	115,000			50,000		165,000	-	150,000		-		15,000	165,000
2.650	Port Renfrew Water	260,000			1,915,000		2,175,000		916,667		1,233,333		25,000	2,175,000
2.665	Sticks Allison Water (Galiano)				-		-						-	-
2.667	Surfside Park Estates (Mayne)	20,000			500,000		520,000		500,000				20,000	520,000
2.670	Regional Water Supply	2,312,500	685,250	3,390,000	32,050,000	807,000	39,244,750	19,359,500	16,700,000	685,250	1,500,000	1,000,000		39,244,750
2.680	JDF Water Distribution	232,500	905,000	40,000	12,520,000		13,697,500	8,172,500	3,700,000	905,000			920,000	13,697,500
2.682	Seagirt Water System	-			-		-	-	-					-
2.691	Wilderness Mountain Water Service				410,000		410,000		200,000		200,000		10,000	410,000
3.701	Millstream Site Remediation					-	-	-			-			-
3.705	SSI Septage / Composting			-	2,280,000		2,280,000	-	2,280,000		-		-	2,280,000
3.718	Saanich Peninsula Wastewater	1,050,000			2,850,000		3,900,000		3,600,000	200,000			100,000	3,900,000
3.798C	Debt - Core Area Wastewater Treatment Program	-			19,790,000		19,790,000	-	18,090,000	700,000	-		1,000,000	19,790,000
3.810	Ganges Sewer Utility (SSI)	-	-		6,217,186		6,217,186		2,624,296		3,322,890		270,000	6,217,186
3.820	Maliview Sewer Utility (SSI)				1,675,000		1,675,000		501,000		1,139,000		35,000	1,675,000
3.830	Magic Lake Sewer Utility (Pender)	-			300,000		300,000	100,000	-		200,000		-	300,000
3.850	Port Renfrew Sewer				15,000		15,000	-			-		15,000	15,000
1.579	Environmental Water Quality	-					-						-	-
3.750	L.W.M.P. - Core and West Shore				9,000,000		9,000,000		9,000,000				-	9,000,000
1.370	JDF Emergency Program	-					-			-				-
Total		**10,947,405**	**3,308,750**	**30,892,500**	**129,184,926**	**6,457,000**	**180,790,581**	**30,409,541**	**110,095,478**	**7,313,893**	**10,856,701**	**3,015,000**	**19,099,968**	**180,790,581**

Making a difference...together

2026 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.011	Board Expenditures	55,000					55,000			55,000				55,000
1.014	CAO / Corporate Services	20,133					20,133			20,133				20,133
1.015	Real Estate	1,500					1,500			1,500				1,500
1.016	Human Resources	353,288					353,288			3,288			350,000	353,288
1.017	Finance	58,043		-			58,043	-	-	58,043			-	58,043
1.018	Health & Capital Planning Strategies	3,000					3,000			3,000				3,000
1.022	Information Technology	1,645,650	-	-			1,645,650	1,584,000		61,650				1,645,650
1.024	GM - Planning & Protective Services	2,049					2,049			2,049				2,049
1.025	Corporate Emergency	7,000					7,000			7,000				7,000
1.027	First Nations Relations	3,693					3,693			3,693				3,693
1.105	Facilities Management	10,000	75,000				85,000			85,000				85,000
1.106	Facilities and Risk			140,000	-		140,000	-					140,000	140,000
1.107	Corporate Satellite Facilities			-			-						-	-
1.109	JDF Admin. Expenditures	2,000					2,000			2,000				2,000
1.110	SGI Admin. Expenditures	2,800					2,800			2,800				2,800
1.111	SSI Admin. Expenditures	15,900	-				15,900			15,900				15,900
1.118	Corporate Communications	7,464					7,464			7,464			-	7,464
1.123	Family Court Building			-			-	-				-	-	-
1.137	Galiano Island Community Use Building			-			-						-	-
1.141	SSI Public Library			-			-				-		-	-
1.226	Health Facilities - VIHA	-		937,500	-		937,500	-				200,000	737,500	937,500
1.235	SGI Small Craft Harbour Facilities				50,000		50,000	-				-	50,000	50,000
1.236	SSI Small Craft Harbour (Fernwood Dock)				60,000		60,000				-		60,000	60,000
1.238A	Community Transit (SSI)				60,000		60,000	-			50,000		10,000	60,000
1.238B	Community Transportation (SSI)	-			968,000		968,000	-	320,000		460,000		188,000	968,000
1.280	Regional Parks	107,700	325,000	-	13,420,000	5,000,000	18,852,700	-	15,000,000	432,700	-	-	3,420,000	18,852,700
1.290	Royal Theatre	44,000		93,000			137,000	-			-	-	137,000	137,000
1.295	McPherson Theatre	55,000		238,000			293,000						293,000	293,000
1.297	Arts Grants and Development	3,800					3,800			3,800				3,800
1.309	Climate Action and Adaptation	792,961					792,961	211,483			581,478			792,961
1.310	Land Banking and Housing	10,000		-		-	10,000		-	10,000	-			10,000
1.313	Animal Care Services	5,000	25,000	-	-		30,000	-		30,000				30,000
1.318	Building Inspection	6,000	60,000				66,000			66,000				66,000
1.323	ByLaw Services	2,500	25,000				27,500			27,500				27,500
1.324	Regional Planning Services	8,000					8,000			8,000				8,000
1.325	Community Planning	-			-		-			-	-			-
1.335	Geo-Spatial Referencing	10,000					10,000			10,000				10,000
1.350	Willis Point Fire	7,500		-			7,500	-		7,500	-		-	7,500
1.352	South Galiano Fire	10,800	85,000				95,800			10,800			85,000	95,800
1.353	Otter Point Fire	20,000	-	40,000			60,000			20,000			40,000	60,000
1.356	Pender Island Fire	60,000	28,000	-			88,000	-		88,000			-	88,000
1.357	East Sooke Fire	51,578	-				51,578			51,578			-	51,578
1.358	Port Renfrew Fire	16,000		-	-		16,000			16,000			-	16,000
1.359	North Galiano Fire	-					-			-				-
1.360	Shirley Fire Department	-					-			-				-
1.371	SSI Emergency Program	-					-						-	-
1.372	Emergency Planning Coordination	2,500	-				2,500			2,500				2,500
1.373	SGI Emergency Program	-					-						-	-
1.375	Hazardous Material Incident Response	-	-				-			-				-
1.377	JDF Search and Rescue	-					-			-				-
1.405	JDF EA Community Parks & Recreation		-		-	-	-	-		-	-			-
1.40X	SEAPARC	1,671,500		2,223,000	-	-	3,894,500	-	1,850,000	166,500	1,400,000		478,000	3,894,500
1.44x	Panorama Recreation	383,380	15,000	310,000	-		708,380	-	-	398,380	-		310,000	708,380
1.455	SSI Community Parks	15,000	-		10,000		25,000	-		15,000	-		10,000	25,000
1.458	SSI Community Recreation	10,000			2,500		12,500			5,000	-		7,500	12,500

Making a difference...together

2026 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.459	SSI Park Land & Rec Programs	40,000	-	25,000	-	50,000	115,000		-	40,000	-	-	75,000	115,000
1.465	Saturna Island Community Parks				-		-	-					-	-
1.475	Mayne Island Community Parks	4,000		-	-		4,000	-			-		4,000	4,000
1.485	Pender Island Community Parks	-			15,000	-	15,000	-			-	-	15,000	15,000
1.495	Galiano Community Parks	1,000			3,000		4,000	-		1,000			3,000	4,000
1.521	Environmental Resource Management	385,000		-	9,600,000		9,985,000	200,000	2,000,000	385,000			7,400,000	9,985,000
1.523	Port Renfrew Refuse Disposal				27,500		27,500				-		27,500	27,500
1.575	Environmental Administration Services	6,000					6,000			6,000				6,000
1.576	Environmental Engineering Services	40,000	55,000				95,000			95,000				95,000
1.577	IW - Environmental Operations	125,000	630,000				755,000			755,000	-			755,000
1.578	Environmental Protection	122,000	50,000				172,000	-		172,000				172,000
1.911	911 Call Answer	-					-			-				-
2.610	Saanich Peninsula Water Supply	300,000			3,400,000		3,700,000		3,000,000	200,000			500,000	3,700,000
2.620	Highland Water (SSI)				-		-	-						-
2.621	Highland & Fernwood Water (SSI)				3,750,000		3,750,000		3,750,000		-		-	3,750,000
2.622	Cedars of Tuam Water (SSI)				465,000		465,000	-	465,000		-		-	465,000
2.624	Beddis Water (SSI)				443,000		443,000		305,000		-		138,000	443,000
2.626	Fulford Water (SSI)	-			1,125,000		1,125,000	-	1,125,000		-		-	1,125,000
2.628	Cedar Lane Water (SSI)				105,000		105,000		95,000				10,000	105,000
2.630	Magic Lake Estates Water (Pender)	-			145,000		145,000	-					145,000	145,000
2.640	Lyall Harbour Boot Cove Water (Saturna)	-			-		-	-	-		-		-	-
2.642	Skana Water (Mayne)	674,120			-		674,120	-	127,262		546,858		-	674,120
2.650	Port Renfrew Water	10,000			200,000		210,000		200,000		-		10,000	210,000
2.665	Sticks Allison Water (Galiano)				-		-						-	-
2.667	Surfside Park Estates (Mayne)	-			1,500,000		1,500,000		1,500,000				-	1,500,000
2.670	Regional Water Supply	2,425,000	773,000	40,000	47,385,000	292,000	50,915,000	19,742,000	28,400,000	773,000	2,000,000	-		50,915,000
2.680	JDF Water Distribution	175,000	774,000	40,000	9,120,000		10,109,000	8,215,000	1,100,000	774,000			20,000	10,109,000
2.682	Seagirt Water System	-			-		-	-	-					-
2.691	Wilderness Mountain Water Service				-		-		-		-		-	-
3.701	Millstream Site Remediation					-	-	-			-			-
3.705	SSI Septage / Composting			-	132,500		132,500	-	82,500		40,000		10,000	132,500
3.718	Saanich Peninsula Wastewater	1,270,000			350,000		1,620,000		1,120,000	400,000			100,000	1,620,000
3.798C	Debt - Core Area Wastewater Treatment Program	-			7,475,000		7,475,000	-	6,075,000	400,000	-		1,000,000	7,475,000
3.810	Ganges Sewer Utility (SSI)	-	-		474,375		474,375		118,594		355,781		-	474,375
3.820	Maliview Sewer Utility (SSI)				285,000		285,000		230,000		45,000		10,000	285,000
3.830	Magic Lake Sewer Utility (Pender)	-			-		-	-	-		-		-	-
3.850	Port Renfrew Sewer				-		-	-			-		-	-
1.579	Environmental Water Quality	-					-						-	-
3.750	L.W.M.P. - Core and West Shore				-		-		-				-	-
1.370	JDF Emergency Program	-					-			-				-
Total		**11,057,859**	**2,920,000**	**4,086,500**	**100,570,875**	**5,342,000**	**123,977,234**	**29,952,483**	**66,863,356**	**5,698,778**	**5,479,117**	**200,000**	**15,783,500**	123,977,234

Making a difference...together

2027 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.011	Board Expenditures	-					-			-				-
1.014	CAO / Corporate Services	20,133					20,133			20,133				20,133
1.015	Real Estate	-					-			-				-
1.016	Human Resources	354,932					354,932			4,932			350,000	354,932
1.017	Finance	12,994		-			12,994	-	-	12,994			-	12,994
1.018	Health & Capital Planning Strategies	1,500					1,500			1,500				1,500
1.022	Information Technology	180,000	-	-			180,000	130,000		50,000				180,000
1.024	GM - Planning & Protective Services	2,318					2,318			2,318				2,318
1.025	Corporate Emergency	-					-			-				-
1.027	First Nations Relations	4,932					4,932			4,932				4,932
1.105	Facilities Management	10,000	75,000				85,000			85,000				85,000
1.106	Facilities and Risk			140,000	-		140,000	-					140,000	140,000
1.107	Corporate Satellite Facilities			-			-						-	-
1.109	JDF Admin. Expenditures	-					-			-				-
1.110	SGI Admin. Expenditures	-					-			-				-
1.111	SSI Admin. Expenditures	10,900	-				10,900			10,900				10,900
1.118	Corporate Communications	3,288					3,288			3,288			-	3,288
1.123	Family Court Building			-			-	-				-	-	-
1.137	Galiano Island Community Use Building			-			-						-	-
1.141	SSI Public Library			-			-				-		-	-
1.226	Health Facilities - VIHA	-		-	-		-	-				-	-	-
1.235	SGI Small Craft Harbour Facilities				50,000		50,000	-				-	50,000	50,000
1.236	SSI Small Craft Harbour (Fernwood Dock)				10,000		10,000				-		10,000	10,000
1.238A	Community Transit (SSI)				60,000		60,000	-			50,000		10,000	60,000
1.238B	Community Transportation (SSI)	-			1,100,000		1,100,000	-	315,000		700,000		85,000	1,100,000
1.280	Regional Parks	62,800	485,000	545,000	14,385,000	5,000,000	20,477,800	-	15,000,000	547,800	-	-	4,930,000	20,477,800
1.290	Royal Theatre	-		-			-	-			-	-	-	-
1.295	McPherson Theatre	-		190,000			190,000						190,000	190,000
1.297	Arts Grants and Development	-					-			-				-
1.309	Climate Action and Adaptation	164,023					164,023	43,745			120,278			164,023
1.310	Land Banking and Housing	-		-		-	-		-	-	-			-
1.313	Animal Care Services	5,000	25,000	-	-		30,000	-		30,000				30,000
1.318	Building Inspection	6,000	60,000				66,000			66,000				66,000
1.323	ByLaw Services	2,500	25,000				27,500			27,500				27,500
1.324	Regional Planning Services	3,000					3,000			3,000				3,000
1.325	Community Planning	2,700			-		2,700			2,700	-			2,700
1.335	Geo-Spatial Referencing	10,000					10,000			10,000				10,000
1.350	Willis Point Fire	13,500		-			13,500	-		13,500	-		-	13,500
1.352	South Galiano Fire	9,700	-				9,700			9,700			-	9,700
1.353	Otter Point Fire	20,000	-	40,000			60,000			20,000			40,000	60,000
1.356	Pender Island Fire	98,000	-	10,000			108,000	5,000		98,000			5,000	108,000
1.357	East Sooke Fire	18,850	582,000				600,850			600,850			-	600,850
1.358	Port Renfrew Fire	16,000		-	-		16,000			16,000			-	16,000
1.359	North Galiano Fire	-					-			-				-
1.360	Shirley Fire Department	-					-			-				-
1.371	SSI Emergency Program	-					-						-	-
1.372	Emergency Planning Coordination	-	70,000				70,000			70,000				70,000
1.373	SGI Emergency Program	-					-						-	-
1.375	Hazardous Material Incident Response	-	300,000				300,000			300,000				300,000
1.377	JDF Search and Rescue	-					-			-				-
1.405	JDF EA Community Parks & Recreation		-		-	-	-	-		-	-			-
1.40X	SEAPARC	139,850		232,000	27,000	-	398,850	-	-	118,850	-		280,000	398,850
1.44x	Panorama Recreation	304,000	-	-	385,000		689,000	-	-	304,000	-		385,000	689,000

Making a difference...together

2027 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.455	SSI Community Parks	15,000	-		10,000		25,000	-		15,000	-		10,000	25,000
1.458	SSI Community Recreation	10,000			2,500		12,500			5,000	-		7,500	12,500
1.459	SSI Park Land & Rec Programs	40,000	-	-	-	50,000	90,000		-	40,000	-	-	50,000	90,000
1.465	Saturna Island Community Parks				-		-	-					-	-
1.475	Mayne Island Community Parks	-		-	-		-	-			-		-	-
1.485	Pender Island Community Parks	-			25,000	-	25,000	-			-	-	25,000	25,000
1.495	Galiano Community Parks	-			5,900		5,900	-		-			5,900	5,900
1.521	Environmental Resource Management	385,000		-	1,600,000		1,985,000	-	350,000	385,000			1,250,000	1,985,000
1.523	Port Renfrew Refuse Disposal				-		-				-		-	-
1.575	Environmental Administration Services	9,000					9,000			9,000				9,000
1.576	Environmental Engineering Services	40,000	-				40,000			40,000				40,000
1.577	IW - Environmental Operations	125,000	615,000				740,000			740,000	-			740,000
1.578	Environmental Protection	97,000	-				97,000	-		97,000				97,000
1.911	911 Call Answer	-					-			-				-
2.610	Saanich Peninsula Water Supply	100,000			1,000,000		1,100,000		600,000	200,000			300,000	1,100,000
2.620	Highland Water (SSI)				-		-	-						-
2.621	Highland & Fernwood Water (SSI)				2,750,000		2,750,000		2,665,000		40,000		45,000	2,750,000
2.622	Cedars of Tuam Water (SSI)				460,000		460,000	-	435,000		20,000		5,000	460,000
2.624	Beddis Water (SSI)				3,170,000		3,170,000		3,120,000		40,000		10,000	3,170,000
2.626	Fulford Water (SSI)	-			1,175,000		1,175,000	-	1,125,000		40,000		10,000	1,175,000
2.628	Cedar Lane Water (SSI)				680,000		680,000		675,000				5,000	680,000
2.630	Magic Lake Estates Water (Pender)	-			75,000		75,000	-					75,000	75,000
2.640	Lyall Harbour Boot Cove Water (Saturna)	-			-		-	-	-		-		-	-
2.642	Skana Water (Mayne)	-			-		-	-	-		-		-	-
2.650	Port Renfrew Water	10,000			200,000		210,000		200,000		-		10,000	210,000
2.665	Sticks Allison Water (Galiano)				-		-						-	-
2.667	Surfside Park Estates (Mayne)	-			-		-		-				-	-
2.670	Regional Water Supply	1,612,500	855,000	40,000	39,690,000	220,000	42,417,500	21,212,500	16,750,000	855,000	3,600,000	-		42,417,500
2.680	JDF Water Distribution	182,500	710,000	40,000	6,775,000		7,707,500	6,977,500	-	710,000			20,000	7,707,500
2.682	Seagirt Water System	-			-		-	-	-					-
2.691	Wilderness Mountain Water Service				-		-		-		-		-	-
3.701	Millstream Site Remediation					-	-	-			-			-
3.705	SSI Septage / Composting			-	-		-	-	-		-		-	-
3.718	Saanich Peninsula Wastewater	250,000			800,000		1,050,000		400,000	200,000			450,000	1,050,000
3.798C	Debt - Core Area Wastewater Treatment Program	-			12,025,000		12,025,000	-	10,275,000	750,000	-		1,000,000	12,025,000
3.810	Ganges Sewer Utility (SSI)	-	-		-		-		-		-		-	-
3.820	Maliview Sewer Utility (SSI)				-		-		-		-		-	-
3.830	Magic Lake Sewer Utility (Pender)	-			-		-	-	-		-		-	-
3.850	Port Renfrew Sewer				-		-	-			-		-	-
1.579	Environmental Water Quality	-					-						-	-
3.750	L.W.M.P. - Core and West Shore				-		-		-				-	-
1.370	JDF Emergency Program	-					-			-				-
Total		**4,352,920**	**3,802,000**	**1,237,000**	**86,460,400**	**5,270,000**	**101,122,320**	**28,368,745**	**51,910,000**	**6,479,897**	**4,610,278**	**-**	**9,753,400**	**101,122,320**

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2028 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.011	Board Expenditures	-					-			-				-
1.014	CAO / Corporate Services	14,796					14,796			14,796				14,796
1.015	Real Estate	1,500					1,500			1,500				1,500
1.016	Human Resources	6,576					6,576			6,576			-	6,576
1.017	Finance	38,549		-			38,549	-	-	38,549			-	38,549
1.018	Health & Capital Planning Strategies	1,500					1,500			1,500				1,500
1.022	Information Technology	94,000	-	-			94,000	45,000		49,000				94,000
1.024	GM - Planning & Protective Services	1,644					1,644			1,644				1,644
1.025	Corporate Emergency	5,000					5,000			5,000				5,000
1.027	First Nations Relations	1,644					1,644			1,644				1,644
1.105	Facilities Management	10,000	-				10,000			10,000				10,000
1.106	Facilities and Risk			140,000	-		140,000	-					140,000	140,000
1.107	Corporate Satellite Facilities			-			-						-	-
1.109	JDF Admin. Expenditures	-					-			-				-
1.110	SGI Admin. Expenditures	5,000					5,000			5,000				5,000
1.111	SSI Admin. Expenditures	6,100	-				6,100			6,100				6,100
1.118	Corporate Communications	3,288					3,288			3,288			-	3,288
1.123	Family Court Building			-			-	-				-	-	-
1.137	Galiano Island Community Use Building			-			-						-	-
1.141	SSI Public Library			15,000			15,000				-		15,000	15,000
1.226	Health Facilities - VIHA	-		-	-		-	-				-	-	-
1.235	SGI Small Craft Harbour Facilities				50,000		50,000	-				-	50,000	50,000
1.236	SSI Small Craft Harbour (Fernwood Dock)				10,000		10,000				-		10,000	10,000
1.238A	Community Transit (SSI)				60,000		60,000	-			50,000		10,000	60,000
1.238B	Community Transportation (SSI)	-			1,570,000		1,570,000	-	410,000		1,015,000		145,000	1,570,000
1.280	Regional Parks	74,400	938,000	750,000	14,185,000	5,000,000	20,947,400	-	15,000,000	787,400	2,000,000	-	3,160,000	20,947,400
1.290	Royal Theatre	16,500		-			16,500	-			-	-	16,500	16,500
1.295	McPherson Theatre	16,500		-			16,500						16,500	16,500
1.297	Arts Grants and Development	-					-			-				-
1.309	Climate Action and Adaptation	-					-	-			-			-
1.310	Land Banking and Housing	-		-		-	-		-	-	-			-
1.313	Animal Care Services	5,000	25,000	-	-		30,000	-		30,000				30,000
1.318	Building Inspection	-	-				-			-				-
1.323	ByLaw Services	2,500	25,000				27,500			27,500				27,500
1.324	Regional Planning Services	10,000					10,000			10,000				10,000
1.325	Community Planning	-			-		-			-	-			-
1.335	Geo-Spatial Referencing	10,000					10,000			10,000				10,000
1.350	Willis Point Fire	11,500		-			11,500	-		11,500	-		-	11,500
1.352	South Galiano Fire	10,000	-				10,000			10,000			-	10,000
1.353	Otter Point Fire	20,000	800,000	-			820,000			820,000			-	820,000
1.356	Pender Island Fire	-	-	15,000			15,000	120		-			14,880	15,000
1.357	East Sooke Fire	14,000	-				14,000			14,000			-	14,000
1.358	Port Renfrew Fire	16,000		-	-		16,000			16,000			-	16,000
1.359	North Galiano Fire	-					-			-				-
1.360	Shirley Fire Department	-					-			-				-
1.371	SSI Emergency Program	-					-						-	-
1.372	Emergency Planning Coordination	-	-				-			-				-
1.373	SGI Emergency Program	-					-						-	-
1.375	Hazardous Material Incident Response	-	-				-			-				-
1.377	JDF Search and Rescue	-					-			-				-
1.405	JDF EA Community Parks & Recreation		-		-	-	-	-		-	-			-
1.40X	SEAPARC	176,300		189,500	-	-	365,800	-	-	109,800	-		256,000	365,800
1.44x	Panorama Recreation	520,239	-	3,560,000	-		4,080,239	-	-	520,239	-		3,560,000	4,080,239
1.455	SSI Community Parks	15,000	-		10,000		25,000	-		15,000	-		10,000	25,000

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2028 - CAPITAL EXPENDITURE PLAN

Schedule B

		CAPITAL EXPENDITURE						SOURCE OF FUNDING						
Service #	Service Name	Equipment	Vehicles	Buildings	Engineered Structures	Land	TOTAL	Capital Funds on Hand	Debenture Debt	Equipment Repl Fund	Grants	Other	Capital Reserves	TOTAL
1.458	SSI Community Recreation	10,000			2,500		12,500			5,000	-		7,500	12,500
1.459	SSI Park Land & Rec Programs	40,000	-	-	-	50,000	90,000		-	40,000	-	-	50,000	90,000
1.465	Saturna Island Community Parks				-		-	-					-	-
1.475	Mayne Island Community Parks	-		-	-		-	-			-		-	-
1.485	Pender Island Community Parks	-			25,000	-	25,000	-			-	-	25,000	25,000
1.495	Galiano Community Parks	-			33,000		33,000	-		-			33,000	33,000
1.521	Environmental Resource Management	385,000		-	1,250,000		1,635,000	-	-	385,000			1,250,000	1,635,000
1.523	Port Renfrew Refuse Disposal				-		-				-		-	-
1.575	Environmental Administration Services	6,000					6,000			6,000				6,000
1.576	Environmental Engineering Services	40,000	65,000				105,000			105,000				105,000
1.577	IW - Environmental Operations	500,000	340,000				840,000			840,000	-			840,000
1.578	Environmental Protection	111,100	-				111,100	-		111,100				111,100
1.911	911 Call Answer	-					-			-				-
2.610	Saanich Peninsula Water Supply	-			850,000		850,000		300,000	200,000			350,000	850,000
2.620	Highland Water (SSI)				-		-	-						-
2.621	Highland & Fernwood Water (SSI)				2,665,000		2,665,000		2,665,000		-		-	2,665,000
2.622	Cedars of Tuam Water (SSI)				-		-	-	-		-		-	-
2.624	Beddis Water (SSI)				2,780,000		2,780,000		2,780,000		-		-	2,780,000
2.626	Fulford Water (SSI)	-			1,125,000		1,125,000	-	1,125,000		-		-	1,125,000
2.628	Cedar Lane Water (SSI)				645,000		645,000		645,000				-	645,000
2.630	Magic Lake Estates Water (Pender)	-			60,000		60,000	-					60,000	60,000
2.640	Lyall Harbour Boot Cove Water (Saturna)	-			-		-	-	-		-		-	-
2.642	Skana Water (Mayne)	-			-		-	-	-		-		-	-
2.650	Port Renfrew Water	-			-		-		-		-		-	-
2.665	Sticks Allison Water (Galiano)				-		-						-	-
2.667	Surfside Park Estates (Mayne)	-			-		-		-				-	-
2.670	Regional Water Supply	1,033,000	495,000	40,000	32,635,000	180,000	34,383,000	22,988,000	4,900,000	495,000	6,000,000	-		34,383,000
2.680	JDF Water Distribution	133,000	750,000	40,000	6,920,000		7,843,000	6,928,000	-	750,000			165,000	7,843,000
2.682	Seagirt Water System	-			-		-	-	-					-
2.691	Wilderness Mountain Water Service				-		-		-		-		-	-
3.701	Millstream Site Remediation					-	-	-			-			-
3.705	SSI Septage / Composting			-	-		-	-	-		-		-	-
3.718	Saanich Peninsula Wastewater	430,000			2,800,000		3,230,000		2,600,000	380,000			250,000	3,230,000
3.798C	Debt - Core Area Wastewater Treatment Program	-			12,150,000		12,150,000	-	10,750,000	400,000	-		1,000,000	12,150,000
3.810	Ganges Sewer Utility (SSI)	-	-		-		-		-		-		-	-
3.820	Maliview Sewer Utility (SSI)				-		-		-		-		-	-
3.830	Magic Lake Sewer Utility (Pender)	-			205,000		205,000	-	40,000		-		165,000	205,000
3.850	Port Renfrew Sewer				-		-	-			-		-	-
1.579	Environmental Water Quality	-					-						-	-
3.750	L.W.M.P. - Core and West Shore				-		-		-				-	-
1.370	JDF Emergency Program	-					-			-				-
Total		**3,795,636**	**3,438,000**	**4,749,500**	**80,030,500**	**5,230,000**	**97,243,636**	**29,961,120**	**41,215,000**	**6,243,136**	**9,065,000**	**-**	**10,759,380**	**97,243,636**

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ECA 24-19

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, APRIL 17, 2024

SUBJECT **Climate Action Strategy – 2023 Progress Report**

ISSUE SUMMARY

To present the Capital Regional District's (CRD) 2023 Climate Action Progress Report, which identifies progress towards the CRD's Climate Action Strategy.

BACKGROUND

The CRD has a strong history of climate action and remains committed to addressing climate change within its own operations and at the regional level. The CRD signed the BC Climate Action Charter in 2007, established a regional climate action service in 2009, embedded climate action targets and goals into the Regional Growth Strategy in 2018, and declared a climate emergency in 2019. In 2021, the Board approved a renewed CRD Climate Action Strategy and five-year action plan. The Strategy provides direction for how the CRD, under its service mandates, will show leadership on climate action, both for the CRD's corporate operations and for its community-focused services. Actions are categorized within six goal areas. The CRD has committed to annually reporting on the progress towards achieving its climate action goals.

2023 Progress Report Results

The 2023 Climate Action Progress Report (Appendix A) provides a summary of the 2023 activities undertaken by multiple CRD services to track the progress of the CRD Climate Action Strategy's corporate and community-focused actions. The Progress Report also includes a report card that compiles self-reported progress metrics from divisions responsible for advancing each of the Strategy's 54 actions (comprised of 127 sub-actions). These metrics were used to produce a 'status' (on track, opportunity for improvement or attention required) for overall action plan progress, corporate and community-focused actions, the six goal areas of the strategy and each action. This systematic evaluation provides an indication of where focused efforts need to be made or increased to achieve targeted actions and outcomes within the Strategy and meet our targets.

The overall status for the 2023 year was calculated as 'on track', meaning 75-100% of the yearly target for actions were progressed as envisioned within the Strategy's five-year action plan. The averaged status for all corporate actions was calculated as 'opportunity for improvement' and the averaged status for all community-focused actions was calculated as 'on track'. The Progress Report also includes a list of both corporate-focused and regional indicators. These indicators are not included in the status calculations but provide context and track long-term trends relevant to the organization and broader regional climate action trends.

Greenhouse Gas Emissions and Climate Impacts

To track progress, the CRD completes an annual corporate emissions inventory. Emissions associated with Hartland Landfill and the Capital Region Housing Corporation are not included,

as they are excluded from the provincial reporting framework. The results of the 2023 corporate inventory indicate:

- CRD operations generated 2,956 tonnes of CO2e emissions, a 2.8% increase from 2022 and a 1.6% decrease from the baseline level of emissions from 2007.
- Emissions from buildings, facilities and infrastructure decreased by 8.7% to 1,552 tonnes, attributed in part to several energy-focused maintenance and operational measures.
- Emissions from vehicle travel increased by 19.4% to 1,404 tonnes due to a growth in service levels provided by the CRD. Factors that contributed were increased vehicle use for building inspections, bylaw enforcement, emergency programs, and the overall staffing increases in various services, notably Regional Parks.

As the region continues to grow, there is also an increased demand for government services to adequately serve and support communities, which is reflected in our corporate emissions. This context does not preclude the need to reduce emissions further or meet our targets; the CRD is committed to advancing greenhouse gas (GHG) mitigation efforts to align with the emission reduction pathways outlined in the Climate Action Strategy. For example, throughout 2023, the CRD procured an additional 36 electric vehicles, which included a backlog of orders from previous years; it is expected these zero-emission vehicles will assist in the reduction of GHG emissions from vehicles in 2024 and beyond.

The CRD completes regional and local government GHG inventories every two years, following the internationally recognized Global Protocol Community-Scale GHG Inventories BASIC+ Framework. The latest inventory, completed for the 2022 year and presented to the Board in October 2023, indicated:

- The capital region emits approximately 1.86 million tonnes of CO2e annually.
- This represents a 7% reduction from 2007 levels and a decline in per capita GHG emissions (t CO2e/capita) of 25%.
- Emissions increased by 1% compared to the 2020 inventory.

Regardless of GHG emission reductions today, the capital region will continue to experience the impacts of climate change now and into the future. The CRD and regional partners must work to reduce vulnerability in our communities and adapt to a changing climate by improving how we anticipate, respond to and recover from both extreme weather events and more gradual changes occurring over time. Climate adaptation planning and implementation will be a key aspect of future service delivery.

CRD Climate Action Service

Under Bylaw No. 3510, the CRD established a Climate Action service in 2009 with a regional collaboration mandate to directly support the organization and local governments in reaching mitigation and adaptation targets, policies and actions. The service hosts two inter-municipal networks, and closely works with local government staff, senior governments, utilities and other stakeholders to identify other climate action opportunities and advance initiatives in collaboration.

In 2023, the Climate Action service operated on an annual budget of approximately $1.9M, which included five full-time employees and one four-year, full-time term position. In addition, the corporation provided an annual stipend of $100,000 towards a fund to support key corporate-focused climate action planning activities. The program's core budget is provided through an annual requisition from all the region's municipalities and electoral areas and

supplemental funding from corporate services. The program also relies on external grants and partnerships to undertake corporate and community climate action programming. External sources accounted for approximately $500,000 in additional funding to support completion of key projects in 2023.

CONCLUSION

The CRD's Climate Action Strategy provides direction for how the CRD, under its service mandates, will show leadership on climate action, both for the CRD's corporate operations and for its community-focused services. The CRD's 2023 Climate Action Progress Report outlines actions the CRD has undertaken to advance the Climate Action Strategy, Board priorities, and commitments as a signatory to the BC Climate Action Charter over the past year. Overall, in 2023, the CRD progressed on several climate action initiatives and has identified where focused efforts need to be made or increased to achieve targeted actions and outcomes. The overall status for the 2023 year was calculated as 'on track', meaning 75-100% of the yearly targets for actions were progressed as envisioned within the Strategy's five-year action plan. The CRD remains dedicated to expediting crucial actions and planning aimed at achieving corporate greenhouse gas reduction targets and preparing for climate impacts. Furthermore, the organization continues to collaborate with partners to meet regional goals.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Nikki Elliott, BES, MPA, Manager, Climate Action Programs
Concurrence:	Larisa Hutcheson, P. Eng., Acting General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: 2023 Climate Action Progress Report

Appendix A

2023 Climate Action Progress Report

Taking Action on the Climate Emergency



Making a difference...together

TERRITORIAL ACKNOWLEDGMENT

The CRD acknowledges that it conducts its business in the territory of the Lək̓ʷəŋən (Songhees) and Xwsepsum (Esquimalt) Nations here in the core area, the W̱SÁNEĆ Nations, including W̱JOŁEŁP (Tsartlip), BOḴEĆEN (Pauquachin), SṮÁUTW̱, (Tsawout) and W̱SIKEM (Tseycum) on the Saanich Peninsula and Gulf Islands, Sc'ianew (Beecher Bay), T'Sou-ke, and paaʔčiidʔatx̣ (Pacheedaht) to the west, as well as MÁLEXEŁ (Malahat) and Pune'laxutth' (Penelekut) Nations, all of whom have lived on these lands since time immemorial.



Cover photos:
Front: Ogden Point Breakwater
Back: Juan de Fuca trail

Organizational Overview

The Capital Regional District (CRD) delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure, while continuing to provide core services to residents throughout the region.

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Overview

In 2021, the CRD renewed its Climate Action Strategy and committed to annually report on all climate action-related activities undertaken by the organization. This report summarizes all 2023 activities and other annual indicators identified in the CRD's Climate Action Strategy.

Regulations and Commitments

The CRD is required to take action to reduce corporate and community-related greenhouse gas (GHG) emissions and prepare for the impacts of climate change under the following provincial regulations and commitments:

- **Local Government (Green Communities) Statutes Amendment Act** requires regional districts and local governments to include targets, policies and actions for the reduction of GHG emissions in Regional Growth Strategies and Official Community Plans. The Act also provides powers to local governments to support mitigation and adaptation through development permit areas, development cost charges and parking and building code requirements.
- **Landfill Gas Management Regulation** establishes province-wide criteria for landfill gas capture from municipal solid waste landfills. The regulation focuses on GHG emissions from landfills, with the objective of maximizing reductions of landfill gas emissions and identifying potential opportunities to increase landfill gas recovery. As a manager of the Hartland Landfill, the CRD is responsible for adhering to this regulation.
- **Emergency and Disaster Management Act** was established in 2023, replacing the Emergency Program Act, with accompanying regulations still forthcoming. This new legislation aligns with the Sendai Framework for Disaster Risk Reduction, which includes a priority to better understand disaster risk, and local governments will be required to prepare risk assessments for all potential hazards. These risk assessments will be required to consider the role of climate change.
- All local governments in the region, including the CRD, are signatories of the BC Climate Action Charter. This includes a commitment to:
  - become carbon neutral in corporate operations.
  - measure and report on the community's GHG emissions profile.
  - work to create compact, complete and more energy-efficient communities.
- United with more than 350 Canadian local governments, the CRD is a member of the Partners for Climate Protection Program, from the Federation of Canadian Municipalities and ICLEI - Local Governments for Sustainability, affirming its ambitious GHG reductions and participating in a five-milestone planning, implementation and reporting framework.

CRD Climate Action & Adaptation Service

Under Bylaw No. 3510, the CRD established a climate action service in 2009 to act as a resource and facilitator for the CRD, local governments, citizens and organizations in the capital region on energy and climate issues. The service hosts two inter-municipal networks and works closely with local government staff, senior governments, utilities and other stakeholders to identify and advance climate action initiatives in collaboration. The Climate Action Service has five main focus areas:

- provide support to local governments in developing and implementing climate action plans, programs and policies.
- catalyze action through partnerships with public and private sectors, non-governmental organizations and community organizations and increase public awareness of climate change issues.
- liaise with senior levels of government on climate change-related programs, policies and legislation that impact the capital region.
- provide scientific information, data and indicators related to local and regional GHG emissions and projected climate impacts.
- support the CRD in fulfilling its corporate climate objectives and support execution of climate-related Board priorities.

In 2023, the Climate Action service operated on a core budget of approximately $1.9 million, which included five full-time employees and one four-year, full-time term position. In addition, the corporation provided an annual stipend of $100,000 toward a fund to support key corporate-focused climate action planning activities. The program's core budget is provided through an annual requisition from all the region's municipalities and electoral areas and supplemental funding from corporate services. Additionally, the program leveraged approximately $500,000 in external grants and advanced several partnerships to undertake corporate and community climate action programming.*



View of Ganges Harbour on Salt Spring Island

**The CRD receives $126,082 annually for the 2022, 2023 and 2024 years from the Local Government Climate Action Program to support local climate initiatives. Funds can be held in reserve year over year to fund larger projects and are allocated to electoral areas and corporate projects in alignment with the Climate Action Strategy. See Appendix A for details on allocation of funds in 2023.*

Climate Action Strategy

Climate action is a long-standing CRD Board priority. Since 2009, the CRD has been committed to taking action to address climate change within its own operations, and at the regional level, to reduce emissions and prepare for climate impacts. This commitment was underlined by the Board's declaration of a climate emergency in early 2019. In answer to this declaration, the CRD developed an updated five-year Climate Action Strategy in 2021.

The Climate Action Strategy provides direction for how the CRD, under its service mandates, will show leadership on climate action, both for the CRD's corporate operations and for its community-focused services. The strategy coordinates with other CRD plans and strategies and supports the overarching Regional Growth Strategy (RGS).



Farm in Central Saanich

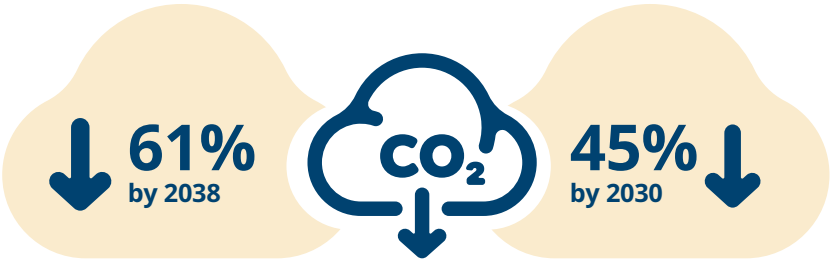
Climate Action Vision

Through collective action, we eliminate emissions and foster healthy and resilient communities and natural areas now and in the future.

This vision recognizes that the CRD must act in concert with many partners to address the climate emergency, ensuring the region is minimizing its contribution to climate change while also preparing for the changes that have already begun. In this context, "we" is inclusive of all governments, First Nations, residents, businesses, institutions, organizations and residents.

Targets and Goals

The CRD's Climate Action Strategy outlines a pathway toward net-zero emissions by mid-century, in line with the Intergovernmental Panel on Climate Change modelled pathways to limit warming to a 1.5°C change this century. It also established six goal areas where the CRD will focus its efforts.



Regional target

Reduce regional greenhouse gas (GHG) emissions 61% by 2038 based on 2007 levels (as per 2018 Regional Growth Strategy).

Corporate target

Reduce corporate GHG emissions 45% by 2030 based on 2007 levels, and reach net-zero GHG emissions before 2050.

Climate Action Strategy Goals

- Climate focused decision making
- Sustainable land use, planning and preparedness
- Low-carbon mobility
- Low-carbon and resilient buildings and infrastructure
- Resilient and abundant nature, ecosystems and food systems
- Minimized waste

Tracking Our Emissions

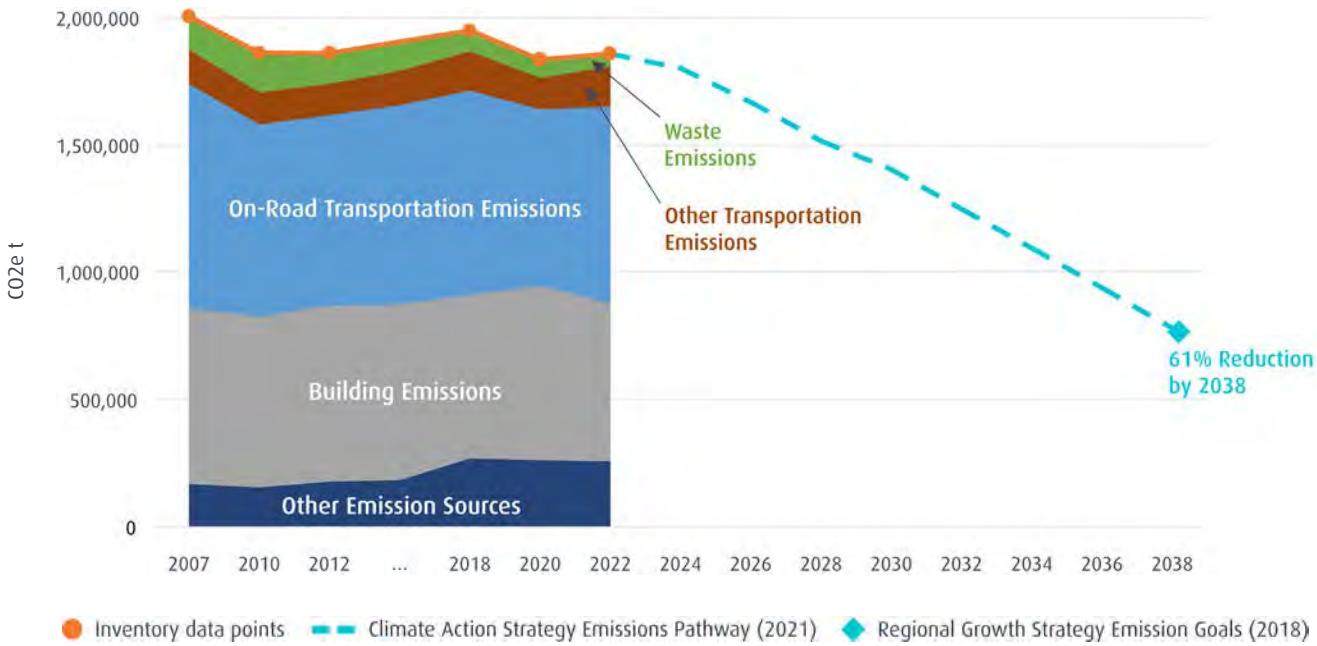
The CRD undertakes GHG accounting on a regular basis to understand our emissions portfolio.

Community Emissions

In 2023, the CRD completed an emissions inventory and report for the 2022 calendar year, building on the 2018 and 2020 inventories. This followed the internationally recognized Global Protocol Community-Scale GHG Inventories BASIC+ Framework and included GHG emissions from stationary energy (e.g., buildings), transportation (e.g., commuter vehicles), waste (e.g., landfills), industrial processes and product use (IPPU) (e.g., chemical industry), and agriculture, forestry and other land use (e.g., fertilizer application).

The territorial 2022 inventory indicated the capital region emits approximately 1.86 million tonnes of CO2e annually. This represents a 7% reduction from 2007 levels and a decline in per capita GHG emissions (t CO2e/capita) of 25%. Emissions increased by 1% compared to the 2020 inventory. This slight increase was expected and largely due to increased transportation-related emissions associated with COVID-19 pandemic recovery and the return to in-person activities. On-road transportation and the built environment remain the main sources of regional emissions, together accounting for approximately 75% of all emissions in 2022.

Capital Region Emissions (2007 to 2022) and 2038 RGS Emissions Goal



To achieve the CRD's regional GHG emission reduction target of 61% reduction by 2038, the region, and all key players, including senior levels of government, local governments, residents, businesses, industry and organizations, must continue to advance key initiatives, including:

- increase uptake of transit, walking, cycling and other modes of active transportation.
- accelerate adoption of zero-emissions vehicles.
- retrofit existing buildings, improving energy efficiency and converting fossil fuel heating systems to electric.
- transition to construction of net-zero energy ready new buildings.

Corporate Emissions

In 2023, CRD operations* generated 2,956 tonnes of CO2e emissions, with 1,404 tonnes associated with vehicle and equipment use and 1,552 tonnes coming from facilities and infrastructure. This represents a 2.8% increase from 2022, and a 1.6% decrease from the baseline level of emissions from 2007.

Buildings and Infrastructure

The overall emissions from CRD buildings and infrastructure decreased by 8.7% compared to 2022, despite the CRD adding a new building, the Salt Spring Island Multi Space, to the reporting scope, which added an additional 62 t CO2e, primarily from propane use.

The majority of emission reduction was in the 'other fuel' category and can be attributed to the reduction of biodiesel used at the SEAPARC facility after a boiler replacement. Emissions from natural gas also contributed to the reduction, dropping by 7.8%, which can be attributed in part to several energy-focused maintenance and operational measures, supported by the corporate energy specialist. It should be noted that the reductions in electrical emissions are primarily due to the reduction in the emission factor for the BC Hydro provincial grid, which dropped 1.7% in 2023, compared to 2022.



Electrician installing an EV charger

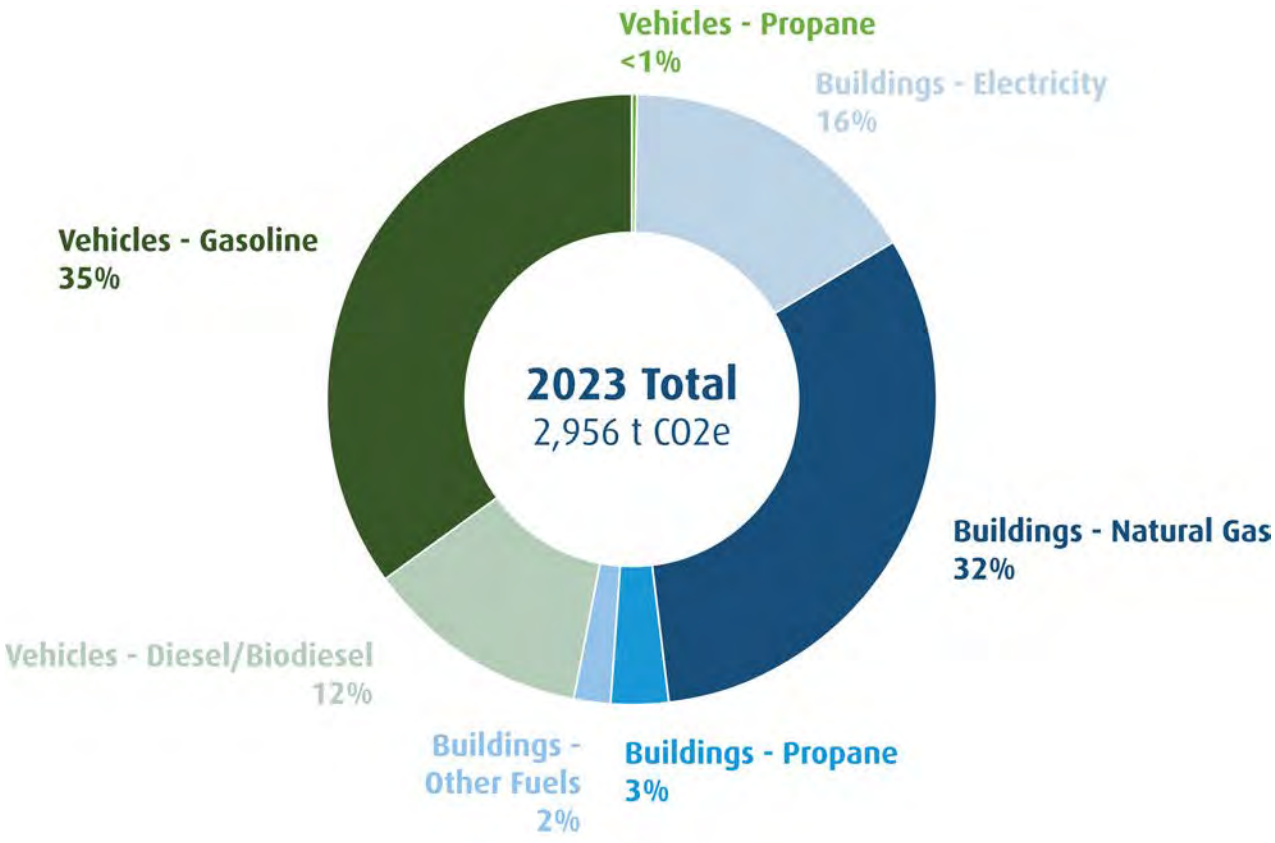
**Emissions associated with Hartland Landfill, Capital Region Housing Corporation, and Capital Region Hospital District are not included in this total, as they are excluded from the provincial reporting framework.*

Vehicle and Equipment Emissions

The overall emissions from vehicle and equipment use increased by a total of 19.4% and are strongly impacted by increased service levels provided by the CRD. Factors that contributed to the vehicle emissions were increased vehicle use for building inspections, bylaw enforcement, emergency programs, and the overall staffing increases in various services, notably Regional Parks.

Throughout 2023, the CRD procured an additional 36 electric vehicles, which included a backlog of orders from previous years; it is expected these zero-emission vehicles will assist in the reduction of GHG emissions from vehicles in the 2024 reporting year and beyond.

2023 CRD Corporate GHG Emissions



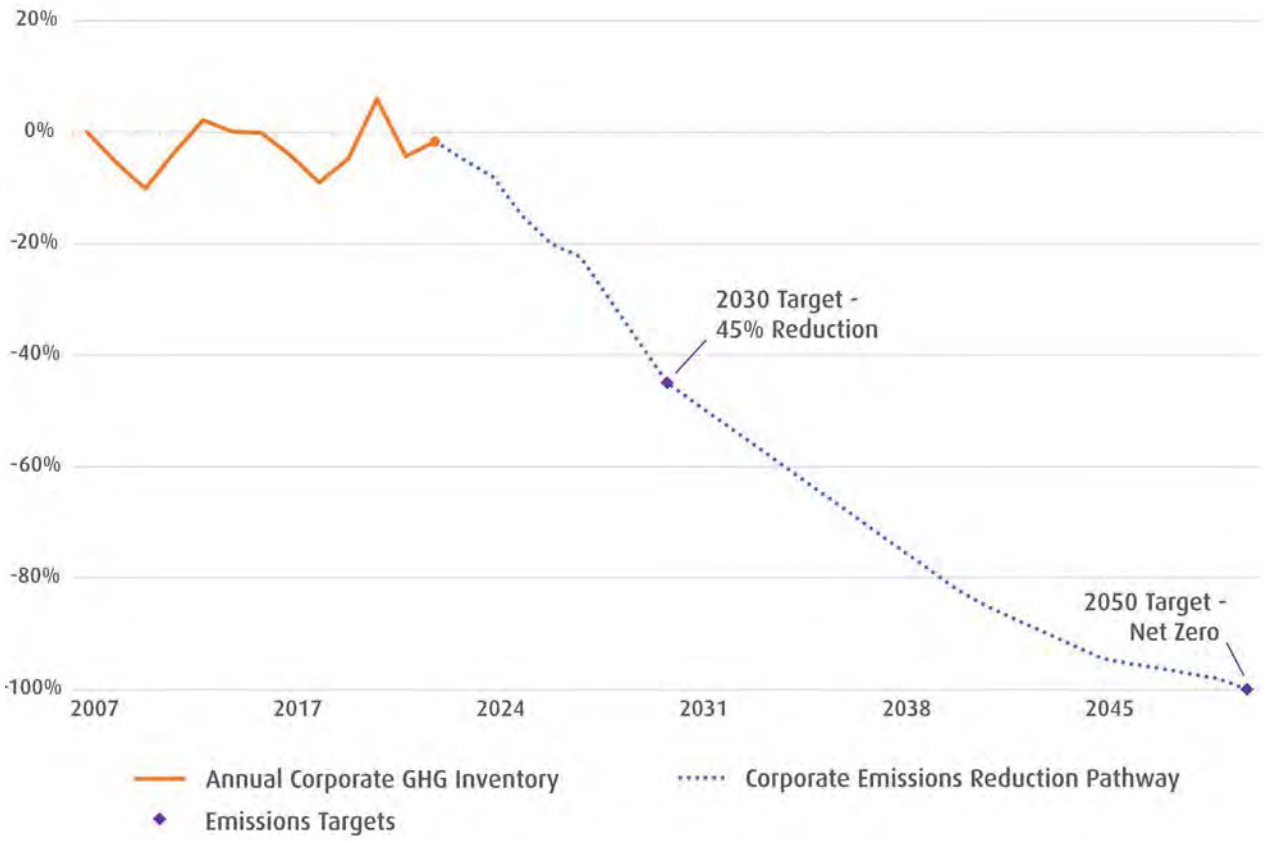
Total Vehicle & Equipment Emissons (Vehicles)
1,404 t CO2e

Total Buildings & Infrastructure Emissions (Buildings)
1,552 t CO2e

The graph below illustrates the reported 2023 emissions and the updated 2022 emissions on the corporate emission reduction pathway laid out in the Climate Action Strategy. To follow the pathway and begin to decrease emissions and meet corporate GHG targets, the CRD will continue to focus on accelerating the following critical actions in upcoming years:

- procurement of electric and plug-in hybrid vehicles for the CRD fleet,
- decarbonization at key CRD facilities, including Panorama Recreation Centre, SEAPARC Leisure Complex, CRD Headquarters, and Integrated Water Services; and
- pursuing an annual 5% improvement in electricity efficiency through energy audits and retrofits.

CRD Corporate Emission Trends (2007 to 2023) and Forecasted Climate Action Strategy Pathways and Targets



Adapting to Climate Impacts

The global average temperature has increased by over 1°C in the past 150 years and the impacts on weather patterns are already being felt. The past three years have brought an unprecedented heat dome, heavy rains and flooding, extended drought, the worst wildfire season in Canadian history, and the world's hottest year on record.

As a result of climate change, modelling indicates that the region will continue to experience:

- hotter summer temperatures, with more extreme heat days and heatwaves
- warmer winter temperatures and less frequent frost, with less snowfall in the colder months
- less rain and more dry days in the summer months
- more precipitation falling in fall, winter and spring, with longer-lasting and more frequent extreme rainfall events
- increased likelihood of variability of climate within and between years
- sea level rise

Resilience to climate change can take many forms and includes the ability to prepare for, recover from, and adapt to these impacts. It involves more immediate actions to prepare and react to extreme weather events the region is already experiencing, as well as longer-term planning to prepare for the consequences of future warming in the mid to late-century time scale.

The CRD has several services that support climate resilience, including: maintaining drinking water supply and wastewater services, regional planning functions, regional parks, harbours, watersheds and invasive species related programs, and supporting emergency management coordination and healthy community planning. The CRD is working to adapt to the changing climate in our service areas by identifying vulnerabilities and adaptive capacities, as well as strategies and actions to improve how the region anticipates, responds to and recovers from both extreme weather events and the gradual changes occurring over time.



Smoke pollution from summer forest fires



CRD Headquarters

Progress on the CRD's Five-year Action Plan

The CRD's Climate Action Strategy established six key goal areas, 56 actions and 127 sub-actions that will be undertaken by several different services across the organization between 2021 and 2025. The strategy also outlined several indicators to help measure success and to track important trends.

The following sections are intended to provide a high-level, easy-to-understand overview of the CRD's performance and progress related to climate action, and to summarize progress made in the 2023 year for each goal area.



More information, including details on the scoring methodology and actions within each goal area, is contained in Appendix A: Climate Action Report Card.

2023 Overall Action Plan Progress

On Track

The climate action strategy identifies 127 actions with specific timelines across the organization. Scores are based on the current status of each action within their goal areas.

Corporate Actions

Opportunity for Improvement

Community-Focused Actions

On Track

Goal Area

- **Goal 1:** Climate-Focused Decision Making
- **Goal 2:** Sustainable Land Use, Planning and Preparedness
- **Goal 3:** Low-Carbon Mobility
- **Goal 4:** Low-Carbon and Resilient Buildings and Infrastructure
- **Goal 5:** Resilient and Abundant Nature, Ecosystems and Food Systems
- **Goal 6:** Minimized Waste

Legend: Action Status

- **On Track:** 75% or greater of yearly target progress
- **Opportunity for Improvement:** 50% - 75% of yearly target progress
- **Attention Required:** less than 50% of yearly target progress
- **Future Action**

Legend: Indicators*

- Direction of arrow indicates **current trend direction**
- Indicator is trending in the **desired direction**
- Indicator is trending in the **wrong direction**
- Indicator is intended to provide **contextual information**

*While indicators are not considered in the calculation of the action status, they provide context and track long-term progress.

Climate-Focused Decision Making

Goal 1: Climate action priorities are integrated at all levels of decision making across the organization.

Overall Action Status
On Track

To provide its wide range of services, the CRD maintains and operates vehicles, equipment, buildings, facilities, infrastructure, landfills, trails and parks. Decisions made in each service area can have implications for greenhouse gas (GHG) emissions generated or sequestrated by CRD assets over time, as well as how prepared these assets are for the changing climate. The CRD has also identified the need to improve the organizational understanding of Indigenous knowledge, laws and perspectives in relation to climate solutions.

The majority of sub-actions in this goal area are well progressed, resulting in an overall action status of *on track*.

Goal Progress Summary

- Approved and implemented a new corporate green building policy, which sets standards for energy efficient and low-carbon new construction and retrofits of corporate buildings.
- Adopted an internal carbon price policy that sets an internal corporate carbon price of $170 per tonne of carbon emissions to represent the social, environmental and economic benefits of carbon pollution reduction in select corporate projects.
- Maintained the internal Climate Action Reserve Fund, which provided support to additional GHG reduction studies at three recreation centres and partially funded an ongoing study at the Saanich Peninsula Wastewater Treatment Plant.
- Completed the annual corporate GHG emissions inventory.
- Provided a variety of staff training sessions, including: overviews of new climate policies; Climate 101, a general primer available to all staff and offered regularly; and Climate 201, to guide staff on embedding a climate lens in their work.

CRD Roles

Operational decision making

This goal contains

15

sub-actions



Front entrance at CRD Headquarters

- Attended the 2023 Cultural Heritage Climate Change Workshop where Indigenous perspectives on heritage conservation in light of climate change were shared and new approaches to help reduce shoreline impacts were discussed.

Indicators

Annual CRD Corporate GHG emissions	• 2,956 t CO2e (2.8% increase compared to 2022)



CRD staff e-bike training session in Centennial Square

Sustainable Land Use, Planning and Preparedness

Goal 2: Support the region on its pathway to livable, affordable and low-carbon communities that are prepared for climate change.

Overall Action Status
On Track

How land use is managed has a strong influence on the regional emissions, by affecting how far we travel to daily amenities, school and work, how we choose to get to those places, as well as affecting how much land can be protected as carbon sinks. The 2018 Regional Growth Strategy sets a regional vision and high-level policies for growth management. The key provision is to contain 95% of growth in designated areas, and to concentrate growth in a way that is connected. In addition to land use, planning and preparedness efforts across the region are important to increase the resilience of the region by increasing our ability to cope with hazardous or emergency events and other impacts that result from a changing climate.

The majority of sub-actions in this goal area are well progressed, resulting in an overall action status of *on track*.

Goal Progress Summary

- Undertook an extensive effort to map vulnerability to extreme heat for the region and develop the Capital Region Extreme Heat Information Portal, with support from municipal partners and a grant from the Union of British Columbia Municipalities (UBCM).
- Partnered with the University of Victoria's School of Public Administration to conduct research into the health impacts of extreme heat using an equity lens.
- Hosted an inter-municipal workshop on carbon budgeting.
- Obtained a Pacific Institute for Climate Solutions grant to hire a summer intern to support climate adaptation related research.
- Commenced an update to the 2017 Climate Projections for the Capital Region report based on new global models, engaged with municipal staff on regional impacts and created a guide for the use of climate projections data.

CRD Roles

Regional planning

Juan de Fuca land use planning

Emergency management in electoral areas

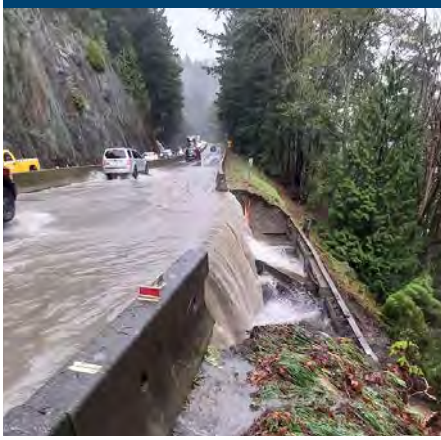
Inter-municipal coordination

Data management

This goal contains

24

sub-actions



Malahat washout during November 2021 extreme rain event (Credit: Emcon Services Inc.)

- Completed the 2022 Regional GHG Inventory Study and provided the report and data to local government staff in the region.
- Successfully applied for the UBCM Complete Communities grant to initiate a Growth and Mobility Study.
- Completed Electoral Area Community Wildfire Resiliency Plans and shared with residents.
- Continued work on the FireSmart program.
- Began the creation of a public-facing emergency dashboard to improve the public notification system for extreme weather events.
- Continued to facilitate and administer several inter-municipal networks that serve to coordinate regional climate action, set priorities and disseminate resources, including the Climate Action Task Force and Climate Action Working Group, Development Planning Advisory Commission, Transportation Working Group, Local Government Emergency Program Advisory Committee, the Regional Emergency Management Partnership and the Healthy and Safe Environments Community Health Network.

Indicators	
Regional GHG emissions	• 1.86 million tonnes of CO2e (1% increase compared to 2020)
Number of net new dwelling units in areas where more than 45% walk/bike/bus to work*	• Currently, the region is not meeting the desired trend

** Progress on this indicator is reported in the Regional Growth Strategy Indicator Report.*



Tour of the Greater Victoria Water Supply Area

Low-Carbon Mobility

Goal 3: Rapidly reduce corporate fleet emissions. Support, endorse and encourage active, public and zero-emission transportation options across the region.

Overall Action Status
On Track

On-road transportation is the region's largest source of GHG emissions. Not only do vehicles release significant emissions, they also lead to increased traffic congestion in peak periods. Shifting from a vehicle focus to a low-carbon mobility focus means improving the options to get more people walking, biking and taking transit. For trips that use a vehicle, rapidly switching to electric vehicles (EVs) will require building out charging infrastructure throughout the region, making sure chargers are accessible to those who live in all types of homes and at key locations across the region. The CRD owns and operates a fleet of approximately 300 vehicles to provide its many services across the region, and can reduce its GHG emissions by greening its fleet.

The majority of sub-actions in this goal area are well progressed, resulting in an overall action status of *on track*.

Goal Progress Summary

- Continued implementation of the corporate Green Fleet Policy, ordering and acquiring new EVs.
- Accessed grant funding from the federal Zero Emission Vehicle Infrastructure Program and installed 54 electric vehicle chargers at 13 CRD sites and facilitated grant funding for 60 additional chargers on behalf of the City of Victoria, encompassing both fleet and public vehicle charging.
- Developed and distributed public EV charging installation guidelines to support private and public sector landowners and businesses to install public charging stations.
- Initiated a Memorandum of Understanding with BC Hydro to advance key priorities related to EV charging infrastructure and policies across the region.
- Completed work with the Community Social Planning Council on gender equity and safety on CRD trails.

CRD Roles

CRD fleet

CRD infrastructure (Regional trail system and EV charging)

Regional planning

Electoral area transportation

Data management

Community programs

This goal contains

31

sub-actions



Fleet EV charging at McLoughlin Point Wastewater Treatment Plant

- Continued to participate in various technical and working groups to support the connection of the downtown to the Westshore through RapidBus delivery and supported the Ministry of Transportation and Infrastructure to improve transit service in suburban and rural areas by increasing the number of park and rides.
- Analyzed, published and distributed regional Origin Destination Household Travel Survey with an expanded scope, adding additional questions related to e-bike usage, micro-mobility, demographics and population change.
- Completed an update to the Regional Cycling Network and the All-Ages and Abilities facility framework and developed a planning tool to support a consistent cycling network across jurisdictions.
- Accelerated the Regional Trails Widening and Lighting Project after securing additional resources through the CRD's 2024-2028 Financial Plan.
- Continued to implement the Gulf Islands Trails Plan, with the development of the first regional trail in the Gulf Islands (Mayne Island Regional Trail) underway.
- Completed repairs to Regional Parks Selkirk Trestle and Phase 4 of the E&N Rail Trail.
- Completed Salt Spring Island Active Transportation Plan.

Indicators	
Regional EV Infrastructure Roadmap implementation	• Level 2 ports: 54% (415 installed) • DCFC ports: 33% (44 installed)
Regional GHG emissions from transportation	• 930,656 t CO2e (14% increase compared to 2020)
Annual EV ICBC registrations (region fleet size)	• 10,424, 3.43% of total registrations (0.92% increase compared to 2022)
Annual CRD corporate fleet GHG emissions	• 1404 t CO2e (19.4% increase compared to 2022)
Number of corporate EVs purchased*	• 36 EVs purchased (45 total in fleet)

**Due to industry delays, vehicles received in 2023 were a combination of vehicles ordered in 2021, 2022 and 2023.*

Low-Carbon and Resilient Buildings and Infrastructure

Goal 4: Accelerate energy efficiency, emission reductions and enhanced resilience in CRD buildings and infrastructure. Support and encourage the same for all buildings and infrastructure across the region.

Overall Action Status

Opportunity for Improvement

A large portion of regional GHGs come from energy used in buildings across the capital region, almost all of which is from fossil fuels for space heating and hot water. Shifting from relying on fossil fuels for space heating and hot water and improving the energy efficiency of our buildings is key to achieving GHG reduction targets and can support resiliency measures. As the climate changes, it is increasingly important to prepare buildings and infrastructure. The capacity of infrastructure to be resilient to climate impacts must be considered, such as increased stormwater flows, power interruptions, poor air quality and heat waves.

Although many actions are well-progressed in this goal area, staff indicate actions related to corporate carbon reduction projects and assessing CRD infrastructure for climate risk have been delayed, resulting in an overall status of *opportunity for improvement* for this goal area. Many foundational energy studies for key facilities have been completed and retrofit projects will be completed in future years.

Goal Progress Summary

- Finalized and began implementation of the Corporate Green Building Policy.
- Completed energy audits and a preliminary net-zero energy pathway feasibility study for Panorama Recreation Centre, SEAPARC Leisure Complex and Rainbow Recreation Centre, and began additional detailed studies.
- Implemented the Home Energy Navigator program, which saw nearly 700 registrants, providing approximately 500 home consultations, and supported an estimated 125-150 heat pump retrofits in the region.

CRD Roles

CRD buildings and infrastructure

Building inspection in electoral areas

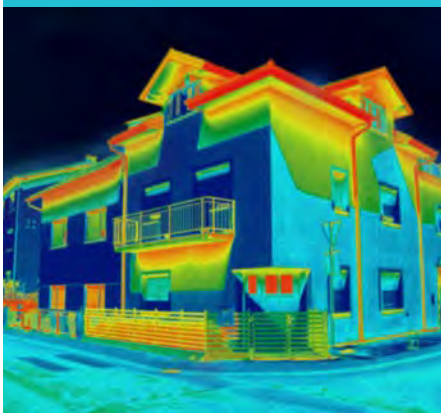
Data management

Community programs

This goal contains

30

sub-actions over the next five years



Thermal camera image of a building

- Continued supporting the BC Sustainable Energy Association to deliver Cool it! climate action workshops for students in the region, delivering 73 workshops (33 funded by the CRD and 40 additional workshops funded by municipalities).
- Coordinated and supported consultations with the District of Saanich and the City of Victoria towards creating mandatory energy and carbon emission reporting requirements for existing large Part 3 buildings; engaged municipalities about the opportunity.
- Supported municipalities in their considerations and adoptions of the Zero Carbon Step Code (ZCSC) and the transition to mandatory BC Energy Step Code requirements.
- Led the province in being the first regional district to adopt Step 3 of ZCSC, Strong Carbon Performance, in electoral areas.
- Advanced several initiatives, with the University of Victoria and the Canadian Forest Service, to better assess and understand climate change impacts relating to ecosystem health and water supply in the Greater Victoria Water Supply Area.
- Hosted a local government workshop on green stormwater infrastructure guidelines, undertook a series of Rural Stormwater Management workshops for the agricultural community, and workshops for residential rain garden installation for homeowners.

Indicators

Regional Energy Retrofit Program implementation	• 700 participants signed up as of December 2023
Regional GHG emissions from buildings	• 619,054 t CO2e (10% decrease compared to 2020)
Annual CRD corporate facilities GHG emissions	• 1,552 t CO2e (8.7% decrease compared to 2022)



CRD residents outside their home retrofitted with a heat pump



Home Energy Navigator display at the Victoria Home Show

Resilient and Abundant Nature, Ecosystems and Food Systems

Goal 5: Protect, conserve and manage ecosystem health and nature's capacity to store carbon and adapt to climate change. Support the ongoing ability of natural systems to sustain life.

Overall Action Status

Opportunity for Improvement

Green spaces, blue spaces and parks provide important services to store carbon in vegetation and soils, while at the same time providing ecological services that support the region's resilience to climate change. As temperatures in the region rise, natural areas can also serve to reduce the need for energy-intensive air conditioning and provide accessible areas of respite for all residents. Monitoring ecological changes over time and sharing this across all levels of government, including First Nations, as well as community organizations and citizens, can increase our collective understanding of the impacts of these changes and inform how the region can collectively respond to support the health of our ecosystems.

Although many efforts are being made in this goal area, staff indicate *opportunities for improvement* or delays in identifying and implementing adaptation strategies and data collection on biodiversity.

Goal Progress Summary

- Finalized the Regional Parks and Trails Strategic Plan 2022-2032 after more fulsome engagement with First Nations.
- Progressed updates to the Regional Parks Land Acquisition Strategy, which provides direction on the selection of land for regional park purposes that reflect the values identified in the Strategic Plan, including climate considerations.
- Undertook several initiatives to better assess and understand climate change impacts relating to ecosystem health and water supply in the Greater Victoria Water Supply Area, including investigating impacts on: forest growth, mortality and resilience; vulnerability of the dominant tree species to outbreaks of a bark beetle; forest fuel hazard and wildfire probability, behaviour and spread, and burn severity.

CRD Roles

Stewardship of CRD lands

Land acquisition

Community and inter-municipal coordination

Education and outreach

Regional planning

Data management

This goal contains

19

sub-actions

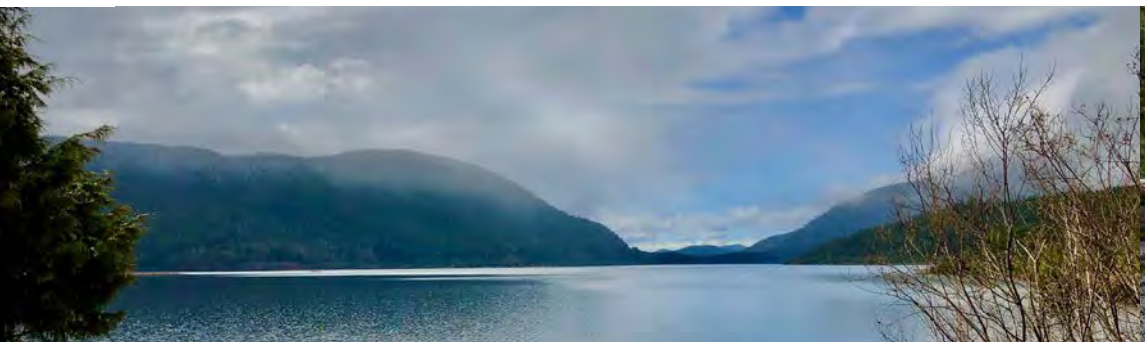


Volunteers removing invasive species in Mill Hill Regional Park

- Provided various regional and local ecological data sets to support planning and policy efforts, including the launch of intertidal and subtidal inventories of the core area harbours, land cover information, and coastal storm and sea level data.
- Continued to support efforts to monitor stream flows in the region.
- Continued to chair and coordinate the Capital Region Invasive Species Partnership.
- Hosted and promoted regional participation in the Canada-wide Nature in the City challenge supporting biodiversity awareness.
- Advanced work on a proposed Regional Foodlands Trust, obtaining initial support from the Board, permission for use of Bear Hill from Regional Parks and continued engagement with the agricultural community.
- Continued to work cooperatively with the W̱SÁNEĆ Leadership Council and its designates on the development of the Mount Work Regional Park Management Plan.
- Partnered with the W̱SÁNEĆ Leadership Council and Raincoast Conservation Society on the Healthy Waters Initiative, which includes a role for W̱SÁNEĆ Guardians.
- Collaborated with Scia'new First Nation and T'Sou-ke First Nation on the protection of culturally significant sites.
- Collaborated with T'Sou-ke First Nation on ecological restoration planning for Ayum Creek Regional Park in partnership with the Land Conservancy.

Indicators	
Hectares of regional park land*	• 13,350 ha (an additional 21.28 ha was acquired in 2023)
Number of volunteer stewardship hours	• 6,209 hours by 703 volunteers

**Progress on this indicator is reported in the Regional Growth Strategy Indicator Report*



Sooke Lake Reservoir



Todd Creek Trestle

Minimized Waste

Goal 6: Waste generation and the resulting emissions are minimized and remaining waste is transformed into a resource. Follow the 5R pollution prevention hierarchy.

Overall Action Status

Opportunity for Improvement

Product use and the disposal of waste contribute to GHG emissions in the region. About 2.7% of regional GHG emissions are associated with waste —and the majority of this comes from decomposing organic waste that was added to Hartland Landfill over the last several decades (e.g., food scraps and construction wood waste). The most effective way to reduce future emissions from the landfill is to follow the 5R hierarchy – focusing first on decreasing the amount of waste produced, and then on decreasing the GHG emissions from the remaining waste.

Although significant progress has been made on actions in this goal area, staff indicated *opportunities for improvement* or delays in furthering education and engagement on waste management to be delivered by and for First Nations communities, maximizing and optimizing the capture of landfill gas, and considering climate change impacts in liquid waste management.

Goal Progress Summary

- Received approval from the Ministry of Environment & Climate Change Strategy on the Solid Waste Management Plan.
- Received Board approval for policy changes that will see more waste diverted from Hartland Landfill, including: new material bans, adjusted tipping fee structure, and increased bylaw fines.
- Initiated the procurement process for a Material Diversion Transfer Station at Hartland Landfill to collect and process five source-separated waste stream materials for reuse, recycling, or energy recovery and will facilitate the diversion of up to 40,500 tonnes of waste per year.
- Continued the curbside Blue Box Collection Program and awarded a new curbside recycling contract for the collection of recyclables from single-family homes, to take effect in early 2024, which includes low-emission and electric vehicles.

CRD Roles

Solid waste management

Liquid waste management

Education and outreach

This goal contains

8

sub-actions over the next five years



Hartland Landfill

- Implemented the Multi-family Dwelling Waste Diversion Project, which promoted standardized education on proper recycling procedures for 50 participating buildings (2,499 units) across eight municipalities within the region.
- Supported 22 projects, with approximately $60,000 in funds, through the Rethink Waste Community Grant.
- Advanced several education programs, including: the Rethink Waste Newsletter, workshops, landfill tours, funding for the Compost Education Centre, webpage updates, advertisement campaigns, and direct community outreach.
- Initiated work on a jurisdictional scan of municipal solid waste processing technologies; this included investigating incineration with energy recovery, gasification, and pyrolysis thermal processing systems.
- Produced approximately 7.9 megawatts of green power from landfill gas, an increase from 1.6 megawatts in 2022.**

Indicators	
CRD's per capita disposal rate*	• 382 kg/capita (6.02% or 23 kg/capita decrease compared to 2022)
Landfill Gas Efficiency**	• Achieved a 74% gas collection efficiency based on UBCi model (78% in 2022)

**This number excludes blended biosolids. Please refer to the 2023 Solid Waste Management Plan Progress Report for additional information.*

***Please refer to the Solid Waste Management Plan Progress Reports for additional information.*



Hartland Landfill and the Landfill Gas Plant



Hartland Landfill public drop-off

Looking Ahead – 2024

The CRD will continue to show a leadership role, support inter-municipal collaborative efforts, pursue strategic partnerships and external funding sources, and respond to opportunities, as local and senior levels of governments advance their efforts. Some activities planned for 2024 include:

- **Extreme Heat Vulnerability Mapping:** In 2024, the Extreme Heat Vulnerability Information Portal Project, a collaborative effort between the CRD, municipal partners, Island Health and the Province to understand vulnerability to heat across the capital region, will be completed. The portal will support the integration of extreme heat disaster risk reduction and climate adaptation planning, providing tools and data to help community planners and emergency managers address extreme heat now, and in the future.
- **Updated Climate Projections:** An update to the 2017 Climate Projections for the Capital Region report based on new global models will be released in early 2024 and accompanied by capacity-building workshops for municipal staff.
- **Emergency Response Notification System:** The development of a public-facing emergency dashboard to improve the public notification system for extreme weather events is targeted for completion in 2024.
- **Panorama Heat Recovery System:** In 2024, a low-temperature electric dehumidifier, designed for future tie-ins with the heat recovery system, will be installed at Panorama Recreation Centre. Detailed design and incentive applications for the heat recovery system will be completed, with installation scheduled for 2025.
- **Transportation Governance:** Building on an initial survey of municipal councils, electoral areas and partner agencies, on transportation governance in the region, staff will prepare an engagement plan for the service design and feasibility study phase of this initiative and further engage interest holders.
- **EV Infrastructure Roadmap:** Staff will continue to work with local governments, BC Hydro and other partners to advance the installation of EV charging infrastructure across the region.
- **Monitoring Ecosystem Health in the Greater Victoria Water Supply Area:** An update of the Terrestrial Ecosystem Mapping in the GVWSA, an essential information source for assessing the effects of climate change on ecosystems, will be completed.
- **Hartland Landfill Policy Changes:** Bylaw changes that will see more waste diverted from Hartland Landfill, including new material bans, adjusted tipping fee structure, and increased bylaw fines, will come into effect.
- **Additional Climate Action Capacity:** In response to Board directives, the Climate Action Program will hire a one-year auxiliary term position to develop a community mobilization program, undertake regional education activities, and commence additional policy analysis, regulatory reviews, and/or GHG modelling efforts.



Dallas Road, Victoria, BC

Appendix A: Climate Action Report Card

This Climate Action Report Card is intended to provide a high-level, easy-to-understand overview of the CRD's climate performance and progress.

Methodology

The Climate Action Strategy defines specific actions to guide CRD efforts over the lifespan of the strategy. These include 56 "umbrella" actions broken down into 127 sub-actions, with specific timelines and responsible divisions.

The Climate Action Report Card compiles the self-reported quantitative progress metrics from services for each of the 127 sub-actions. By averaging the progress of respective sub-actions, the report card measures the current 'action status' for several informative categories, such as overall climate action status, corporate and community-focused actions, and the six goal areas of the strategy.

The report card uses a math-based system to produce a percent grade by comparing reported progress with expected progress based on the action timelines established in the strategy. For ongoing actions with no timeline, percentages are based on self-reported levels of progress satisfaction by the responsible service. Each action status score is accompanied by qualitative progress updates that summarize any actions taken or barriers encountered during the reporting year. For clarity, percentages are converted to three coloured status indicators: on track, opportunity for improvement, and attention required. In addition, several broader corporate and regional indicators are included. These are not considered in the evaluation of the action statuses.

For more information on timing, divisions involved, and sub-actions, please see Appendix C in the Climate Action Strategy.

2023 Overall Action Plan Progress
On Track

The climate action strategy identifies 127 actions with specific timelines across the organization. Scores are based on the current status of each action within their goal areas.

Corporate Actions Opportunity for Improvement

Community-Focused Actions On Track

Goal Areas:

- **Goal 1:** Climate-Focused Decision Making
- **Goal 2:** Sustainable Land Use, Planning and Preparedness
- **Goal 3:** Low-Carbon Mobility
- **Goal 4:** Low-Carbon and Resilient Buildings and Infrastructure
- **Goal 5:** Resilient and Abundant Nature, Ecosystems and Food Systems
- **Goal 6:** Minimized Waste

Legend: Action Status

- **On Track:** 75% or greater of yearly target progress
- **Opportunity for Improvement:** 50% - 75% of yearly target progress
- **Attention Required:** less than 50% of yearly target progress
- **Future Action**

Legend: Indicators*

- Direction of arrow indicates **current trend direction**
- Indicator is trending in the **desired direction**
- Indicator is trending in the **wrong direction**
- Indicator is intended to provide **contextual information**

*While indicators are not considered in the calculation of the action status, they provide context and track long-term progress.

Climate-Focused Decision Making

Goal 1: Climate action priorities are integrated at all levels of decision making across the organization.

Overall Action Status
On Track

Status	Action	Update
Progress on Actions		
	1-1 Integrate and standardize the climate lens framework across processes	• Prepared the 2023-2026 Corporate Plan, with consideration of how initiatives impact the organization's climate action efforts. • Approved and implemented a corporate green building policy. • Applied a climate lens to actions completed under the Corporate Asset Management Strategy. • Completed the annual corporate GHG emissions inventory. • Developed an annual CRD Climate Action Report Card for accountability on climate progress.
	1-2 Develop internal carbon pricing policies and procedures	• Approved and adopted an internal carbon price policy for use in select corporate projects. Piloted the policy into the scope of work for a new build project, as well as a major facility upgrade.
	1-3 Identify internal funding sources for climate action	• Provided funding through the internal Climate Action Reserve Fund for additional carbon reduction studies at three recreation centres and partially funded an ongoing study at Saanich Peninsula Wastewater Treatment Plant. • Engaged in a contract with BC Hydro to provide partial funding to the Corporate Energy Specialist role in 2023.
	1-4 Support staff capacity building and coordination	• Provided a variety of staff training sessions, including: overviews of new climate policies; Climate 101, a general primer available to all staff and offered regularly; and Climate 201, to guide staff on embedding a climate lens in their work. • Maintained an internal Climate Action SharePoint hub for staff capacity building. • Continued quarterly Climate Action Fleet and Facilities Working Group meetings and established a Building Performance Working Group.
	1-5 Investigate how Indigenous knowledge can inform climate action at CRD	• Continued engagement with First Nations with respect to climate impacts. Indigenous perspectives on climate change concerns continue to be raised by First Nations in engagement with CRD staff in relation to many areas of service delivery, often with a focus on reduced access to land for food security and cultural uses, including harvesting and hunting. More work is needed to learn how Indigenous knowledge can inform climate action. • Continued conversations with First Nations leadership, Guardians, cultural workers and archaeologists on the importance of protecting cultural heritage sites and landscapes that are susceptible to climate impacts. • Attended the 2023 Cultural Heritage Climate Change Workshop where Indigenous perspectives on heritage conservation in light of climate change were shared and new approaches to help reduce shoreline impacts were discussed.
Additional Action Plan Indicators		
	Annual CRD Corporate GHG emissions	• 2,956 t CO2e (2.8% increase compared to 2022)

Sustainable Land Use, Planning and Preparedness

Goal 2: Support the region on its pathway to livable, affordable and low-carbon communities that are prepared for climate change.

Overall Action Status
On Track

Status	Action	Update
Progress on Actions		
!	**2-1 Incorporate climate hazards and vulnerabilities into corporate CRD emergency response plans**	• Continued to reevaluate emergency response planning based on climate hazards and vulnerabilities on an ongoing basis. • Began the development of a public-facing emergency dashboard to improve the public notification system for extreme weather events. Targeted for completion in 2024.
⏩	**2-2 Monitor Regional Growth Strategy (RGS)**	• Completed the annual RGS Indicator Report. • Reviewed Regional Context statements, as needed, through an established process in which municipal climate policies are reviewed in relation to RGS goals.
⏩	**2-3 Integrate climate impacts into Juan de Fuca land use plans and policies**	• Initiated a review and update for the Port Renfrew Official Community Plan (OCP). Staff are working with Pacheedaht First Nation to select a consultant to lead the project. • Planned review of development permit flood management guidelines in conjunction with the Port Renfrew OCP update.
⏩	**2-4 Collect and share pertinent energy, emissions, climate projections and vulnerability data**	• Completed the 2022 Regional GHG Inventory Study and provided the report and data to local government staff in the region. • Continued to collect heating systems information for all homes sold in the capital region and continued development of regional home archetyping map based on home heating fuel information. • Undertook an extensive effort to map vulnerability to extreme heat for the region and develop the Capital Region Extreme Heat Information Portal, with grant funds received from the Union of British Columbia Municipalities (UBCM). • Obtained a Pacific Institute for Climate Solutions grant to hire a summer intern to support climate adaptation related research. • Advanced an update to the 2017 Climate Projections for the Capital Region Report based on new global models. Engaged with municipal staff on regional impacts and created a guide for the use of climate projections data. • Obtained a Complete Communities grant (UBCM) to initiate a Growth and Mobility Study. A portion of the study will be used to advance the development of a methodology to assist in GHG analysis associated with the implementation of the RGS.
⏩	**2-5 Identify innovative actions to close the regional 2030 emissions reduction gap**	• Delivered a list of policies that have the potential to close the capital region emissions gap to the Board.
⏩	**2-6 Coordinate regional climate action, collaboration and capacity building among local governments and interested First Nations**	• Continued to facilitate and administer several inter-municipal networks that serve to coordinate regional climate action, set priorities and disseminate resources, including the Climate Action Task Force and Climate Action Working Group, Development Planning Advisory Commission, Transportation Working Group, Local Government Emergency Program Advisory Committee, the Regional Emergency Management Partnership and the Healthy and Safe Environments Community Health Network. • Conducted research and hosted an inter-municipal workshop on carbon budgeting. • Supported local governments and First Nations in accessing climate projections and sea level data and participated in policy discussions. • Continued to reach out to First Nations to collaborate on relevant projects, such as extreme heat vulnerability mapping to build relationships and provide opportunities for sharing of information as it relates to climate change. • Partnered with the University of Victoria's School of Public Administration to conduct research into the health impacts of extreme heat using an equity lens.

	Status	Action	Update
		2-7 Incorporate regional climate projections into electoral area emergency planning and enhance FireSmart efforts	• Continued to incorporate climate projections in the hazard, risk and vulnerability assessments for the Electoral Areas on an ongoing basis. • Completed Electoral Area Community Wildfire Resiliency Plans and shared with residents. • Continued work on the FireSmart program. • Conducted Community Wildfire Resiliency webinar series for electoral areas. • Adopted new open burning bylaw to prevent human-caused wildfires. • Completed Community Evacuation Guides. • Raised public awareness of community wildfire exposure, evacuation maps and other preparedness resources to enhance personal and community resiliency planning.
		2-8 Coordinate with emergency management stakeholders on planning and public outreach activities related to climate risks	• Continued to work to coordinate extreme heat, flood and drought awareness among emergency management stakeholders and partners in the region. • Undertook extreme heat vulnerability mapping for the region, which will inform emergency response and other planning activities (see action 2-4).
		2-9 Investigate Transition Salt Spring Island 2.0 Climate Plan implementation	• Allocated Local Government Climate Action Program funds ($22,000 for 2023) to award a contract to Transition Salt Spring Society to provide education programming and community engagement to reduce emissions.
Regional Climate Progress Indicators and Trends			
		Regional GHG emissions	• 1.86 million tonnes of CO2e (1% increase compared to 2020)
		Number of net new dwelling units in areas where more than 45% walk/ bike/bus to work*	• Currently, the region is not meeting the desired trend

**Progress on this indicator is reported in the Regional Growth Strategy Indicator Report.*



Low-Carbon Mobility

Goal 3: Rapidly reduce corporate fleet emissions. Support, endorse and encourage active, public and zero-emission transportation options across the region.

Overall Action Status
On Track

Status	Action	Update
Progress on Actions		
!	**3-1 Administer and track the new Green Fleet Policy**	• Continued to implement the Green Fleet Policy and order and acquire new electric vehicles (EVs). • Continued to experience some delays due to market availability and vehicle requirements exceeding the capabilities of current EVs. Where possible, vehicles have been slated for a shortened (5-year) lifecycle and will be reviewed at that time for potential EV replacement.
▶▶	**3-2 Develop electric vehicle (EV) adoption and right-sizing plan for the corporate fleet**	• Reviewed market availability of EVs on an ongoing basis. • Investigated opportunities for telematics and fuel purchase management software to assist in fleet rightsizing. • Maintained corporate e-bike fleet at headquarters and Regional Parks and completed staff training.
▶▶	**3-3 Develop EV infrastructure plan for the corporate fleet**	• Installed 54 chargers at 13 different sites for fleet use, meeting short- to mid-term fleet EV infrastructure needs. Accessed external grant funding to support installations.
▶▶	**3-4 Investigate the feasibility of bio-based diesel supply and storage**	• Continued discussions with fuel providers regarding feasibility and to determine next steps.
▶▶	**3-5 Develop a region-wide approach to transportation demand management and safety policy**	• Continued implementing a pilot for sustainable commute planning, working with large employers in the region (Seaspan and CFB Esquimalt). • Continued Traffic Safety Commission work on safety education and initiatives, including the development and implementation of more standardized safety protocols and treatments. • Completed work with the Community Social Planning Council on gender equity and safety on CRD trails. Grant funds were used to investigate the development of bike skills for equity-seeking groups that are underrepresented on CRD trails.
▶▶	**3-6 Collect and distribute transportation planning data regionally**	• Continued collection, analysis and distribution of transportation data through traffic count program, volunteer bike program, permanent bike counter program, and the addition of short duration automated bike count pilot, using cameras to do volume counts in locations throughout the region. Data is routinely utilized to inform decision making at a local, regional, provincial and national level. • Analyzed, published and distributed regional Origin Destination Household Travel Survey, with an expanded scope, adding additional questions related to e-bike usage, micro-mobility, demographics and population change.
▶▶	**3-7 Accelerate infrastructure improvements that support active transportation**	• Supported Board advocacy for regional infrastructure delivery in relation to transportation, including increased funding for active travel, including improvements to the regional trail network. • Continued implementation of the Regional Transportation Plan (RTP). • Initiated the planning required to scope regional transportation governance options with a background report to the Transportation Committee. • Initiated an engagement process with municipal councils, electoral areas and agency partners on regional transportation governance. • Completed Salt Spring Island Active Transportation Plan. • Continued meetings of the Regional Transportation Working Group with a core mandate of working toward consistent and connected cycling facilities, per the regional transportation priorities. • Completed an update to the regional cycling network and the All-Ages and Abilities facility framework and developed a planning tool to support a consistent cycling network across jurisdictions. • Accelerated the Regional Trails Widening and Lighting Project after securing additional resources through the CRD's 2024-2028 Financial Plan. • Continued to implement the Gulf Islands Trails Plan. Development of the first regional trail in the Gulf Islands (Mayne Island Regional Trail) is underway, supported by grant funding to be completed in 2024. • Completed repairs to Regional Parks Selkirk Trestle. • Completed Phase 4 of the E&N Rail Trail.

	Status	Action	Update
	!	**3-8 Lead and support regional education programs focused on zero-emission mobility**	• Maintained current portfolio of education programs, including Charge Your Ride, on the CRD website; provided outreach materials to community groups, as requested. • Co-hosted industry-focused workshops on EV charging infrastructure best practices for engineers, site hosts and property management professionals. • Continued with Ready, Step, Roll active school travel planning implementation, with five schools enrolled.
	▶▶	**3-9 Support acceleration of transit improvements and increased service**	• Continued to participate in various technical and working groups to support the connection of the downtown to the Westshore through RapidBus delivery. • Supported the Ministry of Transportation and Infrastructure (MoTI) to improve transit service in suburban and rural areas by increasing the number of park and rides. • Explored the feasibility of mobility hub development in key locations across the region, in partnership with MoTI. • Continued discussion of long-term transportation alternatives in the context of transportation governance work (see action 3-7) • Established a provincial E&N technical working group to determine the future of the E&N Corridor. • Initiated concept planning for a transit bus storage location on Salt Spring Island.
	▶▶	**3-10 Support a public electric vehicle charging network and encourage uptake of zero-emission vehicles**	• Established BC Hydro MOU to advance priority initiatives. Included liaising within municipal partners and other key stakeholders to identify potential Level 3 direct current fast charging (DCFC) stations sites across the region. • Developed and distributed public EV charging installation guidelines to support private landowners and businesses to install public charging stations. Provided support to BC Hydro in the review and redevelopment of provincial EV charger design guidelines for DCFCs. • Installed eight publicly-accessible chargers at SEAPARC Leisure Complex, Panorama Recreation Centre and Rainbow Recreation Centre and facilitated an external federal grant on behalf of the City of Victoria, installing 60 additional chargers, encompassing both fleet and public vehicle charging. • Completed feasibility studies and engineering evaluations at nine high-use parks, to support prioritization for future installations. • Pursued engagement opportunities with EV infrastructure builders, site hosts, electricians and other key sectors as opportunities arose. • Responded to provincial engagement processes for input on the Clean Transportation Action Plan and the Medium Heavy Duty Zero Emission Vehicle consultation paper.
	▶▶	**3-11 Implement Regional EV Charging Roadmap**	• See action 3-10. • Continued to pursue grant funding to install additional Level 2 EV chargers in the region. • Attended provincial Electric Vehicle Local Government Peer network meetings and shared learnings with municipal staff via the CRD Climate Action Inter-Municipal Working Group.
	!	**3-12 Improve internet access on Southern Gulf Islands**	• Proposed partnership with CityWest, contracted by Connected Coast, to build last-mile fibre infrastructure to Galiano and Saturna Islands, which would deliver connectivity and economic benefits. This project would create revenue through a profit-sharing agreement, which will be invested in economic diversification and sustainability initiatives across the entire electoral area. • Completed two applications to the Rural Economic Development Infrastructure Program (REDIP) for funding to support the above project. One application was unsuccessful, and one is still under review. Without REDIP support, the CRD will need voter assent separately for each island to borrow the funding.

Additional Action Plan Indicators		Regional Climate Progress Indicators and Trends	
Regional EV Infrastructure Roadmap implementation	• Level 2 ports: 54% (415 installed) • DCFC ports: 33% (44 installed)	**Percentage of total trips made by walking, cycling and transit in the Growth Management Planning Area***	• Progress is being made toward the target. The overall active transportation mode share has increased due to a sizeable increase in cycling trips and a steady increase in walking.
Percentage of the Regional Trail Network completed*	• 96.2%	**Annual EV ICBC registrations (region fleet size)**	• 10,424, 3.43% of total registrations (0.92% increase compared to 2022)
Annual CRD corporate fleet GHG emissions	• 1,404 t CO2e (19.4% increase compared to 2022)	**Victoria Transit Region fuel sales**	• 2023 data for this indicator was unavailable at the time of reporting
Number of corporate EVs purchased	• 36 new EVs acquired (total 45 in fleet)**	**Regional GHG emissions from transportation**	• 930,656 t CO2e (14% increase compared to 2020)
Number of CRD fleet EV chargers installed	• 54 (79 to date)		

**Progress on these indicators is reported in the Regional Growth Strategy Indicator Report. In 2023, the Percentage of the Regional Trail Network completed indicator was revised to better align with the Regional Parks and Trails Strategic Plan 2022-2032 and so cannot be compared to what has been reported in previous years.*

***Due to industry delays, vehicles received in 2023 were a combination of vehicles ordered in 2021, 2022 and 2023.*

Low-Carbon and Resilient Buildings and Infrastructure

Goal 4: Accelerate energy efficiency, emission reductions and enhanced resilience in CRD buildings and infrastructure. Support and encourage the same for all buildings and infrastructure across the region.

Overall Action Status

Opportunity for Improvement

Status	Action	Update
Progress on Actions		
	4-1 Develop and implement a corporate Green Building Policy	• Finalized and implemented the Corporate Green Building Policy.
	4-2 Develop and implement a Strategic Energy Management Plan	• Completed an energy management assessment in conjunction with 16 stakeholders from various services in the CRD and BC Hydro, which will inform the updated corporate Strategic Energy Management Plan.
	4-3 Conduct energy studies for CRD facilities to identify priority emission reduction and energy efficiency projects	• Supported by a Federation of Canadian Municipalities (FCM) grant, completed ASHRAE Level 1 energy audits and a preliminary net-zero energy pathway feasibility study, which included a business case for renewable power, for SEAPARC Leisure Complex, Panorama Recreation Centre and Rainbow Road Recreation and began additional detailed studies. A portion of Local Government Climate Action Program (LGCAP) funds were allocated to support work for Panorama Recreation Centre ($79,496). • Accessed BC Hydro funding to initiate an energy study for the Saanich Peninsula Wastewater Treatment Plant, to be completed in 2024. As part of this study, the business case for on-site renewable power generation is being examined. • Completed replacement of two heat pumps at Rainbow Recreation Centre, with commissioning of both units continuing into 2024. A portion of LGCAP funds were allocated to support this work ($10,000).
	4-4 Complete identified high impact retrofits to CRD facilities	• Completed options analysis for the electrification of the CRD Headquarters HVAC system. Costing results have delayed implementation and staff are currently investigating funding models. • Assessed building optimization opportunities at CRD Headquarters and implemented changes to reduce energy use and emissions. • Engaged an engineering consultant to begin a conceptual design for a heat recovery system and detailed design of a low-temperature electric dehumidifier for Panorama Recreation Centre.
	4-5 Pursue climate-friendly development and retrofits for CHRC and CRHD facilities	• Embedded energy reductions into the design phase on new construction projects, wherever possible. All new development projects follow Building and Energy Performance targets set by the BC Housing Design Guidelines and Construction Standards. • Continued efforts to secure grant funding to support energy and GHG savings in housing facilities. • Pursued FCM Sustainable Affordable Housing Grants for three projects in the design stage. Projects pursuing FCM funding are targeting Step Code 4, with additional energy requirements, and will demonstrate Net Zero Ready performance through a renewable energy study (performance targets are contingent on funding). • Continued to follow the Hospital District 10-year capital plan, which provides major and minor capital resources to Island Health and facilities following Island Health energy guidelines.
	4-6 Consider climate impacts in risk assessments and infrastructure upgrades	• Continued to consider climate change impacts as part of the design criteria for water supply and wastewater systems. • Developed a spatial risk-based drainage structure replacement matrix for the primary water supply catchment area to identify structures that are undersized in relation to projected climate impacts. • Undertook initiatives to better assess and understand climate change impacts relating to ecosystem health and water supply in the GVWSA. See actions 5-2 and 5-3.
	4-7 Implement a Regional Energy Retrofit Program	• Implemented the Home Energy Navigator program, which saw nearly 700 registrants, providing approximately 500 home consultations, and supported an estimated 125-150 heat pump retrofits in the region. • Undertook two major marketing campaigns, organized multiple social media campaigns and attended eight community events (including two Victoria Home Shows) in support of recruitment. • Continued to determine how to scale up the program and expand program uptake in the region. • Supported expansion of the program to the Regional District of Nanaimo and the City of Vancouver in 2023. • More than 3,000 heat pumps were installed in the region in 2023.

	Status	Action	Update
		4-8 Develop, deliver and support building-related energy, emissions and water education	· See action 4-7. · Continued supporting the BC Sustainable Energy Association to deliver Cool it! climate action workshops for students in the region, delivering 73 workshops (33 funded by the CRD and 40 additional workshops funded by municipalities). · Continued to promote BC's home heating fuel-switching rebate program with municipal partners, including hosting a Group Purchase Rebate code for the region, and co-hosting community workshops and webinars. · Partnered with staff from CRD Parks, Environmental Protection, and Environmental Resource Management to deliver public outreach events, as well as a Professional Development Day for teachers. · Began updating the Climate Action To Go Kits, available through the region's libraries, and investigated developing thermal imaging kits. · Allocated Local Government Climate Action Program funds ($10,000) to award a contract to Transition Salt Spring to administer and promote the Southern Gulf Island Rainwater Harvesting Rebate Program, approving 25 rain barrels, with an additional six in the pre-approval stage and enabling the storage of 45,782 US gallons of rainwater.
		4-9 Support acceleration of regional building energy benchmarking and local government regulation approaches	· Continued participation in the Building Benchmark BC program, including five corporate buildings. · Coordinated and supported consultations with the District of Saanich and the City of Victoria towards creating mandatory energy and carbon emission reporting requirements for existing large Part 3 buildings; engaged municipalities about the opportunity. · Participated in the Benchmarking Peer Leadership Group and shared information with partners clarifying local government authority related to building energy and carbon emissions reporting.
		4-10 Coordinate high-performance building policy support and capacity-building activities	· Continued to participate in the Step Code Local Government Peer network. · Supported municipalities in their considerations and adoptions of the Zero Carbon Step Code (ZCSC) and the transition to mandatory BC Energy Step Code requirements. · Led the province in being the first regional district to adopt Step 3 of ZCSC, Strong Carbon Performance, in electoral areas. · Participated in provincial engagement sessions related to forthcoming Highest Efficiency Equipment Standards.
		4-11 Collect and share data and research on building energy use and emissions	· See action 2-4. · Utilized the Inter-municipal Climate Action Working Group to share knowledge about regional best practices on embodied carbon.
		4-12 Promote green infrastructure and improved stormwater management approaches	· Hosted a local government workshop on green stormwater infrastructure (GSI) guidelines. · Hosted a series of Rural Stormwater Management workshops for the agricultural community. · Promoted GSI guidelines through the Inter-municipal Watershed Management Group. · Delivered workshops for residential raingarden installation for homeowners. · Continued to coordinate the Gorge Waterway Initiative.
		4-13 Understand climate impacts on groundwater resources in Juan de Fuca Electoral Area	· Initiated planning for potential groundwater study of Aquifer 606.
		4-14 Investigate regional renewable energy and storage potential	· Future action.

Additional Action Plan Indicators		Regional Climate Progress Indicators and Trends	
Annual CRD corporate facilities GHG Emissions	• 1,552 t CO2e (8.7% decrease compared to 2022)	**Regional Energy Retrofit Program implementation**	• 700 participants registered as of December 2023
Number of critical emissions reduction projects completed	• 0*	**Annual FortisBC natural gas consumption numbers**	• 7,409,355 (2022) (3% increase compared to 2021)
Number of site energy audits completed	• 11 (increase of 3 since 2022)	**Annual FortisBC natural gas connections**	• 60,260 (2022) (2% increase compared to 2021)
		Regional GHG emissions from buildings	• 619,054 t CO2e (10% decrease compared to 2020)

**Studies have been undertaken that will direct capital projects in coming years.*

Resilient and Abundant Nature, Ecosystems and Food Systems

Goal 5: Protect, conserve and manage ecosystem health and nature's capacity to store carbon and adapt to climate change. Support the ongoing ability of natural systems to sustain life.

Overall Action Status

Opportunity for Improvement

Status	Action	Update
Progress on Actions		
!	**5-1 Integrate climate considerations into regional parks strategic and management planning**	• Finalized the Regional Parks and Trails Strategic Plan 2022-2032 after more fulsome engagement with First Nations. Climate action and resiliency was identified as one of the five strategic goals and five priorities and 24 actions were identified to support climate action in regional parks and trails. • Initiated a park management planning process and policy review, which includes investigating how climate change considerations can be embedded in park management plans. • Continued to develop the Stewardship Plan to guide management and acquisition decisions that build resiliency in regional parks and trails, under a changing climate. • Progressed updates to the Regional Parks Land Acquisition Strategy, which provides direction on the selection of land for regional park purposes that reflect the values identified in the Strategic Plan, including climate considerations. • Collaborated with Scia'new First Nation and T'Sou-ke First Nation on the protection of culturally significant sites. • Collaborated with T'Sou-ke First Nation on ecological restoration planning for Ayum Creek Regional Park, in partnership with the Land Conservancy. • Continued to work cooperatively with the W̱SÁNEĆ Leadership Council and its designates on the development of the Mount Work Regional Park Management Plan. • Awarded the BC Recreation and Parks Association (BCRPA) Program Excellence Award for the Exploring Indigenous Perspectives Program.
▶▶	**5-2 Monitor ecosystem health in the Greater Victoria Water Supply Area (GVWSA) and investigate expanding regionally**	• Undertook several initiatives to better assess and understand climate change impacts relating to ecosystem health and water supply in the GVWSA, including: investigating impacts on forest growth, mortality and resilience; vulnerability of the dominant tree species to outbreaks of a bark beetle; forest fuel hazard and wildfire probability, behaviour and spread, and burn severity. • Continued work on a risk mitigation strategy to reduce the potential impacts on water quality from areas burned by a wildfire. • Began update of the Terrestrial Ecosystem Mapping, which will be an essential information source for assessing the effects of climate change on ecosystems in the GVWSA. • Utilized updated LiDAR data to develop an enhanced forest inventory that quantifies the height, density and structure of forest in the GVWSA to facilitate analyses and modelling relating to the risk of drought stress and wildfire in a changing climate. • Expanded and upgraded the watershed hydrology monitoring system to improve understanding of how climate change could affect the amount and timing of rainfall, soil moisture, stream flows and water quality. These data will also be used to develop a water supply reservoir inflow model that can be used to assess climate change projections on water supply. • Completed annual overview flights to monitor forest health, which have been ongoing since 2007.
!	**5-3 Undertake climate adaptation initiatives to increase the resilience of the GVWSA**	• Developed shaded fuel-break corridors at strategic locations near the boundaries of the GVWSA to use as staging areas for wildfire suppression. Several approaches for managing woody debris have been implemented and compared, including the use of an air curtain burner. • Trialed within-stand treatments with thinning of 40 to 60-year-old planted douglas fir stands to reduce the distribution of biomass and forest fuel that would otherwise occur through natural thinning processes and increasing drought conditions. • Planned prescribed burn trial area in the Leech Water Supply Area, when conditions allow.
!	**5-4 Provide regional and local ecological data to support planning and policy efforts**	• Advanced efforts to implement a proposed Biodiversity Service Establishment Bylaw, which received 1st, 2nd and 3rd reading. • Compiled existing datasets from the Province and initiated preliminary discussions with some municipal staff regarding collaboration. • Provided various regional and local ecological data sets to support planning and policy efforts, including the launch of intertidal and subtidal inventories of the core area harbours, land cover information, and coastal storm and sea level data. • Worked to enable easier download and improve public accessibility to land cover classification data. • Continued to support efforts to monitor stream flows in the region. Engaged a contractor to obtain high flow data to improve flow discharge curves. • Participated in the provincial Local Government Biodiversity Forum and provided input on the draft Provincial Biodiversity Framework.
▶▶	**5-5 Coordinate regional invasive species program**	• Fostered ongoing regional collaboration and information sharing through the Capital Region Invasive Species Partnership, which is chaired and coordinated by the CRD. • Organized several species-specific training workshops to share best management and removal practices for priority invasive species throughout the region and build local government and First Nation capacity to manage these species. • Implemented public awareness and outreach campaigns regarding priority invasive species in the region. • Contributed to the development of standard operating procedures for the mobile incineration unit. • Managed the shared invasive species treatment and monitoring contractor and liaised with municipal partners to remove high-priority invasive plants in the region.

	Status	Action	Update
		5-6 Support regional forest and urban tree programs	• Updated regional watershed land cover maps showing tree canopy and impervious cover change over time. • Hosted regional discussions and initiated planning in preparation for submitting a regional application to the Two Billion Trees (2BT) program with local governments, school districts and First Nation partners.
		5-7 Support Indigenous-led monitoring and restoration programs	• Discussion about Guardian Programs with multiple First Nations are ongoing through engagement on Phase 1 of the Regional Parks Land Acquisition Strategy. • Involved First Nations' cultural workers, Guardians and archaeologists in projects to monitor and help mitigate impacts on culturally significant areas during land altering works. • Consulted with Songhees Nation on the proposed routing for daylighting Bowker Creek to ensure the protection of significant cultural sites. Requested input into Bowker Creek Blueprint. • Engaged T'Sou-ke, Tsawout and Songhees Nations marine and Guardian staff in egg addling and moult surveys as part of the new Regional Goose Management Service. • Continued to work with Pauquachin First Nation to assess water quality in and around Coles Bay, including participating in a collaborative project with the University of Victoria to develop on-reserve in-community water quality monitoring capacity. • Assisted Tsawout First Nation after they experienced a sewage spill into Tetayut Creek. • Partnered with W̱SÁNEĆ Leadership Council and Raincoast Conservation Society on the Healthy Waters Initiative, which includes a role for W̱SÁNEĆ Guardians. • Engaged some First Nations to offer support regarding fats, oils, grease and obstructive waste in sewer systems. • Worked with T'Sou-ke Nation on a potential knotweed management program for the Sooke and Charter Rivers, as this species is predicted to expand with changing climate conditions.
		5-8 Support local food and agriculture planning and programs	• Progressed work to support a Regional Foodlands Trust. Obtained initial support from the CRD Board and drafted the service bylaw for future consideration. • Obtained permission for the use of Bear Hill from Regional Parks and initiated a process to identify potential site operators. • Continued engagement with the agricultural community.
		5-9 Integrate climate impacts and solutions into environmental education and outreach campaigns	• Continued to embed climate adaptation messaging in environmental public outreach campaigns and residential educational materials, including the integrated residential outreach program Live Green, Waterwise Summer campaigns, watershed outreach programs and regional park interpretive programs. • Offered Climate Resilient Gardening, Lawn to Meadows, Healthy Soils, Rainwater Harvesting, and Backyard Biodiversity workshops as part of the Live Green Healthy Landscapes workshop series. • Hosted and promoted regional participation in the Canada-wide Nature in the City challenge supporting biodiversity awareness. • Promoted stewardship stories from noted local stewards in the region during "Make a Difference" week. • Supported the One Planet Student Challenge, a regional art contest focused on sustainability solutions, in partnership with the District of Saanich, City of Victoria and nonprofit, OneEarth Living. 124 students from nine schools participated in 2023. A celebration event was held for finalists, and their art was displayed at CRD Headquarters for one month.

Additional Action Plan Indicators		Regional Climate Progress Indicators and Trends	
Hectares of regional park land	• 13,350 ha (an additional 21.28 ha was acquired in 2023)	**Percentage of Sea-to-Sea Green/Blue Belt acquired***	• This indicator has been replaced in the Regional Growth Strategy Indicator Report by Total Regional Park land acquired
Number of volunteer stewardship hours	• 6,209 hours by 703 volunteers	**Hectares of farmland in the Growth Management Planning Area**	• This indicator has been replaced in the Regional Growth Strategy Indicator Report with Farm operating revenues in the Growth Management Planning Area due to census data being unavailable

Minimized Waste

Goal 6: Waste generation and the resulting emissions are minimized and remaining waste is transformed into a resource. Follow the 5R pollution prevention hierarchy.

Overall Action Status

Opportunity for Improvement

Status	Action	Update
Progress on Actions		
⏩	**6-1 Implement the Solid Waste Management Plan**	• Received approval from the Ministry of Environment & Climate Change Strategy on the Solid Waste Management Plan. • Received Board approval for policy changes that will see more waste diverted from Hartland Landfill, including new material bans, adjusted tipping fee structure, and increased bylaw fines. • Initiated the procurement process for a Material Diversion Transfer Station at Hartland Landfill to collect and process five source-separated waste stream materials for reuse, recycling, or energy recovery and will facilitate the diversion of up to 40,500 tonnes of waste per year. • Developed the Waste Stream Collector Incentive program to encourage Hartland account customers to divert recyclables. Continued developing programming to increase waste diversion based on the results from CRD's 2022 Solid Waste Stream Composition Study. • Implemented the Multi-family Dwelling Waste Diversion Project, which promoted standardized education on proper recycling procedures for 50 participating buildings (2,499 units) across eight municipalities within the region. • Continued to enforce landfill bans on yard and garden material and food waste; collected 12,833 tonnes of source-separated organic material at the Hartland Depot for processing off-site. • Continued with onsite beneficial use opportunities, with 5,100 tonnes of select waste material streams processed and utilized on site in place of virgin material, as per provincial guidelines.
⏩	**6-2 Develop and deliver education programs to promote a circular economy, zero waste and the 3 Rs**	• Continued to provide funding under the Rethink Waste Community Grant, supporting 22 projects with approximately $60,000 in funds. • Continued to distribute the Rethink Waste Newsletter. • Produced and promoted four videos on Rethink Waste Community Grant recipients, to highlight how individuals and organizations are coming together to reduce waste. • Responded to 19,597 Infoline inquiries via phone calls and emails. • Continued participation in the Coast Waste Management Association's Educators & Communicators Working Group. • Continued sponsorship of Ecostar awards. • Refreshed and updated the solid waste web pages, including adding a dedicated education page. • Broadened education resources for people living in multi-family buildings, as well as businesses. • Continued to promote food waste reduction through the Love Food Hate Waste Campaign, which features bus ads, social media, local print and digital media ads. • Continued to deliver education workshops and landfill tours. • Continued to provide funding for the Compost Education Centre to deliver programming. Renewed a two-year contract with the Victoria Compost and Conservation Education Society (CEC) targeting organic diversion and compost education. • Initiated the procurement process to conduct a Market Research and Engagement Study to evaluate the effectiveness of the CRD's waste reduction programming and behaviour change initiatives, which will be conducted once every three years to allow for comparison between years.
!	**6-3 Support education and engagement on waste management to be delivered by and for First Nations communities**	• Continued to have regular meetings with the W̱SÁNEĆ Leadership Council and the Capital Regional District Solid Waste Working Group. • Continued discussions with Pacheedaht First Nation and Port Renfrew on future mutually beneficial long-term waste management for the broader Port Renfrew community.
!	**6-4 Continue to maximize and optimize the capture of landfill gas for beneficial use**	• Produced approximately 7,939 KW/h (7.9 megawatts) of green power from landfill gas, an increase from 1.6 megawatts in 2022.* • Awarded construction contract for a Renewable Natural Gas (RNG) facility at Hartland Landfill, which is expected to result in GHG emission reductions of 450,000 tonnes of carbon dioxide over the next 25 years, a 73% improvement from initial projections of 260,000 tonnes in 2019. • Implemented strategies to improve gas collection and mitigate fugitive emissions. • Continued annual installation of landfill gas collection infrastructure. • Initiated work on a jurisdictional scan of municipal solid waste processing technologies, including investigation of incineration with energy recovery, gasification, and pyrolysis thermal processing systems.
!	**6-5 Consider climate change impacts in liquid waste management**	• Continued development of the renewed Core Area Liquid Waste Management Plan and Saanich Peninsula Liquid Waste Management Plan. Staff are working to engage First Nations and integrate climate change considerations into the plan updates.

Regional Climate Progress Indicators and Trends	
CRD's per capita disposal rate	• 406 kg/per capita (1% decrease compared to 2022)
Landfill Gas collection efficiency*	• Achieved a 74% gas collection efficiency based on UBCi model (78% in 2022)

**Please refer to the Solid Waste Management Plan Progress Reports for additional information.*



Capital Regional District

625 Fisgard Street
Victoria, BC V8W 2S6
250.360.3000

www.crd.bc.ca
Twitter: @crd_bc
Facebook: Capital Regional District



2023 Climate Action Progress Report

Presented to CRD Environmental Services Committee

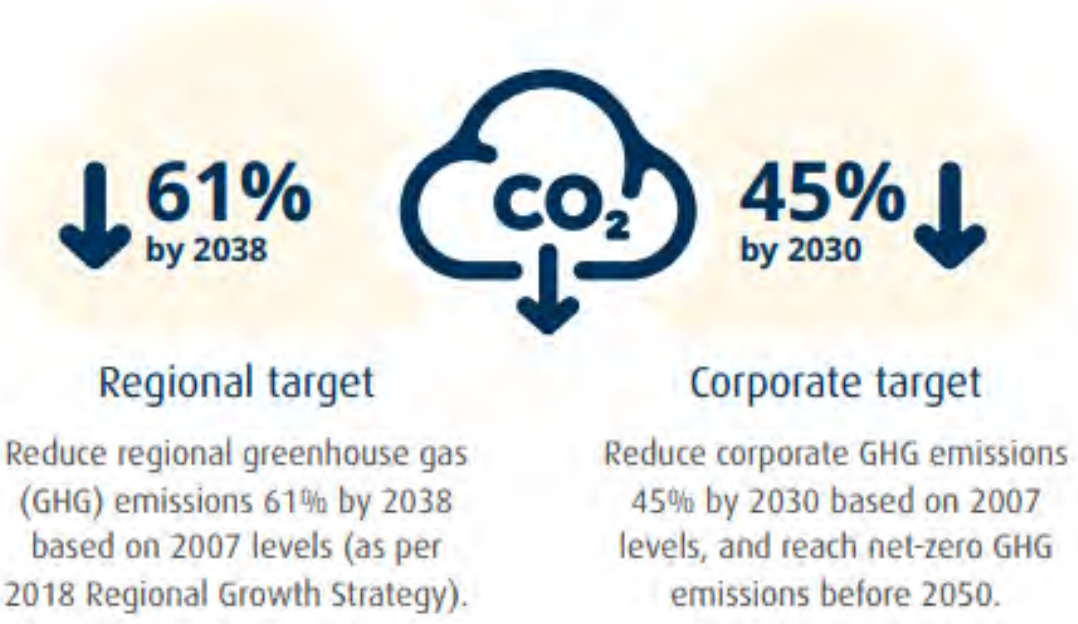
April 17, 2024

Agenda

1. Climate Action Strategy
2. Current Status
3. Progress Summary
4. Report Card
5. Looking ahead

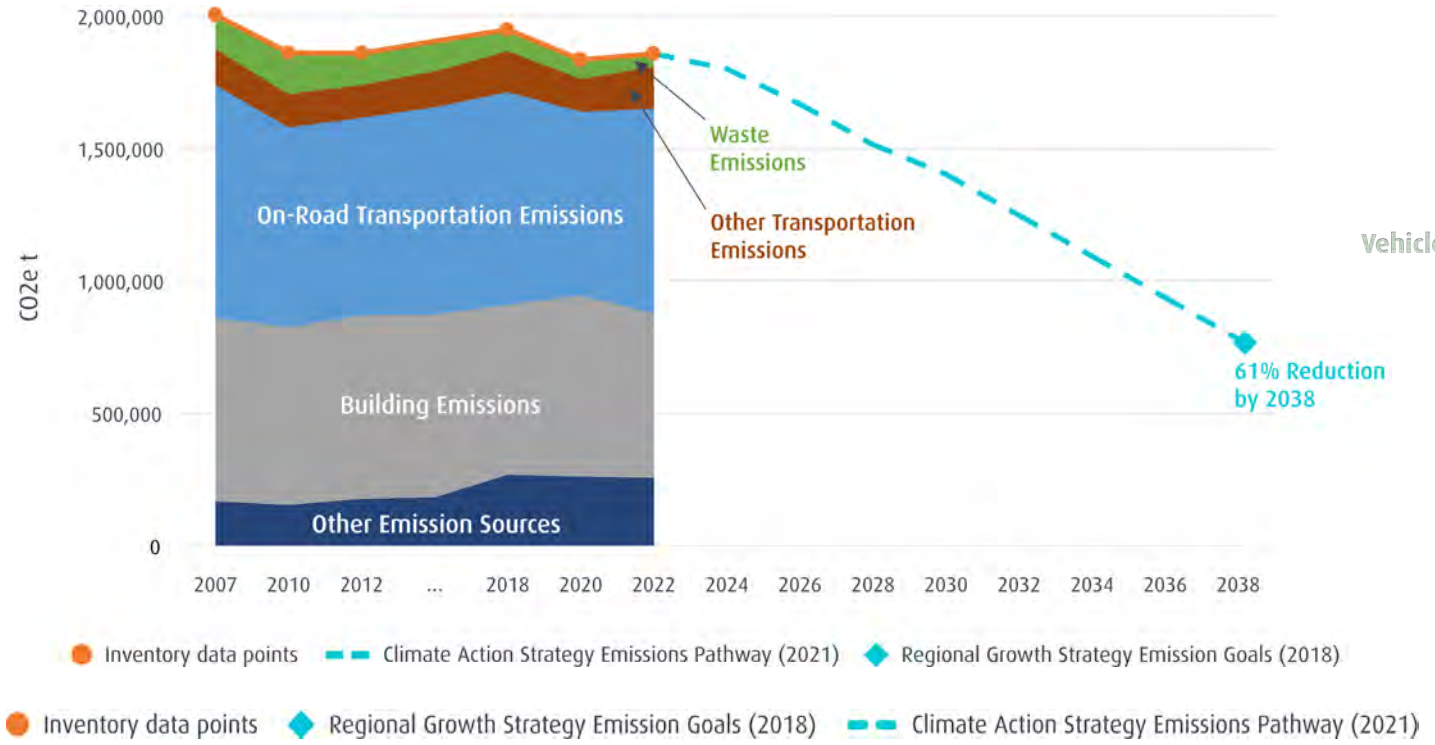


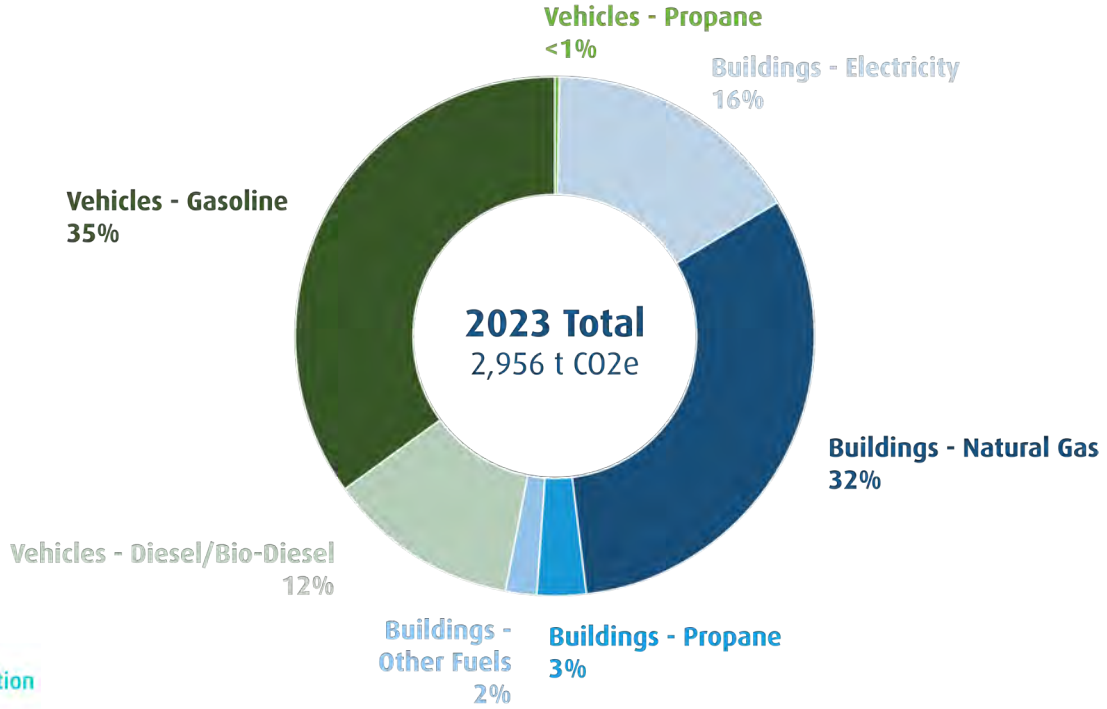
Climate Action Strategy

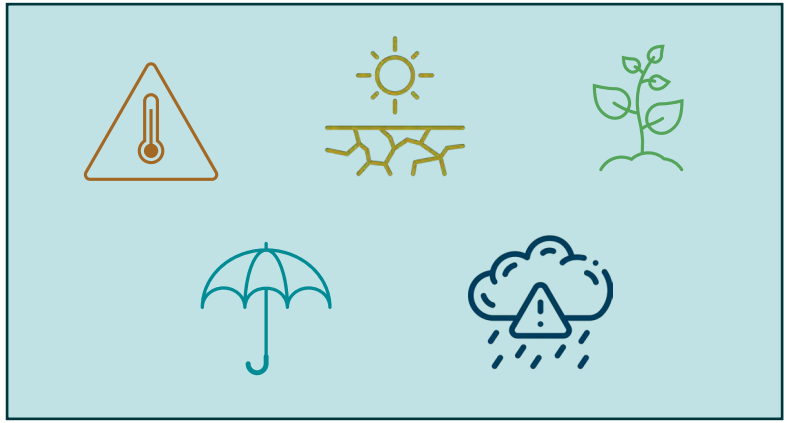


- Climate-focused decision making
- Sustainable land use, planning and preparedness
- Low-carbon mobility
- Low-carbon and resilient buildings and infrastructure
- Resilient and abundant nature, ecosystems and food systems
- Minimized waste

Current Status







Summary Report Card

2023 Overall Action Plan Progress
On Track

The climate action strategy identifies 127 actions with specific timelines across the organization. Scores are based on the current status of each action within their goal areas.

Corporate Actions Opportunity for Improvement

Community-Focused Actions On Track

Goal Areas:

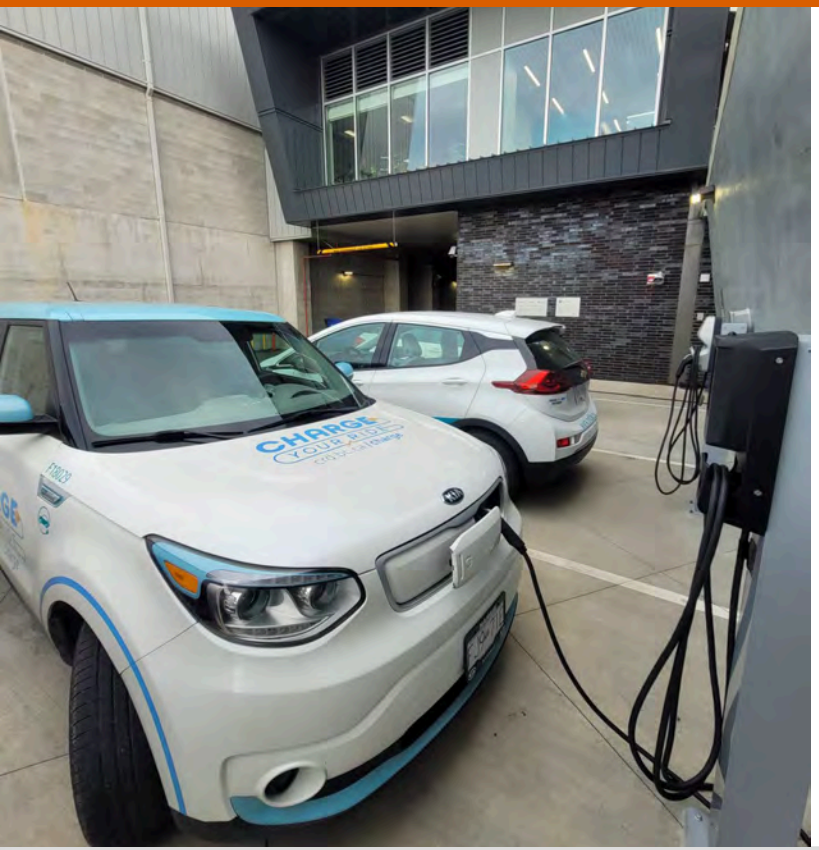
- **Goal 1:** Climate-Focused Decision Making
- **Goal 2:** Sustainable Land Use, Planning and Preparedness
- **Goal 3:** Low-Carbon Mobility
- **Goal 4:** Low-Carbon and Resilient Buildings and Infrastructure
- **Goal 5:** Resilient and Abundant Nature, Ecosystems and Food Systems
- **Goal 6:** Minimized Waste

Climate-Focused Decision Making

Goal 1: Climate action priorities are integrated at all levels of decision making across the organization.

Overall Action Status:

On Track



Progress Summary

- Approved and implemented a new corporate green building policy
- Adopted an internal carbon price policy ($170 per tonne)
- Complete corporate greenhouse gas inventory (GHG) and improved energy management.
- Developed and provided a variety of staff training sessions
- Maintained Climate Action Reserve Fund to support several corporate climate initiatives
- Attended the 2023 Cultural Heritage Climate Change Workshop where Indigenous perspectives on heritage conservation were shared

Sustainable Land Use, Planning and Preparedness

Goal 2: Support the region on its pathway to livable, affordable and low-carbon communities that are prepared for climate change.

Overall Action Status:

On Track



Progress Summary

- Undertook the Capital Region Extreme Heat Information Portal project
- Partnered with the University of Victoria to research health impacts of extreme heat using an equity lens.
- Completed Electoral Area Community Wildfire Resiliency Plans and shared with residents
- Completed the 2022 Regional GHG Inventory Study
- Successfully applied for the UBCM Complete Communities grant to initiate a Growth and Mobility Study.
- Hosted an inter-municipal workshop on carbon budgeting
- Continued to facilitate and administer several inter-municipal networks that serve to coordinate climate action and disseminate resources

Low Carbon Mobility

Goal 3: Rapidly reduce corporate fleet emissions. Support, endorse and encourage active, public and zero-emission transportation options across the region.

Overall Action Status:

On Track



Progress Summary

- Continued implementation of the corporate Green Fleet Policy
- Installed 54 EV chargers at 13 CRD sites
- Developed public EV charger installation guidelines
- Updated the Regional Cycling Network framework and developed a planning tool to support a consistent cycling network across jurisdictions
- Administered the Origin Destination Household Travel Survey
- Accelerated the Regional Trails Widening and Lighting Project
- Completed repairs to Regional Parks Selkirk Trestle and Phase 4 of the E&N Rail Trail
- Completed Salt Spring Island Active Transportation Plan
- Supported the connection of downtown to the Westshore through RapidBus delivery and the Ministry of Transportation and Infrastructure to improve transit service in suburban and rural areas

Low-Carbon and Resilient Buildings and Infrastructure

Goal 4: Accelerate energy efficiency, emission reductions and enhanced resilience in CRD buildings and infrastructure. Support and encourage the same for all buildings and infrastructure across the region.

Overall Action Status:
Opportunity for Improvement



Progress Summary

- Finalized and began implementation of the Corporate Green Building policy
- Completed energy audits and net-zero energy pathway feasibility studies at the CRD's three recreation centres
- Registered nearly 700 residents with the Home Energy Navigator and supported ~125-150 heat pump retrofits
- Supported and engaged municipalities on Zero Carbon Step Code (ZCSC) and energy and carbon emission reporting requirements for large buildings
- Became the first regional district in BC to adopt Step 3 of ZCSC in electoral areas
- Supported climate leadership training workshops for students through the BC Sustainable Energy Association
- Promoted green stormwater management to local governments and residents via workshops

Resilient and Abundant Nature, Ecosystems and Food Systems

Goal 5: Protect, conserve and manage ecosystem health and nature's capacity to store carbon and adapt to climate change. Support the ongoing ability of natural systems to sustain life.

Overall Action Status:
Opportunity for Improvement



Progress Summary

- Finalized the Regional Parks and Trails Strategic Plan 2022-2032 after more fulsome engagement with First Nations
- Progressed updates to the Regional Parks Land Acquisition Strategy
- Advanced several initiatives to assess climate change impacts on ecosystem health and water supply in the GVWSA
- Provided various regional and local ecological data sets to support planning and policy efforts
- Continued to support efforts to monitor stream flows in the region
- Continued to coordinate the Capital Region Invasive Species Partnership
- Advanced work on a proposed Regional Foodlands Trust, obtaining initial support from the Board
- Continued to collaborate with First Nations on park management planning, the protection of culturally significant sites and ecological restoration planning

Minimized Waste

Goal 6: Waste generation and the resulting emissions are minimized and remaining waste is transformed into a resource. Follow the 5R pollution prevention hierarchy.

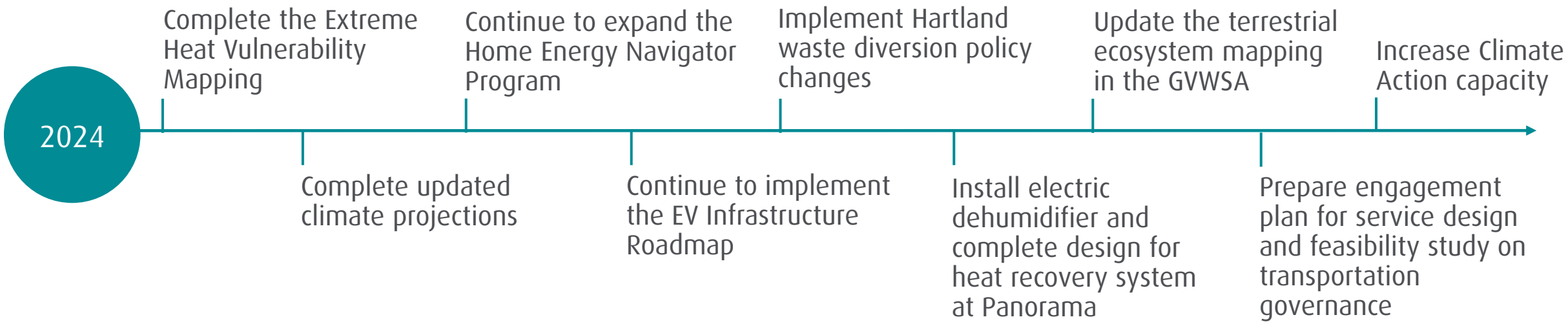
Overall Action Status:
Opportunity for Improvement



Progress Summary

- Received approval from the Ministry of Environment & Climate Change Strategy on the Solid Waste Management Plan
- Received Board approval for policy changes to increase waste diversion
- Initiated procurement for a Material Diversion Transfer Station, which will facilitate the diversion of up to 40,500 tonnes of waste per year
- Implemented the Multi-family Dwelling Waste Diversion Project, which promoted recycling education to 50 buildings
- Advanced several education programs
- Supported 22 projects with approximately $60,000 in funds through the Rethink Waste Community Grant
- Initiated a jurisdictional scan of municipal solid waste processing technologies, including investigating incineration with energy recovery
- Produced approximately 7.9 megawatts of green power from landfill gas, an increase from 1.6 megawatts in 2022

Looking Ahead – 2024 Initiatives





Thank you

nelliott@crd.bc.ca | 250.360.3048

@crdvictoria

Capital Regional District

CRDVictoria

crd.bc.ca

Making a difference...together

EEP 24-22

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, APRIL 17, 2024

SUBJECT **Biosolids Literature Review – Update**

ISSUE SUMMARY

To provide the Environmental Services Committee with an update on the proposal for an independent academic review of the risks and benefits of biosolids land application.

BACKGROUND

At the August 9, 2023 Capital Regional District (CRD) Board meeting, staff were directed to *report back with a proposal that CRD Environment Service fund University of Victoria or other suitable independent academic institution to prepare a review: a) of available literature, to determine whether there are validated examples and/or peer reviewed papers assessing the risks and benefits of the application of biosolids on environmental and human health, and b) based on this and on The Precautionary Principle, whether CRD may have a legal liability for such application.*

At the October 18, 2023 Environmental Services Committee meeting, staff presented a proposal for an academic institution to conduct a literature review. At that time, the provincial government's Technical Working Group (TWG) was expected to issue a report on its review of the *Organic Matter Recycling Regulation* in late 2023. Given the upcoming report, the committee passed the following motion: *That the committee postpone discussion on this item until the January 2024 committee meeting.* Staff have been receiving semi-regular status updates from the TWG Secretariat and other provincial staff.

The TWG consists of academics, consulting practitioners, and representatives from federal, various provincial and local governments. The TWG is effectively undertaking the same literature review exercise that the CRD Board requested. The final TWG meeting was held at the end of September 2023 and a summary report of its findings and recommendations was initially expected by the end of November 2023 at the earliest. At the February 14, 2024 CRD Board meeting, staff reported that the TWG report was delayed "to the end of Q1 2024."

At the March 13, 2024 Board meeting, staff reported that the report had been delayed again until Q2 2024. Staff were then directed to reinitiate the process of authorizing the literature review by the following motion: *Given delays to provincial reporting on Organic Matter Recycling Regulation, and the Board's previous direction to initiate an academic analysis, that the Board direct staff to move forward with a third-party academic review of the scientific literature on the uses and impacts of biosolids.*

Staff have reconfirmed the interest of only one of the three independent academic institutions initially willing to undertake the literature review, which is the Toronto Metropolitan University (TMU) Department of Chemistry and Biology, led by Dr. Lynda McCarthy. The intended lead author from University of Victoria Department of Engineering and Computer Science (civil engineering) has since gone on leave and the author from The University of Washington College of the Environment has not yet responded. The TMU team has a confirmed lead author who will rely on support from various co-authors.

Any literature review is expected to take at least two to three months to organize and complete. The review would be guided by the Terms of Reference (Appendix A).

ALTERNATIVES

Alternative 1
The Environmental Services Committee recommends to the CRD Board:
That staff be directed to proceed with an academic review of the risks and benefits of biosolids land application with the team from Toronto Metropolitan University, with a budget not to exceed $40,000.

Alternative 2
The Environmental Services Committee recommends to the CRD Board:
That an academic review of the risks and benefits of biosolids land application be reconsidered after the provincial technical working group has completed its review of Organic Matter Recycling Regulation and released its report.

IMPLICATIONS

Financial Implications

Costs for the proposed biosolids literature review will be approximately $40,000 and can be covered by existing Core Area wastewater and biosolids budgets.

CONCLUSION

The CRD Board directed staff to reinitiate consideration of an additional literature review of biosolids land application, given the recent delays in reports supporting the current BC Organic Matter Recycling Regulation review. Staff have reconfirmed that a knowledgeable, independent academic institution is available to complete this review. The review is expected to take at least three months to administer and complete.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:
That staff be directed to proceed with an academic review of the risks and benefits of biosolids land application with the team from Toronto Metropolitan University, with a budget not to exceed $40,000.

Submitted by:	Glenn Harris, Ph.D., R.P. Bio., Senior Manager, Environmental Protection
Concurrence:	Larisa Hutcheson, P. Eng., Acting General Manager, Parks & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: Biosolids Literature Review – Terms of Reference

APPENDIX A

BIOSOLIDS LITERATURE REVIEW

TERMS OF REFERENCE

April 2024

BACKGROUND

In 2011, the Capital Regional District (CRD) Board passed a resolution to ban the land application of biosolids from CRD facilities primarily due to concerns about the potential human and environmental risks of contaminants therein. This ban ended a small CRD program that distributed lime-stabilized Class A biosolids (as defined under the BC Organic Matter Recycling Regulations [OMRR]) from a sub-regional wastewater treatment plant to the general public and local landscaping businesses. In 2020, the CRD commissioned a new wastewater treatment plant that substantially increased the volume of Class A biosolids produced annually to approximately 3,600 tonnes. Biosolids management options were subsequently introduced.

As per BC Ministry of Environment and Climate Change Strategy (ENV) expectations, Canadian Council of Ministers of the Environment guidance, and CRD commitments under its Core Area Liquid Waste Management Plan, the CRD is required to beneficially use all biosolids output. In BC, biosolids land application is regulated under OMRR. A long-term biosolids management plan is currently under development and is due to ENV by June 2024.

Currently, CRD Class A biosolids are being managed under a short-term biosolids management plan (2020-2025), with the primary beneficial use options being incineration as an alternative fuel in a cement manufacturing plant in Richmond, BC, and integration with landfill cover systems as contingencies. When neither of these options are available, landfilling biosolids at the regional landfill has been the only alternative. However, in 2023, given significant operational and logistical challenges with the short-term options, the CRD Board amended its position to allow for limited non-agricultural land application of biosolids as a contingency option. The CRD has secured the use of biosolids for industrial land reclamation at a quarry near Cassidy, BC. CRD staff continue to seek additional short-term beneficial use contingency options that meet Board limits, in order to limit or avoid landfilling of biosolids when the other options are not available.

As part of development of the CRD's long-term biosolids management plan, the CRD has external technical advice that recommends that land application be included in a portfolio of options to ensure program redundancy and resiliency. Land application is typically the most reliable and cost-effective beneficial use option. However, there continue to be concerns raised about the potential human health and environmental risks associated with biosolids land application.

In response to these concerns, raised both in the CRD and elsewhere in the province and around the world, ENV convened a technical working group to review the OMRR to ensure it remains protective of human health and the environment. A summary report is expected in Q2 2024. In the meantime, the CRD Board is seeking its own independent literature review on the risks and benefits of biosolids land application.

PURPOSE

The purpose of the literature review is to provide the Board and general public a summary of the human health and environmental risks, and benefits of the land application of CRD Class A biosolids.

AUTHOR(S) QUALIFICATIONS

The author(s) undertaking the literature review must include at least one tenured faculty member from an independent academic institution(s) with expertise and experience in assessing human health and environmental risk, knowledge of biosolids land application practices, and an understanding of contaminant fate and impact. Additional co-authors with relevant expertise can be included if a team approach is taken.

SCOPE

The literature review must:

- Build on previous literature reviews through a comprehensive scan of up-to-date primary scientific literature and other relevant studies.
- Consider environmental conditions typical of BC's south coastal region.
- Assess the human health and environmental risks of legacy contaminants, and those of emerging concern, that are potentially found in biosolids.
- Summarize contaminant concentrations in biosolids relative to levels of exposure in general society.
- Discuss the limitations of extrapolating lab-based toxicity testing to observations in the environment.
- Summarize areas of uncertainty in biosolids land application risk, including a summary of relevant techniques for evaluating and addressing uncertainty.
- Summarize biosolids land application techniques that can reduce risk and/or address uncertainty.
- Briefly summarize risks and concerns that have resulted in land application bans elsewhere.
- Briefly summarize risks and benefits of longstanding land application programs elsewhere.
- Assess the overall risks of biosolids land application considering the intent of the Precautionary Principle (Rio Declaration, 1992 and subsequent derivations).

The CRD will provide the author(s) with a summary of the known contaminant concentrations in CRD Class A biosolids and a list of the potential land application opportunities that have been identified as the long-term biosolids management plan is being developed.

The literature review author(s) are not expected to undertake new scientific experiments as part of this project.

DELIVERABLES

The literature review must provide a comprehensive and up-to-date summary of the human health and environmental risks, and benefits, of biosolids land application. It must include an executive summary and/or conclusions section that is understandable by a non-technical general public.

TIMELINE

The literature review must be completed within three months of project commencement.

BUDGET

The literature review will have a maximum budget of $40,000.

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REPORT TO ELECTORAL AREAS COMMITTEE
MEETING OF WEDNESDAY, MAY 08, 2024

SUBJECT **Bylaw No. 4592 to Expand Otter Point Fire Protection and Emergency Response Local Service Area Boundary (Bylaw No. 2042)**

ISSUE SUMMARY

The proposed bylaw amendment expands the Otter Point Fire Protection and Emergency Response Local Fire Service Area boundary to three parcels of land described as Section 41, Otter District as shown on plan deposited under DD 55112I, Lot A Plan EPP103577 District Lot 39 Malahat and Lot B Plan EPP103577 District Lot 39 Malahat.

BACKGROUND

Three properties in the Otter Point area of the Juan de Fuca Electoral Area are currently excluded from the Otter Point Fire Protection and Emergency Response Local Service Area. The property owners have worked with staff to prepare petitions to the Capital Regional District (CRD) to be included in the Otter Point Fire Protection and Emergency Response Service Area boundary. The property boundary amendment would include the land parcels described as Section 41, Otter District as shown on plan deposited under DD 55112I, Lot A Plan EPP103577 District Lot 39 Malahat and Lot B Plan EPP103577 District Lot 39 Malahat.

The portions of the individual parcels and owner's names to be included into fire protection are:

Owner	Property ID	Civic Address
A-3 Holdings	009-497-757	Section 41, Otter District, Plan DD 55112I
Martin and Susan Nagy	Lot A Plan EPP103577 District Lot 39 Malahat	2727 Anderson Road, Otter District, BC V9Z 1G2
Millar and Anisa Montgomery	Lot B Plan EPP103577 District Lot 39 Malahat	Lot B Plan EPP103577 District Lot 39 Malahat

The petition processes concluded on March 22, 2024. The property owners provided unanimous support to the amended service area and results have been certified by the CRD Corporate Officer (Appendix B).

The proposed bylaw amendment ensures the properties receive timely life-safety services and increases the tax base of the service. There are no operational concerns with the addition of the properties. The proposal is supported by staff and the Otter Point Fire Protection and Emergency Response Commission.

ALTERNATIVES

Alternative 1
The Electoral Areas Committee recommends to the Capital Regional District Board:
1. That the attached Certificate of Results of the petitions to expand the service area boundary for the Otter Point Fire Protection and Emergency Response Service be received;

2. That Bylaw No. 4592, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, Amendment Bylaw No. 8, 2024", be read a first, second, and third time; and
3. That elector approval be obtained by Electoral Area Director consent on behalf.

Alternative 2
That this report be referred back to staff for additional information based on Electoral Areas Committee direction.

IMPLICATIONS

Financial Implications
This bylaw is not expected to negatively impact the service requisition.

Service Delivery Implications
No negative impact to service area participants or volunteer firefighters is expected. The level of service provided to the properties would be consistent with the policies and operating guidelines of the Otter Point Fire Department.

Legal Implications
All establishing bylaw amendments require elector approval prior to adoption. As this is a service entirely within the Juan de Fuca Electoral Area, the most cost-effective method to obtain this is by way of Electoral Area Director consent on behalf.

The *Regional District Establishing Bylaw Approval Exemption Regulation,* BC Reg 113/2007, exempts an establishing bylaw amendment only adding three parcels to a service area from the need for Inspector of Municipalities approval before adoption. However, s.135 of the *Community Charter* and s. 228 of the *Local Government Act* require one clear day between third reading and adoption, where assent, consent, or approval is required. As this bylaw requires elector assent, the Board can read it three times then adopt it at a future meeting.

CONCLUSION

The proposed bylaw amendment expands the Otter Point Fire Protection Local Fire Service Area boundary to three parcels of land described as Section 41, Otter District as shown on plan deposited under DD 55112I, Lot A Plan EPP103577 District Lot 39 Malahat and Lot B Plan EPP103577 District Lot 39 Malahat. Staff recommend adoption of the attached local fire protection area service area amendment Bylaw No. 4592 (Appendix C).

RECOMMENDATION

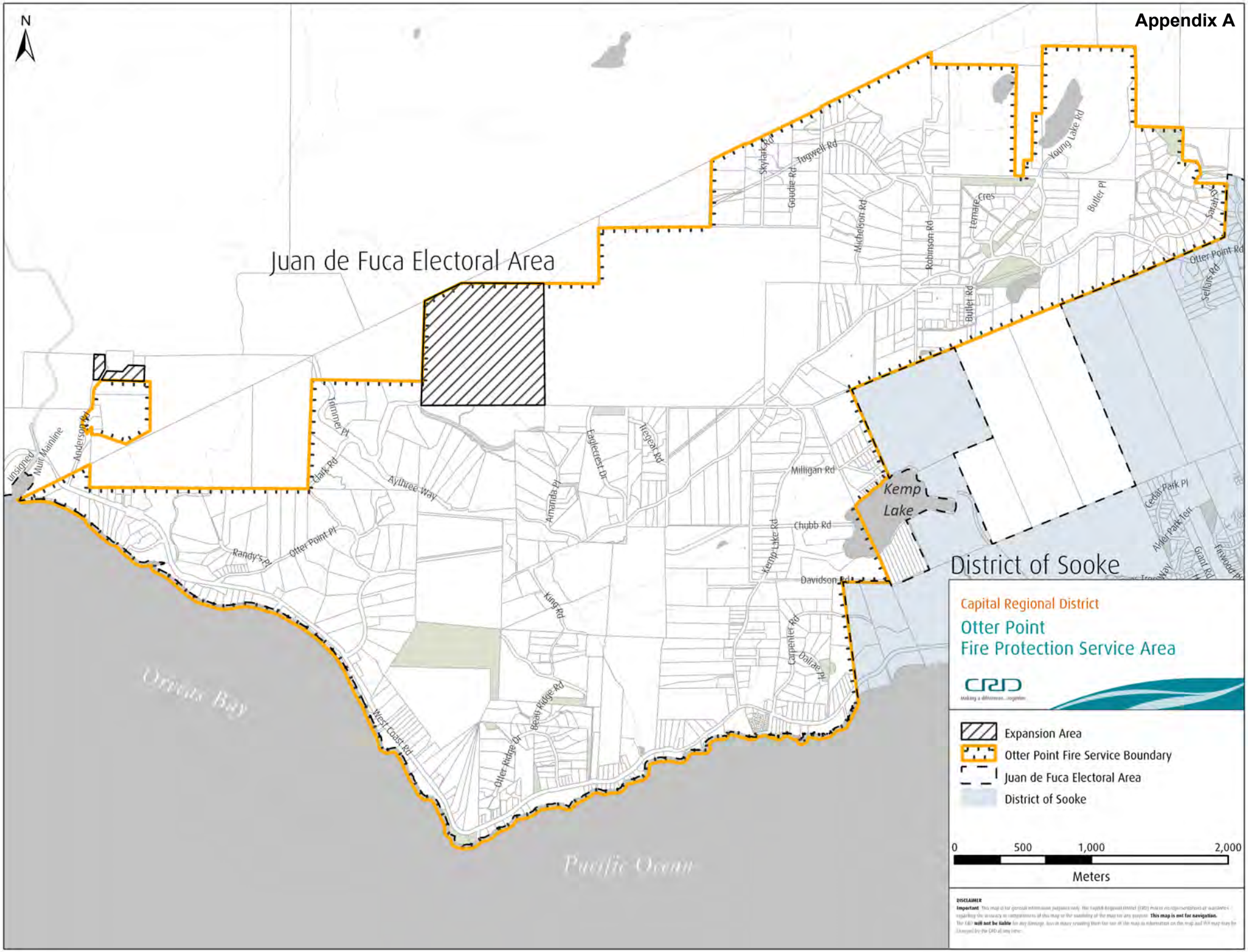
The Electoral Areas Committee recommends to the Capital Regional District Board:
1. That the attached Certificate of Results of the petitions to expand the service area boundary for the Otter Point Fire Protection and Emergency Response Service be received;
2. That Bylaw No. 4592, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, Amendment Bylaw No. 8, 2024", be read a first, second, and third time; and
3. That elector approval be obtained by Electoral Area Director consent on behalf.

Submitted by:	Shawn Carby, CD, MAL, Senior Manager, Protective Services
Concurrence:	Kevin Lorette, P.ENG., MBA., General Manager, Planning & Protective Services
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Map of Proposed Otter Point Fire Protection Local Service Area Amendment
Appendix B: Certificate of Results of the Petitions
Appendix C: Bylaw No. 4592, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, Amendment Bylaw No. 8, 2024"

Appendix A


N
Juan de Fuca Electoral Area
District of Sooke
Kemp Lake
Otter Bay
Pacific Ocean
Capital Regional District
Otter Point
Fire Protection Service Area
Expansion Area
Otter Point Fire Service Boundary
Juan de Fuca Electoral Area
District of Sooke
0
500
1,000
2,000
Meters
DISCLAIMER
Important

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CAPITAL REGIONAL DISTRICT

CERTIFICATION OF RESULTS

THE OTTER POINT FIRE PROTECTION AND EMERGENCY RESPONSE LOCAL SERVICE BOUNDARY - TO INCLUDE THE PARCEL DESCRIBED AS SECTION 41, OTTER DISTRICT AS SHOWN ON PLAN DEPOSITED UNDER DD 55112I

I, Kristen Morley, Corporate Officer for the Capital Regional District, do hereby declare that a petition was signed by 100% of the owners of the parcel described as SECTION 41, OTTER DISTRICT AS SHOWN ON PLAN DEPOSITED UNDER DD 55112I requesting expansion of the service area boundary under Bylaw 2040, *"Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992*".

The requirements for the petition as set out in section 337 of the *Local Government Act* and 212 of the *Community Charter* have been satisfied.

Dated at Victoria, BC
this 18th day of January, 2024.

Kristen Morley
Corporate Officer

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CAPITAL REGIONAL DISTRICT

CERTIFICATION OF RESULTS

THE OTTER POINT FIRE PROTECTION AND EMERGENCY RESPONSE LOCAL SERVICE BOUNDARY - TO INCLUDE THE PARCELS DESCRIBED AS LOT A PLAN EPP103577 DISTRICT LOT 39 MALAHAT & LOT B PLAN EPP103577 DISTRICT LOT 39 MALAHAT

I, Kristen Morley, Corporate Officer for the Capital Regional District, do hereby declare that a petition requesting expansion of the service area boundary under Bylaw 2040, *"Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992"* was signed by 100% of the owners of the following parcels described as:

- **LOT A PLAN EPP103577 DISTRICT LOT 39 MALAHAT;** and
- **LOT B PLAN EPP103577 DISTRICT LOT 39 MALAHAT.**

The requirements for the petition as set out in section 337 of the *Local Government Act* and 212 of the *Community Charter* have been satisfied.

Dated at Victoria, BC
this 22nd day of March, 2024.

Kristen Morley
Corporate Officer

CAPITAL REGIONAL DISTRICT
BYLAW NO. 4592

****

A BYLAW TO AMEND OTTER POINT FIRE PROTECTION AND EMERGENCY RESPONSE LOCAL SERVICE ESTABLISHMENT BYLAW NO. 1, 1992 (BYLAW NO. 2042)

****

WHEREAS:

A. Under Bylaw No. 2042, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992", the Regional Board established a service to provide fire protection service to residents of the Local Service Area (the "Service");

B. By petition under section 337 of the *Local Government Act*, a landowner requests inclusion into the service area;

C. The Electoral Area Director for the Juan de Fuca Electoral Area has consented to the modifications to the establishing bylaw under ss. 347 and 349 of the *Local Government Act*; and

D. The Board wishes to amend Bylaw No. 2042 to ensure fire protection and emergency response in the community;

NOW THEREFORE, the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. Bylaw No. 2042, "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992" is hereby amended by replacing Schedule "A" in its entirety with the attached amended Schedule "A".

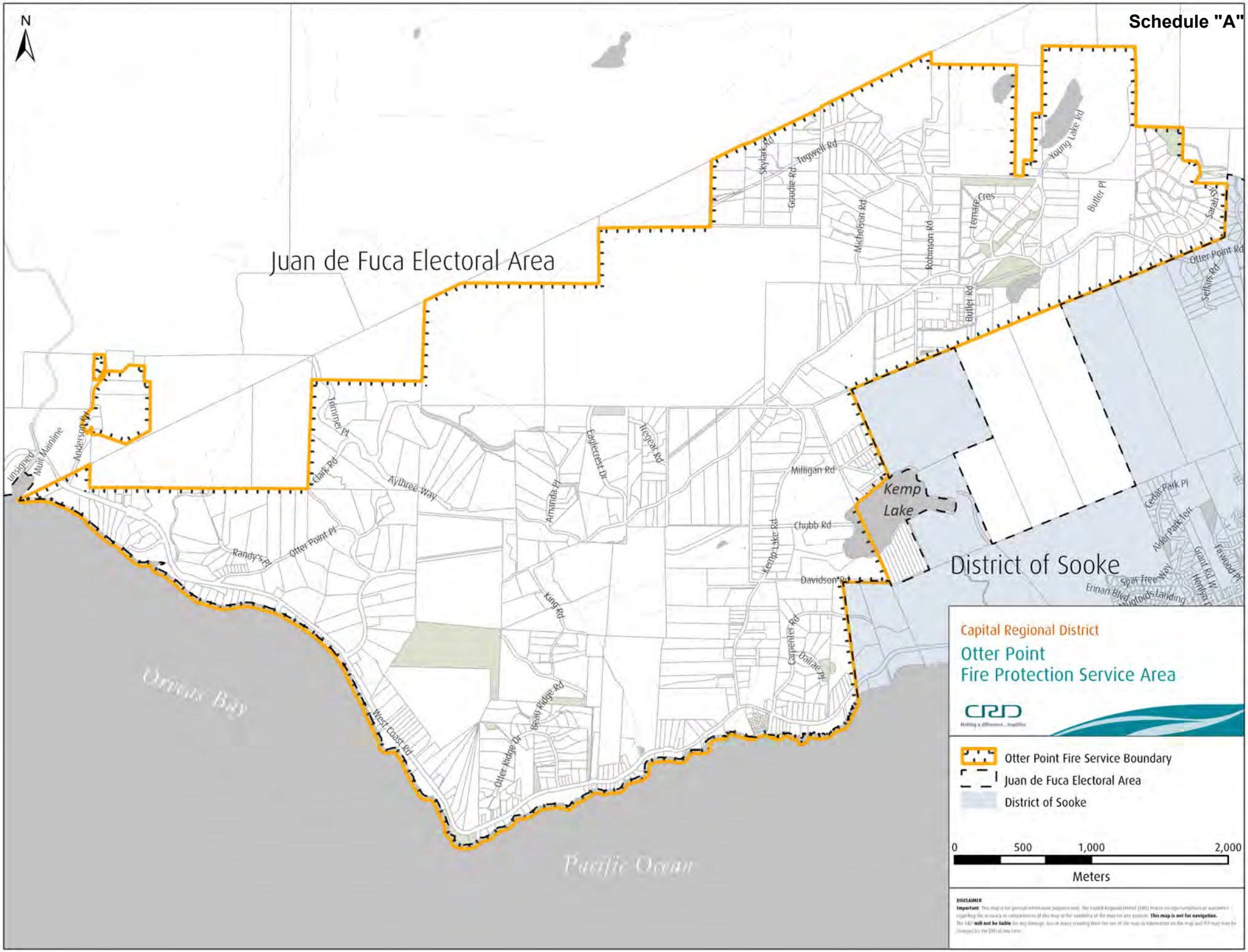
2. This Bylaw may be cited for all purposes as "Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, Amendment Bylaw No. 8, 2024".

READ A FIRST TIME THIS	th	day of	2024
READ A SECOND TIME THIS	th	day of	2024
READ A THIRD TIME THIS	th	day of	2024
APPROVED BY THE ELECTORAL AREA DIRECTOR THIS	th	day of	2024
ADOPTED THIS	th	day of	2024

CHAIR

CORPORATE OFFICER

Schedule "A"


N
Juan de Fuca Electoral Area
District of Sooke
Kemp Lake
Otter Bay
Pacific Ocean
Otter Point Rd
Young Lake Rd
Butler Pl
Butler Rd
Robinson Rd
Michelson Rd
Gaudie Rd
Tugwell Rd
Skylark Rd
Lemaire Cres
Sellars Rd
Sahalin Cres
Cedar Park Pl
Alder Park Terr
Grant Rd W
Fircrest Pl
Spar Tree Way
Erinan Blvd
Hollands Landing
Milligan Rd
Chubb Rd
Davidson Rd
Kemp Lake Rd
Carpenter Rd
Dalrae Pl
King Rd
Bear Ridge Rd
Otter Ridge Dr
West Coast Rd
Eaglecrest Dr
Hegyon Rd
Amanda Pl
Aythree Way
Randy's Pl
Otter Point Pl
Clark Rd
Tammey Pl
Anderson Rd
Muir Mainline
Unsigned
Capital Regional District
Otter Point
Fire Protection Service Area
Otter Point Fire Service Boundary
Juan de Fuca Electoral Area
District of Sooke
0
500
1,000
2,000
Meters
DISCLAIMER
Important

Making a difference...together

REPORT TO ELECTORAL AREAS COMMITTEE
MEETING OF WEDNESDAY, MAY 08, 2024

SUBJECT: **Fire Services Governance Review Report – 2024 - 2027 Implementation Plan and Draft Bylaw No. 4608 to Amend Bylaw No. 3654 for Fire Commissions**

ISSUE SUMMARY

To report to the Electoral Areas Committee with the implementation plan and fire commission bylaw amendment in response to the recommendations in the Fire Services Governance Review report.

BACKGROUND

The current fire service governance structure, challenges with regulatory compliance, and lack of direct oversight has been identified as a serious liability and risk for the Capital Regional District (CRD). On February 10, 2021, the Board directed staff to report back with operational, administrative, and governance strategies to meet and sustain regulatory compliance for fire services in the CRD electoral areas.

In November 2022, the CRD procured contractor Tim Pley & Associates to facilitate a review of roles, responsibilities, and governance models in CRD fire services. Protective Services coordinates 11 CRD Fire Services through delegated authority commissions, contracts with not-for-profit societies, and agreements with neighbouring jurisdictions.

In October 2023, the Fire Services Governance Report was released and staff were directed to distribute the report and to engage the fire commissions and fire societies and to report back to the Committee with an implementation plan.

The report identified 36 recommendations, as noted in Appendix A, designed to ensure CRD fire departments can meet and sustain regulatory compliance while minimizing the liability and risk to the firefighters, public and the CRD.

A key recommendation being, *"Commissions should be converted to an advisory capacity with a revised and focused set of responsibilities. Bylaw No. 3654 would be revised accordingly and new terms of reference for the Commissions would be developed with them".*

Between October 17, 2023, and March 4, 2024, a total of 18 engagement sessions were completed between staff and the six commission, and three society operated fire services. The majority focus of the sessions was Bylaw No. 3654, "Fire and Emergency Response Commissions Bylaw, 2010", and the authority to operate a fire service as delegated by the Board.

Specifically, the discussions focused on the definitions of, and differences between, Administrative and Advisory Authority to operate a service. The attached Bylaw No. 4608, Appendix B, is an amendment to Bylaw No. 3654. Appendix C illustrates a redlined version of the amendments which is considerate of all feedback received through the extensive engagement process with commissions and societies, while also respecting the intent of the consultant's recommendations.

The following is a summary of the implementation plan:

Year	Recommendation Topic	Number	Notes
2024	Occupational Health & Safety Programs	1 to 5,11 & 20	Underway
	CVRD/Malahat Service Agreement	13	Underway
	Bylaw No. 3654 Amendment	14, 15, 17	Underway
	Fire Chiefs reporting to CRD Manager	18	Underway
	Fire Chiefs Employment Status	19	Underway
	South Galiano Service Agreement	22	Not started
	Create CRD Manager, Fire Services Position	25	Complete
	North Galiano Station 2 Ownership	28	Complete
	Status of Paid on Call firefighters	32	Not started
2025	Response to *Fire Safety Act* Update	7 to 9	Expectation of new regulation
	CRD Fire Service Operational Powers Bylaw	6 &16	Fire Chief Authority
	Pender Island Service Agreement	21	Revision
	Expand Fire Admin Assistant to full time	26	2025 Initiative Business Case
	Pacheedaht First Nation Service Agreement	29 to 31	Port Renfrew
	Risk Assessment – Training Centers	33 & 34	Otter Point and Pender Island
	Saturna Island Service Agreement	35 & 36	Revision
2026	Galiano Island Consolidated Fire Service	23	First Budget Year
2027	Durrance Road Service Agreement	12	Renewal
	Create Fire Coordination Position	27	2027 Initiative Business Case

Recommendations not included in the current Implementation Plan		
Consolidation of Fire Commissions	24	No support from Commissions

ALTERNATIVES

Alternative 1
The Electoral Areas Committee recommends to the Capital Regional District Board:
1. That the 2024-2027 Fire Services Governance Review Implementation plan be approved; and
2. That Bylaw No. 4608, "Fire Protection and Emergency Response Service Commissions Bylaw, 2010, Amendment Bylaw No. 2, 2024" be given first, second and third reading; and
3. That Bylaw No. 4608 be adopted.

Alternative 2
That the 2024-2027 Fire Services Governance Review Implementation plan and/or Bylaw No. 4608, 2024 be referred back to staff for additional information based on Electoral Areas Committee direction.

IMPLICATIONS

Alignment with Board & Corporate Priorities
A CRD Board priority for the 2023-2026 term is the effective advocacy, coordinated and collaborative governance, and leadership in organizational performance and service delivery.

- Initiative 16e-3 in the CRD Corporate Plan is to continue to review committees and commissions to find efficiencies and improve consistency.
- Initiative 16g-3 is to review and modernize fire and emergency management programs.

Financial Implications
Recommendations requiring new or additional funding will be addressed through the annual financial planning process for each service area.

Service Delivery Implications
The proposed shift of the responsibility for fire operations to CRD staff while the fire commissions retain oversight of the remaining fire service responsibilities and governance was the result of the consultations with the fire commission's membership. This was a hybrid approach based on feedback from the consultations that recognized the importance of the commission's role in supporting EA Fire Services while still meeting the intent of the consultant's recommendations. The proposed changes are designed to limit risk and liability to the CRD and the fire commission members that have been identified in the Corporate Risk Registry and through experience as an area of significant exposure. The implementation of these recommendations will result in the sustainable delivery of fire protection services in a manner compliant with regulatory requirements, which provides the highest possible level of safety for firefighters and residents.

Social Implications
The delivery of fire services in the electoral areas is community driven and there has been extensive communication and engagement resulting in an implementation plan that reflects stakeholder inputs. The CRD should continue to be mindful of the deep investment made by volunteers in the delivery of fire protection services in communities across the capital region areas, that their continued involvement will be dependent upon the continued feeling that they are contributing to their local community, and that changes to the current state and motivations for those changes could easily be misunderstood if not adequately communicated. Ongoing communication and consistent, reliable actions by the CRD will be critical to successful implementation of recommendations.

CONCLUSION

Substantial regulatory changes over the last decade have created significant challenges for rural volunteer-based fire service to achieve and maintain compliance within the current governance and operating structure. The Fire Services Governance Review report prepared by Tim Pley & Associates reviewed the governance models currently utilized by the CRD and provided recommendations for improvement. Staff have directly engaged local fire commissions, fire societies and key stakeholders for the purpose of developing an implementation plan in response to the recommendations in the consultant's report.

RECOMMENDATION

The Electoral Areas Committee recommends to the Capital Regional District Board:
1. That the 2024-2027 Fire Services Governance Review Implementation plan be approved; and
2. That Bylaw No. 4608, "Fire Protection and Emergency Response Service Commissions Bylaw, 2010, Amendment Bylaw No. 2, 2024" be given first, second and third reading; and
3. That Bylaw No. 4608 be adopted.

Submitted by:	Shawn Carby, Senior Manager, Protective Services
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Fire Services Governance Review Recommendations
Appendix B: Bylaw No. 4608
Appendix C: Redlined Consolidated Bylaw No. 3654 Including Amendments of Bylaw No. 4608

2. Summary of Recommendations

The following section extracts the recommendations contained within the report. The more expansive discussion in the report contains details regarding each of these recommendations. For convenience, the relevant headings are included as a guide to the section from which the particular recommendation is extracted.

4. Current State – Capital Regional District	
Recommendation #1:	The CRD should work with its Commission-led Departments to comprehensively review and update OH&S processes – including programs in use and implementing operational guidelines – in the Departments for which it is directly responsible. A common OH&S program designed for the Departments, should be developed in consultation with them, and implemented through common operational guidelines. The program should, among other things, lay out clearly the requirements for operation of a joint committee or worker representative system, respiratory program, and WHMIS
Recommendation #2	The CRD's Human Resources Department is well staffed with individuals who are expert in OH&S requirements. The role and responsibility of such staff in overseeing and guiding the Departments in the fulfilment of their OH&S obligations should be clarified.
Recommendation # 3	The CRD should review with its Commission-led Departments whether the operation of a single joint committee across multiple Departments (or perhaps two such committees), would provide an effective way of helping the Departments manage the administrative burden of OH&S processes, while ensuring proper centralized oversight.
Recommendation #4	The responsibilities of the Society-owned Departments for operation and implementation of a comprehensive set of OH&S processes should be clarified in the relevant service agreements. If those Departments wish to remain responsible for emergency service delivery, any potential residual liability of the CRD for their OH&S matters should be addressed contractually, to the extent possible.
Recommendation #5	When the service agreements with the CVRD and Saanich are updated, the responsibility of the service providers to properly manage the OH&S processes for their respective fire departments should be specifically addressed.
Recommendation #6	The CRD should develop and implement an operational powers bylaw covering both the Commission-led and Society-owned Departments. Such bylaw can also be used to address administrative and reporting issues for the Commission-
5. Change Drivers	
Recommendation #7	If a fire safety inspection obligation is imposed on the CRD when the *Fire Safety Act* is proclaimed in force, it likely will require both a service establishment bylaw (to authorize the new service) and either a new powers bylaw or an update to the Departments' existing powers and authority. The form of these bylaws will depend on how the obligation ultimately is framed, and the decision of the CRD, in consultation with its Departments, as to how this new obligation will be met.
Recommendation #8	When the *Fire Safety Act* comes into force, the CRD, in consultation with its Departments, will need to determine how it can best meet its new obligation to undertake border-to-border fire investigations within the Electoral Areas. The CRD may need to implement a new service establishment bylaw to fund this work, and to authorize the undertaking of such investigations. The form of bylaw will depend on how the obligation ultimately is framed, and the decision of the CRD, in consultation with its departments, as to how this new obligation will be met.
Recommendation #9	When the *Fire Safety Act* comes into force, it will be necessary to update the Departments' powers to reflect the new powers and authority granted by that statute. When such powers are updated, it will be important to specify the extent to which the powers and authority can be exercised outside an existing fire service area, and by whom. The form of these bylaws will depend on how the obligation ultimately is framed, and the decision of the CRD, in consultation with its Departments, as to how this new obligation will be met.
Recommendation #10	When the revisions to the current *Emergency Program Act* are brought into effect, it will be necessary to update the emergency program bylaws and corresponding agreements with its various service participants.
Recommendation #11	The CRD, in consultations with the Departments, should review the existing individual OHS programs related to decontamination procedures and mental wellness challenges, and develop a regional district approach to address the identified needs.

6. Neighboring Jurisdiction Contracted Areas	
Recommendation #12	When the Saanich Agreement is updated with respect to Durrance Road, consideration should be given to address the following issues: • extending the termination notice – given the challenges in replacing Saanich as a service provider, any termination provision should require an extended notice period to the CRD; • expressly granting operational powers and authority to Saanich in relation to its emergency (and any non-emergency) response activities in the Durrance Rd. service area; • dropping reference to the Saanich smoke alarm bylaw, as that bylaw has been incorporated into Saanich's Fire Prevention Bylaw No. 9712; and • the CRD needs to ensure that it has met the obligations under section 7 and 8 to authorize fire inspections in the service area by the Saanich Fire Department and has implemented a regulatory bylaw equivalent to Saanich's Bylaw No. 9712 covering the service area
Recommendation #13	The CVRD Service Agreement has expired and needs to be renewed. When it is updated, a number of issues have been flagged for consideration in any new service agreement including: expressly recognizing that the service is being provided by volunteers or paid-on-call firefighters; granting operational powers and authority to the MVFD; building out a robust dispute resolution; and addressing any relevant service limitations (e.g., private bridges, other property access
7. Commission-led Departments	
Recommendation #14	Bylaw No. 3654 will need to be updated to address any changes made to the Commission model.
Recommendation #15	Any updated Commission Handbook (and/or updated bylaw) should expressly address responsibility for OH&S matters, as well as the role to be played by the CRD's professional staff in relation to Department oversight.
Recommendation #16	When Bylaw 3654 is updated, consider making it an operational powers bylaw as well, granting operational powers and authority to the various Departments (including any service areas receiving emergency response services under contract from a Society or other local government). Alternatively, create an operational powers bylaw covering all of the CRD's fire service areas.
Recommendation #17	CRD Fire Commissions should be moved from having delegated Board authority, to operating on an advisory basis. Their responsibilities should be recast and clarified, principally covering: • Budget review and input; • Quarterly or semi-annual financial reviews; • Engagement in any strategic planning for the Department; and • Community outreach and engagement, for both financial matters and recruitment purposes
Recommendation #18	CRD fire chiefs should report directly to a newly created CRD staff position – Manager of Electoral Area Fire Services.
Recommendation #19	The CRD should explore the matter of CRD fire chief employment status. CRD fire chiefs (and deputies) should be engaged as exempt employees of the CRD. Alternatively, if the CRD prefers to engage one or more fire chiefs as independent contractors, matters of liability protection, WorkSafe BC coverage and compliance with Canada Revenue Services requirements should be considered and addressed.
8.0 Society-owned Departments	
Recommendation #20	Society-owned and operated fire departments present a series of unique risk management and liability issues. If the Societies wish to continue to be responsible for the provision of emergency response services, they must be prepared to accept the potential liability and risk that accompanies such service provision. The service agreements with the Societies should be updated to clearly reflect that allocation of risk and responsibility. Certain other issues should also be addressed in the service agreements, including: enhanced reporting obligations; an improved, graduated dispute resolution process; clarifying OH&S obligations (and accompanying risk allocations); and clearly specifying what support is being provided by the CRD to the Society-owned Departments.

Recommendation #21	The CRD, in consultation with the Pender Island Society, should review whether the provision in the Pender Island Agreement which suggests that members of the Society are entitled to avail themselves of the protections under section 738 of the Local Government Act and are covered by the CRD's indemnitybylaw, is correct and accurately reflects the legal position of the Society and its members.
Recommendation #22	The CRD should engage with the South Galiano Volunteer Fire Department Society to explore conversion of the South Galiano Volunteer Fire Department to a CRD-operated department. The role of the Society should be redefined, and consideration given to the Society fulfilling the advisory role provided by commissions in other service areas until such time as a Southern Gulf Islands Fire Advisory Commission is established.
Recommendation #23	The CRD should facilitate discussions involving the South and North Galiano Fire Chiefs, the Society Chairs from both South and North Galiano, and the Commission Chair from North Galiano for the purposes of exploring the potential for the two departments to deepen their partnership, up to and including the potential to consolidate the two departments
9. CRD Organizational Structure	
Recommendation #24	The CRD should consider the consolidation of Fire Commissions (Advisory) into two Advisory Fire Commissions, one representing the Southern Gulf Islands and the other representing the Juan de Fuca area.
Recommendation #25	The CRD should create and fill a Manager of Electoral Area Fire Services position. This position would be responsible for supervising CRD fire chiefs, supporting and liaising with Fire Commissions, as well as managing fire service agreements with other local governments and societies.
Recommendation #26	The CRD should expand from 0.5 FTE to full time the Assistant position assigned to Electoral Area Fire and Emergency Services. As soon as is possible staff resources should be increased in order that the full-time Assistant position is assigned only to Electoral Area Fire Services.
Recommendation #27	The CRD should create and fill a new Fire Training Officer position. The incumbent would report to the Manager of Electoral Area Fire Services
Appendix 2: Commission-led Departments	
Recommendation #28	The CRD should investigate the ownership of North Galiano #2 fire hall and land upon which it is situated.
Recommendation #29	The CRD should begin engaging with Pacheedaht First Nation as soon as possible on the matter of a shared services agreement for the next twenty year period, given that the current agreement expires in 2028.
Recommendation #30	The CRD should consider a joint application to the *Community to Community* grant fund program, managed by UBCM, with Pacheedaht First Nation for the purpose of facilitating discussions on the next iteration of their shared fire services
Recommendation #31	The CRD and Pacheedaht should discuss a Pacheedaht presence on the Commission that is better reflective of the Pacheedaht involvement in the community and their funding commitment to the provision of fire protection services.
Recommendation #32	The CRD should clarify the employment status of Paid on Call Firefighters, and whether that status changes at times when those personnel perform work other than regular training, maintenance and emergency response.
Recommendation #33	The CRD should clarify the ownership and responsibilities in terms of operations, liability, maintenance and replacement of the fire training facility located at the Otter Point fire hall.
Appendix 3: Society-owned Departments	
Recommendation #34	The CRD should clarify the ownership and responsibilities in terms of operations, liability, maintenance and replacement of the fire training facility located at the Pender Island fire hall.
Recommendation #35	Bylaw No. 2165 *Saturna Island Fire Protection and Emergency Response Local Service Contribution Establishment Bylaw,* should be revised consistent with other recommendations in this report, and to authorize the CRD to provide fire protection services, rather than limiting the CRD to funding fire protection services provided by the Society.

Recommendation #36	When the Saturna Island service agreement is renewed, it should stipulate: • That facilities, equipment and apparatus are owned by the CRD or that upon dissolution of the service agreement that such ownership transfers to the CRD; • Society reporting obligations including on matters of finance, operational service delivery, training and OH&S.

CAPITAL REGIONAL DISTRICT
BYLAW NO. 4608

****

A BYLAW TO AMEND THE FIRE PROTECTION AND EMERGENCY RESPONSE SERVICE COMMISSIONS BYLAW, 2010 (BYLAW NO. 3654)

****

WHEREAS:

A. Under Bylaw No. 3654, "Fire Protection and Emergency Response Service Commissions Bylaw, 2010", the Regional Board established Commissions to operate Volunteer Fire Departments;

B. The Board wishes to define the Administrative and Advisory powers delegated to Fire Commissions;

C. The Board wishes to amend Bylaw No. 3654 to clarify the powers delegated to Commissions by the Regional Board with respect to the development, maintenance and operation of a volunteer fire department.

NOW THEREFORE, the Capital Regional District Board in open meeting assembled hereby enacts as follows:

1. Bylaw No. 3654, "Fire Protection and Emergency Response Service Commissions Bylaw, 2010" is hereby amended as follows:

   (a) By adding the following into section 1(b), Interpretation, Definitions, in appropriate alphabetical list order:

   "ADMINISTRATIVE AUTHORITY" means the ability to administer the service within the existing framework of bylaws and policies established by the Board;

   "ADVISORY AUTHORITY" means a commission may only make recommendations to the Board through the appropriate standing committee;

   "OVERSEE" means to provide oversight, watch or supervise that the operational, maintenance, and regulatory functions of the service is performed in conformance with Regional District Policy or government regulation;

   "STAFF" means the CRD employees assigned by the applicable General Manager to oversee and supervise the operational, maintenance, and regulatory functions of the applicable Fire Services, in accordance with applicable laws and CRD policies and procedures;

   (b) By replacing section 8(a) in its entirety with:

   The Regional Board hereby delegates to a Commission, subject to: (a) the policies and procedures of the Regional Board; and (b) limitations in the Capital Regional District Delegation Bylaw, a combination of administrative and advisory powers of the Regional Board, described in sections 9 and 10, respectively relating to the development, maintenance and operation of a volunteer fire department within the Service Area whether acquired before or after the adoption of this bylaw.

   (c) By replacing section 8(c) in its entirety with:

   For clarity, subject to the *Local Government Act*, RSBC 2015 c 1, unless a power, duty or function of the Capital Regional District Board has been expressly delegated by this bylaw or another CRD bylaw, all the powers, duties and functions of the CRD Board remain with the CRD Board, and the Commission may not further delegate powers, duties, or functions to another individual or body. Individual Commissioners have no delegated authority outside the body of the Commission in open meeting assembled, acting as a whole.

(d) By replacing section 9 in its entirety with:

9. Advisory Authority of the Commission

(1) In collaboration and by consensus with staff, a Commission shall:

(a) Identify and advise on any contracted services necessary to run the day-to-day operations of the service;

(b) Set the size of the fire force for the Volunteer Fire Department within the Local Service Area;

(c) Review five-year financial operating and capital budgets and submit to the Regional District in the manner required by Section 12;

(d) Encourage the Fire Chief and members of the fire department to attend commission meetings to provide input to the decision making process; and

(e) Propose amendments of service levels for the Service Area.

(2) For clarity, advisory authority includes advising on the needs of the Volunteer Fire Department, as well as providing advice and recommendations on matters related to the Fire Service referred by the Fire Chief, CRD Staff, or the Regional Board. It does not include service delivery decisions which are otherwise managed or delivered by the Fire Chief, the Volunteer Fire Department, or CRD Staff.

(e) By replacing section 10 in its entirety with:

10. Administrative Authority of a Commission

(1) A Commission shall, in the administration of a Volunteer Fire Department:

(a) Confirm the appointment of a Fire Chief;

(b) Not expend any funds whatsoever except those first approved by the Regional Board under Section 12;

(c) Review and adopt operational rules and procedures for the organization and conduct of the Fire Protection Service, which rules and procedures shall be proposed by the Fire Chief and with the concurrence of Staff; and

(d) Review and adopt procedures and allocations of funds required for the maintenance and upkeep of the Fire Hall and any and all firefighting machinery, equipment and protective clothing, which procedures and allocations of funds shall be proposed by the Fire Chief and with the concurrence of Staff.

(2) For clarity, administrative authority means acting as the directing mind for those aspects of the service delegated by the Regional Board to the Commission. It does not include service delivery decisions which are otherwise managed or delivered by the Fire Chief, the Volunteer Fire Department, or CRD Staff, nor may it be exercised in a manner inconsistent with CRD policies, procedures, or other delegation instruments.

(f) By replacing section 12(a) in its entirety with:

A Commission shall, per the timeline established by the Financial Officer in each year, submit five-year operating and capital budgets covering all anticipated costs and revenues of the Volunteer Fire Department in the operation and maintenance of the assets of the Capital Regional District utilized by the Volunteer Fire Department.

(g) By replacing section 12(b)(i) in its entirety with:

Be prepared by the Fire Chief with the concurrence of staff in a form approved by the Financial Officer;

(h) By inserting the following as a new section 18 and renumbering the remaining sections:

18. Fire Chief Responsibilities

In addition to the duties customarily performed by a fire chief of a Volunteer Fire Department and as required by law, by employment or volunteer agreement, or CRD policy and procedure, the Fire Chief shall:

(a) Appoint volunteer members to the Volunteer Fire Department;

(b) Prepare the annual budget of the Service in collaboration with CRD Staff and the Commission;

(c) Advise on matters relating to the operation, maintenance, and strategic development of the Service and Volunteer Fire Department; and

(d) Discharge the duties of a Fire Chief consistent with all applicable laws and standards.

(i) By inserting the following as a new section 19 and renumbering the remaining sections:

19. Staff Responsibilities

Staff shall:

(a) Ensure the Fire Chief supervises, directs, controls and regulates the members of the Volunteer Fire Department subject to the provisions of the *Fire Services Act* and any applicable Provincial, Federal or Regional District enactments that apply;

(b) Authorize expenditures on behalf of the Volunteer Fire Department as required for the operation of the Volunteer Fire Department which have first been approved by the Regional District under Section 12;

(c) Oversee the preparation of five-year financial plans, provide advice to the Fire Chief and the Commission on the preparation and submission of five-year financial plans;

(d) Oversee and assist with development and maintenance of long-term equipment replacement plans;

(e) Oversee and support the Fire Chief in all areas of Volunteer Fire Department administration consistent with CRD policy, procedure, and applicable legislation;

(f) Ensure the Volunteer Fire Department is compliant with all applicable enactments, including the *Fire Services (Safety) Act*, and *Workers Compensation Act*, RSBC 2019, c1, minimum training standards, including the Office of the Fire Commissioner Minimum Structure Firefighter Training Standard, and CRD policies and procedures;

(g) Provide the Commission with financial expenditure reports for the purpose of Commission oversight of operating and capital expenditures;

(h) Facilitate salaried employee and contractor recruitment processes, and supervise volunteer firefighter recruitment and appointment processes; and

(i) Facilitate and assist with strategic planning processes.

(j) By inserting the following into Schedule "A", section 1, Definitions:

"East Sooke Community Hall" means the former fire station building located at 1397 Coppermine Road, East Sooke and owned by the CRD;

(k) By inserting the following into Schedule "A" in numerical order:

3. Delegation of Powers and Duties

(a) In addition to the powers delegated in Section 8 of this bylaw, the Regional Board hereby delegates to the Commission, subject to the policies and procedures of the Regional Board and limitations defined in the Capital Regional Delegation Bylaw, administrative powers of the Regional Board with respect to the equipment, maintenance, management and operation of the East Sooke Community Hall, and without limiting the generality of the foregoing, the Commission shall establish a scale of admission charges, appoint staff, determine operational rules, procedures and recreational programs and the collection of all revenues from, and payment of expenses of, the said operation.

(b) Notwithstanding the provisions of (a) above, the Regional Board retains the right of approval of the operational rules, procedures and policies.

4. Administration

In addition to the provisions of Section 10 of this bylaw, the Commission shall:

(a) review and adopt operational rules and procedures for the organization and operation of the East Sooke Community Hall; and

(b) review and adopt procedures and allocation of funds required for the maintenance and upkeep of the East Sooke Community Hall and any and all machinery, equipment, furniture and fixtures in conjunction with it.

5. Budget

In addition to the provisions of Section 12 of this bylaw, the Budget shall provide for the necessary funds for the administration, development, maintenance and operational expenses of the East Sooke Community Hall.

2. This Bylaw may be cited for all purposes as "Fire Protection and Emergency Response Service Commissions Bylaw, 2010, Amendment Bylaw No. 2, 2024".

READ A FIRST TIME THIS	th	day of	2024
READ A SECOND TIME THIS	th	day of	2024
READ A THIRD TIME THIS	th	day of	2024
ADOPTED THIS	th	day of	2024

CHAIR

CORPORATE OFFICER

CAPITAL REGIONAL DISTRICT

BYLAW NO. 3654

****

A BYLAW TO CONVERT LOCAL FIRE PROTECTION AND EMERGENCY RESPONSE SERVICE COMMITTEES INTO COMMISSIONS AND TO ESTABLISH A CONSOLIDATED BYLAW FOR EXISTING LOCAL FIRE PROTECTION AND EMERGENCY RESPONSE SERVICE COMMISSIONS AND CONVERTED COMMITTEES

****

(Amended by Bylaw 3707, 4608)

WHEREAS:

A. The Regional Board may establish a commission under section 176 (1)(g) of the *Local Government Act* to operate Regional District Services, undertake operation and enforcement in relation to the Regional Board's exercise of its regulatory authority, and manage property or an interest in property held by the Regional District;

B. The Regional Board established Committees to operate Volunteer Fire Departments and wishes to convert the Committees to Commissions under section 176(1) (g) of the *Local Government Act*; and

C. The Capital Regional District wishes to establish a consolidated bylaw for the management of Electoral Area Volunteer Fire Departments.

NOW THEREFORE the Board of the Capital Regional District, in open meeting assembled, enacts as follows:

1. Interpretation

(a) This bylaw includes the Schedules annexed hereto and the Schedules are hereby declared to form part of this bylaw.

(b) Definitions

In this bylaw unless the context otherwise requires:

"ADMINISTRATIVE AUTHORITY" means the ability to administer the service within the existing framework of bylaws and policies established by the Board;

(Bylaw 4608)

"ADVISORY AUTHORITY" means a commission may only make recommendations to the Board through the appropriate standing committee;

(Bylaw 4608)

"BUDGET" means the 5-year financial plan (operating and capital) in respect of a service;

"COMMISSION" means a commission established by the Regional District under this Bylaw, or another Bylaw of the Regional District;

"COMMITTEE" means a committee established by the Regional District under this Bylaw, or another Bylaw of the Regional District for the operation of a service referred to in Schedules A to E of this bylaw;

"CORPORATE OFFICER" means the person having responsibility for corporate administration under section 198 of the *Local Government Act*;

"DIRECTOR" means the Electoral Area Director for the Electoral Area in which the Commission is established;

"FINANCIAL OFFICER" means the person having responsibility for financial administration under section 199 of the *Local Government Act*;

"OVERSEE" means to provide oversight, watch or supervise that the operational, maintenance, and regulatory functions of the service is performed in conformance with Regional District Policy or government regulation;

(Bylaw 4608)

"REGIONAL BOARD" means the Board of Directors of the Capital Regional District Board;

"REGIONAL DISTRICT" means the Capital Regional District;

"SCHEDULES" means the schedules or a schedule attached to and forming part of this Bylaw;

"SERVICE AREA" means the area designated to a Commission in the Schedules;

"STAFF" means the CRD employees assigned by the applicable General Manager to oversee and supervise the operational, maintenance, and regulatory functions of the applicable Fire Services, in accordance with applicable laws and CRD policies and procedures;

(Bylaw 4608)

"VOLUNTEER FIRE DEPARTMENT" means a volunteer fire department established by the Regional District under this bylaw, or another bylaw of the Regional District to carry out the function contemplated in the establishing bylaw for the service.

2. Volunteer Fire Department Commission

(a) The Committees established under the "Committee Establishing Bylaws" listed below in column 1 are continued and renamed as per "New, Renamed Commissions" set out in column 2:

Committee Establishing Bylaw	**New, Renamed Commission**
East Sooke Fire Protection Service Area Management Bylaw No. 1, 2007	East Sooke Fire Protection and Emergency Response Service Commission

Otter Point Fire Protection Service Area Management Bylaw No. 1, 2003	Otter Point Fire Protection and Emergency Response Service Commission
Port Renfrew Fire Protection Local Service Area Fire Department Management By-law No. 1, 1990	Port Renfrew Fire Protection and Emergency Response Service Commission (Bylaw 3707)
Port Renfrew Local Community Services Committee Bylaw No. 1, 2005 and any amendments thereto	
Shirley Fire Protection Service Area Management Bylaw No. 1, 2008	Shirley Fire Protection and Emergency Response Service Commission
Willis Point Fire Protection Facilities Local Service Area Management Bylaw, 1995	Willis Point Fire Protection and Recreation Facilities Commission
North Galiano Fire Protection Service Area Management Bylaw No. 1, 2004	North Galiano Fire Protection and Emergency Response Service Commission

(b) The Commission established by Willis Point Fire Protection and Recreation Facility Commission Bylaw No. 1, 1995 is dissolved and discontinued.

(c) The Fire Protection Local Service Commission established by Shirley Fire Protection Service Area Management Bylaw No. 1, 2008 is hereby continued and known as the "Shirley Fire Protection and Emergency Response Service Commission".

(d) The Regional Board hereby establishes a Commission in each of the Service Areas named in the Schedules to manage a Volunteer Fire Department in that Service Area.

(e) The terms of office of the existing members of the Commissions shall continue until their expiry under Bylaw No. 3399; Bylaw No. 3173; Bylaw No. 3115; Bylaw No. 3280 and any amendments thereto; Bylaw No. 3584; and Bylaw No. 2336.

3. Membership

(a) Unless otherwise specified in the Schedules, a Commission shall consist of seven (7) members as follows:

(i) The Director representing the Electoral Area; and

(ii) Six (6) individuals appointed by resolution of the Regional Board and representing the Service Area; only one member of the Volunteer Fire Department in the Service Area may be a member of the Commission, but none of the aforesaid Commission members shall be the fire chief or any officer.

(b) Despite subsection 3(a)(ii) and any Schedule to this bylaw, only in Service Areas with an estimated census population of 750 persons or less, a maximum of two (2) members of the Volunteer Fire Department in the Service Area may be members of the Commission but none of the aforesaid Commission members shall be the fire chief or any officer.

(c) Despite subsection 3(a), and any Schedule to this bylaw, the number of members of a Commission continues to be the number serving as of the date of the adoption of this bylaw until such time as the appointment of members under a previous bylaw expires, at which time the Commission shall consist of seven (7) members.

(d) In the case of the Committee established by North Galiano Fire Protection Service Area Management Bylaw No. 1, 2004 and renamed the North Galiano Fire Protection and Emergency Response Service Commission, the term of office for members with a term set to expire on June 30th is hereby extended to December 31st of the same year.

(e) Other than the Director, Commission members shall be persons owning property or residing within the Service Area.

(f) The Corporate Officer shall, following each census, determine the estimated population of the service area for the purpose of this section.

4. Term of Office

The term of office for a member of a Commission other than the Director representing the Electoral Area shall be for a two (2) year period commencing the first day of January following each such appointment or until their successors are appointed.

5. Nominations

(a) A Commission shall hold an Annual General Meeting on or before the last day of November in each year to which the owners or occupiers of real property within a Service Area shall be invited to attend by written notice posted at least 30 days prior to the date of the Annual General Meeting.

(b) A Commission must accept nominations for the members of the Commission to be appointed effective the following 1st of January from individuals present at the Annual General Meeting, and if more nominations are received than there are positions to fill, a Commission must poll the owners or occupiers of real property within the Service Area who are present at the meeting.

(c) The names of persons nominated or the results of the poll under subsection (b) must be forwarded immediately after the Annual General Meeting to the Electoral Area Director of the Regional District.

6. Appointment

(a) All vacancies on a Commission must be advertised or posted locally at least thirty (30) days in advance of the Annual General Meeting.

(b) The Director shall seek recommendations for all appointments from the Commission but is not bound by a Commission's recommendation and may consult with other persons.

(c) The Director must provide the name of a person to the Board to fill a vacancy or in the case of a person whose appointment is to expire.

(d) Before the 1st of January every year, the Regional Board shall appoint or re-appoint members to a Commission to fill the terms of office of the members whose terms expire as of the 31st of December in each year.

(e) In the event of death, resignation or disqualification of a member of a Commission, the Regional Board shall appoint a successor for the remainder of such member's term.

(f) The Board may terminate the appointment of a Commission member who fails to attend three (3) consecutive regular meetings without the permission of a Commission.

(g) Without limiting paragraph (f), the Board may terminate the appointment of a Commission member who moves from the Service Area or ceases to own property in the Service Area where such person has ceased to attend at least one half of the regular meetings of the Commission.

7. Commission Procedure

(a) A Commission must, at its first meeting in January of each year, by secret ballot, elect a Chair and Vice Chair from among its members.

(b) For the conduct of business each member of a Commission shall have one vote.

(c) The rules, policies, procedures and the Delegation Bylaw which govern the Regional Board shall apply to a Commission where applicable.

(d) Meetings are open to the public.

(e) A quorum of a Commission is a majority of its members.

(f) If, as a result of members of a Commission declaring a conflict of interest in relation to a matter and, as a consequence, there is no longer a quorum of members of the Commission to decide on a particular issue, the issue shall be referred to the Regional Board for a decision.

8. Delegation of Powers and Duties

(a) ~~The Regional Board hereby delegates to a Commission, subject to: (a) the policies and procedures of the Regional Board; and (b) limitations in the Capital Regional Delegation Bylaw, administrative powers of the Regional Board with respect to the development, maintenance and operation of a volunteer fire department within the Service Area whether acquired before or after the adoption of this bylaw.~~

The Regional Board hereby delegates to a Commission, subject to: (a) the policies and procedures of the Regional Board; and (b) limitations in the Capital Regional District Delegation Bylaw, a combination of administrative and advisory powers of the Regional Board, described in sections 9 and 10, respectively, relating to the development, maintenance and operation of a volunteer fire department within the Service Area whether acquired before or after the adoption of this bylaw.

(Bylaw 4608)

(b) The operational, maintenance and regulatory functions of this service shall be performed in conformance with Regional District policy or government regulation.

(c) ~~Despite the provisions of (a) above, the Regional Board retains the right of approval of a Commission's exercise of the powers delegated to it by the Regional Board.~~

For clarity, subject to the *Local Government Act*, RSBC 2015 c 1, unless a power, duty or function of the Capital Regional District Board has been expressly delegated by this bylaw or another CRD bylaw, all the powers, duties and functions of the CRD Board remain with the CRD Board, and the Commission may not further delegate powers, duties, or functions to another individual or body. Individual Commissioners have no delegated authority outside the body of the Commission in open meeting assembled, acting as a whole.

(Bylaw 4608)

~~9. Duties~~

~~A Commission shall:~~

~~(a) Appoint a Fire Chief who shall be a person appointed as a local assistant by the Fire Commissioner prior to his or her confirmation as Fire Chief;~~

~~(b) Authorize the Fire Chief to appoint such members of the Volunteer Fire Department within the Local Service Area;~~

~~(c) Ensure the Fire Chief controls and regulates the members of the Volunteer Fire Department subject to the provisions of the *Fire Services Act* and any applicable Provincial, Federal or Regional District enactments that apply;~~

~~(d) Prepare a five-year financial operating and capital budget and submit to the Regional District in the manner required by Section 12;~~

~~(e) Authorize expenditures on behalf of the Volunteer Fire Department as required for the operation of the Volunteer Fire Department which have first been approved by the Regional District under Section 12; and~~

~~(f) Encourage the Fire Chief and members of the fire department to attend commission meetings to provide input to the decision making process.~~

9. Advisory Authority of the Commission

(1) In collaboration and by consensus with staff, a Commission shall:

(a) Identify and advise on any contracted services necessary to run the day-to-day operations of the service;

(b) Set the size of the fire force for the Volunteer Fire Department within the Local Service Area;

(c) Review five-year financial operating and capital budgets and submit to the Regional District in the manner required by Section 12;

(d) Encourage the Fire Chief and members of the fire department to attend commission meetings to provide input to the decision making process; and

(e) Propose amendments of service levels for the Service Area.

(2) For clarity, advisory authority includes advising on the needs of the Volunteer Fire Department, as well as providing advice and recommendations on matters related to the Fire Service referred by the Fire Chief, CRD Staff, or the Regional Board. It does not include service delivery decisions which are otherwise managed or delivered by the Fire Chief, the Volunteer Fire Department, or CRD Staff.

(Bylaw 4608)

~~10. Administration~~

~~A Commission shall, in the administration of a Volunteer Fire Department:~~

~~(a) Not expend any funds whatsoever except those first approved by the Regional Board under Section 12;~~

~~(b) Review and adopt operational rules and procedures for the organization and conduct of the Fire Protection Service, which rules and procedures shall be proposed by the Fire Chief;~~

~~(c) Review and adopt procedures and allocations of funds required for the maintenance and upkeep of the Fire Hall and any and all firefighting machinery, equipment and protective clothing, which procedures and allocations of funds shall be proposed by the Fire Chief.~~

10. Administrative Authority of a Commission

(1) A Commission shall, in the administration of a Volunteer Fire Department:

(a) Confirm the appointment of a Fire Chief;

(b) Not expend any funds whatsoever except those first approved by the Regional Board under Section 12;

(c) Review and adopt operational rules and procedures for the organization and conduct of the Fire Protection Service, which rules and procedures shall be proposed by the Fire Chief and with the concurrence of Staff; and

(d) Review and adopt procedures and allocations of funds required for the maintenance and upkeep of the Fire Hall and any and all firefighting machinery, equipment and protective clothing, which procedures and allocations of funds shall be proposed by the Fire Chief and with the concurrence of Staff.

(2) For clarity, administrative authority means acting as the directing mind for those aspects of the service delegated by the Regional Board to the Commission. It does not include service delivery decisions which are otherwise managed or delivered by the Fire Chief, the Volunteer Fire Department, or CRD Staff, nor may it be exercised

in a manner inconsistent with CRD policies, procedures, or other delegation instruments.

(Bylaw 4608)

11. Reporting

A Commission shall,

(a) By the 30th day of November in each year, submit a written report to the Board of the Regional District outlining the operation the Volunteer Fire Department for that calendar year; and

(b) By December 31 of each year, submit to the Board the minutes of the annual general meeting.

12. Budget

(a) ~~A Commission shall, on or before the 1st day of September in each year, prepare five-year operating and capital budgets covering all anticipated costs and revenues of the Volunteer Fire Department in the operation and maintenance of the assets of the Capital Regional District utilized by the Volunteer Fire Department.~~

A Commission shall, per the timeline established by the Financial Officer in each year, submit five-year operating and capital budgets covering all anticipated costs and revenues of the Volunteer Fire Department in the operation and maintenance of the assets of the Capital Regional District utilized by the Volunteer Fire Department.

(Bylaw 4608)

(b) The Budget shall:

(i) ~~Be in a form approved by the Financial Officer;~~
Be prepared by the Fire Chief with the concurrence of staff in a form approved by the Financial Officer;

(Bylaw 4608)

(ii) Provide for the necessary funds for the administration, development, training, maintenance, debt servicing and operational expenses of the Volunteer Fire Department;

(iii) Allow for contributions to reserve funds recommended by the Finance Officer;

(iv) Be submitted for consideration of the Regional Board; and

(v) If requested by the Regional Board, be altered to the satisfaction of the Board.

13. Unauthorized Expenditures

A Commission shall not authorize an expenditure other than an expenditure provided for in the Budget as included in the approved financial plan of the Regional District.

14. Borrowing and Additional Funding

A Commission shall not accept funds advanced from any source other than the Regional District without prior approval from the Regional District.

15. Facilities and Equipment

Any facilities or equipment acquired by the Commission shall be acquired in the name of the Regional District, shall be the property of the Regional District and shall not be disposed of without the approval of the Regional District.

16. Contracts

The Commission shall not enter into contracts on behalf of the Regional District except:

(a) where the Commission has been granted authority to do so under the Delegation Bylaw; and

(b) in the name of the Regional District.

17. Regional Board Responsibilities

The Regional Board:

(a) may advance sums required under the approved budget for an expenditure in relation to the administration, development, maintenance and operation of the Volunteer Fire Department pending collection of any rate, tax or charge levied for the purpose of raising the necessary funds to meet the expenses set out in the approved budget; and

(b) requisition the necessary funds under Section 806.1 of the *Local Government Act* within the fire regulation unit and Service Area.

18. Fire Chief Responsibilities

In addition to the duties customarily performed by a fire chief of a Volunteer Fire Department and as required by law, by employment or volunteer agreement, or CRD policy and procedure, the Fire Chief shall:

(a) Appoint volunteer members to the Volunteer Fire Department;

(b) Prepare the annual budget of the Service in collaboration with CRD Staff and the Commission;

(c) Advise on matters relating to the operation, maintenance, and strategic development of the Service and Volunteer Fire Department; and

(d) Discharge the duties of a Fire Chief consistent with all applicable laws and standards.
(Bylaw 4608)

19. Staff Responsibilities

Staff shall:

(a) Ensure the Fire Chief supervises, directs, controls, and regulates the members of the Volunteer Fire Department subject to the provisions of the *Fire Services Act* and any applicable Provincial, Federal or Regional District enactments that apply;

(b) Authorize expenditures on behalf of the Volunteer Fire Department as required for the operation of the Volunteer Fire Department which have first been approved by the Regional District under Section 12;

(c) Oversee the preparation of five-year financial plans, provide advice to the Fire Chief and the Commission on the preparation and submission of five-year financial plans;

(d) Oversee and assist with development and maintenance of long-term equipment replacement plans;

(e) Oversee and support the Fire Chief in all areas of Volunteer Fire Department administration consistent with CRD policy, procedure, and applicable laws;

(f) Ensure the Volunteer Fire Department is compliant with all applicable enactments, including the *Fire Services (Safety) Act* and *Workers Compensation Act*, RSBC 2019, c 1, minimum training standards, including the Office of the Fire Commissioner Minimum Structure Firefighter Training Standard, and CRD policies and procedures;

(g) Provide the Commission with financial expenditure reports for the purpose of Commission oversight of operating and capital expenditures;

(h) Facilitate salaried employee and contractor recruitment processes, and supervise volunteer firefighter recruitment and appointment processes; and

(i) Facilitate and assist with strategic planning processes.

(Bylaw 4608)

20. Repeal

(a) Bylaw No. 3399, cited as “East Sooke Fire Protection Service Area Management Bylaw No. 1, 2007” is hereby repealed;

(b) Bylaw No. 3115, cited as “Otter Point Fire Protection Service Area Management Bylaw No. 1, 2003” is hereby repealed;

(c) Bylaw No. 1806, cited as “Port Renfrew Fire Protection Local Service Area Fire Department Management By-law No.1, 1990” is hereby repealed;

(d) Bylaw No. 3280, cited as “Port Renfrew Local Services Committee Bylaw No. 1, 2005” is hereby repealed;

(e) Bylaw No. 3584, cited as “Shirley Fire Protection Service Area Management Bylaw No. 1, 2008” is hereby repealed;

(f) Bylaw No. 2333, cited as “Willis Point Fire Protection and Recreation Facility Commission Bylaw No. 1, 1995” is hereby repealed;

(g) Bylaw No. 2336, cited as “Willis Point Fire Protection Facilities Local Service Area Management Bylaw, 1995” is hereby repealed;

(h) Bylaw No. 3173, cited as “North Galiano Fire Protection Service Area Management Bylaw No. 1, 2004” is hereby repealed.

21. Citation

This bylaw may be cited as “Fire Protection and Emergency Response Service Commissions Bylaw, 2010”.

(Bylaw 3707)

READ A FIRST TIME THIS	14th	day of	April	2010
READ A SECOND TIME THIS	14th	day of	April	2010
READ A THIRD TIME THIS	14th	day of	April	2010
ADOPTED THIS	14th	day of	April	2010

Original signed by Geoff Young
CHAIR

Original signed by Carmen Thiel
CORPORATE OFFICER

Schedule “A” - East Sooke

1. Definitions

In this bylaw, as applies to the East Sooke Fire Protection and Emergency Response Service Commission, unless context otherwise requires:

“DIRECTOR” means the Electoral Area Director for Juan de Fuca;

“EAST SOOKE COMMUNITY HALL” means the former fire station building located at 1397 Coppermine Road, East Sooke and owned by the CRD;

(Bylaw 4608)

“COMMISSION” means the East Sooke Fire Protection and Emergency Response Service Commission;

“SERVICE AREA” means the East Sooke Fire Protection Service Area as more particularly described in East Sooke Fire Protection and Emergency Response Service Establishment Bylaw No. 1, 2006;

“VOLUNTEER FIRE DEPARTMENT” means the East Sooke Volunteer Fire Department.

2. Membership

Despite Section 3 (a) of this bylaw, membership shall consist of eight (8) members as follows:

(a) The Director representing the Electoral Area; and

(b) Seven (7) individuals appointed by resolution of the Regional Board and representing the Service Area. Only one member of the Volunteer Fire Department in the Service Area may be a member of the Commission, but none of the aforesaid Commission members shall be the fire chief or any officer.

3. Delegation of Powers and Duties

(a) In addition to the powers delegated in Section 8 of this bylaw, the Regional Board hereby delegates to the Commission, subject to the policies and procedures of the Regional Board and limitations defined in the Capital Regional Delegation Bylaw, administrative powers of the Regional Board with respect to the equipment, maintenance, management and operation of the East Sooke Community Hall, and without limiting the generality of the foregoing, the Commission shall establish a scale of admission charges, appoint staff, determine operational rules, procedures and recreational programs and the collection of all revenues from, and payment of expenses of, the said operation.

(b) Notwithstanding the provisions of (a) above, the Regional Board retains the right of approval of the operational rules, procedures and policies.

4. Administration

In addition to the provisions of Section 10 of this bylaw, the Commission shall:

(a) review and adopt operational rules and procedures for the organization and operation of the East Sooke Community Hall; and

(b) review and adopt procedures and allocation of funds required for the maintenance and upkeep of the East Sooke Community Hall and any and all machinery, equipment, furniture and fixtures in conjunction with it.

5. Budget

In addition to the provisions of Section 12 of this bylaw, the Budget shall provide for the necessary funds for the administration, development, maintenance and operational expenses of the East Sooke Community Hall.

(Bylaw 4608)

Schedule “B” - Otter Point

1. Definitions

In this bylaw, as applies to the Otter Point Fire Protection Commission, unless context otherwise requires:

“DIRECTOR” means the Electoral Area Director for Juan de Fuca;

“COMMISSION” means the Otter Point Fire Protection and Emergency Response Service Commission;

“SERVICE AREA” means the Otter Point Fire Protection Local Service Area as more particularly described in Otter Point Fire Protection and Emergency Response Local Service Establishment Bylaw No. 1, 1992, as amended;

“VOLUNTEER FIRE DEPARTMENT” means the Otter Point Volunteer Fire Department.

2. Membership

Despite Section 3 (a) of this bylaw, membership shall consist of eight (8) members as follows:

(a) The Director representing the Electoral Area; and

(b) Seven (7) individuals appointed by resolution of the Regional Board and representing the Service Area. Only one member of the Volunteer Fire Department in the Service Area may be a member of the Commission, but none of the aforesaid Commission members shall be the fire chief or any officer.

Schedule “C” - Port Renfrew

(Bylaw 3707)

1. Definitions

In this bylaw, as applies to the Port Renfrew Fire Protection and Emergency Response Service Commission, unless context otherwise requires:

“DIRECTOR” means the Electoral Area Director for Juan de Fuca;

“COMMISSION” means the Port Renfrew Fire Protection and Emergency Response Service Commission;

“SERVICE AREA” means the Port Renfrew Fire Protection Local Service Area as more particularly described in Port Renfrew Fire Protection and Emergency Response Service Establishment Bylaw No. 1, 1989, as amended;

“VOLUNTEER FIRE DEPARTMENT” means the Port Renfrew Volunteer Fire Department.

2. Membership

Despite Section 3 of this bylaw, membership shall consist of seven (7) members as follows:

(a) The Director representing the Electoral Area;

(b) Three (3) individuals who shall be owners of real property within the Fire Protection and Emergency Response Local Service Area;

(c) Three (3) individuals who may be owners of real property, or residents within the Fire Protection and Emergency Response Local Service Area. One (1) of these individuals shall represent the Pacheedaht First Nation when service agreements for fire protection and/or solid waste are in place with the Pacheedaht and there have been no violations to the terms and conditions of the agreements.

(d) For Service Areas with an estimated census population of 750 persons or less, a maximum of two (2) members of the Volunteer Fire Department in the Service Area may be members of the Commission, but none of the aforesaid Commission members shall be the fire chief or any officer.

3. Nomination

Despite Section 5(b) of this bylaw:

(a) The Commission shall, at its regularly scheduled meeting in September:

(i) Submit to the Electoral Area Director its nominations for the members of the committee for the following term, with the exception of the Pacheedaht representative;

(ii) Invite residents or owners of real property in the Fire Protection and Emergency Response Local Service Area to submit additional nominations, on forms provided at the meeting, to the Electoral Area Director on or before 14 days from the date of the meeting; and

(iii) Schedule the Annual General Meeting which shall be held no sooner than 15 days from the date of the meeting, but in all cases shall be before the last day of October.

(b) The Pacheedaht First Nation shall submit their nomination for the member representing the band to the Electoral Area Director, the first appointment to be effective immediately with a term to expire on December 31, 2010.

4. Procedure

In accordance with Section 7 of this bylaw, the Commission shall:

(a) Hold a meeting quarterly or at the call of the Chair. In January of each year, establish a schedule of meetings which shall be posted on the community notice board situated at the transfer station, the post office and on the CRD website.

Schedule “D” - Shirley

1. Definitions

In this bylaw, as applies to the Shirley Fire Protection and Emergency Response Service Commission, unless context otherwise requires:

“DIRECTOR” means the Electoral Area Director for Juan de Fuca;

“COMMISSION” means the Shirley Fire Protection and Emergency Response Service Commission;

“SERVICE AREA” means the Shirley Fire Protection and Emergency Response service Area as more particularly described in Shirley Fire Protection and Emergency Response Service Establishment Bylaw No. 1, 1991;

“VOLUNTEER FIRE DEPARTMENT” means the Shirley Volunteer Fire Department.

Schedule “E” - Willis Point

1. Definitions

In this bylaw, as applies to the Willis Point Fire Protection and Recreation Facilities Commission, unless context otherwise requires:

“DIRECTOR” means the Electoral Area Director for Juan de Fuca;

“COMMISSION” means the Willis Point Fire Protection and Recreation Facilities Commission;

“SERVICE AREA” means the Willis Point Local Service Area created under Willis Point Fire Protection, Emergency Response and Recreation Service Establishment Bylaw No. 1, 1991;

“VOLUNTEER FIRE DEPARTMENT” means the Willis Point Volunteer Fire Department;

“WILLIS POINT COMMUNITY CENTRE” means the recreation facilities adjoining the fire hall in the Service Area and owned by the Regional District.

2. Membership

Despite Section 3 of this bylaw, membership shall consist of eight (8) members as follows:

(a) The Director representing the Electoral Area;

(b) Seven (7) individuals appointed by resolution of the Regional Board and representing the Service Area;

(c) For Service Areas with an estimated census population of 750 persons or less, a maximum of two (2) members of the Volunteer Fire Department in the Service Area may be members of the Commission, but none of the aforesaid Commission members shall be the fire chief or any officer.

(d) Other than the Director, Commission members shall be persons owning property or residing within the Service Area.

3. Delegation of Powers and Duties

(a) In addition to the powers delegated in Section 8 of this bylaw, the Regional Board hereby delegates to the Commission, subject to the policies and procedures of the Regional Board and limitations defined in the Capital Regional Delegation Bylaw, administrative powers of the Regional Board with respect to the equipment, maintenance, management and operation of the Willis Point Community Centre, and without limiting the generality of the foregoing, the Commission shall establish a scale of admission charges, appoint staff, determine operational rules, procedures and recreational programs and the collection of all revenues from, and payment of expenses of, the said operation.

(b) Notwithstanding the provisions of (a) above, the Regional Board retains the right of approval of the operational rules, procedures and policies.

4. Administration

In addition to the provisions of Section 10 of this bylaw, the Commission shall:

(a) review and adopt operational rules and procedures for the organization and operation of the Willis Point Community Centre; and

(b) review and adopt procedures and allocation of funds required for the maintenance and upkeep of the Willis Point Community Centre and any and all machinery, equipment, furniture and fixtures in conjunction with it.

5. Budget

In addition to the provisions of Section 12 of this bylaw, the Budget shall provide for the necessary funds for the administration, development, maintenance and operational expenses of the Willis Point Community Centre.

Schedule “F” - North Galiano

1. Definitions

In this bylaw, as applies to the North Galiano Fire Protection Service Commission, unless context otherwise requires:

“DIRECTOR” means the Electoral Area Director for the Southern Gulf Islands;

“COMMISSION” means the North Galiano Fire Protection and Emergency Response Service Commission;

“SERVICE AREA” means the North Galiano Fire Protection Local Service Area as more particularly described in North Galiano Island Fire Protection and Emergency Response Service Establishment Bylaw No. 1, 1990, as amended;

“VOLUNTEER FIRE DEPARTMENT” means the North Galiano Volunteer Fire Department.

2. Membership

Despite Section 3 (a) and (b) of this bylaw, membership shall consist of seven (7) members as follows:

(a) The Director representing the Electoral Area; and

(b) Six (6) individuals appointed by resolution of the Regional Board and representing the Service Area. Only one member of the Volunteer Fire Department in the Service Area may be a member of the Commission, but none of the aforesaid Commission members shall be the fire chief or any officer.

3. Commission Procedure

Despite Section 7 (a) of this bylaw, a Commission must, at its first meeting in January of each year, by secret ballot, elect a Chair, Vice Chair and Treasurer from among its members.

Making a difference...together

REPORT TO THE GANGES SEWER LOCAL SERVICES COMMISSION
MEETING OF April 29, 2024

SUBJECT **REQUEST FOR INCLUSION OF PROPERTY IN THE GANGES SEWER SERVICE AREA - 105 KILNER ROAD**

ISSUE

To consider expanding the boundary of the Ganges Sewer Service Area to include 105 Kilner Road.

BACKGROUND

Salt Spring Island Community Services (SSICS) has recently purchased the property at 105 Kilner Road, south of downtown Ganges, and is developing the property from a single-family residence to a boarding house / homeless shelter. The applicant has informed the Capital Regional District that the present septic system serving the property is inadequate for their needs and wishes to connect to the Ganges sewer system. To do this, the boundary of the Service Area needs to be revised to include 105 Kilner Road, which lies just outside the existing boundary next to 268 Fulford-Ganges Road, which is within the Service Area. It should be noted that SSICS owns both contiguous properties.

As a result of the proposed change in use (to accommodate more than 15 people), the Average Daily Flow (ADF) would be higher than that of a single-family dwelling of comparable size. The total ADF would be approximately 3,740 litres per day. According to CRD Engineering Specifications, a single-family dwelling of medium density would produce approximately 1,526 litres per day (545 litres/capita/day x 2.8 persons per dwelling) or about forty percent of what the intended SSICS use would produce. The new ADF is insignificant compared to the current capacity of the Ganges Wastewater Treatment Plant. None of the sewer conveyance lines in the area are close to a surcharged condition.

SSICS has agreed to pay the requisite capacity purchase charge in accordance with Bylaw No. 3262 in the amount of $8,938.60.

ALTERNATIVES

Alternative 1

The Ganges Sewer Local Services Commission recommends the Electoral Area Committee recommend to the Capital Regional District Board:

1. To expand the boundary of the Ganges Sewer Local Service Area to include 105 Kilner Road;
2. The Applicant agrees to pay for all costs to include the property into the service area, and also pays the capacity purchase charge;
3. The Applicant agrees to pay all engineering, administration, permit fees, and construction costs associated with the extension of the sewer and connection to the existing sewer and the property;
4. That Bylaw 4601, “Salt Spring Island Ganges Sewerage Local Service Establishment Bylaw, 1991, Amendment Bylaw No. 14, 2024, be introduced and read a first, second and third time.

Alternative 2

That the request to include 105 Kilner Road into the Ganges Local Area Services boundary be denied.

Alternative 3

That this report be referred to staff for additional information.

IMPLICATIONS

Service Delivery Implications:

Alternative 1:

The expansion of the Service Area to include 105 Kilner Road will allow SSICS to provide a much-needed amenity for the unhoused on Salt Spring. Although the ADF will be greater than that from a comparable single-family dwelling, it will not add a significant volume to adversely affect the throughput capacity of the Ganges Wastewater Treatment Plant and none of the sewer conveyance lines in the area are close to a surcharged condition.

The applicant has agreed to pay for all costs related to (1) including the property into the service area, capacity purchase charge for the planned development, and ongoing parcel taxes and user fees for the service; and (2) all engineering, administration, permit fees and construction costs associated with the extension of the sewer and connection to the existing sewer and the property.

A bylaw amending the service area boundaries is required to support the development of an emergency shelter. After the third reading, the Inspector of Municipalities reviews the bylaw for approval and the Salt Spring Island Electoral Area Director for consent. Once the bylaw is adopted the applicant can proceed with the process of design and construction of the service extension and connection.

Alternative 2

Denying the expansion of the boundary of the Service Area to include 105 Kilner Road would prevent SSICS from developing 105 Kilner Road into a needed emergency shelter to serve the needs of the Salt Spring Island community.

Legal Implications

SSICS has changed 105 Kilner Road's use within the same occupancy class from single family residence to boarding house/shelter. This change normally requires a building permit application under CRD's Bylaw No. 3741, "Building Regulation Bylaw No. 5, 2010", as such a change in use may require renovation to meet the minimum standards of life safety set out in the BC Building Code. A new permit application could potentially identify a need for sprinklers, fire alarms, fire protection equipment, outward-swinging doors, and other minimum requirements for life safety expected of a shelter or boarding house.

The property owner, SSICS, is aware of the need for a permit but refuses to apply for one, choosing instead to assume all risk associated with the operation of the boarding house/shelter. CRD Building Inspection has put SSICS on notice that the failure to obtain a permit is at SSICS' sole risk, but has reserved the right to take enforcement action in future.

The lack of a building permit does not render a property ineligible from inclusion in a CRD service area. Entrance into a service is a discretionary decision, decided upon by the CRD Board by bylaw.

CONCLUSION

Expanding the Ganges Local Area Service boundary to include 105 Kilner Road will allow SSICS to provide a much-needed emergency shelter on Salt Spring. Although the ADF will be greater than that from a comparable single-family dwelling, it will not add a significant volume to affect the capacity of the Ganges Wastewater Treatment Plant adversely, and none of the sewer conveyance lines in the area are close to a surcharged condition.

RECOMMENDATION

The Ganges Sewer Local Services Commission recommends the Electoral Area Committee recommend to the Capital Regional District Board:

1. To expand the boundary of the Ganges Sewer Local Service Area to include 105 Kilner Road;
2. The Applicant agrees to pay for all costs to include the property into the service area, and also pays the capacity purchase charge;
3. The Applicant agrees to pay all engineering, administration, permit fees, and construction costs associated with the extension of the sewer and connection to the existing sewer and the property;
4. That Bylaw 4601, "Salt Spring Island Ganges Sewerage Local Service Establishment Bylaw, 1991, Amendment Bylaw No. 14, 2024, be introduced and read a first, second and third time.

Submitted by:	Dean Olafson, P. Eng., MBA, Manager of Engineering, SSI Electoral Area
Concurrence:	Karla Campbell, MBA, BPA, Senior Manager, SSI Electoral Area Administration
Concurrence:	Kristen Morley, J.D., General Manager, Corporate Services & Corporate Officer
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

Appendix A: Salt Spring Island Community Services – Application Cover Letter, December 5th, 2022
Appendix B: Bylaw 4601, "Salt Spring Island Ganges Sewerage Local Service Establishment Bylaw, 1991, Amendment Bylaw No. 14, 2024.

Michael Smith
Housing and Facilities Manager
Salt Spring Island Community Services
[redacted]
saltspringcommunityservices.ca

December 5, 2022

Please accept this letter as an application to add 105 Kilner Ave to the Ganges Sewer Service Area.

I believe all questions you require are answered as followed.

The number of existing or proposed buildings on the property, and their proposed use (ie, residential, commercial, etc),

1 Residential building

The total number of units and total square footage of all buildings

1916 Square feet on two levels. 3 bedrooms

The equivalent population for the whole property to be served,

Approximately 15-17 clients plus 2 staff during COVID times.

The average daily flow, peak hourly flow, and inflow and infiltration allowance. (for sanitary sewer connection only)
The domestic water peak demand based on total fixture units. (for water service connection only)

We are not asking for a water service connection - that is in place already. the info is, however.
2.5 bathrooms (3 toilets, 2 showers, 2-bathroom sinks)
1 kitchen sink
1 dishwasher connection
1 clothes washer
2 exterior hose bibs

Please let me know if you require any further information.

Michael

Michael Smith
Housing and Facilities Manager
Salt Spring Island Community Services
[redacted]
saltspringcommunityservices.ca

Appendix B

CAPITAL REGIONAL DISTRICT
BYLAW NO. 4601

****

A BYLAW TO AMEND A BYLAW TO AMEND THE GANGES SEWER SYSTEM ESTABLISHING BYLAW (BYLAW NO. 1923)

****

WHEREAS:

A. Under Bylaw No. 1328, “Ganges Sewer Defined Area Bylaw, 1985”, the Board established a Defined Area for sewage collection and disposal, and converted it into a service by establishing Bylaw No. 1923, “Ganges Sewer System Establishing Bylaw, 1991”;

B. The Board wishes to amend Bylaw No. 1923 to include Lot B Plan VIP20705 Section 19 Range 4E Cowichan Portion North Salt Spring (also known as 105 Kilner Road) in the Service Area and to adjust language to reflect the current Service Area in a single schedule; and

C. The Electoral Area Director may provide elector assent in writing pursuant to s.349 of the *Local Government Act;*

NOW THEREFORE, the Board in open meeting assembled hereby enacts as follows:

1. Bylaw No. 1923, “Salt Spring Island Ganges Sewerage Local Service Establishment Bylaw, 1991”, is hereby amended:

   (a) by deleting Schedule “A” and inserting the attached Schedule “A”, which includes Lot B Plan VIP20705 Section 19 Range 4E Cowichan Portion North Salt Spring, also known as 105 Kilner Road;

2. This bylaw may be cited for all purposes as the “Salt Spring Island Ganges Sewerage Local Service Establishment Bylaw, 1991, Amendment Bylaw No. 14, 2024".

READ A FIRST TIME THIS	day of	202_
READ A SECOND TIME THIS	day of	202_
READ A THIRD TIME THIS	day of	202_
CONSENTED TO BY THE ELECTORAL AREA DIRECTOR OF SALT SPRING ISLAND THIS	day of	202_
APPROVED BY THE INSPECTOR OF MUNICIPALITIES THIS	day of	202_
ADOPTED THIS	day of	202_

CHAIR

CORPORATE OFFICER

CAPITAL REGIONAL DISTRICT

SCHEDULE "A":
Salt Spring Island Ganges Sewerage Local Service
Establishing Bylaw, 1991, Amendment Bylaw No.14, 2024

Proposed Service Area Expansion

Ganges Sewerage Service Area

0 125 250 500 Meters

N W E S

Projection: Universal Transverse Mercator. Zone 10, North. North American Datum 1983.

1:13,000

DISCLAIMER

Important This map is for general information purposes only. The Capital Regional District (CRD) makes no representations or warranties regarding the accuracy or completeness of this map or the suitability of the map for any purpose. **This map is not for navigation.** The CRD **will not be liable** for any damage, loss or injury resulting from the use of the map or information on the map and the map may be changed by the CRD at any time.

January 2024 | 2024-01-24-50601-Bylaw4601_GangesSewerageAmendment.aprx | gis@crd.bc.ca

Rainbow Road Recreation Centre

Ganges Sewerage Local Service Area

Mouat Park

Grace Islet

Ganges

Lot B, VIP20705 003-555-054

KINER RD

DEAN RD

Making a difference...together

REPORT TO COMMITTEE OF THE WHOLE
MEETING OF WEDNESDAY, MAY 08, 2024

SUBJECT **Board Priorities Annual Check In**

ISSUE SUMMARY

To report on progress made to advance the 2023-2026 Board Priorities and Corporate Plan.

BACKGROUND

The Capital Regional District (CRD) Board identified and endorsed the following strategic priorities, and associated initiatives, in early 2023 (see Appendix A):

- Transportation
- Housing
- Climate Action & Environment
- First Nations
- Governance

Subsequently, staff prepared the 2023-2026 Corporate Plan to align with this direction. The Corporate Plan presents the work the organization needs to deliver over the Board term to meet the region's 16 most important needs (community needs) and advance the Board's vision and priorities. Initiatives listed in the Corporate Plan are delivered in conjunction with the critical regional, sub-regional and local services and regulatory requirements that the CRD is accountable for delivering.

The Board meets in the spring of every year (in the second through the fourth year of the Board's term) to review progress made and confirm the direction for the Board Priorities. This report has been developed to facilitate this review and provide evidence of CRD staff's progress over the last year.

On February 14, 2024, the CRD Board directed staff:

1. to include the Regional Growth Strategy Indicators report and appendix in the package of information supporting the annual priorities check-in. This information has been included as Appendix D.
2. to evaluate initiative 10b-2 to "scale up regional support for performing arts facilities within the region" in terms of its scope and level of priority along with consideration to establish a new select committee at the next annual check-in of the 2023-2026 CRD Corporate Plan in late spring 2024. Information has been included in the presentation.

Next Steps

Board direction shapes the annual service planning process that identifies recommended initiatives, funding, timing and service levels to deliver next year's workplan. Staff prepare these recommendations through the summer and for review by standing committees and commissions in the fall. The Board approves the service plans through the approval of the provisional budget in October.

Through the 2023-2026 Board Priorities and Corporate Plan, the Board set the CRD on a path that furthers its vision to embrace cooperation, innovation and bold leadership in the delivery of services that contribute to a livable, sustainable and resilient region. Should the Board decide to make changes to the Board Priorities, this will be followed by a thorough review of the CRD Corporate Plan, its initiatives and budgets to re-align CRD resources and workplans to the new direction.

ALTERNATIVES

Alternative 1
The Committee of the Whole recommends to the Capital Regional District Board:
1. That the current level of effort on Board Priorities be maintained; and
2. That staff, through the service and financial planning processes, provide recommendations on funding, timing and service levels for 2025 in accordance with 2023-2026 Board Priorities and Corporate Plan.

Alternative 2
The Committee of the Whole recommends to the Capital Regional District Board:
1. That the level of effort on Board Priorities be adjusted as directed by the Committee of the Whole; and
2. That staff, through the service and financial planning processes, provide recommendations in funding, timing and service levels for 2025 in accordance with the amended direction.

IMPLICATIONS

Alignment with Board & Corporate Priorities
The 2023-2026 Corporate Plan identifies and prioritizes initiatives that advance Board Priorities and deliver the CRD's core services. Together, the initiatives and actions in the Corporate Plan respond to the region's collective community needs in consideration of Board priorities, within the CRD's established service mandates, approved plans and corporate priorities.

Service Delivery Implications
Staff report on the progress of initiatives and services on a regular basis. The Board oversees the Board Priorities through the Quarterly Board Priorities Dashboard which accompanies the CAO Quarterly Progress Reports. The Board also receives a progress report on the CRD Corporate Plan twice a year at the Board Priorities check-in and provisional budget meetings, which take place in the spring and fall respectively. During the year, standing committees and commissions also fulfill an oversight and advisory role in relation to services. The CRD Annual Report is published in the spring. This layered oversight ensures that there is transparency over progress made year-round and that adjustments can be made to policy in close consultation with the Board, where necessary.

Appendix B reports on progress staff have made in advancing 2023-2026 Board Priorities. Appendix C reports on progress made in advancing the 2023-2026 Corporate Plan. A significant amount of change is underway organizationally, and staff have been thoughtful about progressing work in consideration of existing staffing capacity, operational imperatives and commitments, and the organization's capacity to balance multiple streams of transformation simultaneously. As we prepare for 2025, staff are in a good position to continue meeting the expectations that have been set at the start of the Board's term.

As demand for staff's time and services increases regionally, so does demand on the corporate divisions which support them with organization-wide functions. These divisions have also had to increase capacity to support the growing operational requirements driven by population growth, which is a significant demand driver for CRD services.

Financial Implications
Any change in strategic direction will have to be addressed and reflected through the 2025 service and financial planning processes. Such change includes, but is not limited to, Board direction to include new initiative(s), expand the scope of initiative(s), and/or accelerate or decelerate effort on existing initiative(s). Resource implications would be identified in the provisional budget, brought forward by staff in October 2024.

CONCLUSION

Staff are progressing initiatives and actions identified in the 2023-2026 Corporate Plan, including Board Priorities. The Board determines resourcing through its annual review and approval of the provisional budget. To support the Board's decision-making, staff will provide recommendations on funding, timing and service levels through the service and financial planning processes. These will be reviewed through the standing committees and commissions and form the basis of the provisional budget.

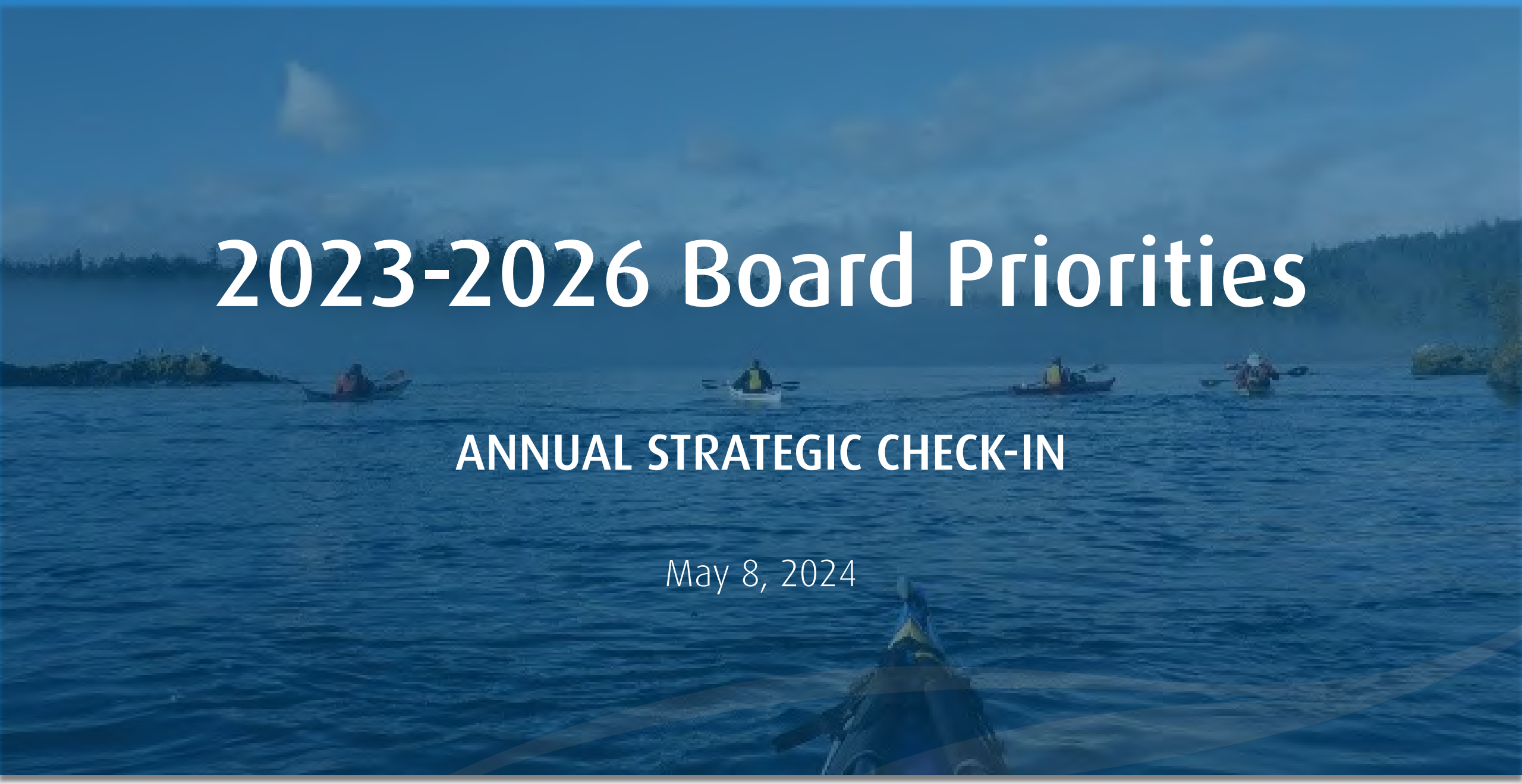
RECOMMENDATION

The Committee of the Whole recommends to the Capital Regional District Board:
1. That the current level of effort on Board Priorities be maintained; and
2. That staff, through the service and financial planning processes, provide recommendations on funding, timing and service levels for 2025 in accordance with 2023-2026 Board Priorities and Corporate Plan.

Submitted by:	Fran Lopez, M. Sc., Acting Manager, Regional & Strategic Planning
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: 2023-2026 CRD Corporate Plan
Appendix B: 2023-2026 Board Priorities – Progress Report (2023)
Appendix C: 2023-2026 Corporate Plan – Progress Report (2023)
Appendix D: Staff Report: Regional Growth Strategy Indicators



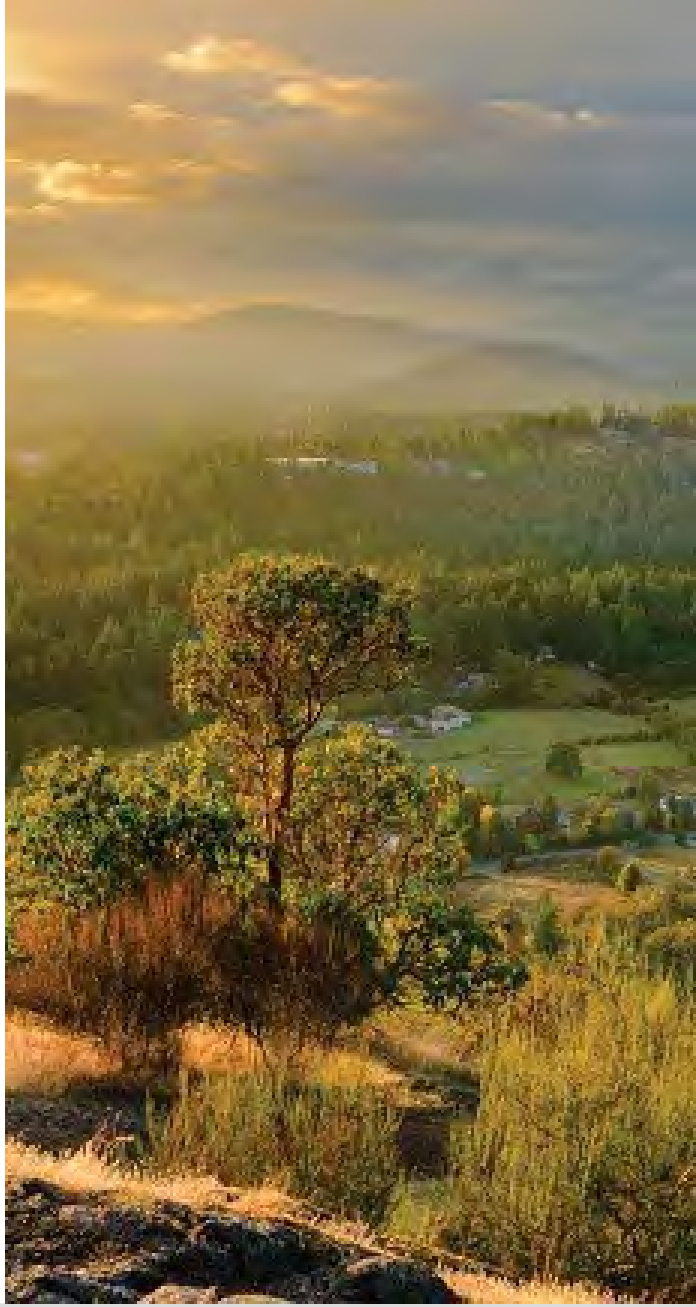
2023-2026 Board Priorities

ANNUAL STRATEGIC CHECK-IN

May 8, 2024

Agenda

1. Operating environment
2. Planning framework
3. Progress updates
4. Board-directed items for consideration
5. Facilitated discussion and CRD Board direction



Operating environment

External context

- B.C. Budget 2024 contains several actions to build more housing to support population growth; no direct support envisaged at this stage for related infrastructure and services provided by local governments.
- Inflation has slowed but not returned to pre-pandemic levels in the region; this is combined with low unemployment rates regionally that remain below the national level.
- The regional population continues to grow within projected range. It is expected that population growth will continue to be a significant economic driver in our region, pushing demand for housing, jobs and CRD services higher into 2024.
- A more comprehensive analysis of economic indicators was presented in the 2024 Service and Financial Planning Guidelines at Finance Committee on May 1, 2024, and will be presented to the CRD Board this afternoon.

Internal context

- The CRD has experienced growth in many core services in the past five years, driven by community need and guided by the CRD Corporate Plan. As demand for operational staff's time and services increases, so does demand on the corporate divisions that provide organization-wide functions.
- The CRD continues to experience increased pressures associated with a highly competitive labour market and a steady number of retirements, trends that have continued into 2024.
- The organization constrained requisition increases in the financial plans (consolidated cost per household) to 2.8% in 2023 and 3.8% in 2024. The target rate is approved by the Board annually through the Service and Financial Planning Guidelines.
- The CRD Board has approved approx. $304 million in Loan Authorization bylaws, with $36.6 million already drawn upon.



Planning framework

The CRD's planning framework is a multi-step coordinated process involving the whole organization.

The Board meets annually in late spring to confirm the strategic direction for the following year. This direction, along with direction from committees about advancing corporate priorities, informs the recommendations brought forward by staff for new initiatives, resourcing and core service delivery adjustments.

The outputs of this work are routed for approval through the Committee of the Whole during the fall. The CRD Board completes the process by approving proposed resourcing and service adjustments at provisional budget approval in October.

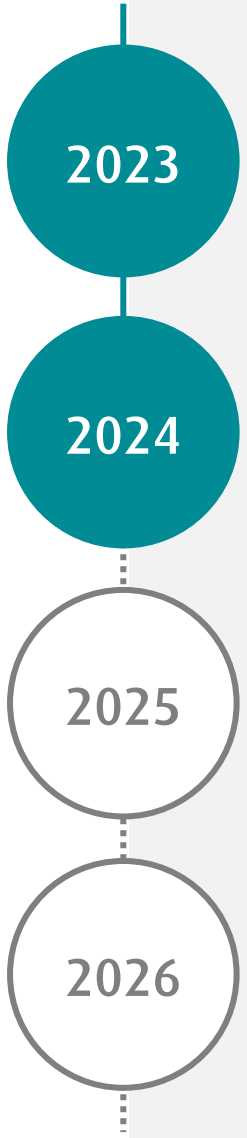
Advancing goals over the Board term

Staff advance the Board Priorities and Corporate Plan initiatives over the course of the four-year term.

The objective is to operationalize (i.e., absorb into day-to-day activities and adjust service levels to accommodate) or complete as many initiatives listed in the Corporate Plan as operationally feasible by 2026.

New initiatives are advanced alongside the 200+ core and mandated services the CRD delivers.

Some significant, multi-year initiatives and priorities started during the previous Board term (or earlier) are still being implemented.



Identify Board Priorities. Develop Corporate Plan to align resources to direction. Take early actions on both.

Initiate work on most initiatives in the Corporate Plan. Maintain momentum on mandated and core service delivery.

Keep up high level of effort to progress approved initiatives and initiate additional, new initiatives. Ensure mandated and core services continue to be delivered in line with expectations.

Initiatives that have been progressing over the course of the Board term are either operationalized or completed and ended.

Board Priority progress updates



Transportation

Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability.

Achievements*

- 2022 Origin Destination Household Travel Survey results showed an increase in walking and cycling in the region.
- Traffic Safety Commission delivered education and awareness campaigns about distracted driving, speeding and impaired driving.
- Gathered input from interest holders about a regional transportation service and feasibility work started.
- Mayne Island Regional Trail construction started.
- Salt Spring Island (SSI) Active Transportation Plan completed to start addressing critical active transportation issues.
- Approved funding strategy for significant investments in the regional trail system through the Regional Trestles Renewal, Trails Widening and Lighting Project.

*Please refer to Appendix B for full list of achievements

Board Priority progress updates



Housing

Residents have access to affordable housing that enhances livability.

Achievements*

- Developed regional housing acquisition strategy and entered an MOU to pursue a pilot in support of a new rural housing program to guide future regional housing investments.
- Land Assembly, Housing and Land Banking service borrowing authority increased by $85 million (M).
- Opened 198 units of affordable rental housing across three projects (210 Gorge Road, 2170 Charters Road and Prosser Place).
- Opened 136 units of supportive housing across four projects (2933 and 2949 Albina Street, 865 Catherine Street and 1909 Prosser Road).
- Advocacy to Minister Kahlon, BC Minister of Housing, to request up to $170M in funding to facilitate development of ~2,000 affordable units in the region.

*Please refer to Appendix B for full list of achievements

Board Priority progress updates



Climate Action & Environment

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts.

Achievements*

- Board approved the new Solid Waste Management Plan and policy changes for the Hartland Landfill Tipping Fees and material stream diversion initiatives.
- Capital Region heat vulnerability mapping project launched with inter-municipal partners.
- Electoral Area Community Wildfire Resiliency Plans and Community Evacuation Guide were completed.
- 2022 Regional and Local Government Greenhouse Gas Inventory report was released.
- SSI rainwater harvesting rebate program renewed; Southern Gulf Islands rain barrel program implemented & expanded.

*Please refer to Appendix B for full list of achievements

Board Priority progress updates



First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals.

Achievements*

- Forum of All Councils held in October 2023 to build relationships and explore ways to work together.
- Board Chair invited First Nations to participate in government-to-government Relationships Building initiative.
- First Nations input being gathered for the Regional Parks & Trails Strategic Plan and Regional Parks Land Acquisition Strategy, among other plans.
- New Indigenous Business Directory for the south island region launched in June 2023, in partnership with Greater Victoria Harbour Authority, City of Victoria and South Island Prosperity Partnership.
- CRD Indigenous Employment findings received by Board in May 2023.

*Please refer to Appendix B for full list of achievements

Board Priority progress updates



Governance

Effective advocacy, coordinated and collaborative governance, and leadership in organizational performance and service delivery.

Achievements*

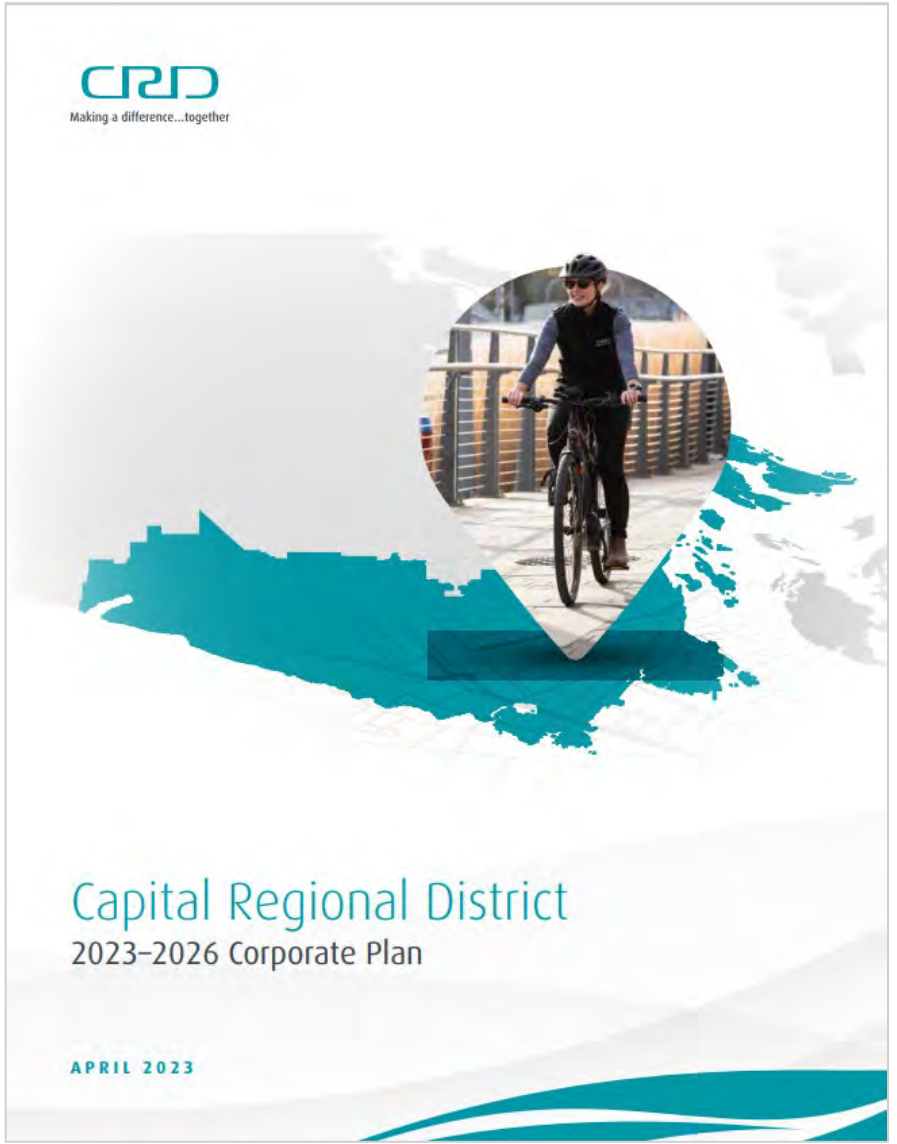
- Board approved 2023-2026 Board Priorities and the 2023-2026 CRD Corporate Plan in March and April 2023.
- Board received Administrative Policy for Intergovernmental Relations in April 2023.
- Board approved updated CRD Advocacy Strategy in August 2023.
- Staff report templates updated to include considerations of First Nations reconciliation, climate action, and equity, diversity and inclusion lenses.
- Accessibility Advisory Committee was established in October 2023.
- The Regional Growth and Mobility study was started.

*Please refer to Appendix B for full list of achievements

Progress updates

CRD 2023-2026 Corporate Plan

- **Action has been taken on over 85% of the 134 initiatives** listed in the Corporate Plan. In most cases, early impacts of the work were absorbed within existing service levels (e.g., for investigatory or early planning work).
- Where additional capacity and/or resources were required, staff submitted requests to the Board through service planning. **44 such initiatives, and associated resources requested,** were endorsed by the Board for 2024 and future requests will be brought forward for consideration through annual provisional budgets.
- Six initiatives progressed in 2024 were not listed in the Corporate Plan. Four were identified by staff and two were directed by the Board.
- CRD staff continue to deliver 200+ core services at a regional, sub-regional and local level. Support Services continue to support the corporation with day-to-day operations.



Board-directed item for consideration

Scale up regional support for performing arts facilities in the region

CORPORATE PLAN INITIATIVE 10B-2

Last term

- Explored creating a new Full Regional Performing Arts Facilities Service
- Establishing bylaw drafted but not passed, due to concerns about cost and approval method

This term

- Drafted amending bylaws for Royal Theatre and McPherson Playhouse services to scale up support
- Royal Theatre amending bylaw (4560) ▸ In Process
- McPherson Playhouse amending bylaw (4561) ▸ In Process



Half Moon Run performing at the Royal Theatre, November 2023. Photo courtesy of the Royal and McPherson Theatres Society.

Update about Alternate Approval Process (AAP)

- It takes approximately seven months to run an AAP from start to finish



PLANNED AAPs FOR 2024-2025

- ▷ Q4 2024 – **Foodlands Access Service Establishment** (regional)
- ▷ Q4 2024 – **New proposed Westshore RCMP Building Debt Service** (sub-regional)
- ▷ Q1 2025 – **Transportation Service Establishment** (regional)
- ▷ Q2 2025 – **Biodiversity Service Establishment** (regional)

Facilitated discussion and Board direction

1. Is progress on the Board Priorities **reasonable**?

2. If not, where would the Board like to see additional effort to advance priorities?

Making a difference...together



Capital Regional District

2023–2026 Corporate Plan

APRIL 2023

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Message from the CAO

It is my pleasure to present the 2023–2026 Capital Regional District (CRD) Corporate Plan.

The Corporate Plan presents the work the CRD needs to deliver over the next four years, along with the critical regional, sub-regional and local services, to meet the region's most important needs and advance the Board's vision and priorities. The Board's goal of embracing cooperation, innovation, and bold leadership in service delivery is inspirational, and will contribute to a livable, sustainable and resilient region this term and beyond.

Together with our new organizational vision, which places an emphasis on our employees and connects the day-to-day work of our employees with our Board and the residents of the region, the CRD is well positioned to achieve the Corporate Plan's outcomes.

As a life-long resident, I know the capital region is an incredible place to call home. The region continues to grow at a remarkable rate and today, over 435,000 people across 13 municipalities and three electoral areas receive our services in one way or another, whether they live in the urban or rural parts of the region. CRD staff are acutely aware of this important responsibility and are committed to earning and maintaining the Board and residents' trust and confidence.



The focus of the Corporate Plan is on the needs of the communities we serve. Some of the actions identified in our plan will be advanced by working closely with intergovernmental stakeholders and other partners. We will continue to collaborate and build relationships with First Nations governments and seek opportunities for government-to-government decision-making and service delivery.

It is clear to me that there are issues that will remain of critical importance over the coming years including increasing access to affordable housing, improving aspects of transportation in the region, and responding to climate change in a meaningful, sustainable way. Our efforts during the Board term will reflect this understanding.

Implementing the Corporate Plan is led by the Executive Leadership Team and will involve every CRD employee. Developing the Corporate Plan was an organization-wide exercise and I am grateful for our CRD workforce, who are committed to continuously seeking ways to improve performance.

This is an exciting time for our organization. I look forward to working with the Board, staff, partners and residents who I know share a common interest in making a difference in our communities. Together, we will make the capital region an even better place.

Ted Robbins
Chief Administrative Officer, Capital Regional District

Executive Leadership Team

The Executive Leadership Team (ELT) consists of the Chief Administrative Officer (CAO), Chief Financial Officer (CFO), Corporate Officer, and the General Managers (GMs), who are all Officers of the Corporation.

These Officers direct the departments and divisions across the Corporation and work collaboratively to:

- Consider strategic issues related to the organization
- Discuss solutions to organizational challenges
- Make decisions effectively on behalf of the organization and in the interests of the CRD Board
- Provide direction on corporate-wide policies, systems, projects, and initiatives
- Ensure our employees are supported and empowered to achieve organizational goals

The success of the organization is measured by how well the entire organization performs in effectively and efficiently delivering services to the residents of the region and in its ability to advance Board and Corporate Priorities within an approved Board budget. It is a key responsibility of the ELT to ensure that the actions, directions, and policies of management are aligned to achieve these objectives and to strengthen our foundational core and ensure that we have an engaged workforce that is valued and supported.

FROM LEFT TO RIGHT

Larisa Hutcheson
General Manager, Parks & Environmental Services

Kevin Lorette
General Manager, Planning & Protective Services

Ted Robbins
Chief Administrative Officer

Alicia Fraser
General Manager, Integrated Water Services

Nelson Chan
General Manager, Finance & Technology, Chief Financial Officer

Kristen Morley
General Manager, Corporate Services, Corporate Officer



About the CRD

The CRD is the regional government for 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands, serving more than 435,000 citizens. The Traditional Territories of many First Nations span portions of the region and 11 of those Nations hold reserve lands throughout the capital region.

The CRD was incorporated in 1966 to provide regional decision-making on matters that transcend municipal boundaries and to enable more effective service delivery to residents regionally, sub-regionally and locally.

The CRD plays a key role in providing services that can be delivered efficiently and effectively through region-wide or shared service delivery models to ensure a livable, sustainable and resilient capital region. As a local government for electoral areas, the CRD develops partnerships to facilitate and deliver projects and services for residents living in unincorporated areas.

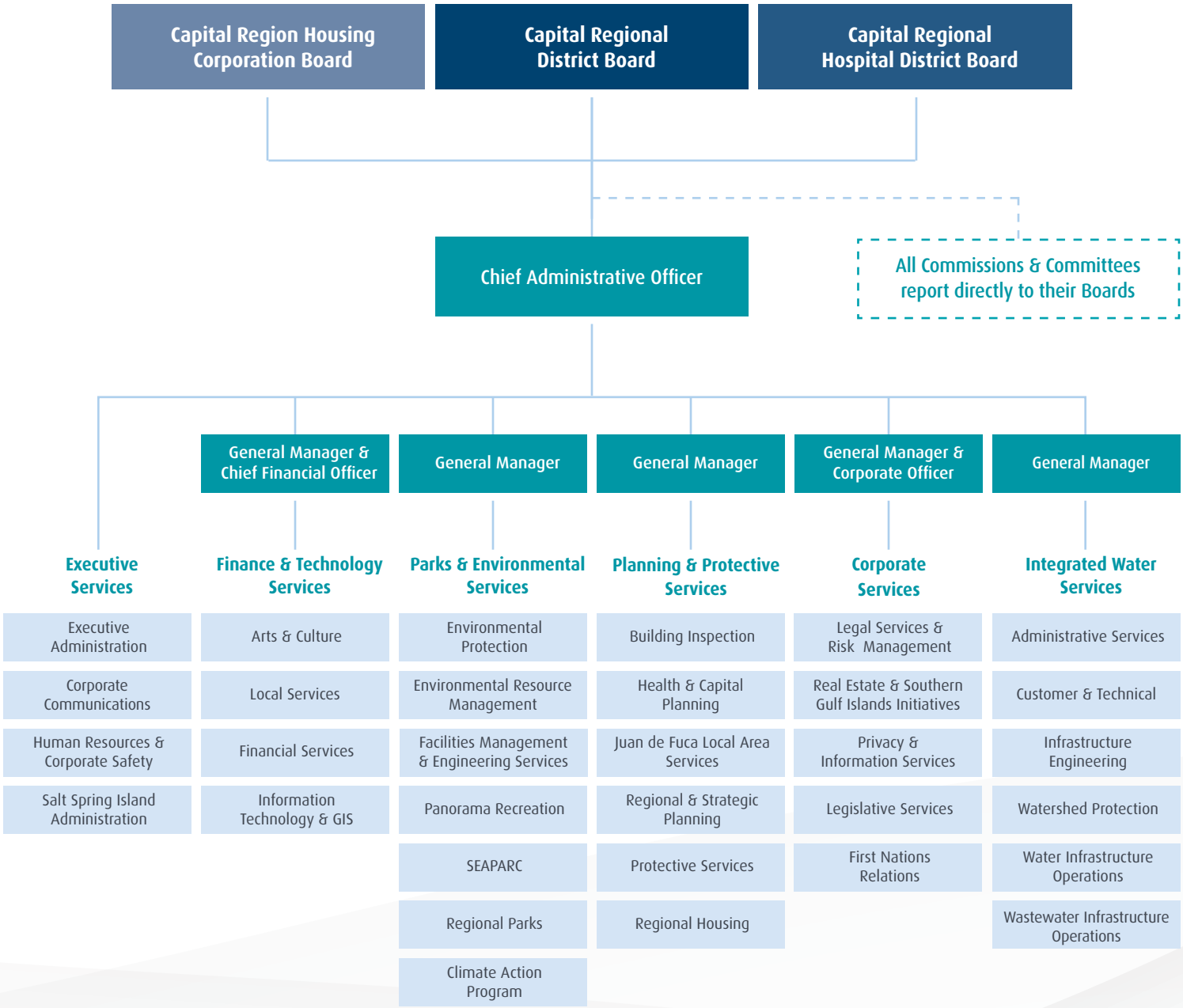
The CRD has more than 200 services, infrastructure and financing agreements with municipalities and electoral areas. CRD services are organized into the following categories:

- Regional, where all municipalities and electoral areas are served
- Sub-regional, where two or more jurisdictions are served
- Local, in the electoral areas where the CRD is the local government

The CRD works collaboratively with First Nations and other orders of governments and has direct relationships with individuals, businesses, organizations, institutions and communities that access regional utilities and services. The CRD owns and operates the Capital Region Housing Corporation, a non-profit provider of approximately 2,000 affordable rental units throughout the region, and administers the Capital Regional Hospital District (CRHD). The CRHD invests in traditional health care services and provides capital funding for health care infrastructure, such as health facilities and hospital equipment. The CRD follows a four-year service and financial planning process to ensure that resources are used efficiently and that services effectively meet the needs of residents, municipalities, electoral areas and First Nations.



Organizational Structure



Cultural Traits

Our cultural traits reflect what we value as an organization. They were developed through an employee-driven process and are the behaviours and mindset we strive to demonstrate and apply throughout our work, no matter our role at the CRD. We seek to integrate them into our processes and support systems so all employees can be empowered to demonstrate them in their daily activities.

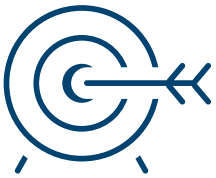


SERVE THE CUSTOMER

Understand the politics

Focus on service

Communicate effectively with stakeholders

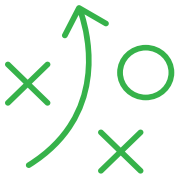


OWN THE OUTCOME

See the big picture

Be accountable for results

Build confidence, increase trust, earn respect



LEAD THE WAY

Think strategically

Foster innovation

Pursue innovation and seek continuous improvement



DEVELOP EMPLOYEE EXCELLENCE

Model integrity

Develop self

Support professional growth



WORK COLLABORATIVELY

Build partnerships

Develop others

Work with a common purpose



EMBRACE CHANGE

Demonstrate courage

Create a common vision for change and support change management

Welcome ideas and perspectives

Our Planning Framework



1

BOARD PRIORITIES

The Board identifies strategic priorities and associated initiatives that require bold and innovative action over the course of its term.

2

CORPORATE PLAN

The Corporate Plan sets out the organization's strategic goals and initiatives necessary to guide service delivery, financial planning and reporting over the Board's mandate.

3

SERVICE PLANNING

In conjunction with financial planning, annual service planning identifies resource implications of initiatives detailed in the Corporate Plan.

4

FINANCIAL PLANNING

In conjunction with service planning, annual financial planning identifies the financial impact of proposed services in preliminary and final budgets. The Board reviews service planning documents and budgets and determines funding.

5

SERVICE DELIVERY

Once the Board approves service planning documents and budgets, the CRD delivers services and reports to Board, Committees and Commissions on progress towards desired outcomes and Board initiatives.

Corporate Statements

The following statements represent the key purpose, commitment and aspirations of the CRD. Our mission embodies our purpose. The Board and organizational vision statements link the Board's vision with how staff work to achieve the desired outcomes. Other key statements ground our work in important priorities and formally declare our commitment to our shared path forward.

Mission

We are a regional federation working together to serve the public good, plan for the future, and help build a livable, sustainable and resilient region. We work across municipal and electoral area boundaries to deliver services to residents regionally, sub-regionally and locally through an inclusive, efficient and open organization.

Board Vision

The CRD embraces cooperation, innovation, and bold leadership in the delivery of services that contribute to a livable, sustainable and resilient region. We are a region where all residents are included and have access to a quality of life that is fulfilling for them; and where there is a healthy environment for current and future generations.

Organizational Vision

The CRD is a place where employees realize their potential and whose lives are improved every day through organizational connections and meaningful, fulfilling work.

Declaration of Climate Emergency

In February 2019, the CRD Board joined many other local governments across the globe in declaring a climate emergency. Climate Action & Environment remains a top priority for this Board's term.

The CRD is working to reduce the organization's greenhouse gases, prepare for climate impacts and support climate action efforts across the region. In 2021, CRD staff completed a comprehensive, data-driven planning process to create a renewed Climate Action Strategy that provides clarity on the role the CRD can play as a leader in climate action over the next five years.

For more information, please visit:
www.crd.bc.ca/climate

Reconciliation

The CRD's boundaries span the traditional territories of many First Nations, whose ancestors have been taking care of the land since time immemorial. The CRD believes that a positive working relationship with First Nations is good for the whole region. For the CRD to have a positive relationship with First Nations we need to acknowledge, respect and complement their Indigenous laws, customs and systems of governance. The CRD is part of a national movement towards Reconciliation with Canada's Indigenous peoples, informed by:

- The Truth and Reconciliation Commission's Calls to Action
- The United Nations Declaration on the Rights of Indigenous Peoples
- Section 35 of the Canadian Charter of Rights and Freedoms
- The Douglas Treaties and the BC Modern Treaty process

For the full Statement of Reconciliation, please visit:
www.crd.bc.ca/firstnations

Commitment to Equity, Diversity & Inclusion

At the CRD, we are committed to creating an inclusive workplace culture that celebrates the uniqueness of individuals – where differences are recognized, appreciated and responded to in ways that fully respect each person's background, lived experiences, talents and strengths.

We value equity, diversity, and inclusion and are committed to listening, learning and evolving on this journey to improve the sense of belonging for everyone at the CRD.



Taking Action

Board Priorities, approved plans, Corporate Plan initiatives and established service mandates drive our work. Our corporate planning process references these drivers and they inform annual service and financial planning processes. This, in turn, informs Board resource allocations and sets the stage for actions that respond to Community Needs.

2023–2026 Board of Directors

Message from the Board

As the 2023–2026 CRD Board of Directors, we are mayors and councillors in each municipality and elected representatives of the electoral areas. In our roles, we hear the concerns of our constituents, we identify opportunities, risks and problems that need to be solved, and we work together as the CRD Board for the benefit of the region.

The continued growth of the region requires decisive and collaborative action to set the strategic course for the CRD over the next four years and beyond. As a Board, we are committed to embracing new opportunities and solving emerging challenges to support our communities. For our term, we have agreed to focus on five regional priority areas, and have reaffirmed our commitments towards climate action and reconciliation with First Nations.

Board Priorities and Initiatives

We carefully selected strategic priorities and associated initiatives, that can be addressed within the CRD's legislative mandate, that are new or that require more intense or urgent effort than has previously been applied.

We acknowledge the extensive work the CRD is already doing for the region and will continue to do. Through the CRD's established service planning and budget processes, we will determine how best to fund our priorities and initiatives, with a focus on affordability and delivering value to taxpayers.



Board of Directors

Our 24-member Board is composed of one or more elected officials from each of the local governments and electoral areas within the CRD boundaries. Each local government and electoral area holds one director position on the Board for every 25,000 people (or portion thereof).



(front row, left to right)

- Peter **JONES**, North Saanich
- Doug **KOBAYASHI**, Colwood
- Colin **PLANT**, Saanich (*2023 Chair*)
- Gary **HOLMAN**, Salt Spring Island Electoral Area
- Marie-Térèse **LITTLE**, Metchosin
- Maja **TAIT**, Sooke

(centre row, left to right)

- Kevin **MURDOCH**, Oak Bay
- Barbara **DESJARDINS**, Esquimalt
- Cliff **MCNEIL-SMITH**, Sidney
- Al **WICKHEIM,** Juan de Fuca Electoral Area
- Marianne **ALTO**, Victoria
- Susan **BRICE**, Saanich
- Judy **BROWNOFF**, Saanich
- Lillian **SZPAK**, Langford
- Chris **COLEMAN**, Victoria

(back row, left to right)

- Paul **BRENT,** Southern Gulf Islands Electoral Area
- Ken **WILLIAMS**, Highlands
- Scott **GOODMANSON**, Langford
- Sid **TOBIAS**, View Royal
- Zac **DE VRIES**, Saanich
- Ryan **WINDSOR**, Central Saanich
- Dave **THOMPSON**, Victoria
- Dean **MURDOCK**, Saanich
- Jeremy **CARADONNA**, Victoria

2023–2026 Board Priorities

Priority Setting

The CRD Board identifies the needs to be addressed and sets the strategic course for the CRD over a four-year mandate, from 2023–2026. The five Board Priorities, the desired outcomes and related initiatives are detailed in the following table (pages 12–13).

In addition to the Board Priorities, Board and ELT approved plans guide the CRD's day-to-day operations. Staff monitor, review, and adjust approved plans to ensure they remain relevant in the face of community and organizational changes.

Priorities	Transportation	Housing	Climate Action & Environment
Desired Outcomes	*Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability.*	*Residents have access to affordable housing that enhances livability.*	*Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts.*
Initiatives	› Improve regional connectivity and safety across transportation modes › Support investments, expansion and equitable access to active and low carbon transportation › Present options for changes in governance for transportation in the region, including the electoral areas	› Increase supply of affordable, inclusive and adequate housing in the region	› Maximize solid waste diversion and resource recovery from waste materials › Explore options for a regional approach to biodiversity and the protection of ecological assets › Increase resilience, community and adaptation planning to address climate related risks and disasters › Support energy efficient and low carbon buildings across the region

Priorities	First Nations	Governance
Desired Outcomes	*Strong relationships with First Nations based on trust and mutual respect, partnerships, and working together on shared goals.*	*Effective advocacy, coordinated and collaborative governance, and leadership in organizational performance and service delivery.*
Initiatives	› Develop mechanisms to hear more from First Nations' governments as to how they would like the CRD to approach reconciliation › Collaborate with First Nations to build and strengthen new processes for respectful, reciprocal government-to-government decision-making and service delivery that uplift Indigenous self-determination › Invite, respect and incorporate Indigenous leadership and traditional knowledge to enhance initiatives and strategies that support other priorities in the plan › Support shared prosperity by enhancing economic opportunities, in partnership with First Nations	› Influence regional issues and advocate in a consistent, focused way that aligns with the Board Priorities › Strengthen Board decision-making frameworks to include First Nations reconciliation, equity, diversity and inclusion, and climate action lenses › Develop understanding of, and accountability for, equity, diversity and inclusion across CRD decision-making bodies › Foster greater civic participation among diverse community members › Explore changes to growth management approaches and identify implementation actions appropriate for local, regional and provincial implementation

Accountability & Reporting

The Corporate Plan presents the work the CRD needs to deliver over the Board term to meet the region's Community Needs, and deliver on the Board's Mission, Vision and Priorities.

Sixteen Community Needs have been grouped into five categories according to the nature of the services. The categories are utility services, community services, corporate services, government relations and local government.

Each Community Need highlights the goals the organization is working towards, in alignment with approved strategies and plans and ongoing service mandates, and the initiatives that will advance the goals over the four-year term.

The Corporate Plan, together with divisional service plans, will drive resource allocation decisions and set performance measures. Through the service and financial planning processes, staff will identify the most sustainable and affordable ways to deliver the Corporate Plan initiatives. Services cannot be delivered without resourcing. The Board determines resourcing through its annual review and approval of service and financial plans. To support the Board's decision-making, staff provide recommendations on funding, timing and service levels. Staff are accountable to the Board on progress, which will be measured and reported twice a year.

Service areas responsible for infrastructure and assets are guided by a suite of capital plans and master plans. Abridged lists of major projects have been included in the Corporate Plan, where appropriate, as an acknowledgment of the significant volume of work delivering these plans represents.

The following section identifies the initiatives that each CRD division will deliver in the 2023–2026 term. The table captures actions to advance Board Priorities, corporate priorities, service priorities and approved plans.



Lenses

Several Board Priorities relate to strengthening decision-making frameworks related to Reconciliation with First Nations, Equity, Diversity and Inclusion, and Climate Action. Labels have been included in the Corporate Plan to indicate initiatives that will play a pivotal role in advancing these lenses or that will be delivered in a manner that supports them. While the three lenses inform all work undertaken by staff, the labels draw attention to the most relevant initiatives in this context.

The Regional Growth Strategy (RGS) provides regional-scale policy direction for matters that cross jurisdictions. The CRD develops and maintains the document and, with local governments, shares in responsibility for implementation.

The RGS covers the breadth of regional service delivery, ranging from environment, infrastructure and climate action to housing, transportation and food systems. To support the continued implementation of the RGS, labels have also been added to initiatives that are significant to achieving the RGS objectives.

The tables on the following pages have a numerical and alphabetical coding system for easy reference. The icons listed below will help you navigate further:


Desired outcomes


Connected to Equity, Diversity & Inclusion


Connected to Climate Action


Connected to Regional Growth Strategy


Connected to First Nations Reconciliation

Board Priority icons


Transportation


First Nations


Housing


Governance


Climate Action & Environment

For local services initiatives, please see Local Government Community Needs on pages 35–38.



Community Needs

Utility Services

Services that are essential to residents' needs and/or mandated by regulation.

- Wastewater
- Water
- Solid Waste & Recycling

1 Wastewater

Efficient and effective management of the region's wastewater

Goal	CRD Initiatives	Accountable Division(s)
1a Goal: Optimize Core Area wastewater treatment system	**1a-1** Refine and optimize operations at the McLoughlin Wastewater Treatment Plant to reduce cost, improve efficiency and odour controls	Wastewater Infrastructure Operations, Infrastructure Engineering
	1a-2 Support other infrastructure projects that form part of the Core Area wastewater treatment system, including the Residuals Treatment Facility and conveyance system	Wastewater Infrastructure Operations, Infrastructure Engineering
1b Goal: Management of wastewater & treatment residuals	**1b-1** Implement a development cost charge program for the Core Area wastewater service	Infrastructure Engineering
	1b-2 Deliver master plans, capital plans and operations for wastewater treatment and conveyance to service current and future population, and address infrastructure deficiencies	Wastewater Infrastructure Operations, Infrastructure Engineering
	1b-3 Update the Liquid Waste Management Plan for Saanich Peninsula and Core Area	Environmental Protection
	1b-4 Develop and implement a long-term Biosolids Management Plan	Environmental Protection, Environmental Resource Management

✓ Key Strategies & Plans

- Core Area Liquid Waste Management Plan

Major Projects

- East Coast Interceptor & Bowker Sewer Rehabilitation
- Craigflower Force Main Twinning
- Marigold Siphon Assessment & Replacement
- Marigold Electrical & Building Upgrades
- Odour Control Upgrade (Saanich Peninsula)

2 Water

Safe drinking water and a resilient water supply

Goal	CRD Initiatives	Accountable Division(s)
2a Goal: High quality, safe drinking water	**2a-1** Update the Regional Water Supply Strategic Plan	Water Infrastructure Operations, Infrastructure Engineering, Watershed Operations
	2a-2 Implement the 2022-2050 Regional Water Supply Master Plan	Water Infrastructure Operations, Infrastructure Engineering, Watershed Protection
	2a-3 Review water rates in service agreements with First Nations	Water Infrastructure Operations
	2a-4 Review and determine appropriate level of water subsidy used for agriculture	Water Infrastructure Operations
	2a-5 Active forest/ecological management to enhance forest health and resilience in the Water Supply Areas	Watershed Protection
	2a-6 Collect and analyze information for climate adaptation, reservoir management and the siting of new major infrastructure	Watershed Protection
	2a-7 Implement a development cost charge program for the Regional Water Service	Infrastructure Engineering
2b Goal: Reliable & efficient drinking water transmission system	**2b-1** Enhance safety of aging dams in watersheds and mitigate against the risk of failures	Water Infrastructure Operations, Infrastructure Engineering
	2b-2 Invest in and maintain capital assets, and undertake regulatory monitoring, to service current and future population and climate adaptation	Water Infrastructure Operations, Infrastructure Engineering

✓ Key Strategies & Plans

- Regional Water Supply Strategic Plan
- 2022-2050 Regional Water Supply Master Plan
- Regional Growth Strategy

Major Projects

- Water Filtration Plant Siting & Design
- Deep Northern Intake & Sooke Lake Pump Station – Planning & Design
- Replacement of Segments of Main No.3 & No.4
- Replacement of Other Transmission Mains
- System Seismic Upgrades and Expansion (Saanich Peninsula)

3 Solid Waste & Recycling

Minimize waste disposal and maximize waste diversion

Goal	CRD Initiatives	Accountable Division(s)
3a Goal: Maximize solid waste diversion & resource recovery from waste materials	**3a-1** Develop and implement new and enhanced waste diversion policies	Environmental Resource Management
	3a-2 Investigate regional waste flow management	Environmental Resource Management
	3a-3 Increase multi-family dwelling and industrial, commercial and institutional sector waste diversion	Environmental Resource Management
	3a-4 Explore beneficial uses for solid waste residuals	Environmental Resource Management
	3a-5 Financially sustainable service delivery	Environmental Resource Management
3b Goal: Outreach & engagement with communities	**3b-1** Ongoing engagement and outreach on all major policies and new diversion programs and plans	Environmental Resource Management

✓ Key Strategies & Plans

- Solid Waste Management Plan

Major Projects

- Landfill Gas Utilization
- Cell 4 Liner Installation
- North End Commercial Access Improvements
- Cell 5&6 Gravity Retaining Wall Construction
- Intersections Upgrade
- Cell 5 Liner Construction



Community Needs

Community Services

Services that address the needs of residents and build a liveable, sustainable region.

- Transportation
- Housing & Health
- Climate Action
- Regional Parks
- Planning
- Safety & Emergency Management
- Arts & Recreation

4 Transportation

Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability

Goal		CRD Initiatives	Accountable Division(s)
4a Goal: Present options for changes in governance for transportation in the region, including the electoral areas	**4a-1**	Scope and develop governance options, including consideration of a new transportation authority	Regional & Strategic Planning
	4a-2	Work collaboratively with elected and staff leaders in electoral areas, local governments, partner agencies and the province on transportation governance options development	Regional & Strategic Planning
	4a-3	Chart a pathway to approval, based on a preferred transportation governance option	Regional & Strategic Planning
4b Goal: Improve regional connectivity & safety across transportation modes	**4b-1**	Work with the Transportation Working Group to implement the regional multi-modal transportation network	Regional & Strategic Planning
	4b-2	Prepare policy positions to support advocacy for infrastructure investments and service improvements to achieve regional transportation priority items related to mass transit, general transit improvements, active transportation and multi-modal and safe highways	Regional & Strategic Planning, Corporate Communications
	4b-3	Support local governments to implement consistent approaches to transportation demand management, active transportation and safety policy	Regional & Strategic Planning
4c Goal: Support investments, expansion & equitable access to active and low carbon transportation	**4c-1**	Update the Regional Trails Management Plan	Regional Parks
	4c-2	Prepare a funding strategy to support implementation of priority regional trail enhancement and expansion projects	Regional Parks
4d Goal: Education, encouragement & information	**4d-1**	Shift travel behaviour through education, encouragement, and information	Regional & Strategic Planning

✓ Key Strategies & Plans

- Regional Transportation Plan
- Regional Growth Strategy
- Regional Parks and Trails Strategic Plan
- Regional Trails Management Plan
- Climate Action Strategy

Major Projects

- Regional Parks Capital Plan

5 Housing & Health

Residents have access to affordable housing and improved health facilities that enhances livability

Goal		CRD Initiatives	Accountable Division(s)
5a Goal: Increase the supply of affordable housing across the region	**5a-1**	Increase supply of affordable, inclusive and adequate housing across the region	Regional Housing
	5a-2	Pursue funding opportunities and matching funds to deliver more housing	Regional Housing
5b Goal: Protect & maintain non-market & market rental housing stock	**5b-1**	Support continued investment into existing housing stock to preserve and enhance the quality of the buildings and units	Regional Housing
	5b-2	Protect existing market rental housing to preserve affordability	Regional Housing
5c Goal: Regional response to homelessness	**5c-1**	Support a coordinated, regional and collaborative response to homelessness	Regional Housing
5d Goal: Better regional housing data to support evidence-based decision making & community understanding	**5d-1**	Data collection and research analysis capacity dedicated to housing data	Regional Housing
5e Goal: Provide the local share of health capital infrastructure	**5e-1**	Provide major and minor capital investment, equipment, land holdings, property management, and development	Health & Capital Planning Strategies
5f Goal: Support health through public health bylaws & education	**5f-1**	Work with Island Health to ensure public health bylaws are responsive to changing needs and legislation	Health & Capital Planning Strategies
5g Goal: Facilitate knowledge mobilization & partnerships to support community health & healthy public policy	**5g-1**	Through the Community Health Network, support knowledge and partnership development to fill identified gaps in community health initiatives	Health & Capital Planning Strategies

✓ Key Strategies & Plans

- Regional Housing Affordability Strategy
- Regional Growth Strategy

Major Projects

- CRHD 2023–2032 10-year Capital Plan
- CRHC 2023–2027 Major Capital Plan
- Regional Housing First Program
- Obligations under the Reaching Home and the Rapid Housing Initiative agreements with the Government of Canada
- Operational obligations of managing 50+ buildings

6 Climate Action

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts

Goal	CRD Initiatives		Accountable Division(s)
6a Goal: Sustainable & resilient land use, planning and preparedness	**6a-1**	Promote community capacity building on climate action	Climate Action Program
	6a-2	Update the climate projections for the capital region to support decision making and to help community partners understand how their work may be affected by our changing climate	Climate Action Program
	6a-3	Generate analysis to understand vulnerability and exposure to extreme heat now and into the future	Climate Action Program
	6a-4	Explore options for a regional approach to biodiversity and the protection of ecological assets	Environmental Protection
6b Goal: Low carbon mobility	**6b-1**	Implement the Capital Region Electric Vehicle Infrastructure Roadmap to support shift to low-carbon transportation options	Climate Action Program
	6b-2	Advance the electrification of the CRD vehicle fleet	Customer & Technical Services
	6b-3	Enhance on-board and CRD fleet management technology to support utilization management, reporting, fiscal accountability and climate action	Customer & Technical Services
6c Goal: Low carbon & resilient buildings & infrastructure	**6c-1**	Collaborative policies, programs and data collection initiatives to achieve energy efficient and low carbon buildings across the region	Climate Action Program
	6c-2	Implement the CRD Corporate Green Building Policy and CRD Corporate Carbon Price Policy	Climate Action Program, Facilities Management & Engineering Services
	6c-3	Expand the Home Energy Navigator program	Climate Action Program
6d Goal: Community-based greenhouse gas emissions	**6d-1**	Update the regional greenhouse gas inventories biannually to monitor progress on emissions reduction targets	Climate Action Program

✓ Key Strategies & Plans

- Climate Action Strategy
- Regional Growth Strategy

7 Regional Parks

Additional land acquisitions and increased access to parks and recreational trails that respect Indigenous culture and conservation values

Goal	CRD Initiatives	Accountable Division(s)
7a Goal: Complete the strategic planning & engagement process	**7a-1** Finalize the Regional Parks & Trails Strategic Plan	Regional Parks
7b Goal: Access & equity	**7b-1** Conduct research, develop and implement a Universal Access Plan to improve inclusion and accessibility in regional parks and trails	Regional Parks
7c Goal: Enhance the protection of biodiversity, ecological integrity & natural assets in regional parks	**7c-1** Conduct research and prepare and implement a Natural Areas Conservation Plan	Regional Parks
	7c-2 Develop and implement Impact Assessment and Best Management Practice Guidelines	Regional Parks
7d Goal: Expand access to green space & outdoor recreation	**7d-1** Develop and implement an Outdoor Recreation Plan	Regional Parks
	7d-2 Undertake the Resident Survey	Regional Parks
	7d-3 Develop an Interpretive Program Plan	Regional Parks
7e Goal: Climate action & resilience	**7e-1** Plan for and implement bike parking and e-Bike, electric vehicle charging stations at high-use regional park accesses	Regional Parks
	7e-2 Update Land Acquisition Strategy to incorporate criteria that reflects First Nations' interests	Regional Parks
7f Goal: Reconciliation	**7f-1** Work with First Nations to develop and implement priority initiatives related to regional parks and regional trails	Regional Parks
	7f-2 Develop a policy for supporting and clarifying Indigenous cultural use and cultural safety in regional parks	Regional Parks

✓ Key Strategies & Plans

- Regional Parks & Trails Strategic Plan
- Regional Trails Management Plan
- Regional Growth Strategy
- Land Acquisition Strategy

Major Projects

- Regional Parks Capital Plan

8 Planning

Keep approved plans current and monitor for effectiveness

Goal		CRD Initiatives	Accountable Division(s)
8a Goal: Managed growth	**8a-1**	Explore changes to growth management approaches and identify implementation actions appropriate for local, regional and provincial implementation	Regional & Strategic Planning
	8a-2	Assess the need for an update to the Regional Growth Strategy and accompanying monitoring program	Regional & Strategic Planning
8b Goal: Protect & enhance local agriculture to support long-term food systems security	**8b-1**	Consider establishment of a new foodlands access service	Regional & Strategic Planning
	8b-2	Activate agricultural activities on priority parcels, as appropriate	Regional & Strategic Planning
	8b-3	Building from the Regional Food and Agricultural Strategy, support partners to take action to bring land into agricultural production through research, development of policy positions and advocacy	Regional & Strategic Planning, Corporate Communications

✓ Key Strategies & Plans

- Regional Growth Strategy
- Regional Food and Agriculture Strategy



9 Safety & Emergency Management

Protect public safety and cooperatively mitigate against, prepare for, respond to and recover from emergencies

Goal	CRD Initiatives	Accountable Division(s)
9a Goal: Effective emergency management	**9a-1** Support planning for regional-scale emergencies in cooperation with the Regional Emergency Management Program	Protective Services
	9a-2 Develop plans and implement actions consistent with regulatory requirements for local government and regional emergency management, including new *Emergency Management Act* requirements	Protective Services
	9a-3 Pursue accreditation for CRD emergency management program	Protective Services

✓ **Key Strategies & Plans**

› CRD Corporate Emergency Plan



10 Arts & Recreation

Residents have access to appropriate and affordable arts and recreation opportunities that enhance quality of life

Goal	CRD Initiatives	Accountable Division(s)
10a Goal: Support, promote & celebrate the arts	**10a-1** Develop and implement a revised Arts & Culture Support Service Strategic Plan	Arts & Culture
10b Goal: Sustain & enhance arts throughout the region	**10b-1** Scale up regional participation in the CRD Arts & Culture Support Service	Arts & Culture
	10b-2 Scale up regional support for performing art facilities within the region	Arts & Culture
10c Goal: Affordable recreation opportunities that improve livability	**10c-1** Consider service expansions to address gaps and opportunities, as they emerge	SEAPARC, Panorama Recreation, Regional Parks
	10c-2 Regularly monitor and review services to determine appropriate types of recreational programming and recovery rates to meet Community Needs	SEAPARC, Panorama Recreation
	10c-3 Develop and implement a long-term strategic plan for SEAPARC	SEAPARC
	10c-4 Undertake a review of youth-focused programming at SEAPARC	SEAPARC

✓ Key Strategies & Plans

- CRD Arts & Culture Support Service Strategic Plan
- Panorama Strategic Plan
- SEAPARC Strategic Plan

Major Projects

- Updates and renewals to McPherson Theatre and Royal Theatre
- Heat Recovery System at Panorama



Community Needs

Corporate Services

Services that support an effective and efficient organizational administration.

- People
- Open Government
- Business Systems & Processes

11 People

An organization staff are proud to be a part of

Goal	CRD Initiatives	Accountable Division(s)
11a Goal: Equity, diversity & inclusion	**11a-1** Develop and implement an organizational accessibility plan that is informed by residents and an Accessibility Advisory Committee	Human Resources & Corporate Safety
	11a-2 Develop understanding of, and accountability for, equity, diversity and inclusion across CRD decision-making bodies	Human Resources & Corporate Safety
	11a-3 Create and implement an Indigenous Employment Strategy in partnership with local Indigenous communities and Indigenous-serving organizations	Human Resources & Corporate Safety, First Nations Relations
	11a-4 Strengthen Board decision-making frameworks to include First Nations Reconciliation, Equity, Diversity & Inclusion, and Climate Action lenses	Executive Leadership Team
11b Goal: Organizational capacity	**11b-1** Advance the Human Resource Strategic Plan to guide organizational capacity and continuity, workforce planning and retention, and corporate safety	Human Resources & Corporate Safety
	11b-2 Maintain and enhance corporate compliance and alignment with workplace safety legislation	Human Resources & Corporate Safety
	11b-3 Maintain business continuity, efficiency and resilience by rightsizing the staffing complement and facilities	Executive Leadership Team
	11b-4 Implement the recommendations in the 2023 CRD Employee Survey report	Executive Leadership Team
	11b-5 Continue supporting the CRD Leadership Development Program	Human Resources & Corporate Safety
	11b-6 Evaluate the effectiveness and impacts of the workplace flexibility and Alternative Work Options implementation on the organization and staff	Human Resources & Corporate Safety

Major Projects

- Human Resource Information System
- Digital Communication Tools
- 479 Island Highway Renovations
- Field Operations Centre Construction

12 Open Government

Coordinated and collaborative governance, and leadership in organizational performance and service delivery

Goal	CRD Initiatives	Accountable Division(s)
12a Goal: Enhanced privacy & records management	**12a-1** Adhere to new and emerging requirements of privacy legislation in a consistent manner	Information & Privacy Services
	12a-2 Support the digitization of our legacy records once the Electronic Documents and Records Management System is implemented	Information & Privacy Services
12b Goal: Foster greater civic participation among diverse community members	**12b-1** Enhance the public participation and engagement practices and framework to foster trust and understanding, informed by input from residents and equity, diversity and inclusion principles	Corporate Communications
	12b-2 Advance the Communications Strategic Plan to guide organizational communications practices and policies internally and externally	Corporate Communications
	12b-3 Modernize the crd.bc.ca website	Corporate Communications
	12b-4 Redesign and upgrade the CRD boardroom and broadcasting equipment to prepare for future planned growth and improve electronic meeting participation and engagement	Legislative Services
	12b-5 Build capacity for elections and electoral approval processes to address increasing demand for new service creation	Legislative Services
	12b-6 Implement a Board voting dashboard	Legislative Services

Major Projects

- Electronic Documents and Records Management System
- Website Redesign

13 Business Systems & Processes

Leading systems and policies to respond to best practices, comply with legislative requirements and deliver sustainable budgets

Goal	CRD Initiatives	Accountable Division(s)
13a Goal: Effective systems, processes & policies	**13a-1** Advance strategic approaches to procurement and project delivery to build capacity, improve standardization and support affordable services	Legal & Risk Management, Executive Leadership Team
	13a-2 Advance the Technology Strategic Plan to guide the modernization of our systems and technology solutions	Information Technology & GIS
13b Goal: Business capacity & continuity	**13b-1** Continue implementing business continuity planning and the Enterprise Risk Management framework	Legal & Risk Management
	13b-2 Mature the integration of asset management into capital planning processes to strengthen fiscal management practices and support resource sustainability	Financial Services
13c Goal: Achieve sustainable budgets through innovation & streamlining while recognizing the need for infrastructure investments & accountability to taxpayers	**13c-1** Advance changes to policies and systems to streamline activities, reduce complexity and increase efficiency	Financial Services
	13c-2 Optimize Financial Services through enhanced internal controls and continuous improvement methodologies	Financial Services

✓ Key Strategies & Plans

- Corporate Asset Management Strategy (CAMS)

Major Projects

- Corporate Enterprise Resource Planning Software
- Implementation of CAMS
- Project Management System



Community Needs

Government Relations

Activities that build and strengthen intergovernmental and interagency partnerships.

- Advocacy
- First Nations

14 Advocacy

Effective and coordinated advocacy

Goal	CRD Initiatives	Accountable Division(s)
14a Goal: Influence regional issues & advocate in a consistent, focused way that aligns with the Board Priorities	**14a-1** Work collaboratively to address multi-jurisdictional issues that impact residents' wellbeing in alignment with the Board Priorities	Executive Administration, Corporate Communications

✓ Key Strategies & Plans

› Advocacy Strategy



15 First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships and working together on shared goals

Goal	CRD Initiatives	Accountable Division(s)
15a Goal: Government-to-Government relationships	**15a-1** Seek First Nations' guidance on understanding, developing, and implementing new mechanisms to support ongoing government-to-government relations at the leadership and operational levels	First Nations Relations
	15a-2 Collaborate with First Nations and the province to support inclusive governance by advancing First Nations participation in regional district boards	First Nations Relations
	15a-3 Partner with First Nations to develop, monitor and report out on an organization-wide Reconciliation Action Plan	First Nations Relations
15b Goal: Indigenous leadership & traditional knowledge	**15b-1** Offer ongoing learning opportunities for staff and Board Directors to build awareness and understanding of Indigenous perspectives, law, and systems of governance	First Nations Relations
	15b-2 Seek out and invite opportunities for Indigenous leadership and knowledge to inform and transform approaches to taking care of land and water, across CRD service delivery areas	First Nations Relations, All Divisions
	15b-3 Engage First Nations to collaboratively develop inclusive approaches to land acquisition that respects Indigenous rights and strengthens government-to-government relationships	First Nations Relations
15c Goal: Shared prosperity	**15c-1** Increase the number of economic partnerships with First Nations, across CRD service delivery areas	First Nations Relations, All Divisions

✓ Key Strategies & Plans

- First Nations Task Force Final Report & Statement of Reconciliation
- CRD Statement of Reconciliation



Local Government

Local services for the residents of the Juan de Fuca, Salt Spring Island and Southern Gulf Islands electoral areas.

16 Local Government

Administer and deliver local services in Juan de Fuca, Salt Spring Island and the Southern Gulf Islands

Goal	CRD Initiatives		Accountable Division(s)
16a Goal: Climate Action & Environment	**16a-1**	Explore options for an electoral area specific Climate Action service	Climate Action Program, All Electoral Area Administrations
	16a-2	Explore opportunities to extend environmental protection programs and tools to the electoral areas	Environmental Protection, Climate Action Program, All Electoral Area Administrations
	16a-3	Develop a joint approach for water conservation education and resource management in the electoral areas ※	Environmental Protection, Climate Action Program, All Electoral Area Administrations
	16a-4	Evaluate Juan de Fuca's rural water resources for development	Juan de Fuca Local Area Service
16b Goal: Community Parks & Recreation	**16b-1**	Work with commissions to enhance and manage community parks, recreation facilities and trail networks and to deliver service improvements, where needed	All Electoral Area Administrations
	16b-2	Develop and/or update community parks management plans, as needed	All Electoral Area Administrations
	16b-3	Explore future potential uses for Salt Spring Island's fire hall site, with input from the local community	Salt Spring Island Administration
	16b-4	Investigate options to develop a community hall in Otter Point and proceed with implementation, if feasible ※	Juan de Fuca Local Area Service
	16b-5	Develop and implement a Juan de Fuca Community Parks and Recreation Strategic Plan	Juan de Fuca Local Area Service
16c Goal: Drinking Water	**16c-1**	Develop plans, facilitate infrastructure maintenance, upgrades and service expansions to support the treatment, storage and distribution of water, as needed by the community	All Electoral Area Administrations
16d Goal: Economic Development	**16d-1**	Advance the goals of the Community Economic Sustainability Commissions for Salt Spring Island and Southern Gulf Islands through planning and implementation activities ※	Southern Gulf Islands Administration, Salt Spring Island Administration

※ Initiative identified through strategic planning with Electoral Area Directors

16 Local Government *(Cont'd)*

Administer and deliver local services in Juan de Fuca, Salt Spring Island and the Southern Gulf Islands

Goal		CRD Initiatives	Accountable Division(s)
16e Goal: Governance	**16e-1**	Continue to review committees and commissions to find efficiencies and improve consistency	Legislative Services
	16e-2	Implement the Local Community Commission on Salt Spring Island to oversee island-wide services	Legislative Services
16f Goal: Planning	**16f-1**	Implement the B.C. Energy Step Code requirements, as mandated by the provincial government	Building Inspection
	16f-2	Digitize historical building permits, property files and other building records	Building Inspection
	16f-3	Continue to review Official Community Plans in Juan de Fuca Electoral Area	Juan de Fuca Local Area Service
	16f-4	Establish mechanisms for First Nations to engage in land use planning in the Juan de Fuca Electoral Area	Juan de Fuca Local Area Service
16g Goal: Public safety & emergency response	**16g-1**	Continue to implement wildfire resiliency activities	Protective Services, All Electoral Area Administrations
	16g-2	Enhance public notification processes for emergencies ⁂	Protective Services, Juan de Fuca Local Area Service
	16g-3	Review and modernize fire and emergency management programs	Protective Services

⁂ Initiative identified through strategic planning with Electoral Area Directors

Administer and deliver local services in Juan de Fuca, Salt Spring Island and the Southern Gulf Islands

Goal	CRD Initiatives		Accountable Division(s)
16h Goal: Transportation	**16h-1**	Develop and implement an Active Transportation Plan for the Ganges Village	Salt Spring Island Administration
	16h-2	Advocate for transit service improvements, including seamless connections with ferry services	All Electoral Area Administrations
	16h-3	Support rural transportation opportunities ⁂	Salt Spring Island Administration, Southern Gulf Islands Administration
	16h-4	Coordinate on shovel-ready active transportation projects to access and leverage equitable resourcing in design and engineering ⁂	All Electoral Area Administrations
16i Goal: Wastewater	**16i-1**	Develop plans, facilitate infrastructure maintenance, upgrades and service expansions to support local wastewater treatment plants, as needed by the community ⁂	All Electoral Area Administrations
	16i-2	Explore improvements to wastewater treatment, including alternative uses for wastewater and enhanced liquid waste facilities	Salt Spring Island Administration

⁂ Initiative identified through strategic planning with Electoral Area Directors

✓ Key Strategies & Plans

- Southern Gulf Islands Housing Strategy
- Salt Spring Island Parks & Recreation Strategic plan
- Juan de Fuca Parks & Recreation Strategic Plan
- Connectivity Plan (Southern Gulf Islands)
- Salt Spring Island Pedestrian and Cycling Master Plan
- Southern Gulf Islands Active Transportation Plan
- Salt Spring Island Active Transportation Plan

Major Projects

- Magic Lake Sewer and Water
- Mayne Island Regional Trail
- Centennial Park Plaza Upgrade
- Ganges Harbour Walk Design
- Parks and facilities maintenance and design
- Feasibility and Design Studies Funded through Juan de Fuca Planning Capital Plan
- Facility Improvements Funded through Juan de Fuca Parks Capital Plan
- Various Water and Wastewater Infrastructure Maintenance and Improvement Projects

Next Steps

Maintaining focus on the Board Vision of embracing cooperation, innovation and bold leadership in the delivery of services that contribute to a livable, sustainable and resilient region is key to our continued success.

Moving Forward

Our Corporate Plan is the roadmap we will use on our day-to-day mission to serve the public good and build a region where all residents are included and have access to a quality of life that is fulfilling to them and where there is a healthy environment for current and future generations. We will achieve this through an effective, efficient and transparent organization.

Timelines

Annual timelines on our way to completing the 2023–2026 Corporate Plan include:

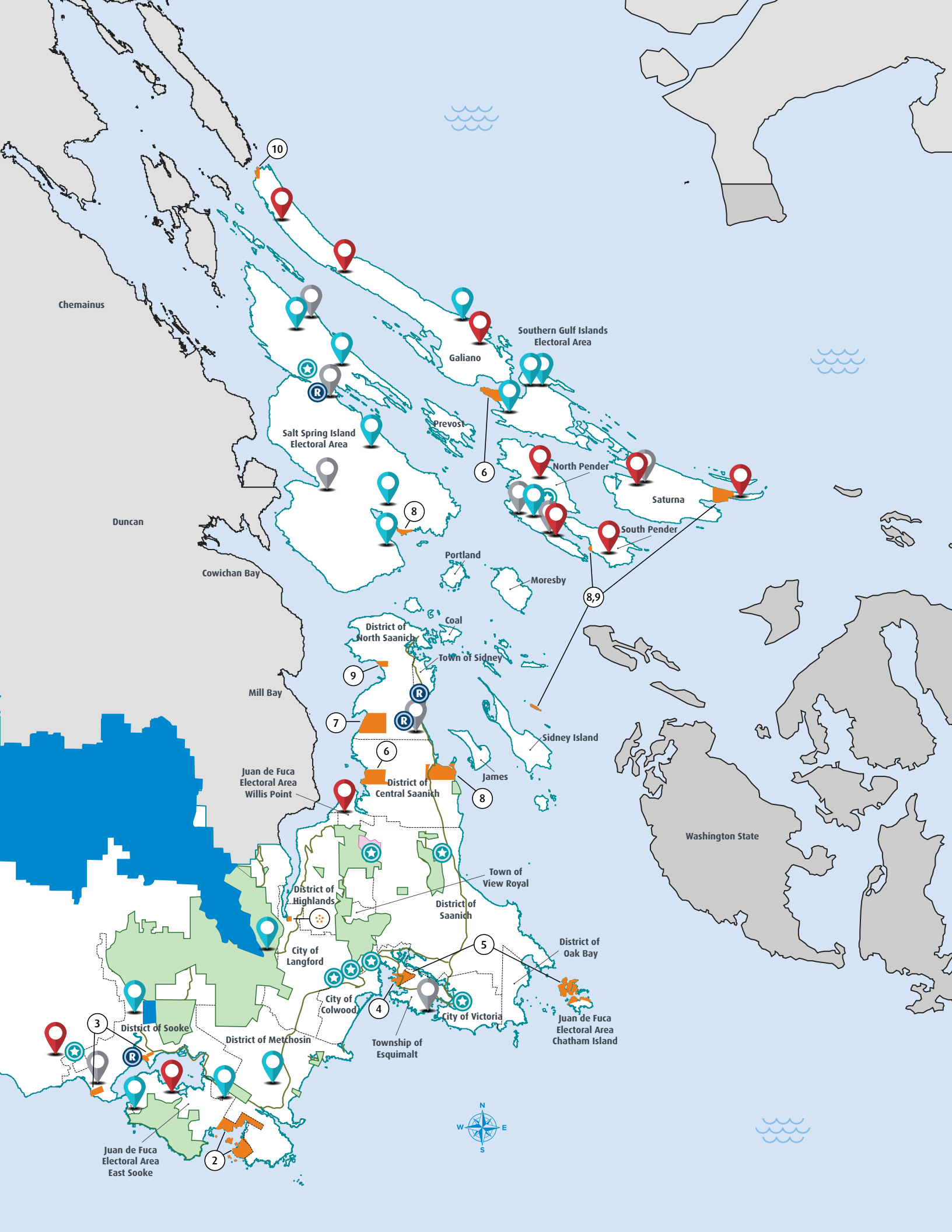
- **Q2:** ELT reports progress to Board and evaluates necessary organizational and resource requirements to implement Corporate Plan
- **Q2-Q3:** ELT and staff conduct service and financial planning
- **Q3:** ELT reviews service plans and budget
- **Q4:** Board reviews preliminary budget

Reporting

Through regular reporting at Committee, Commission and Board meetings, quarterly reporting of the performance dashboards and annual year-end reporting, we will track and assess what has worked well and what can be improved. This critical information helps us adjust to stay on course. To see these reports, please go to: www.crd.bc.ca/reporting.




CRD Worksite
Recreation Centre
Fire Hall
Wastewater Treatment Plant
Water Treatment Plant
CRD Regional Parks
Hartland Landfill
First Nation Traditional Territory
Greater Victoria Water Supply Area
CRD Regional Trails
1 P'a:chi:da?aht (Pacheedaht) First Nation
2 Scia'new (Beecher Bay) First Nation
3 T'Sou-ke Nation
4 Esquimalt Nation
5 Songhees Nation
6 W̱JOŁEŁP (Tsartlip) First Nation
7 BOḰEĆEN (Pauquachin) First Nation
8 SȾÁUTW̱ (Tsawout) First Nation
9 W̱SIḴEM (Tseycum) First Nation
10 Pune'laxutth' (Penelakut) Tribe
MÁLEXEŁ, BOḰEĆEN, W̱JOŁEŁP, SȾÁUTW̱, W̱SIḴEM First Nations share interest in Goldstream IR 13
CRD
1
Juan de Fuca
Electoral Area


10
Chemainus
Galiano
Southern Gulf Islands
Electoral Area
Salt Spring Island
Electoral Area
Prevost
6
North Pender
Saturna
South Pender
8
Duncan
Portland
Moresby
Cowichan Bay
8,9
Coal
District of
North Saanich
Town of Sidney
9
Mill Bay
7
6
Sidney Island
James
Juan de Fuca
Electoral Area
Willis Point
District of
Central Saanich
8
Washington State
Town of
View Royal
District of
Highlands
District of
Saanich
District of
Oak Bay
City of
Langford
5
City of
Colwood
4
City of Victoria
3
District of Sooke
District of Metchosin
Township of
Esquimalt
Juan de Fuca
Electoral Area
Chatham Island
Juan de Fuca
Electoral Area
East Sooke
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Making a difference...together

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APPENDIX B

Making a difference...together



Capital Regional District

2023-2026 Board Priorities – Progress Report

MAY 2024

2023-2026 Board Priorities – Progress Report (2024)

The CRD undertakes a planning process at the outset of each new Board term of office. Through this process, the 2023-2026 Capital Regional District (CRD) Board of Directors set the strategic course for the CRD for the Board term. This direction was captured in the form of a long-term vision and a set of Board priorities for supporting organizational activities. The CRD mission statement was also revised in 2023.

The 2023-2026 CRD Board Priorities were approved by the Board in March 2023. The priorities were carefully selected to enact the Board's vision for building a **livable, affordable and equitable region**. They set out a wide-ranging set of activities that can be addressed within the CRD's legislative mandate, that are new, or that require more intense or urgent effort than has previously been applied. The Board priorities are advanced alongside other CRD services, mandated and/or regulated, and programs.

Reporting on progress made

The CRD Board meets annually in the spring to review progress made on advancing the Board Priorities and confirm the direction for the following year.

This progress report captures the key deliverables and milestones achieved in 2023 while advancing the 2023-2026 Board priorities.

Legend

●	In progress
●	Delayed/an issue has emerged
●	Completed and/or operationalized
●	On hold
(blank)	Not started

Transportation

Residents have access to convenient, green and affordable multi-modal transportation systems that enhance livability.

1a Improve regional connectivity and safety across transportation modes	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- In 2023, the Traffic Safety Commission delivered education and awareness campaigns for the following priority action areas: distracted driving, speeding and impaired driving.
- The 2022 Origin Destination Household Travel Survey report which showed an increase in walking and cycling in the region, was released in September 2023.
- The Salt Spring Island Active Transportation Network Plan was completed in August 2023.

1b Support investments, expansion and equitable access to active and low carbon transportation	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- Presented a regional All Ages and Abilities (AAA) cycling facility criteria to support consistent planning and reporting on implementation of the regional cycling network to the Transportation Committee in March 2023.
- The Active Transportation Infrastructure Stream – BC Active Transportation Infrastructure Grants Program approved $500,000 for the Mayne Island Regional Trail Phase 1 Development Project. Construction is underway including trail support structures, culvert extensions, and placement of base and final surface materials.
- Saturday transit service on Fulford Harbour to Ganges, including southbound service along Cusheon Lake Road, was increased in May 2023.
- The Pender Island Parks and Recreation Commission Schooner Way Active Transportation Trail project is underway. Completion expected in 2026.
- Construction for the Kimta E&N Cycling Connector was completed in April 2023.
- Staff brought forward an information report about the CRD Regional Trails Closure Policy to Transportation Committee in May 2023.
- Staff presented Regional Trails Widening and Lighting Project funding options and were directed by the Board to accelerate by inclusion of the project in the 2024-2028 Financial Plan and that staff continue to develop partnerships, pursue grant opportunities and report back with options to generate additional funds through non-tax revenue.

1c Present options for changes in governance for transportation in the region, including the Electoral Areas	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- Planning started to scope regional transportation governance options. Background report presented to the Transportation Committee in March 2023.
- Completed an engagement process with municipal councils, electoral areas and agency partners on regional transportation governance. Input was gathered during summer 2023 and results were presented to the CRD Board in November 2023.

Housing

Residents have access to affordable housing that enhances livability.

2a Increase supply of affordable, inclusive and adequate housing in the region	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- Opened 72 units of affordable rental housing at 210 Gorge Road in Victoria in February 2023, in partnership with the Cool Aid Society through the Regional Housing First Program (RHFP).
- Opened 52 units of supportive housing at 2933 and 2949 Albina Street in Saanich in February 2023, in partnership with BC Housing and Our Place Society through Rapid Housing Initiative (RHI) Round 1.
- Opened 75 units of affordable rental housing at 2170 Charters Road in Sooke in partnership with the M'akola Housing Society through the RHFP. Project completed December 2022 and tenant move-ins began February 2023.
- Opened 45 units of supportive housing at 865 Catherine Street (House of Courage) in Victoria in March 2023 in partnership with BC Housing and the Aboriginal Coalition to End Homelessness through the RHI Round 2.
- Opened 51 units of affordable housing at Prosser Place (7612 East Saanich Road) in Central Saanich in May 2023, in partnership with the Capital Region Housing Corporation (CRHC) through the Regional Housing First Program (RHFP).
- Opened 39 units of supportive housing at 1909 Prosser Road in Central Saanich in May 2023, in partnership with BC Housing and Pacifica Housing through the RHI Round 2.
- Staff continued ongoing work to implement the Rural Housing Strategy.
- Throughout 2023, CRHC staff advanced the feasibility analysis and preliminary design work or potential development projects in anticipation of the 2023 Community Housing Fund call for proposals.
- A Development Permit Application was submitted to the City of Victoria in Q3 2023 through the Rapid Deployment of Affordable Housing process for Village on the Green redevelopment, in partnership with the CRHC though the RHFP.
- The 2023 Greater Victoria Point-in-Time Count results were announced in August 2023. A regional Point-in-Time Count is a tool a community can use to measure and understand the nature, extent and characteristics of homelessness and is part of a community's response to homelessness by raising awareness of the need for action.
- In August 2023, a bylaw amendment to increase the annual requisition for the Land Assembly, Housing and Land Banking Service to $85 million obtained statutory approval. The process to obtain consent for the bylaw amendments from participating areas and Electoral Areas, as well as consent for the accompanying loan authorization bylaw was initiated and continued into 2024.

2a Increase supply of affordable, inclusive and adequate housing in the region	2023	2024	2025	2026
	●	●		

- The CRHC Chair and CAO met with Minister Kahlon, BC Minister of Housing in September 2023, to advise of the CRD Board's proposal to increase the borrowing authority and request that the Province consider providing up to $170 million in funding to facilitate the development of approximately 2,000 affordable housing units across the region.

Climate Action & Environment

Progress on adaptation, reduced greenhouse gas emissions and triple-bottom line solutions that consider social, environmental and economic impacts.

3a Maximize solid waste diversion and resource recovery from waste material

2023	2024	2025	2026
●	●		

ACHIEVEMENTS IN 2023:

- The Board-approved new Solid Waste Management Plan received approval from the BC Minister of Environment & Climate Change Strategy in July 2023. The final plan sets a path to reduce how much material is sent to Hartland Landfill and guide how the region's solid waste is managed in a safe, secure and sustainable way now and into the future. It includes strategies and actions for reducing and managing all streams of solid waste—including recyclables, compostable material and garbage— to extend the life of Hartland Landfill to 2100 and beyond.
- Staff presented proposed amendments to the Hartland Landfill Tipping Fee Bylaw, a revised tipping fee schedule and new material bans to better encourage diversion in May 2023.

3b Explore options for a regional approach to biodiversity and the protection of ecological assets

2023	2024	2025	2026
●	●		

ACHIEVEMENTS IN 2023:

- Staff initiated internal discussions to understand the scope and breadth of a regional approach to environmental stewardship with a focus on biodiversity and the protection of ecological assets. Work on a new establishing bylaw is paused.

3c Increase resilience, community and adaptation planning to address climate related risks and disasters

2023	2024	2025	2026
●	●		

ACHIEVEMENTS IN 2023:

- Staff launched the capital region heat vulnerability mapping project with inter-municipal partners.
- For the electoral areas, staff completed Community Wildfire Resiliency Plans in February 2023, Community Evacuation Guides in May 2023 and Community Wildfire Exposure Maps in October 2023. In addition, Community Wildfire Resiliency webinar series were conducted for the communities.
- A revised bylaw to regulate open burning within Juan de Fuca (JdF) and Southern Gulf Island electoral areas to prevent human-caused wildfires came into force in April 2023.

3d Support energy efficient and low carbon buildings across the region	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- Continued implementing and promoting the Home Energy Navigator program to support retrofits in single family homes. In addition, staff developed and launched the Neighbourhood Navigator pilot targeting fossil fuel heated neighbourhoods.
- Supported municipalities in advancing new B.C Energy Step Code and B.C Zero Carbon Step Code policy changes. Both came into effect in May 2023.
- Staff participated in the Provincial Local Government Retrofit Peer network, Step Code Peer network, and the new Embodied Carbon Peer network and shared learnings with CRD Climate Action Inter-Municipal Working Group.
- Salt Spring Island's rainwater harvesting rebate program was renewed for one year and staff implemented and expanded the existing rain barrel program for the Southern Gulf Islands.
- The Corporate Green Building Policy and Carbon Price Policy were adopted in April 2023 and implementation is underway.
- The CRD released the 2022 Regional and Local Government Greenhouse Gas Inventory report in October 2023.

First Nations

Strong relationships with First Nations based on trust and mutual respect, partnerships, and working together on shared goals.

4a Develop mechanisms to hear more from First Nations' governments as to how they would like the CRD to approach reconciliation	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- Staff initiated the Government-to-Government Relationship Building initiative to, among other goals, invite First Nations to share their priority topics for a CRD Reconciliation Action Plan, and provide an opportunity for Board Directors to hear directly from local Nations. Invitations to participate were sent to First Nations by the Board Chair in April 2023. All nine First Nations reached out to indicate interest to be involved, and leadership-level meetings were held with four Nations.
- Staff initiated the Inclusive Regional Governance initiative, with a Study Grant from the Province, to gather input from First Nations regarding Nations joining the regional board.
- Cultural perspectives training was offered to Board Directors and Alternate Directors in May 2023. Indigenous Relations Coaching was offered to Board Directors in fall 2023.
- A Forum of All Councils was held in October 2023 to bring together leadership from First Nations, municipalities and electoral areas, build relationships and explore ways to work together.
- Two gatherings were hosted to learn from the W̱SÁNEC cultural workers regarding archaeology and heritage conservation – one for CRD Board Directors, Commissioners and staff, and another just for staff.

4b Collaborate with First Nations to build and strengthen new processes for respectful, reciprocal government-to-government decision-making and service delivery that uplift Indigenous self-determination	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- Regional Parks is actively engaging First Nations regarding land acquisitions.
- JdF Community Parks co-hosted a community meeting with the Pacheedaht First Nation to gather input and identify concerns about the replacement of playground equipment in Port Renfrew.
- In September 2023, the Board adopted policy direction to support land reversion to First Nations within the island rail corridor, in accordance with a process informed by a reconciliation-based approach. Staff participated in inter-governmental island rail corridor planning sessions, facilitated by the Province.

4c Invite, respect and incorporate Indigenous leadership and traditional knowledge to enhance initiatives and strategies that support other priorities in the plan	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- Regional Parks engaged with First Nations to gather input into the Regional Parks & Trails Strategic Plan in early 2023. The feedback was presented to the Board who adopted the final Regional Parks & Trails Strategic Plan 2022-2032 in July 2023.
- Staff continued to collaborate on an ongoing basis with First Nations on the conservation and protection of heritage sites, across all service delivery, and on the Regional Parks Land Acquisition Strategy, land acquisitions, and management plans.
- Staff developed a Working with Indigenous Elders guidance document for staff in February 2023, to support respectful relationships where elders are interested in sharing their knowledge to inform CRD initiatives.
- The CRD partnered with Eddy Charlie and Kristin Spray of Orange Shirt Day Victoria to fly the Xe Xe Smun' Eem flag outside the CRD Fisgard Street office. Panorama Recreation partnered with the Victoria Native Friendship Centre, The Art of Reconciliation and Indigenous artist Dahlila Charlie to host a community mosaic project inspired by Orange Shirt Day and National Day of Truth and Reconciliation.
- Cultural Perspectives training is offered as a foundational training for new staff.
- Archaeology Policy and Process, Heritage Site Conservation, and Archaeological Chance Find Management trainings are offered to staff involved in land altering works, as well as CRD contractors, volunteer CRD Commissioners, and volunteers in regional parks.

4d Support shared prosperity by enhancing economic opportunities, in partnership with First Nations	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- The CRD is in active discussions with First Nations to update water and wastewater servicing agreements that address the Nations' needs and priorities.
- Negotiations with First Nations are underway to identify collaborative opportunities for economic, employment and environmental protection initiatives associated with the operations and future expansion of the Hartland Landfill.
- The CRD Indigenous Employment Project findings were released in May 2023, in a Summary Report, Findings and Recommendations Report, and a report on Wise Practices for Indigenous Employment and Culturally Safe and Supportive Workplaces. A new position was approved by the Board in the fall to lead the development of an Indigenous Employment Strategy.

4d Support shared prosperity by enhancing economic opportunities, in partnership with First Nations	2023	2024	2025	2026
	●	●		

- The CRD funded solid waste bin removal to support a community clean-up for the Pacheedaht First Nation in the first two quarters of 2023.
- The CRD partnered with Greater Victoria Harbour Authority, City of Victoria, and the South Island Prosperity Partnership to develop an Indigenous Business Directory for the South Island to support enhanced procurement from Indigenous businesses. The directory was launched in June 2023.
- The CRD shares resources with First Nations as resources are made available through CRD works, including logs for firewood.

Governance

Effective advocacy, coordinated and collaborative governance, and leadership in organizational performance and service delivery

5a Influence regional issues and advocate in a consistent, focused way that aligns with the Board strategic priorities	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- The Board approved an updated CRD Advocacy Strategy in August 2023.
- In April 2023, the Board received an information report about the revised CRD Intergovernmental Relations Administrative Policy and the Terms of Reference for the Executive Leadership Team.
- A Corporate Advocacy Dashboard is included in the CAO quarterly report. The Board Advocacy webpage offers the complete list of all advocacy correspondence.
- This initiative was operationalized at the end of 2023.

5b Strengthen Board decision-making frameworks to include First Nations reconciliation, equity, diversity and inclusion, and climate action lenses	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- Additional information was included in the 2023-2026 CRD Corporate Plan to support the Board's understanding of how the lenses will impact future initiatives and activities. The latest plan was approved by the Board in April 2023.
- Staff report templates were updated to include decision-making consideration of the three lenses directed by the Board.
- Additional considerations of the lenses have also been included in the documentation supporting the annual development of service plans.

5c Develop understanding of, and accountability for, equity, diversity and inclusion across CRD decision-making bodies	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- The CRD established a statement of Commitment to Equity, Diversity, and Inclusion (EDI) to guide internal decisions and policies. All Corporate Statements are available on page 8 of the 2023-2026 CRD Corporate Plan.
- Staff training and awareness courses were provided throughout 2023 with the support of an EDI training specialist.
- The Terms of Reference for the Accessibility Advisory Committee were approved by the Board in April 2023 and the committee was established in October 2023.

5d Foster greater civic participation among diverse community members	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- The 2023-2026 CRD Corporate Plan identified initiatives to review and enhance engagement practices, tools and framework in alignment with this priority.
- The CRD continues to use the Get Involved engagement platform to host initiatives and campaigns that have public participation components.
- An extensive website redesign for crd.bc.ca is underway.

5e Explore changes to growth management approaches and identify implementation actions appropriate for local, regional and provincial implementation	2023	2024	2025	2026
	●	●		

ACHIEVEMENTS IN 2023:

- The CRD hosted the Development & Planning Advisory Committee in January, March, July and November 2023. This is a forum for municipal partners and others to discuss planning, transportation and development issues of regional, inter-municipal, and inter-agency significance.
- The CRD initiated research and analysis to support the CRD Regional Housing and municipal partners to act on housing and development challenges. However, provincial legislation announced later in the year changed the focus of this work.
- The CRD secured grant-funding from the Union of BC Municipalities' Complete Communities Fund to conduct a regional growth and mobility study.
- The Regional Growth Indicators report is published annually in the first quarter. Indicators related to regional growth, transportation mode share and housing affordability help the region monitor the impact of strategic and tactical actions and capital investments. These are particularly pertinent considering new provincial housing legislation. The data to date does not suggest there is an immediate need to change the existing direction.

APPENDIX C

Making a difference...together



Capital Regional District

2023-2026 Corporate Plan – Progress Report

MAY 2024

CRD 2023-2026 Corporate Plan – Progress Report (2024)

The Capital Region District (CRD) 2023-2026 Corporate Plan presents the work the CRD needs to deliver over the Boad term, along with the regional, sub-regional and local services, to meet the region's most important needs (i.e., the community needs) and advance the Board's vision and priorities.

The plan identifies initiatives that align to Board Priorities, deliver on core service mandates, are needed to meet regulatory requirements, and help the CRD keep pace with population growth and community expectations. The Corporate Plan is structured into categories that reflect the nature of the services:

- **Utility services** are essential to residents' needs and/or mandated by regulation.
- **Community services** address the needs of residents, and build a livable, sustainable region.
- **Corporate services** support effective and efficient organizational administration.
- **Government relations** presents activities to build and strengthen interagency partnerships and intergovernmental relations.
- **Local government** highlights local services for the residents of the Juan de Fuca, Salt Spring Island and Southern Gulf Islands electoral areas, where the CRD acts as the local government, and service provider.

The CRD Board approved the CRD 2023-2026 Corporate Plan in April 2023.

Reporting on progress made

The CRD Board meets annually in the spring to review progress made on advancing the Board Priorities and confirm the direction for the following year. This progress report captures the key deliverables and milestones achieved in 2023 while advancing the CRD 2023-2026 Corporate Plan.

Legend	
●	In progress/core service delivery
●	New Initiative Business Case (IBC)
○/○	Planned activities
●	Completed and/or operationalized
(Blank)	On hold/no action planned

1. Wastewater

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
1a-1	Refine and optimize operations at the McLoughlin Wastewater Treatment Plant to reduce cost, improve efficiency and odour controls	●	●			Existing term position have been extended to 2026. Optimization of operations will continue into 2024.
1a-2	Support other infrastructure projects that form part of the Core Area wastewater treatment system, including the Residuals Treatment Facility and conveyance system	●	●	○	○	Recruitment started/planned for 2024.
1b-1	Implement a development cost charge program for the Core Area wastewater service		●			Planned for 2024.
1b-2	Deliver master plans, capital plans and operations for wastewater treatment and conveyance to service current and future population, and address infrastructure deficiencies	●	●	○	○	Work progressing as planned.
1b-3	Update the Liquid Waste Management Plan for Saanich Peninsula and Core Area		●	○		Work planned for 2024-2025.
1b-4	Develop and implement a long-term Biosolids Management Plan	●	●			Long-term plan must be submitted to Province by June 2024. Engagement process initiated in 2024. Existing term position to be extended in 2024 to 2027.

2. Water

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
2a-1	Update the Regional Water Supply Strategic Plan	●	●			Work to update plan underway.
2a-2	Implement the 2022-2050 Regional Water Supply Master Plan	●	●	○	○	Recruitment planned for 2024; implementation of plan progressing as planned.
2a-3	Review water rates in service agreements with First Nations	●	●	○	○	Continued negotiation and implementation.
2a-4	Review and determine appropriate level of water subsidy used for agriculture	●	●	○	○	Ongoing, no change in subsidy in 2024.
2a-5	Active forest/ecological management to enhance forest health and resilience in the Water Supply Areas			○		Work planned for 2025.
2a-6	Collect and analyze information for climate adaptation, reservoir management and the siting of new major infrastructure	●	●	○	○	Work progressing as planned.
2a-7	Implement a development cost charge program for the Regional Water Service		●			Work planned for 2024.
2a-8	Water Quality Monitoring*		●	○		IBC retracted due to change in operating conditions. Alternative plan will be submitted for 2025.
2b-1	Enhance safety of aging dams, meet increasing regulatory requirements and mitigate against the risk of failures		●	○	○	Recruitment planned for 2024.
2b-2	Invest in and maintain capital assets, and undertake regulatory monitoring, to service current and future population and climate adaptation	●	●	○	○	Future initiative planned for 2025.

**Not in 2023-2026 Corporate Plan*

3. Solid Waste & Recycling

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
3a-1	Develop and implement new and enhanced waste diversion policies	●	●	○	○	Material stream diversion policy changes proceeding. Recruitment planned for 2024.
3a-2	Investigate regional waste flow management		●			Work brought forward to 2024.
3a-3	Increase multi-family dwelling and industrial, commercial and institutional sector waste diversion	●	●	○	○	Work continues as planned. All activities are linked to 3a-1-5.
3a-4	Explore beneficial uses for solid waste residuals	●	●	○	○	Work continues as planned. All activities are linked to 3a-1-5.
3a-5	Financially sustainable service delivery	●	●	○	○	Work continues as planned. All activities are linked to 3a-1-5.
3b-1	Ongoing engagement and outreach on all major policies and new diversion programs and plans	●	●	○	○	Work continues as planned.

4. Transportation

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
4a-1	Scope and develop governance options, including consideration of a new transportation authority	●	●			Work continues as planned.
4a-2	Work collaboratively with elected and staff leaders in electoral areas, local governments, partner agencies and the Province on transportation governance options development		●	○		Workshop with local governments planned for Q2 2024.
4a-3	Chart a pathway to approval, based on a preferred transportation governance option			○	○	Planned for 2025/2026.
4b-1	Work with the Transportation Working Group to implement the regional multi-modal transportation network	●	●	○	○	Regional Trails Closure Policy implementation proceeding as planned. Work continues as planned.
4b-2	Prepare policy positions to support advocacy for infrastructure investments and service improvements to achieve regional transportation priority items related to mass transit, general transit improvements, active transportation and multi-modal and safe highways	●	●	○	○	Work continues as planned.
4b-3	Support local governments to implement consistent approaches to transportation demand management, active transportation and safety policy	●	●	○	○	Work continues as planned.
4c-1	Update the Regional Trails Management Plan			○		Planned for 2025.
4c-2	Prepare a funding strategy to support implementation of priority regional trail enhancement and expansion projects	●	●	○	○	Recruitment planned for 2024.
4d-1	Shift travel behaviour through education, encouragement, and information			○		Planned for 2025.

5. Housing & Health

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
HOUSING						
5a-1	Increase supply of affordable, inclusive and adequate housing across the region	●	●	○	○	Capital projects and operations continue to advance as expected.
5a-2	Pursue funding opportunities and matching funds to deliver more housing	●	●	○	○	Not started.
5b-1	Support continued investment into existing housing stock to preserve and enhance the quality of the buildings and units	●	●	○	○	Routine capital plan delivery continues as expected.
5b-2	Protect existing market rental housing to preserve affordability		●	○	○	Planned for 2024.
5c-1	Support a coordinated, regional and collaborative response to homelessness	●	●	○	○	Board-directed negotiations re. service agreements with Aboriginal Coalition to End Homelessness* and Alliance to End Homelessness* in the Capital Region will take place in 2024.
5d-1	Data collection and research analysis capacity dedicated to housing data					Advanced through 5a-2.
HEALTH						
5e-1	Provide major and minor capital investment, equipment, land holdings, property management, and development	●	●	○	○	Work continues as planned.
5f-1	Work with Island Health to ensure public health bylaws are responsive to changing needs and legislation	●	●	○	○	Work continues as planned.
5g-1	Through the Community Health Network, support knowledge and partnership development to fill identified gaps in community health initiatives	●	●	○	○	Island Health funding expected to be renewed in 2024.

**Not in 2023-2026 Corporate Plan*

6. Climate Action

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
6a-1	Promote community capacity building on climate action	●	●	○	○	Work continues as planned.
6a-2	Update the climate projections for the capital region to support decision making and to help community partners understand how their work may be affected by our changing climate	●	●			Work continues as planned.
6a-3	Generate analysis to understand vulnerability and exposure to extreme heat now and into the future	●	●			Work continues as planned.
6a-4	Explore options for a regional approach to biodiversity and the protection of ecological assets		●	○	○	Work on establishing bylaw has been paused.
6b-1	Implement the Capital Region Electric Vehicle Infrastructure Roadmap to support shift to low-carbon transportation options	●	●	○	○	Work continues as planned.
6b-2	Advance the electrification of the CRD vehicle fleet	●	●	○	○	Work continues as planned.
6b-3	Enhance on-board and CRD fleet management technology to support utilization management, reporting, fiscal accountability and climate action	●	●	○	○	Market availability investigation for fuel purchase system underway.
6c-1	Collaborative policies, programs and data collection initiatives to achieve energy efficient and low carbon buildings across the region	●	●	○	○	Work continues as planned.
6c-2	Implement the CRD Corporate Green Building Policy and CRD Corporate Carbon Price Policy	●	●	○	○	Policies approved in 2024. Implementation now underway.
6c-3	Expand the Home Energy Navigator program	●	●	○	○	Program expanded. Work continues as planned.
6d-1	Update the regional greenhouse gas inventories biannually to monitor progress on emissions reduction targets	●		○		2022 Regional Greenhouse Gas Inventory was published in fall 2023. Next update planned for 2025.

7. Regional Parks

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
7a-1	Finalize the Regional Parks & Trails Strategic Plan	●				Completed. Implementation of plan underway.
7b-1	Conduct research, develop and implement a Universal Access Plan to improve inclusion and accessibility in regional parks and trails		●	○		Internal audit of regional parks accessible features completed. Accessibility audit for three regional parks campgrounds underway.
7c-1	Conduct research and prepare and implement a Natural Areas Conservation Plan	●	●	○		Natural Areas Conservation Plan and Outdoor Recreation Plan to be combined.
7c-2	Develop and implement Impact Assessment and Best Management Practice Guidelines	●				Completed.
7c-3	Elk/Beaver Lake Water Quality Monitoring*		●	○	○	Preparations to conduct water sampling starting in 2024.
7d-1	Develop and implement an Outdoor Recreation Plan	●	●	○		Scoping work completed, initiative progressing as planned in 2023/2024.
7d-2	Undertake the Resident Survey	●	●			Preparations completed in 2023 and survey was mailed to over 7,500 CRD households in early 2024.
7d-3	Develop an Interpretive Program Plan					Planned for 2027.
7e-1	Plan for and implement bike parking and e-bike, electric vehicle charging stations at high-use regional park accesses	●	●	○	○	Work continues as planned. Priority high-use regional parks under consideration for public parking lot EV charge station installations include Elk/Beaver Lake Regional Park and Witty's Lagoon Regional Park.
7e-2	Update the Land Acquisition Strategy to incorporate criteria that reflects First Nations interests	●	●			In progress, phase 1 engagement report received.

**Not in 2023-2026 Corporate Plan*

7e-3	Asset Management Engineered Structure Inspections*		●	○	○	Completed asset renewal report for Regional Trails and Parks in 2023-2024 to inform critical engineered infrastructure.
7f-1	Work with First Nations to develop and implement priority initiatives related to regional parks and regional trails	●	●	○	○	Engaged First Nations on renewed Land Acquisition Strategy, the Regional Parks Stewardship Plan, and Mount Work Management Plan, including Traditional Use and Access Agreements for Mount Work.
7f-2	Develop a policy for supporting and clarifying Indigenous cultural use and cultural safety in regional parks		●			Work continues as planned.

**Not in 2023-2026 Corporate Plan*

8. Planning

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
8a-1	Explore changes to growth management approaches and identify implementation actions appropriate for local, regional and provincial implementation			○		Planned for 2025.
8a-2	Assess the need for an update to the Regional Growth Strategy and accompanying monitoring program			○		Planned for 2025.
8b-1	Consider establishment of a new foodlands access service	●	●	○		Work continues as planned.
8b-2	Activate agricultural activities on priority parcels, as appropriate			○	○	Planned for 2025-2026.
8b-3	Building from the Regional Food and Agricultural Strategy, support partners to take action to bring land into agricultural production through research, development of policy positions and advocacy	●	●	○	○	Work continues as planned.

9. Safety & Emergency Management

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
9a-1	Support planning for regional-scale emergencies in cooperation with the Regional Emergency Management Program	●	●	○	○	Work continues as planned.
9a-2	Develop plans and implement actions consistent with regulatory requirements for local government and regional emergency management, including new Emergency Management Act requirements		●	○		Consultation with commissions and societies on Fire Governance Review report and developing implementation plan as directed by EAC.
9a-3	Pursue accreditation for CRD emergency management program Protective Services			○		Planned for 2025.

10. Arts & Recreation

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
10a-1	Develop and implement a revised Arts & Culture Support Service Strategic Plan	●				Plan developed in 2023. Implementation proceeding as planned.
10b-1	Scale up regional participation in the CRD Arts & Culture Support Service				○	Planned for 2026.
10b-2	Scale up regional support for performing art facilities within the region	●	●			On July 12, 2023, CRD approved amending bylaws for Royal Theatre (4560) and McPherson Playhouse (4561).
10c-1	Consider service expansions to address gaps and opportunities, as they emerge	●	●	○	○	Recruitment planned for 2024.
10c-2	Regularly monitor and review services to determine appropriate types of recreational programming and recovery rates to meet Community Needs	●	●	○	○	Recruitment complete.
10c-3	Develop and implement a long-term strategic plan for SEAPARC		●			Procurement is underway for this initiative.
10c-4	Undertake a review of youth-focused programming at SEAPARC	●	●			Work proceeding as planned.

11. People

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
11a-1	Develop and implement an organizational accessibility plan that is informed by residents and an Accessibility Advisory Committee (AAC)	●	●			AAC established in fall 2023 and work initiated on draft Accessibility Plan. Anticipating significant expectations from AAC in terms of actions. Supporting position to be hired in Q4 2024.
11a-2	Develop understanding of, and accountability for, equity, diversity and inclusion across CRD decision-making bodies		●	○	○	Training will continue to be offered.
11a-3	Create and implement an Indigenous Employment Strategy in partnership with local Indigenous communities and Indigenous-serving organizations		●	○	○	Recruitment completed. Work on strategy will be advanced in 2024.
11a-4	Strengthen Board decision-making frameworks to include First Nations Reconciliation, Equity, Diversity & Inclusion, and Climate Action lenses	●	●	○	○	Work proceeding as planned.
11b-1	Advance the Human Resource Strategic Plan to guide organizational capacity and continuity, workforce planning and retention, and corporate safety	●	●	○	○	Plan will be completed in early 2024. Recruitment to support implementation completed and position filled.
11b-2	Maintain and enhance corporate compliance and alignment with workplace safety legislation	●				Work proceeding as planned.
11b-3	Maintain business continuity, efficiency and resilience by rightsizing the staffing complement and facilities	●	●	○	○	Work proceeding as planned.

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
11b-4	Implement the recommendations in the 2023 CRD Employee Experience Survey report	●	●	○		2023 survey action planning underway at corporate and divisional level. 2024 pulse surveys being planned. Next CRD employee survey will take place in 2025.
11b-5	Continue supporting the CRD Leadership Development Program	●	●	○	○	Training offered to new leaders annually.
11b-6	Evaluate the effectiveness and impacts of the workplace flexibility and Alternative Work Options implementation on the organization and staff		●	○	○	Work proceeding as planned.
11b-7	Manager of Corporate Initiatives & Administration*		●			Recruitment planned for 2024.

**Not in 2023-2026 Corporate Plan*

12. Open Government

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
12a-1	Adhere to new and emerging requirements of privacy legislation in a consistent manner	●	●	○	○	Recruitment planned for 2024.
12a-2	Support the digitization of our legacy records once the Electronic Documents and Records Management System is implemented	●	●	○		Technical assessment work to proceed in 2024 after initial delays.
12b-1	Enhance the public participation and engagement practices and framework to foster trust and understanding, informed by input from residents and equity, diversity and inclusion principles		●			Revised Public Participation Framework preparatory work completed. Work to proceed as planned in 2024.
12b-2	Advance the Communications Strategic Plan to guide organizational communications practices and policies internally and externally	●	●			Strategic Plan completed and due for publication in 2024. Initiated preparatory work for a CRD Residents Survey (name changed from Citizens Survey).
12b-3	Modernize the crd.bc.ca website	●	●	○		Work proceeding as planned.
12b-4	Redesign and upgrade the CRD Boardroom and broadcasting equipment to prepare for future planned growth and improve electronic meeting participation and engagement	●	●	○		Initiated work on Board voting dashboard, CRD Boardroom upgrades and on exploring options for SSI Local Community Commission webcasting. Work will continue into 2024/2025 per Board direction.
12b-5	Build capacity for elections and electoral approval processes to address increasing demand for new service creation			○		Planned for 2025.
12b-6	Implement a Board voting dashboard					Advanced through 12b-4.1.

13. Business Systems & Processes

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
13a-1	Advance strategic approaches to procurement and project delivery to build capacity, improve standardization and support affordable services		●	○		Work is progressing through organizational review.
13a-2	Advance the Technology Strategic Plan to guide the modernization and transformation of our current IT services and systems and launching new digital technology solutions	●	●	○	○	Advancing the Technology Strategic Plan to guide the modernize and transform of IT services, including the launch of digital, data and technology strategies through IT Governance which includes new tools to enable a modern workplace.
13b-1	Continue implementing business continuity planning and the Enterprise Risk Management framework	●	●	○	○	Work progressing as planned. Technical assessments have now started following delay.
13b-2	Mature the integration of asset management into capital planning processes to strengthen fiscal management practices and support resource sustainability	●	●	○	○	Work progressing as planned.
13c-1	Advance changes to policies and systems to streamline activities, reduce complexity and increase efficiency			○		Planned for 2025.
13c-2	Optimize Financial Services through enhanced internal controls and continuous improvement methodologies		●			Work progressing as planned.

14. Advocacy

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
14a-1	Work collaboratively to address multi-jurisdictional issues that impact residents' wellbeing in alignment with the Board Priorities	●	●	○	○	Work proceeding as planned; Board advocacy continues.

15. First Nations

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
15a-1	Seek First Nations' guidance on understanding, developing, and implementing new mechanisms to support ongoing government-to-government relations at the leadership and operational levels	●	●	○	○	Work progressing as planned. Recruitment of additional staff capacity planned for 2024.
15a-2	Collaborate with First Nations and the Province to support inclusive governance by advancing First Nations participation in regional district boards	●	●	○	○	Work progressing as planned.
15a-3	Partner with First Nations to develop, monitor and report out on an organization-wide Reconciliation Action Plan			○		Planned for 2025.
15b-1	Offer ongoing learning opportunities for staff and Board Directors to build awareness and understanding of Indigenous perspectives, law, and systems of governance	●	●	○	○	Work progressing as planned.
15b-2	Seek out and invite opportunities for Indigenous leadership and knowledge to inform and transform approaches to taking care of land and water, across CRD service delivery areas	●	●	○	○	Work progressing as planned.
15b-3	Engage First Nations to collaboratively develop inclusive approaches to land acquisition that respects Indigenous rights and strengthens government-to-government relationships	●	●	○	○	Work progressing as planned.
15c-1	Increase the number of economic partnerships with First Nations, across CRD service delivery areas	●	●	○	○	Work progressing as planned.

16. Local Government

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
16a-1	Explore options for an electoral area specific Climate Action service				○	Planned for 2026.
16a-2	Explore opportunities to extend environmental protection programs and tools to the electoral areas	●	●	○	○	Work progressing as planned.
16a-3	Develop a joint approach for water conservation education and resource management in the electoral areas	●	●	○	○	Work progressing as planned.
16a-4	Evaluate Juan de Fuca's rural water resources for development		●			Planned for 2024.
16b-1	Work with commissions to enhance and manage community parks, recreation facilities and trail networks and to deliver service improvements, where needed	●	●	○	○	Work progressing as planned.
16b-2	Develop and/or update community parks management plans, as needed	●	●	○	○	Work progressing as planned.
16b-3	Explore future potential uses for Salt Spring Island's fire hall site, with input from the local community			○		Work planned for 2025.
16b-4	Investigate options to develop a community hall in Otter Point and proceed with implementation, if feasible	●	●	○		Work progressing as planned.
16b-5	Develop and implement a Juan de Fuca Community Parks and Recreation Strategic Plan	●	●	○	○	Work progressing as planned.

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
16c-1	Develop plans, facilitate infrastructure maintenance, upgrades and service expansions to support the treatment, storage and distribution of water, as needed by the community	●	●	○	○	Work progressing as planned.
16d-1	Advance the goals of the Community Economic Sustainability Commissions for Salt Spring Island and Southern Gulf Islands through planning and implementation activities	●	●	○	○	See 5a-2 for related initiative. Work progressing as planned.
16e-3	Continue to review committees and commissions to find efficiencies and improve consistency	●	●	○	○	Work progressing as planned.
16e-4	Implement the Local Community Commission on Salt Spring Island to oversee island-wide services	●				The SSI Local Community commission was established in 2023. See 12b-4 for related initiative.
16f-1	Implement the B.C. Energy Step Code requirements, as mandated by the provincial government	●				Completed.
16f-2	Digitize historical building permits, property files and other building records	●	●	○		Initiative start delayed due to staffing issues. Will resume when matter has been addressed.
16f-3	Continue to review Official Community Plans in Juan de Fuca Electoral Area	●	●	○	○	Work progressing as planned.
16f-4	Establish mechanisms for First Nations to engage in land use planning in the Juan de Fuca Electoral Area	●	●			Work progressing as planned.
16g-1	Continue to implement wildfire resiliency activities	●	●	○	○	Work progressing as planned.
16g-2	Enhance public notification processes for emergencies		●			See initiative 9a-2.2 for related work.

	INITIATIVE	2023	2024	2025	2026	NEXT STEPS
16g-3	Review and modernize fire and emergency management programs	●	●			Work progressing as planned.
16h-1	Develop and implement an Active Transportation Plan for the Ganges Village	●				Plan completed in August 2023; implementation of plan now underway.
16h-2	Advocate for transit service improvements, including seamless connections with ferry services	●	●	○	○	Work progressing as planned.
16h-3	Support rural transportation opportunities	●	●	○		Work progressing as planned.
16h-4	Coordinate on shovel-ready active transportation projects to access and leverage equitable resourcing in design and engineering	●	●	○	○	Work progressing as planned.
16i-1	Develop plans, facilitate infrastructure maintenance, upgrades and service expansions to support local wastewater treatment plants, as needed by the community	●	●	○	○	Work progressing as planned.
16i-2	Explore improvements to wastewater treatment, including alternative uses for wastewater and enhanced liquid waste facilities	●	●			Work progressing as planned.

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REPORT TO PLANNING AND PROTECTIVE SERVICES COMMITTEE
MEETING OF WEDNESDAY, JANUARY 17, 2024

SUBJECT **Regional Growth Strategy Indicators Report**

ISSUE SUMMARY

To receive the Regional Growth Strategy (RGS) Indicators Report.

BACKGROUND

The *Local Government Act* (*LGA*) section 452 sets out requirements for regional districts with adopted regional growth strategies. Specifically, a regional district must:

a) Establish a program to monitor RGS implementation and the progress made towards its objectives and actions; and
b) Prepare an annual report on that implementation and progress.

The RGS Indicators Report was developed in 2019 to support consistent annual reporting and meet legislative requirements. The report consists of 20 indicators that measure progress towards achieving RGS targets and objectives. Each indicator includes a description of what is being measured, why it is important and a discussion of trends. Criteria for selection of indicators included: relevance, data availability, accuracy, cost, and effort. While many indicators use data that is available annually, some indicators rely on Census data that is only available every five years. Changes in year-to-year performance do not always equate to a long-term trend. It may take several years of data collection to reliably identify a trend.

This report is based on data available for the 2022 reporting year (January 2022 – December 2022). In this reporting year, 18 of the 20 indicators were updated with new data. Please see Appendix A for the report and detailed information about the new data.

The report will be posted on the Capital Regional District's (CRD) website. A copy of the report will be sent to municipal councils and the Juan de Fuca Electoral Area Director.

IMPLICATIONS

Alignment with Board & Corporate Priorities
Annual indicator reporting addresses the Planning Community Need in the 2023-2026 CRD Corporate Plan. Initiative 8a-2 is to assess the need for an update to the Regional Growth Strategy. Annual monitoring contributes to this initiative by identifying progress being made toward RGS implementation and alerting the region to a need for change if progress is not being seen. Additionally, the indicators provide insight on progress on other Board priority areas such as transportation, housing and climate action.

Alignment with Existing Plans & Strategies
This year, two indicators were revised to better align with the Regional Parks and Trails Strategic Plan 2022-2032. Total Regional Park land acquired (2.1a), was revised to include all park land acquisitions rather than exclusively focusing on the Sea-to-Sea Green/Blue Belt which was largely completed by land acquisitions during 2000-2010. Percentage of the Regional Trail Network

completed (2.1b) was updated to track the completion of the three regional trails (Galloping Goose, Lochside and E&N) rather than the network identified in the 2012-2021 Regional Parks strategic plan which is superseded by the 2022-2032 plan.

Environmental & Climate Action
In 2022, the CRD's annual greenhouse gas (GHG) emissions totalled approximately 1.86 million tonnes. This represents a 7% decline from the 2007 base year GHG emissions, and a 1% increase from 2020. Building and transportation related carbon pollution continue to be the largest sources of the region's carbon pollution at approximately 75%. On a per capita basis there has been a decline of 25% between 2007 and 2022. This speaks to the efforts by the CRD, local, provincial and federal governments to reduce energy consumption and GHG emissions. However, the current trend suggests that we will not meet the target by 2038 unless greater effort is made.

Intergovernmental Implications
The Development and Planning Advisory Committee (DPAC) reviewed the draft indicator report. Following receipt by the CRD Board, copies will be forwarded to municipal councils.

Regional Growth Strategy Implications
Achieving RGS objectives requires collaborative partnerships between local, regional and provincial levels of government, each with specific jurisdictional authorities. The RGS indicators show how we are doing as a region rather than the performance of a specific CRD service. The region's growth management approach, policies and targets are to be reevaluated every five years to help the CRD Board in its consideration of the need to update the RGS. The five-year milestone is 2026. Staff will report on the timing and implications of the work required to consider an update to the RGS in Q1 2024.

Managing and Balancing Growth, Housing and Community, Environment and Infrastructure, Economic Development, and Transportation are RGS policy areas where the indicators suggest a need to closely watch for progress against RGS objectives.

1. From a growth management and transportation perspective, only 15% of growth occurs in areas meeting the mode share target of 45% for active transportation and transit in the past five years (1.1a). When looking at the supplemental map to indicator 1.1a, we can see that the areas with 25%-44% walk/bike/bus mode share are mostly adjacent to areas meeting or exceeding the targe of 45%.

   The two most efficient means to improve this indicator are to direct development into areas already meeting the target and improving infrastructure and transit service in areas currently in the 25%-44% category. Significant and concerted investment in infrastructure and transit service would be needed to increase walking, cycling and transit use in areas where the walk/bike/bus mode share is below 24%.

   This indicator will be monitored for change as the result of the introduction of Bill 44 Small-Scale Multi-Unit Housing and Bill 47 Transit-Oriented Areas. It is hoped these bills will lead to more development in areas with high levels of active transportation and transit.

2. From a housing affordability perspective, the region is making steady progress to increase the supply of affordable housing, adding 3,796 units between 2016 and 2022 (3.2d), 483 of which were added between March 2021 to March 2022. However, low rental vacancy rates at all levels of the price spectrum indicate a market that is difficult for renters (3.2c). Low vacancy rates are compounded by average rent increases that have continued to outpace inflation (3.2b).

3. From an environment and infrastructure perspective solid waste disposal (2.2a) has performed well compared to the provincial average. Nevertheless, recent years' data has shown that the region was unable to meet the provincial 2020 target. In 2023 the CRD Board approved significant Hartland Landfill policy changes including banning of wood waste along with other construction and demolition materials, and adjustment of the tipping fee schedule. These changes will be implemented in 2024 and are anticipated to reduce waste by up to 40,500 tonnes/year, having a positive impact on decreasing our per capita waste disposal numbers.

4. From an economic development perspective, there has been a shift with the sub-regional jobs to population ratios (5.1a). Data from 2021 show a pattern of employment shifting from the core, which has historically maintained the highest job to population ratio to the West Shore which has had the lowest ratio. This trend may be influenced by the increased number of people working from home brought about due to the COVID-19 pandemic.

5. From a transportation perspective, the overall active transportation and transit mode share (4.1a) has increased due to a sizeable increase in cycling trips and a steady increase in walking. The region's high level of success with walking and cycling suggest that these modes should be strongly considered when making land use and infrastructure decisions if the goal is to reduce dependency on personal vehicles.

Service Delivery Implications
The legislation stipulates that all services undertaken by a regional district after the Board has adopted a regional growth strategy must be consistent with its RGS. Any adjustments to service levels in support of achieving RGS objectives can be considered through the CRD's established service planning and budgetary processes. Based on current data, no items require adjustment.

CONCLUSION

The RGS Indicators Report monitors the region's progress towards the targets outlined in the RGS and is updated annually. For this reporting year, 18 of the 20 indicators were updated with new data. The RGS Indicator Report will be posted on the CRD website and forwarded to municipal councils.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Emily Sinclair, MCIP, RPP, Senior Manager, Regional and Strategic Planning
Concurrence:	Kevin Lorette, P. Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Larisa Hutcheson, P. Eng., Acting Chief Administrative Officer

ATTACHMENT

Appendix A: 2023 RGS Indicators Report

Appendix A

Regional Growth Strategy Indicators Report 2023

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RGS INDICATORS – AT A GLANCE

Managing and Balancing Growth

1.1a Number of net new dwelling units in areas where more than 45% walk/ bike/bus to work



1.1b Hectares added to the Urban Containment Policy Area (UCPA) Growth Boundary



1.2a Percentage of net new dwellings built outside the UCPA



Environment and Infrastructure

2.1a Total Regional Park land acquired



2.1b Percentage of the Regional Trail Network completed



2.1c Compliance with Source Control Bylaw



2.1d Number of stormwater discharges with a high public health concern



2.2a Waste stream: solid waste disposal



2.2b Average residential water consumption



2.2c Net new dwelling units in East Sooke and Otter Point Official Community Plan (OCP) areas



Housing and Community

3.1a Create safe and complete communities



3.2a Reduce core housing need



3.2b Average rent for two-bedroom apartment



3.2c Vacancy rate by rental price quartiles



3.2d Increase supply of affordable housing



Transportation

4.1a Percentage of total trips made by walking, cycling and transit in the Growth Management Planning Area (GMPA)



Economic Development

5.1a Jobs to population ratio



Food Systems

6.1a Farm operating revenues in the GMPA



6.1b Average age of farmer



Climate Action

7.1a Community greenhouse gas (GHG) emissions



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The Regional Growth Strategy (RGS)

The 2018 Regional Growth Strategy (RGS) is a framework developed by municipalities and the regional district to address how communities will work together to enhance regional quality of life and social well-being over the next 20 years.

The provincial government created the growth strategy legislation to "promote human settlement that is socially, economically and environmentally healthy and that makes efficient use of public facilities and services, land and other resources".

The RGS also includes policies, actions and targets for the reduction of greenhouse gas emissions. The strategy was developed with significant public and stakeholder involvement and responds to the regional vision of a livable community that stewards the environment and natural resources with care.

The RGS Indicator Report

A robust monitoring program helps the region measure progress towards achieving RGS goals and objectives.

Wherever possible, indicators were selected such that data would be available on an annual basis. However, for many of the indicators, information is only available through census data and will therefore only be updated every five years.

Data updated for 2023

This report is based on data available for the 2022 reporting year (January 2022 to December 2022). In this reporting year, 18 of the 20 indicators were updated with new data.

New Indicators

This year Total Regional Park land acquired (2.1a) and Percentage of the Regional Trail Network completed (2.1b) were revised to better align with the Regional Parks and Trails Strategic Plan 2022-2032.

Additionally, Hectares of farmland in the Growth Management Planning Area (6.1a) was replaced by Farm operating revenues in the Growth Management Planning Area (6.1a) due to data availability.

How to use this report

For each indicator, four key questions are answered:

- What is being measured?
- Why is the indicator important?
- What is the target/desired trend?
- How are we doing?

Indicator performance is described relative to a goal or baseline year. However, it is important to note that changes in year-to-year performance do not always equate to a long-term trend.

While performance in any given year may be positive or negative, it may take many years of data to reliably identify a trend. Where possible, trend lines are included in the graphs to illustrate indicator trends.

The following table shows the RGS indicator priority areas, objectives and 2038 targets evaluated in this report. Note that the new indicators for RGS objective 2.1 and 6.1 are slightly different than the 2038 RGS targets.

2038 Targets by priority area and objective

PRIORITY AREA	OBJECTIVE	TARGETS BY 2038
1.0 Managing and Balancing Growth	1.1 Keep Urban Settlement Compact 1.2 Protect the Integrity of Rural Communities	• Accommodate a minimum of 95% of the region's new dwelling units within the Urban Containment Policy Area.
2. 0 Environment and Infrastructure	2.1 Protect, Conserve and Manage Ecosystem Health	• Acquire 100% of the Sea-to-Sea Green/Blue Belt.* • Complete 100% of the Regional Trail Network.* • Reduce contaminants to fresh and marine water bodies.
	2.2 Deliver Services Consistent with RGS Objectives	• Prepare long-term capital plans for Capital Regional District utilities and major infrastructure improvements that take into consideration the conservation of land, water and energy resources and the impacts of climate change and natural hazards.
3.0 Housing and Community	3.1 Create Safe and Complete Communities	• Municipal targets for the number of people living in complete communities to be identified by municipalities in Regional Context Statements.
	3.2 Improve Housing Affordability	• Increase the supply of more affordable housing. • Reduce the number of people in core housing need. • Reduce the number of people who are homeless.
4.0 Transportation	4.1 Improve Multi-Modal Connectivity and Mobility	• Achieve a transportation system that sees 45% of all trips made by walking, cycling and transit.**

5.0 Economic Development	5.1 Realize the Region's Economic Potential	• Achieve a jobs/population ratio of:
		  • 0.60 in Core Area
		  • 0.53 in Saanich Peninsula
		  • 0.36 in West Shore

6.0 Food Systems	6.1 Foster a Resilient Food and Agriculture System	• Increase the amount of land in crop production for food by 5,000 hectares to enhance local food security.* • Municipal targets to increase the amount of land in crop production for food and to encourage agricultural land to be identified by municipalities in Regional Context Statements.
7.0 Climate Action	7.1 Significantly reduce community based greenhouse gas emissions	• Reduce community greenhouse gas emissions by 33% (from 2007 levels) by 2020, and by 61% by 2038.

*Indicator reporting targets slightly different than the RGS.
**Updated to reflect increase in transit mode share target.

1.0 MANAGING AND BALANCING GROWTH

1.1a Number of net new dwelling units in areas where more than 45% walk/bike/bus to work



What is being measured?

This indicator tracks new dwelling units created in census Dissemination Areas (DA) where at least 45% of trips involve active transportation (walking, biking or taking transit).

Why is this indicator important?

The Regional Growth Strategy aims to keep urban settlement compact and directs new growth to be located where it can be efficiently serviced by transit and active transportation.

Target/Desired Trend

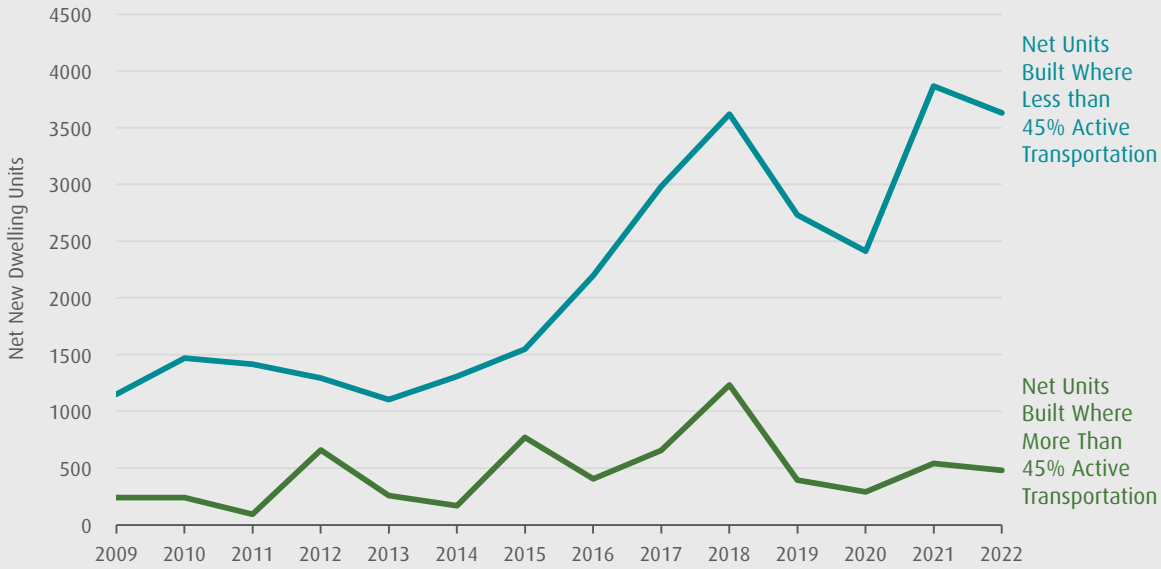
Place growth in areas conducive to walking, cycling and transit.

How are we doing?

Currently, we are not meeting the desired trend.

In the Growth Management Planning Area between 2012-2015, we saw as much as 26% of growth in net new dwelling units in areas with greater than 45% active transportation. In the last five years, 15% of growth in net new dwelling units was in areas with high active transportation.

BC Transit has increased its mode share target from 12% to 15%. Our target has been adjusted from 42% to 45% to reflect this change.



Source: CRD Building Permit Database and Statistics Canada Census of Population 2021

1.0 MANAGING AND BALANCING GROWTH

Supplemental map of areas with more than 45% walk/bike/bus to work

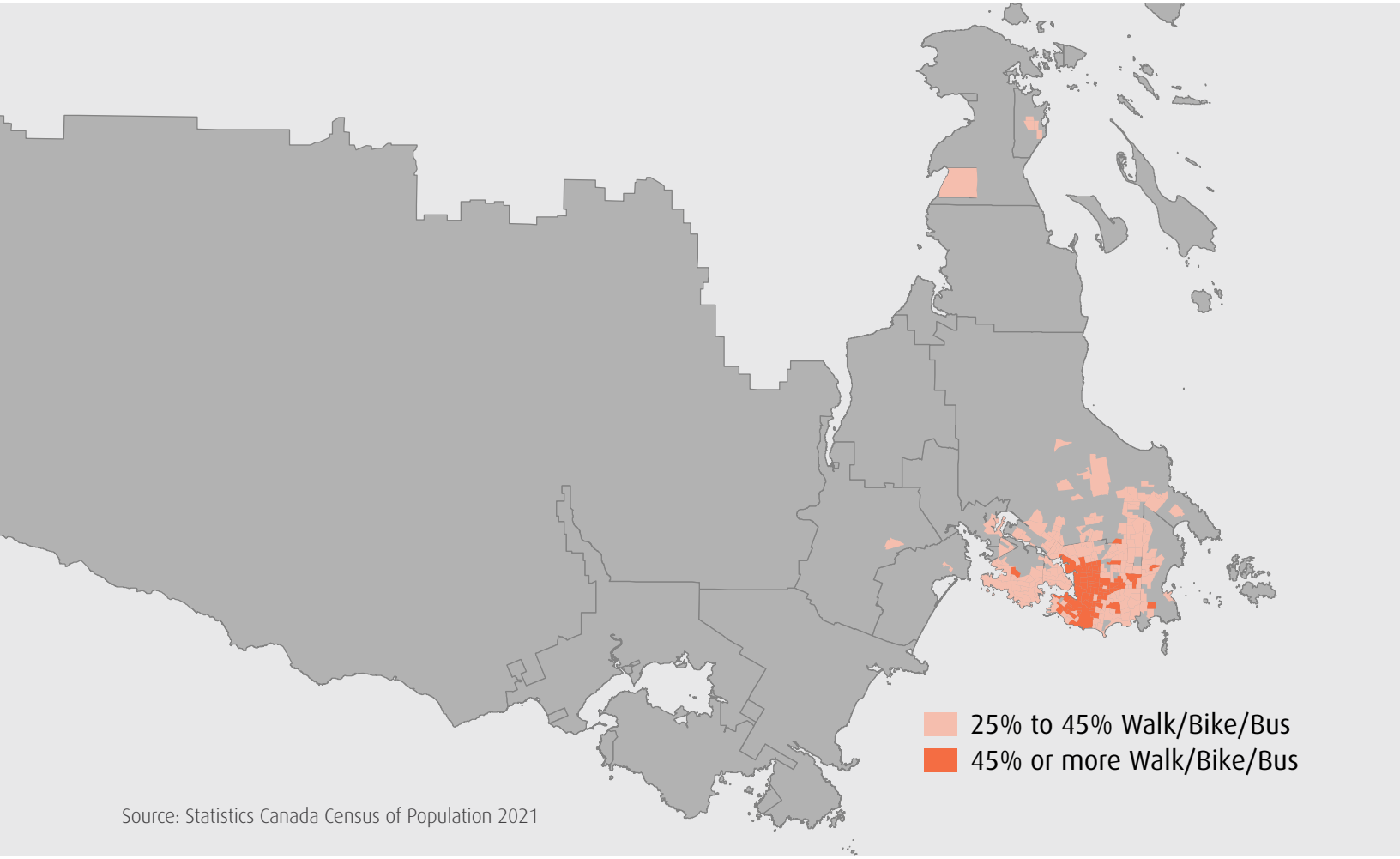
What does the map indicate?

This map shows census Dissemination Areas where more than 45% of residents walk, bike and bus to work, meeting the Regional Growth Strategy mode share target.

These areas are mostly located in the region's core in Victoria, and portions of Esquimalt, Oak Bay and Saanich.

Also provided for reference are the areas with between 25% to 45% walk/bike/bus to show locations that could meet the Regional Growth Strategy goal if further action was taken.

As noted in Indicator 1.1(a), new growth in these areas is desirable as infrastructure and services are already in place to support high levels of active transportation and transit. As the region develops, the desired trend is to see more areas meeting the 45% target.



Source: Statistics Canada Census of Population 2021

1.1b Hectares added to the Urban Containment Policy Area (UCPA) growth boundary



What is being measured?

This indicator measures the net change in the land area of the Urban Containment Policy Area (UCPA). The UCPA is intended to hold a land supply that will accommodate the region's population and employment growth.

Why is this indicator important?

This indicator aligns with the Regional Growth Strategy (RGS) objective to keep urban settlement compact. The RGS includes a policy that generally permits amendment to the UCPA only as an outcome of a comprehensive five-year review of the RGS.

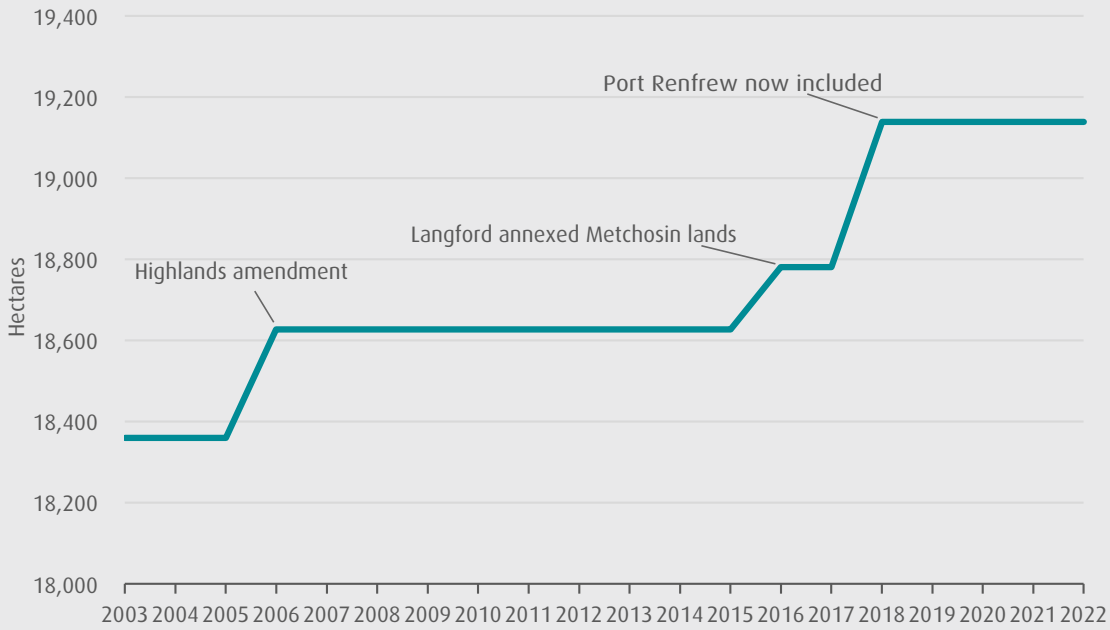
Target/Desired Trend

Minimize change to the UCPA from the date of adoption of the 2018 RGS.

How are we doing?

We are meeting the desired trend.

Since the March 2018 adoption of the RGS, there have been no changes to the UCPA.



Source: CRD Regional Planning

1.0 MANAGING AND BALANCING GROWTH

1.2a Percentage of net new dwellings built outside the Urban Containment Policy Area (UCPA)



What is being measured?

This indicator measures the annual share of net new dwelling units located outside the Urban Containment Policy Area (UCPA).

Why is this indicator important?

The Regional Growth Strategy (RGS) aims to keep urban settlement compact and protect the integrity of rural communities.

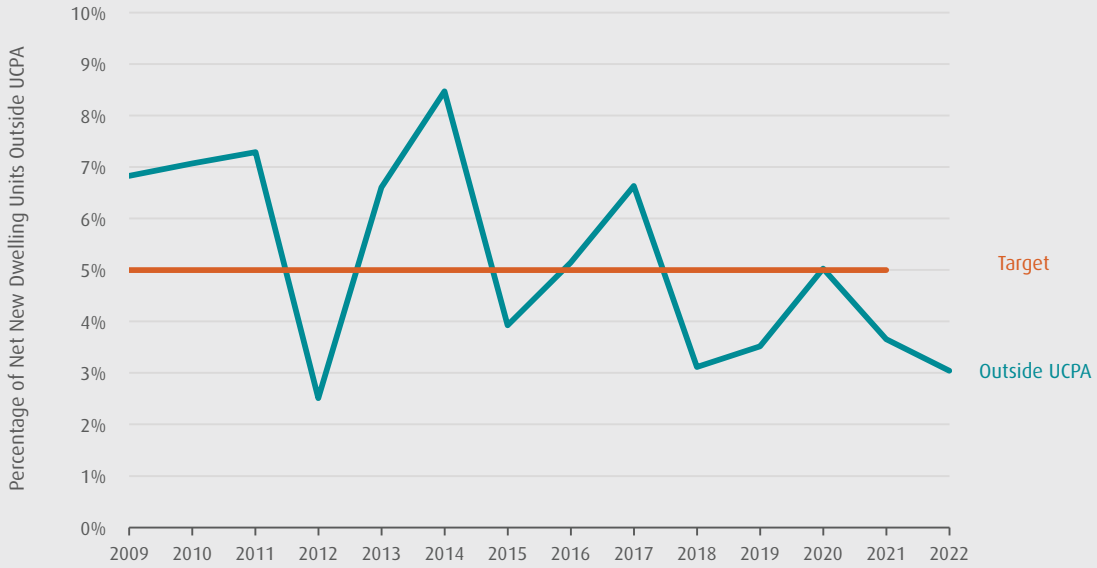
Target/Desired Trend

Accommodate a maximum of 5% of the region's net new dwelling units outside the UCPA (for a minimum 95% of net new dwelling units within the UCPA, as per RGS target).

How are we doing?

We met the target this year.

In the past 10 years, the average percentage growth outside the UCPA has been 4.9%.



Source: CRD Building Permit Database

Supplemental graph showing the location of net new dwellings built outside the Urban Containment Policy Area (UCPA)

What does the graph indicate?

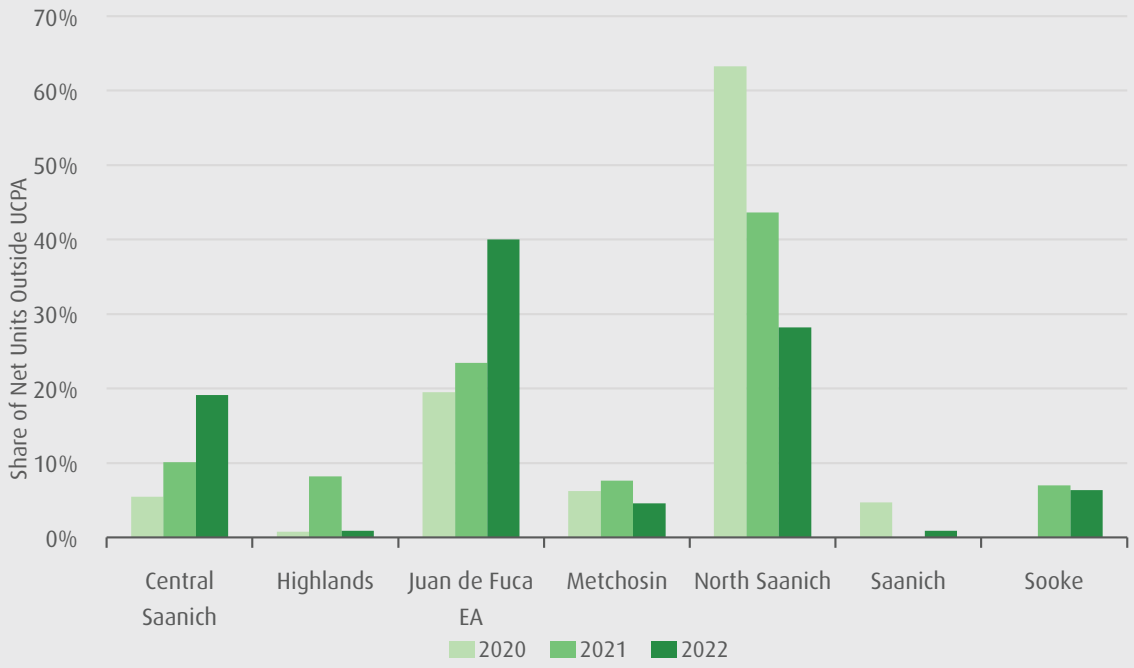
This graph shows the distribution of net new dwellings built outside the Urban Containment Policy Area (UCPA).

Only local governments that have land outside the growth boundary are included. Together these units make up the percentage of new units built outside the growth area.

As noted in Indicator 1.2(a), the Regional Growth Strategy aims to keep urban settlement compact and protect the integrity of rural communities.

Local governments with land outside the growth boundary help achieve this goal through land use policy and decision making that avoids the creation of future urban areas.

Monitoring the distribution of net new dwelling units built outside the growth area provides insight on the performance of local government growth management policies.



Source: CRD Building Permit Database

2.0 ENVIRONMENT AND INFRASTRUCTURE

2.1a Total Regional Park land acquired



What is being measured?

This indicator tracks land protected in the CRD as a Regional Park. Additionally, it shows the types of park land use and the distribution of land for conservation areas, wilderness areas, conservancy areas and natural recreation areas. There is currently no land in conservancy areas as protection of natural and cultural features is a new area.

In previous indicator reports, the measure was the percentage of land acquired for the 1997 Sea-to-Sea Green/Blue Belt Strategy, which was largely completed by land acquisitions during 2000-2010.

With the new Regional Parks and Trails Strategic Plan 2022-2032, measuring the total amount of CRD park land is a better indicator of progress.

Why is this indicator important?

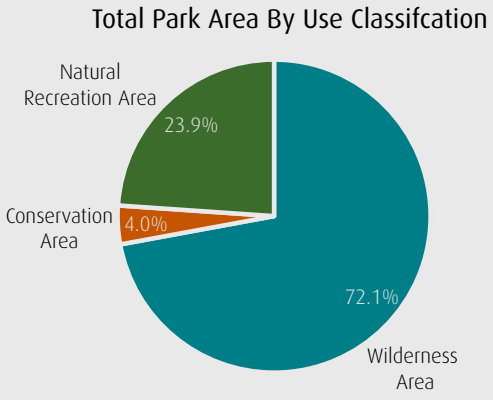
The Regional Growth Strategy aims to protect, conserve and manage ecosystem health. This indicator is important to show growth of CRD parks and the different types of functions they perform including water catchment, natural recreation and habitat conservation.

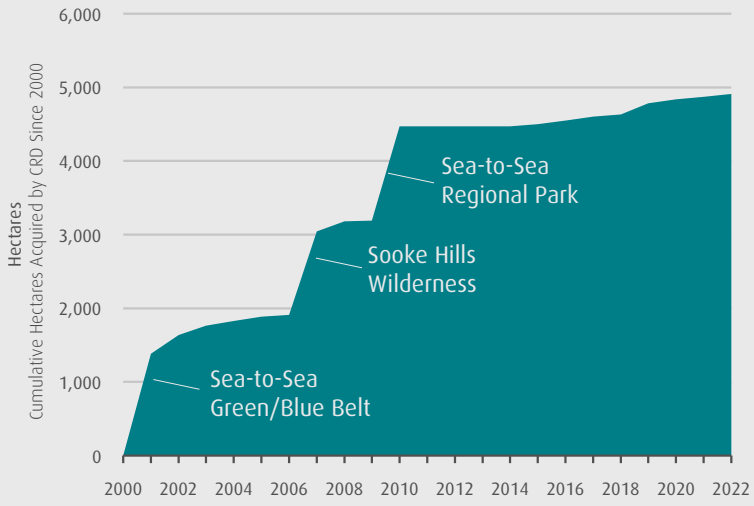
Target/Desired Trend

Continue to acquire park land.

How are we doing?

We are making steady progress acquiring regional park land according to CRD's Regional Parks Land Acquisition Strategy and the Regional Parks and Trails Strategic Plan 2022-2032.





Source: CRD Regional Parks

2.1b Percentage of the Regional Trail Network completed



What is being measured?

This indicator measures the percentage of the Proposed Regional Trail Network(Galloping Goose, Lochside and E&N) that has been completed at the end of 2022.

The Regional Growth Strategy (RGS) targets refer to the 2012-2021 Regional Parks Strategic Plan and the 1997 Sea-to-Sea Green/Blue Belt Strategy, which the Regional Parks and Trails Strategic Plan 2022-2032 supersedes.

Why is this indicator important?

The RGS aims to protect, conserve and manage ecosystem health, and it also strives to improve multi-modal transportation connectivity. The Regional Trail Network represents an integrated trail, active transportation corridor and linear park system linking urban areas to rural green space which helps further both of these goals.

Target/Desired Trend

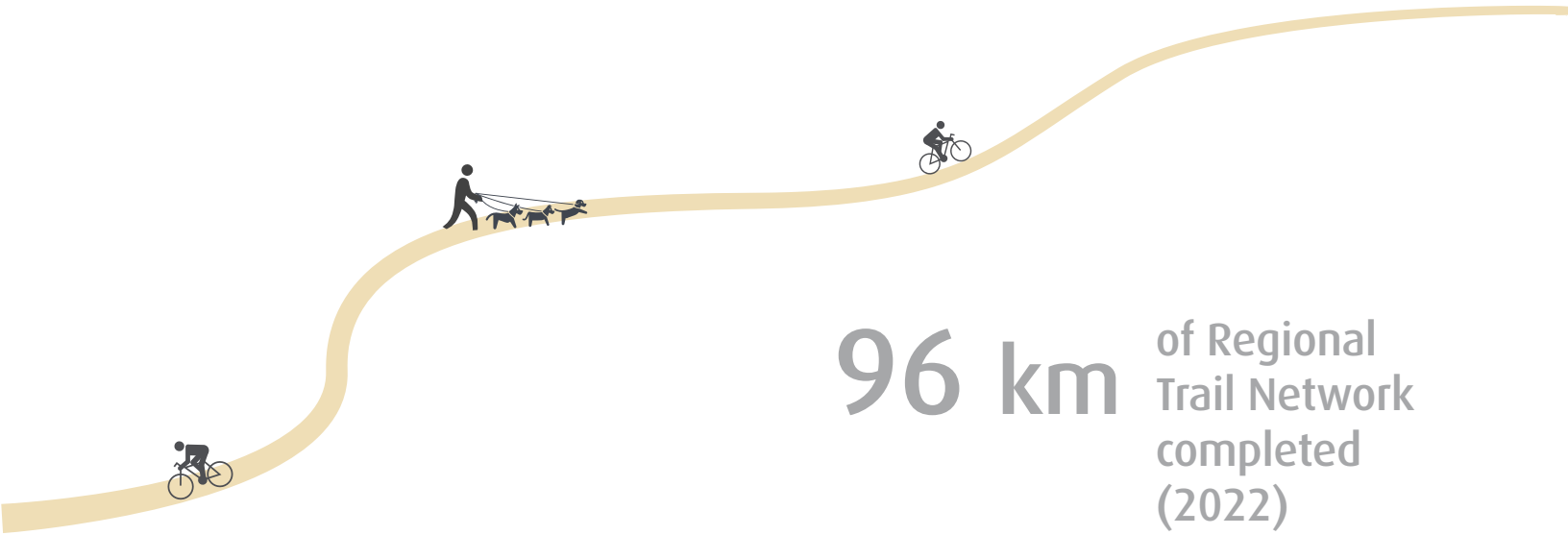
Complete 100% of the Regional Trail Network as identified in the 2022-2032 CRD Regional Parks Strategic Plan.

How are we doing?

We are making good progress towards the target.

As of 2022, 96.2 km of the proposed 100 kilometres of the Regional Trail Network has been completed.

In August of 2023, the CRD Board approved the Regional Trails Widening and Lighting Project. Future versions of this indicator will track progress on trail enhancements in addition to new sections of trail.



96 km of Regional Trail Network completed (2022)

Source: CRD Regional Parks

2.1c Compliance with Source Control Bylaw



What is being measured?

This indicator measures the percentage of businesses in compliance with Source Control Bylaw standards. This pollution prevention initiative aims to reduce the amount of contaminants that industries, businesses, institutions and households discharge into the region's sanitary sewer systems.

Why is this indicator important?

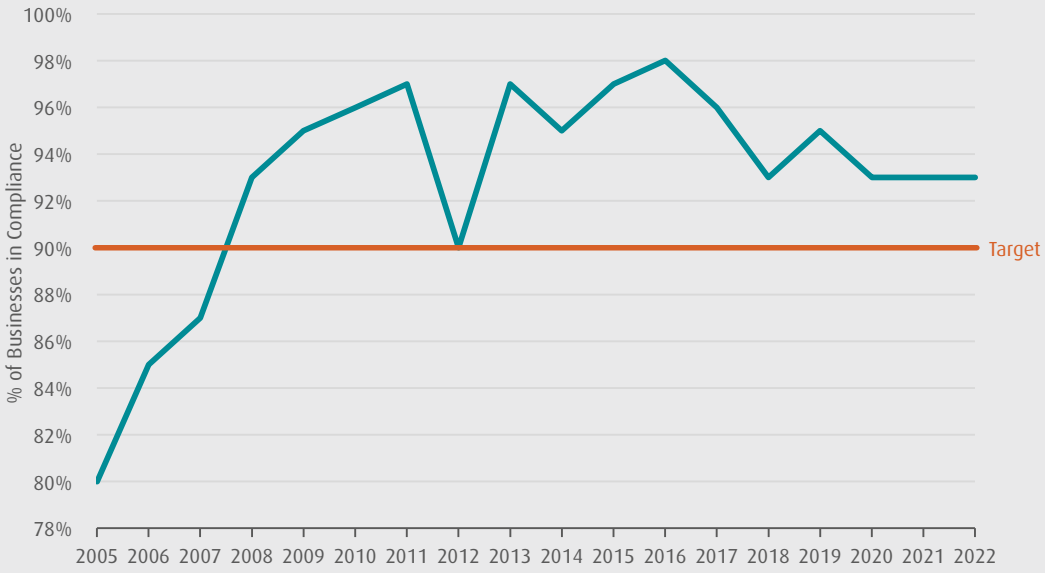
The Regional Growth Strategy aims to protect, conserve and manage ecosystem health. A high level of compliance reduces contaminants in fresh and marine regional waterways.

Target/Desired Trend

Maintain compliance of the standards established in the Source Control Bylaw at a rate of 90% or above.

How are we doing?

We are seeing consistently high levels of compliance.



NOTE: Prior to 2014, the indicator tracked proper waste treatment. The new measure, overall compliance, is a stricter standard indicating proper waste treatment facilities that are fully functioning.

Source: CRD Environmental Protection

2.1d Number of stormwater discharges with a high public health concern



What is being measured?

This indicator monitors the number of stormwater discharges with high public health concern.

Why is this indicator important?

The Regional Growth Strategy aims to protect, conserve and manage ecosystem health.

Target/Desired Trend

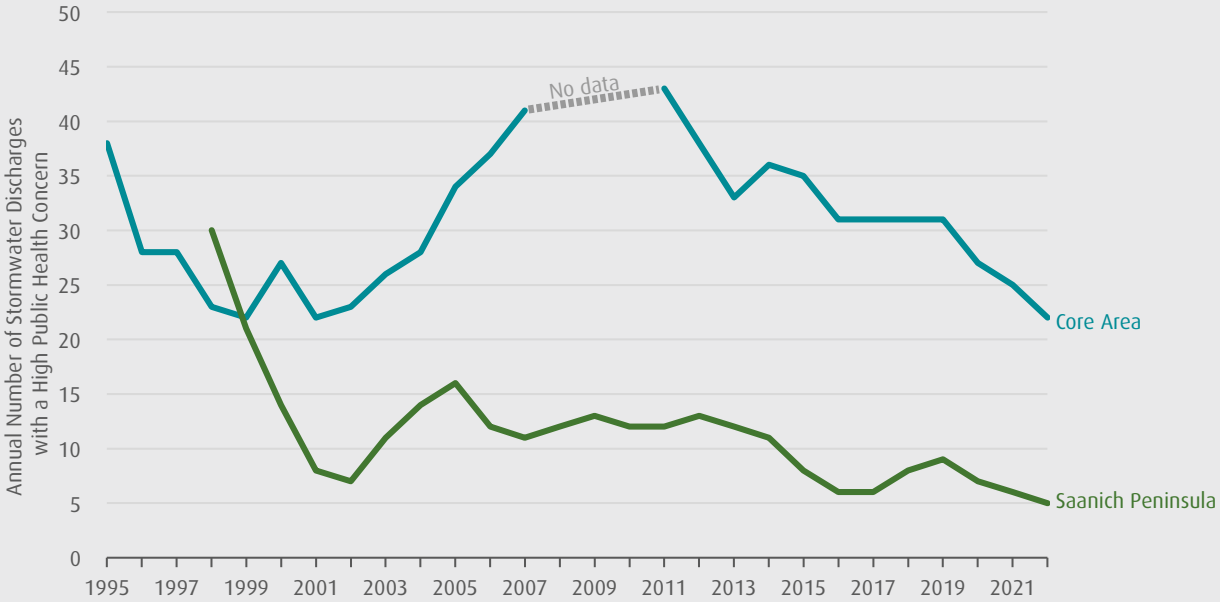
Reduced bacterial contamination to fresh and marine water bodies.

How are we doing?

We are meeting the desired trend.

The overall number of stormwater discharges with high public health concerns has decreased in the Core Area since 2012 and on the Saanich Peninsula since 2005.

There were 22 discharges in the Core Area and five in the Saanich Peninsula in 2022.



Source: CRD Environmental Protection

2.2a Waste stream: solid waste disposal



What is being measured?

This indicator measures the per capita amount of solid waste disposed annually from both residential and non-residential sources.

Why is this indicator important?

The Regional Growth Strategy aims to minimize the consumption of renewable and non-renewable resources through efficient use and responsible management.

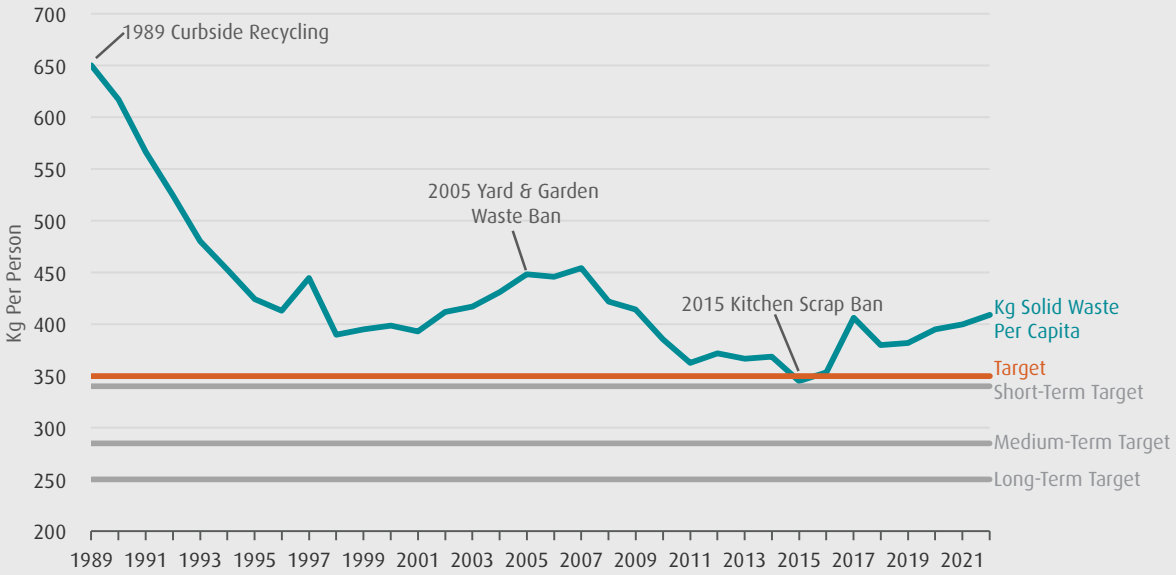
Target/Desired Trend

In 2020, the BC Government set a solid waste disposal target rate of 350 kg/person per year, which is the current target. The target for the region is established in the Capital Regional District Solid Waste Management Plan. This plan identifies three new targets: short-term (three years) 340 kg/person, medium-term (five years) 285 kg/person and long-term (10+ years) 250 kg/person.

How are we doing?

Currently, we are not meeting the target.

We are at less than the provincial average of 506 kg/person (2021). Following years of decline, recent economic activity has resulted in a sustained increase in per capita solid waste disposal. In 2023, the CRD Board approved significant Hartland Landfill policy changes including banning of wood waste along with other construction and demolition materials, and adjustment of the tipping fee schedule. These changes will be implemented in 2024 and are anticipated to reduce waste by up to 40,500 tonnes/year, having a positive impact on decreasing our per capita waste disposal numbers.



Source: CRD Environmental Resource Management

2.2b Average residential water consumption



What is being measured?

This indicator measures the average daily consumption of potable water per capita for residential uses.

Why is this indicator important?

The Regional Growth Strategy aims to minimize the consumption of renewable and non-renewable resources through efficient use and responsible management.

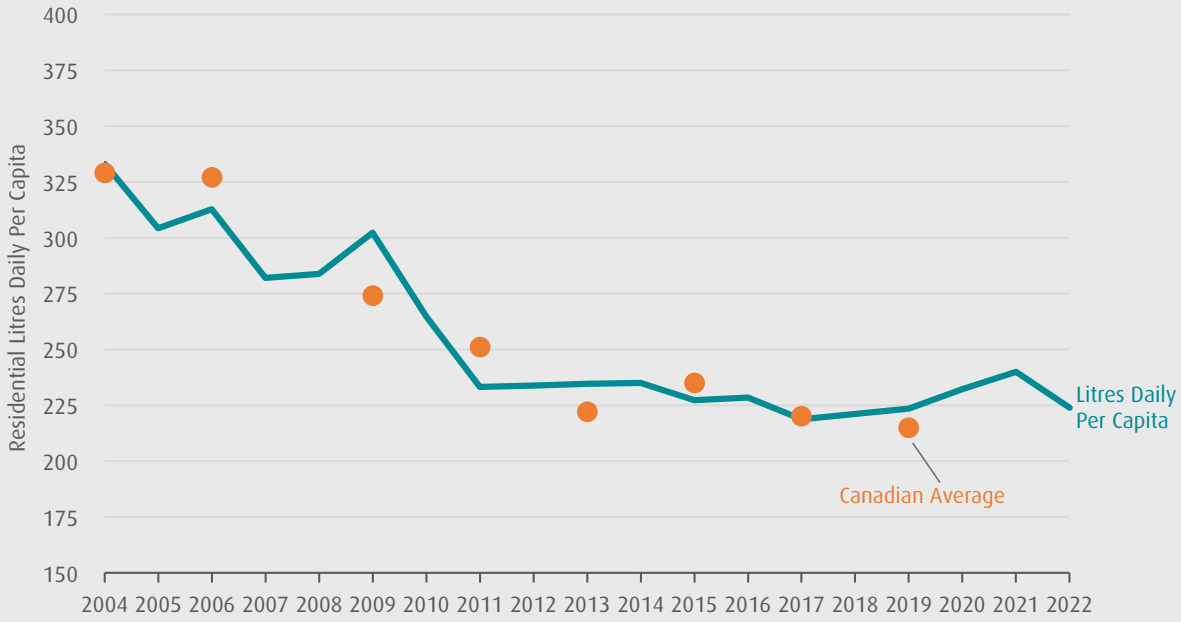
Target/Desired Trend

Decrease per capita consumption of potable water.

How are we doing?

Following a sizable reduction in per capita water consumption between 1995 to 2010 as a result of greater conservation and the introduction of efficient plumbing fixtures and appliances, rates have stabilized in the last 10 years around the Canadian average.

It is expected that the increase in water consumption observed in 2021 is attributable to changed residential water consumption patterns during the COVID-19 pandemic as people spent significantly more time at home due to office, business and facility closures. As anticipated, 2022 usage has returned to 2019 levels.



Source: CRD Integrated Water Services, 2004-2022 Environment Canada Municipal Water and Wastewater Survey 2011-2019 Statistics Canada Survey of Drinking Water Plants

2.2c Net new dwelling units in East Sooke and Otter Point Official Community Plan (OCP) areas



What is being measured?

This indicator measures annual net new dwelling units located in the East Sooke and Otter Point Official Community Plan (OCP) areas of the Juan de Fuca Electoral Area.

Why is this indicator important?

The Regional Growth Strategy allows for the possible provision of water servicing in East Sooke and Otter Point and specifies the total number of existing and new units permitted within their OCPs.

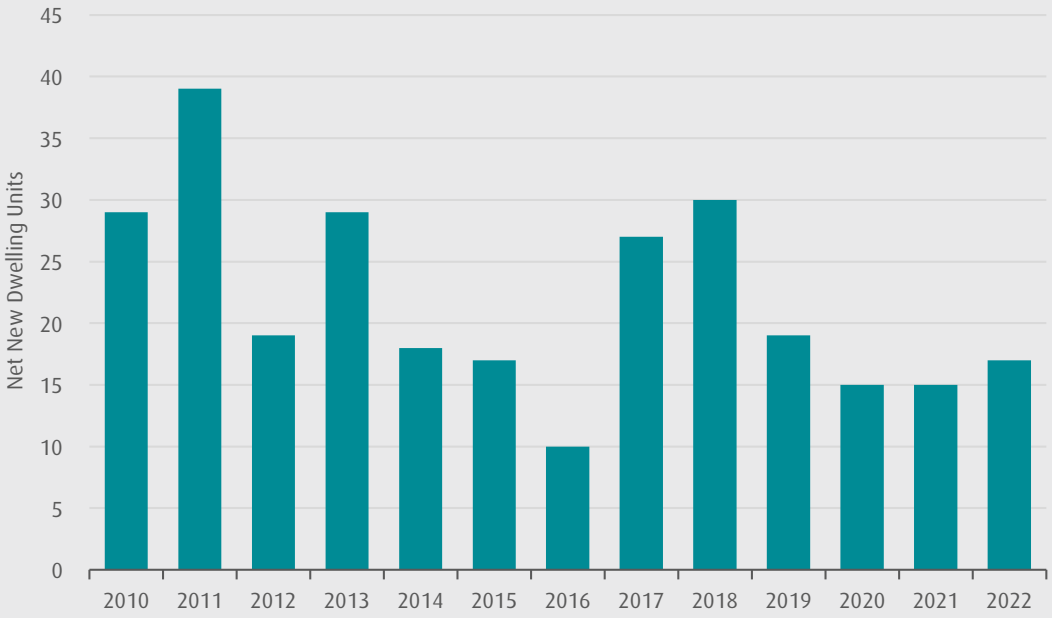
Target/Desired Trend

The total number of units in East Sooke and Otter Point is not to exceed 3,384 units. This includes both existing and new units.

How are we doing?

We are meeting the target.

As of 2022 there are 1,683 dwelling units in East Sooke and Otter Point. There has been minimal expansion, with an average of 20 net new units per year over the past 10 years.



Source: CRD Building Permit Database

3.0 HOUSING AND COMMUNITY

3.1a Create safe and complete communities



What is being measured?

This indicator measures the number of people living in complete communities identified by municipalities in their Official Community Plans.

Why is this indicator important?

The Regional Growth Strategy supports the development of complete communities that allow residents to undertake many daily activities close to home.

Target/Desired Trend

Increase the number of people living in complete communities.

How are we doing?

This indicator will be updated in 2024 to track development in the Transit Oriented Areas within the Growth Management Planning Area identified by the provincial government as part of Bill 47.

3.0 HOUSING AND COMMUNITY

3.2a Reduce core housing need



What is being measured?

This indicator measures the percentage of households in core housing need.

A household in core housing need falls below at least one of the housing standards: adequacy (property does not require major repairs); affordability; or suitability (number of bedrooms match household size) and it would have to spend 30% or more of its total before-tax income to pay the median rent for housing that is acceptable (meets all three standards).

Why is this indicator important?

The Regional Growth Strategy aims to improve housing affordability.

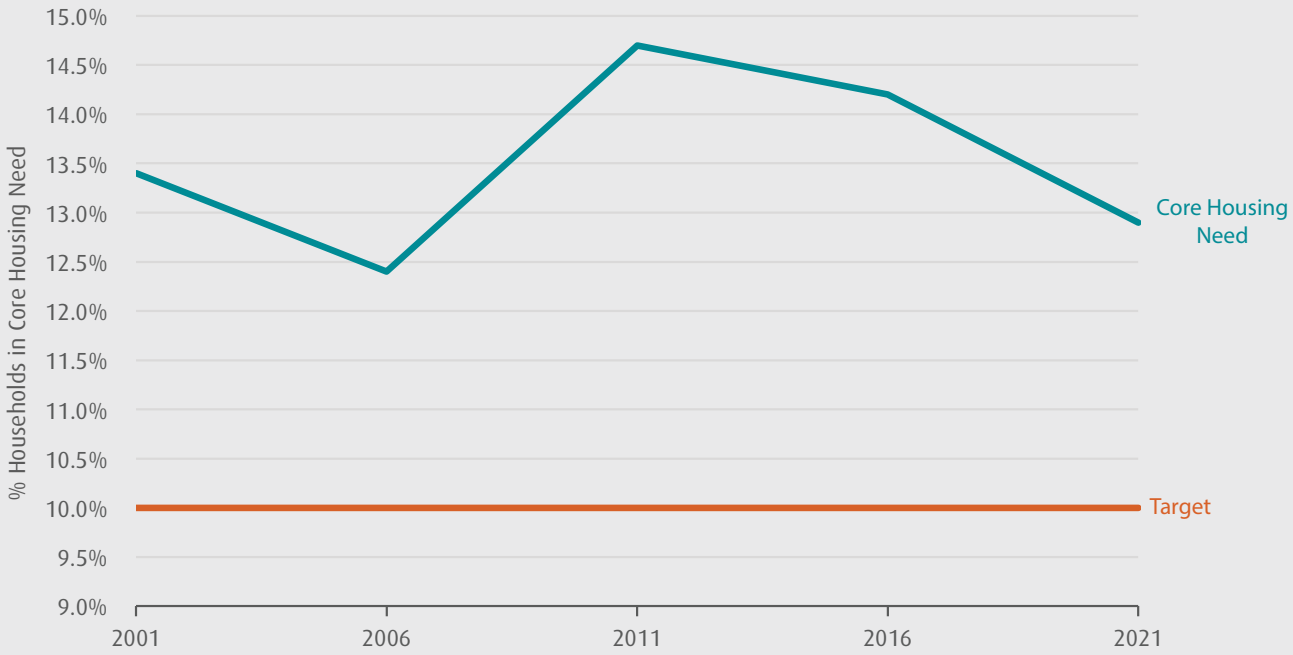
Target/Desired Trend

Reduce percentage of households in core housing need to 10%.

How are we doing?

The income measure used to calculate core housing need was from 2020. The percentage of Canadians living with low income saw the most significant decline in a five-year period since 1976. This was driven mainly by higher government transfers, especially pandemic-related benefits. These benefits primarily benefited the working-age population, with the Canada Child Benefit helping parents and children (The Daily, Statistics Canada, July 13, 2022).

We are far from our target.



Source: Statistics Canada, Census of Population, 2001, 2006, 2016 and 2021 and National Household Survey, 2011

3.2b Average rent for two-bedroom apartment



What is being measured?

This indicator measures the average cost of two-bedroom rental housing in the Victoria Census Metropolitan Area.

Why is this indicator important?

The Regional Growth Strategy aims to improve housing affordability.

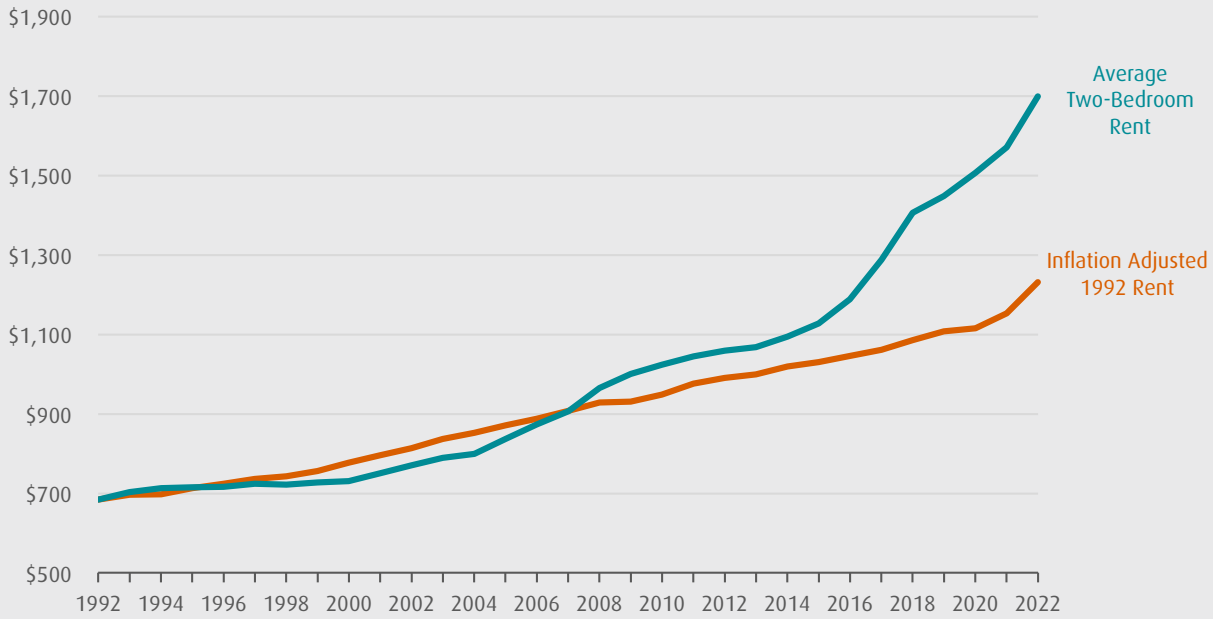
Target/Desired Trend

There is no target for the average cost of rental housing, however, cost increases at or below the level of inflation are preferable.

How are we doing?

We are currently not meeting the target.

The price of a two-bedroom rental has outpaced inflation since 2008.



Source: Canada Mortgage and Housing Corporation Rental Market Survey

3.2c Vacancy rate by rental price quartiles



What is being measured?

This indicator measures the rental vacancy rate by rental price quartiles in the Victoria Census Metropolitan Area (CMA) over time.

Why is this indicator important?

The Regional Growth Strategy aims to improve housing affordability in the region. The rental vacancy rate by rental price quartiles is an indicator of housing supply and housing affordability in the region.

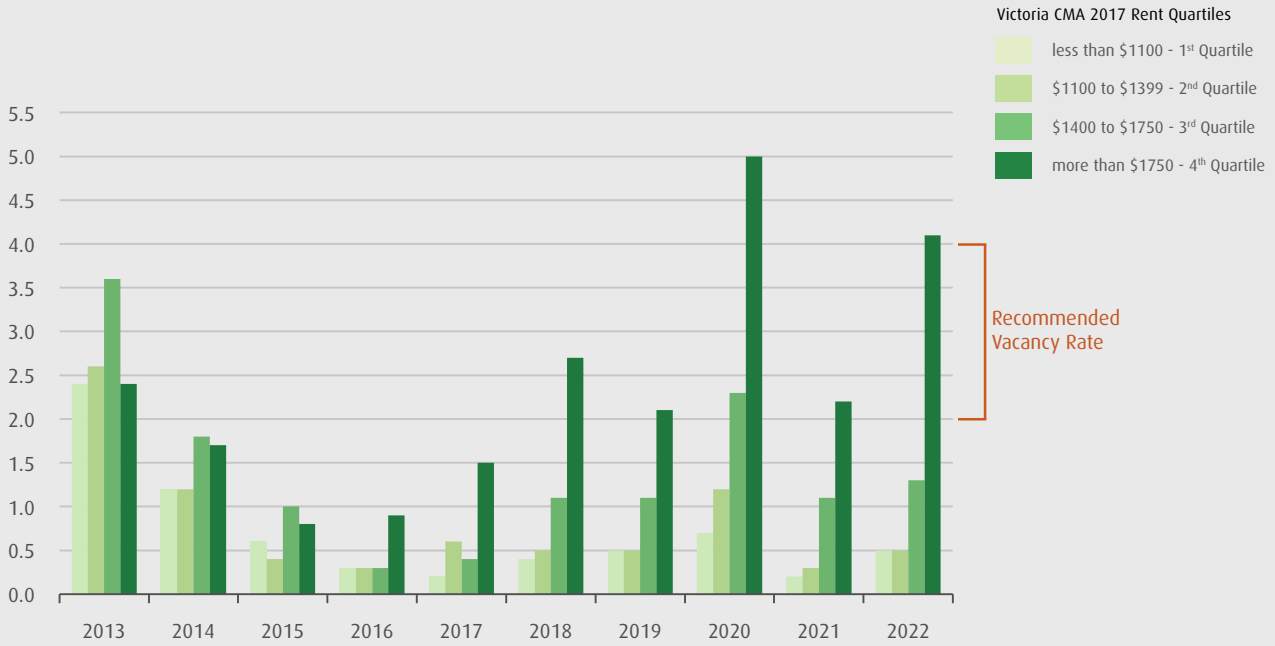
Target/Desired Trend

Higher vacancy rates across all prices are preferable. Recommended vacancy rates range between 2-4%.

How are we doing?

We are currently not meeting the desired trend.

There has been a general trend of very low vacancy rates in the region, especially at the lower price quartiles. Data from the past four years shows a marginal increase in vacancies, most significantly in units renting for more than $1,750.



Source: Canada Mortgage and Housing Corporation Rental Market Survey

3.2d Increase supply of affordable housing



What is being measured?

This indicator measures the cumulative number of subsidized housing units in the Growth Management Planning Area (GMPA) that have a financial relationship with BC Housing. The units include emergency shelters, housing for the homeless, transitional and supported housing and assisted living, independent social housing and rent assistance in the private market.

Why is this indicator important?

The Regional Growth Strategy aims to increase the supply of affordable housing and to reduce the number of people who are experiencing homelessness.

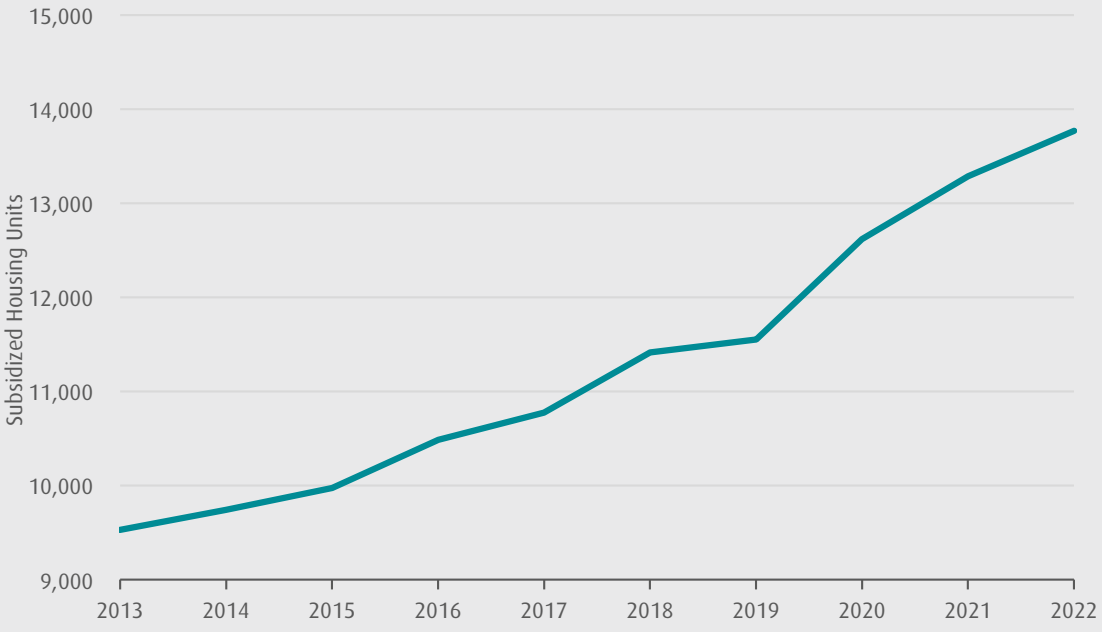
Target/Desired Trend

Increase the cumulative number of subsidized housing units that have a financial relationship with BC Housing.

How are we doing?

Progress is being made toward the target.

As of March 31, 2022 there were 13,772 subsidized housing units in the GMPA, representing an increase of 483 units in this reporting period.



Source: BC Housing's Research & Corporate Planning Department Unit Count Report March 2019, 2020, 2021, 2022

4.0 TRANSPORTATION

4.1a Percentage of total trips made by walking, cycling and transit in the Growth Management Planning Area (GMPA)



What is being measured?

This indicator measures the percentage of total trips made by walking, cycling and transit in the Growth Management Planning Area.

Why is this indicator important?

The Regional Growth Strategy aims to improve multi-modal connectivity and mobility. Mode share percentages provide the necessary data to track transportation choices over time.

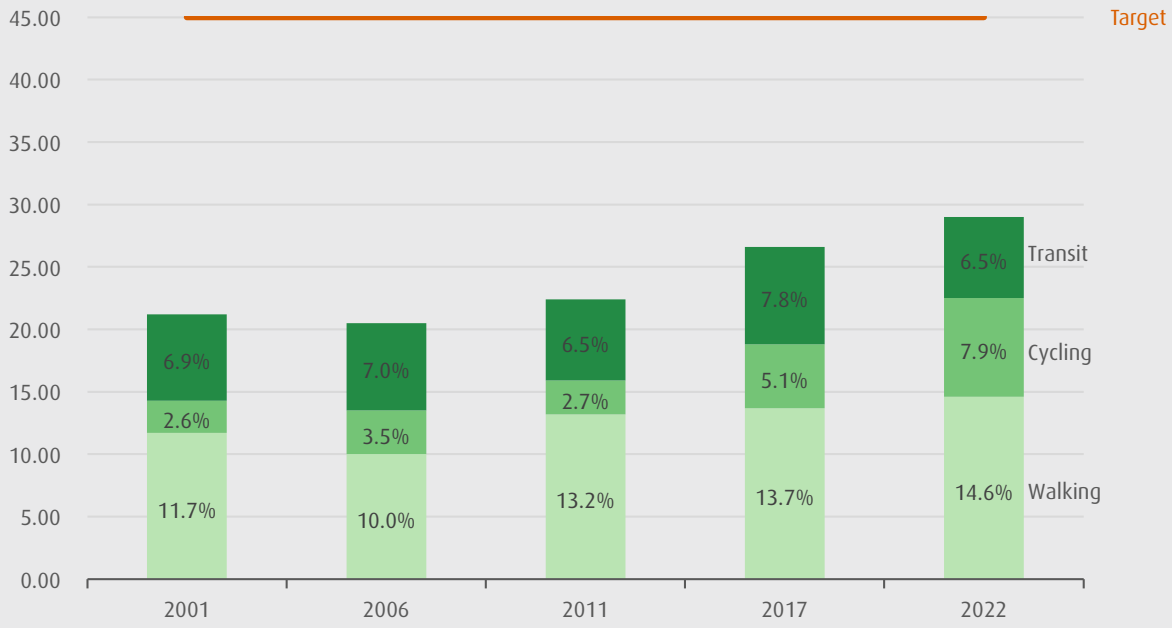
Target/Desired Trend

Achieve a transportation system that sees 45% of all trips made by walking, cycling and transit by 2038.

How are we doing?

Progress is being made toward the target.

The overall active transportation mode share has increased due to a sizeable increase in cycling trips and a steady increase in walking.



Source: CRD Origin Destination Survey 2001, 2006, 2011, 2017, 2022

5.0 ECONOMIC DEVELOPMENT

5.1a Jobs to population ratio



What is being measured?

This indicator measures the ratio of employment to population in each Capital Regional District sub-region.

Why is this indicator important?

The Regional Growth Strategy aims to realize the region's economic potential. A balanced distribution of employment and jobs indicates economic opportunities spread across the region.

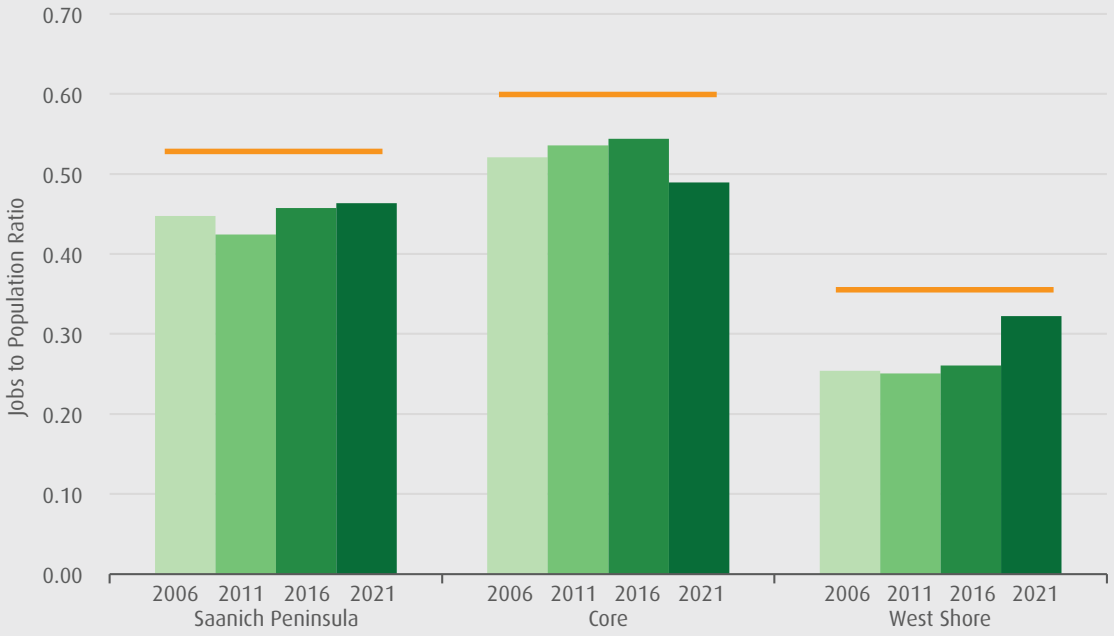
Target/Desired Trend

Achieve a jobs to population ratio of:

- 0.53 in the Saanich Peninsula
- 0.60 in the Core Area
- 0.36 in the West Shore

How are we doing?

Data from the 2021 census show a pattern of employment shifting from the core, which has historically maintained the highest job to population ratio to the West Shore which has had the lowest ratio. This trend may be influenced by the shift to working from home brought about due to the COVID-19 pandemic.



Source: Statistics Canada, Census of population, 2006, 2011, 2016, 2021, Place of Residence and Place of Work Tables

6.0 FOOD SYSTEMS

6.1a Farm operating revenues in the Growth Management Planning Area (GMPA)



What is being measured?

Incorporated farms and communal farming organizations with total farm operating revenues equal to or greater than $25,000, as well as unincorporated farms with total farm operating revenues of $10,000 and over. As of 2020, a farm is defined as an operation that produces at least one agricultural product and reports revenue and expenses to the Canada Revenue Agency. Prior to 2020, a farm was defined based on its intention to sell agricultural commodities.

Why is this indicator important?

The Regional Growth Strategy (RGS) aims to foster a resilient food and agricultural system. Tracking operating revenues is a way to report on the productivity of the region's farms.

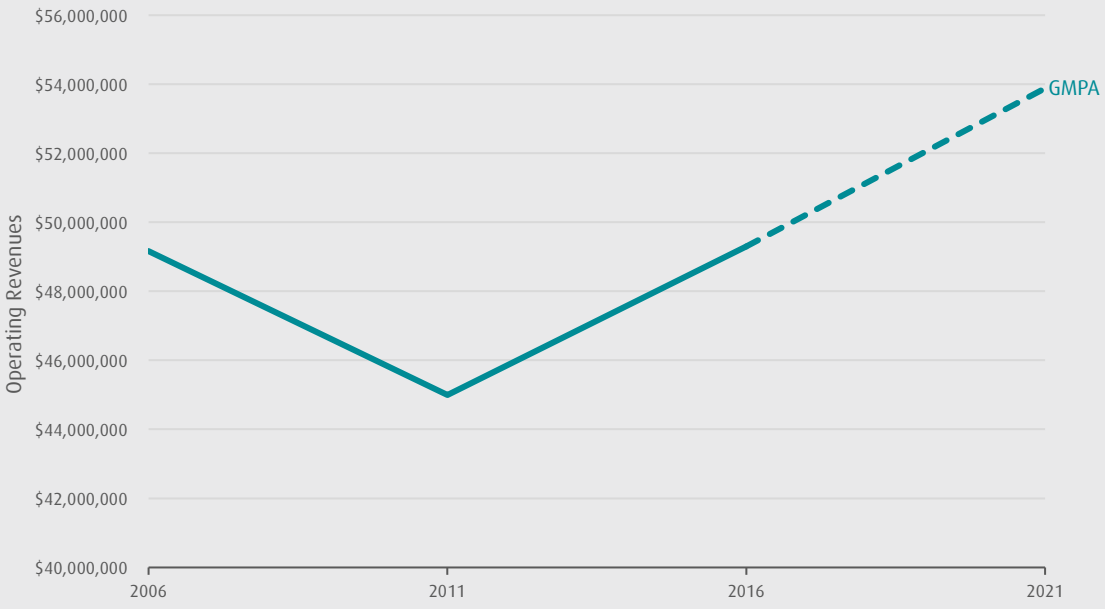
Target/Desired Trend

Increase the operating revenues.

How are we doing?

Food systems were added to the RGS in 2018. This indicator initially tracked hectares of farmland in the Growth Management Planning Area, however the 2021 census data wasn't available for our region due to poor data quality.

This new indicator from the Census of Agriculture is derived from administrative records. Caution should be used when comparing data from 2021 with prior years as operating revenues and expenses use an updated definition and different sources than previous Censuses of Agriculture.



Source: Statistics Canada, custom tabulation of Census of Agriculture 2006, 2011, 2016, 2021

6.0 FOOD SYSTEMS

6.1b Average age of farmer



What is being measured?

This indicator measures the average age of farm operators.

Why is this indicator important?

The Regional Growth Strategy aims to foster a resilient food and agricultural system. A higher average age of farmers represents a warning sign for the future of food production in the region.

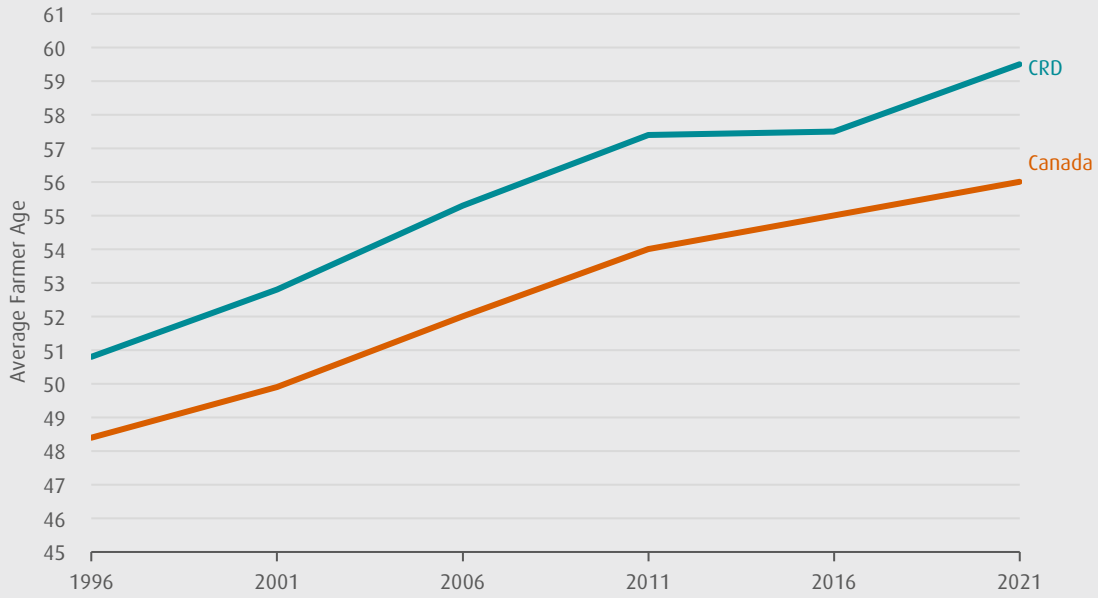
Target/Desired Trend

A lower average age of farmers is desirable.

How are we doing?

Progress toward this target remains static.

The average age of farmers in the region remains higher than the Canadian average.



Source: Statistics Canada, Census of Agriculture 1996, 2001, 2006, 2011, 2016, 2021

7.0 CLIMATE ACTION

7.1a Community greenhouse gas (GHG) emissions



What is being measured?

Community greenhouse gas (GHG) emissions.

This GHG inventory represents the best available information. Following the GPC BASIC + protocol, the scope of emissions includes: stationary energy (e.g., buildings, construction, energy industry), transportation, waste, industrial process and product use, agriculture, forestry and other land use.

Why is this indicator important?

The Regional Growth Strategy aims to significantly reduce community GHG emissions.

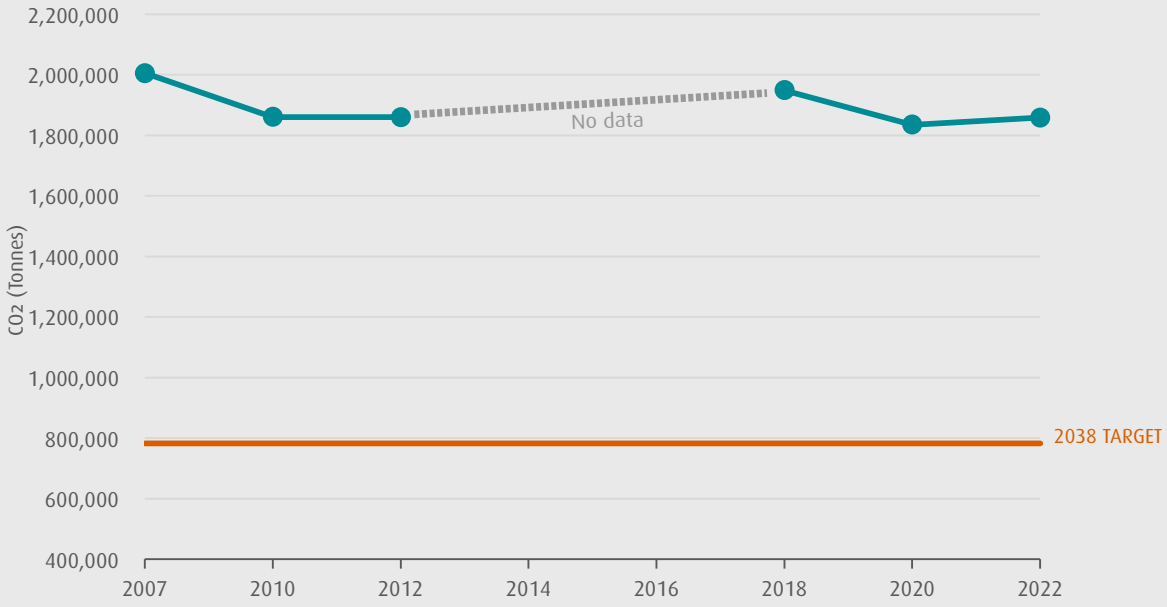
Target/Desired Trend

Decrease community GHG emissions by 33% from 2007 levels by 2020 and 61% by 2038.

How are we doing?

In 2022, the Capital Regional District's (CRD) annual GHG emissions totalled approximately 1.86 million tonnes, which represents a 7% decline from the 2007 base year GHG emissions, and a 1% increase from 2020.

Together, building and transportation-related carbon pollution continue to be the largest sources of the region's carbon pollution, (approximately 75%) in 2022. On a per capita basis there has been a decline of 25% between 2007 and 2022. This speaks to the efforts the CRD, local, provincial and federal governments have made to reduce energy consumption and GHG emissions. However, the current trend suggests that we will not meet the target by 2038 unless greater effort is made.



Source: CRD 2022 Greenhouse Gas Protocol BASIC+ Community Greenhouse Gas Emissions Inventory Report



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