Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Environmental Services Committee

Wednesday, June 19, 2024 | **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. 24-612 Minutes of the May 15, 2024 Environmental Services Committee Meeting

Recommendation: That the minutes of the Environmental Services Committee meeting of May 15, 2024 be adopted as circulated.

Attachments: Minutes - May 15, 2024

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. Delegations

5.1.1. 24-647 Delegation - Jonathan O'Riordan; Representing Mt Work Coalition: Re: Agenda Items: 6.2. Biosolids Literature and Legal Review - June Update, 6.3. Biosolids Beneficial Use Options - Request for Expressions of Interest; and 6.4. Biosolids Advanced Thermal Demonstration Plant - Project Update

6. Committee Business

6.1. 24-620 Millstream Meadows Remediation Project

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That the Millstream Meadows project budget increase from $14.7M to $15.32M be incorporated into the 2024 capital plan, with the additional project budget of $0.62M funded from uncommitted project capital on hand.

Attachments: Staff Report: Millstream Meadows Remediation Project

Appendix A: Millstream Meadows Site Location - Map

6.2. 24-604 Biosolids Literature and Legal Review - June Update

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
1. That staff be directed to secure a tenured professor that fulfills the qualification criteria outlined in this report, to undertake the independent literature review, as per the terms of reference previously approved for this work, with a budget not to exceed $40,000; and
2. That staff be directed to procure a legal review in alignment with the selection criteria and scope of work presented in this report, with a budget not to exceed $25,000.

Attachments: Staff Report: Biosolids Literature and Legal Review - June Update

Appendix A: Biosolids Literature Review - Terms of Reference

Appendix B: Selected Cases on Biosolids Application to Land (Oct 2013)

6.3. 24-610 Biosolids Beneficial Use Options - Request for Expressions of Interest

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That staff be directed to issue a Request for Expressions of Interest for biosolids management under Tier 2 of the Long-term Biosolids Beneficial Use Strategy.

Attachments: Staff Report: Biosolids Beneficial Use Options - RFEOI

6.4. 24-611 Biosolids Advanced Thermal Demonstration Plant - Project Update

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

Attachments: Staff Report: Biosolids Advanced Thermal Demo Plant Project Update

6.5. 24-608 Previous Minutes of Other CRD Committees and Commissions for Information

Recommendation: There is no recommendation. The following minutes are for information only.
a) Solid Waste Advisory Committee - June 7, 2024
b) TCAC - Core Area Wastewater Treatment - May 22, 2024

Attachments: Minutes: SWAC - June 7, 2024

Minutes: TCAC - May 14, 2024

7. Notice(s) of Motion

8. New Business

9. Adjournment

The next meeting is July 17, 2024.

To ensure quorum, please advise Jessica Dorman (jdorman@crd.bc.ca) if you or your alternate cannot attend.

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625 Fisgard St.,
Victoria, BC V8W 1R7

Capital Regional District

Meeting Minutes

Environmental Services Committee

Wednesday, May 15, 2024 **1:30 PM** **6th Floor Boardroom**
625 Fisgard St.
Victoria, BC V8W 1R7

PRESENT
Directors: B. Desjardins (Chair), S. Tobias (Vice Chair), J. Bateman (for M. Tait) (EP), J. Brownoff (EP), J. Caradonna, G. Holman (1:35 pm) (EP), D. Kobayashi (EP), D. Murdock (EP), D. Thompson, A. Wickheim (EP)

Staff: T. Robbins, Chief Administrative Officer; L. Jones, General Manager, Parks, Recreation and Environmental Services; R. Smith, Senior Manager, Environmental Resource Management; N. Elliott, Manager, Climate Action Programs; M. Lagoa, Deputy Corporate Officer; J. Dorman, Committee Clerk (Recorder)

EP - Electronic Participation

Regrets: Director(s) M. Tait, C. Plant

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 Thompson, SECONDED by Director Caradonna,
That the agenda for the May 15, 2024 Environmental Services Committee meeting be approved.
CARRIED

3. Adoption of Minutes

3.1. 24-483 Minutes of the April 17, 2024 Environmental Services Committee Meeting

MOVED by Director Caradonna, SECONDED by Director Tobias,
That the minutes of the Environmental Services Committee meeting of April 17, 2024 be adopted as circulated.
CARRIED

4. Chair's Remarks

Chair Desjardins thanked the staff for all their work on the Biosolids Literature Review update.

5. Presentations/Delegations

There were no presentations or delegations.

6. Committee Business

6.1. 24-449 Hartland Public Drop-off Depot - Expanded Hours Pilot

R. Smith presented Item 6.1. for information.

Discussion ensued on the following:
- cost of service
- monitoring waste levels and illegal dumping
- feedback from residents
- product exclusions

Director Holman joined the meeting electronically at 1:35 pm.

6.2. 24-468 Increasing Direct-Current Fast-Charge/Level 3 Chargers in the Region

N. Elliott presented Item 6.2. for information.

Discussion ensued on the following:
- grant leveraging and municipal collaboration
- EV charging location map and Electoral Area breakdown

6.3. 24-486 Bylaw No. 4607 - Electric Vehicles Charging and Fees Bylaw No. 1, 2024

N. Elliott spoke to Item 6.3.

Discussion ensued on the following:
- EV charging fees and schedules
- violation and infraction enforcement

MOVED by Director Caradonna, SECONDED by Director Thompson,
The Environmental Services Committee recommends to the Capital Regional District Board:
1. That Bylaw No. 4607, "Electric Vehicles Charging and Fees Bylaw No. 1, 2024", be introduced and read a first, second and third time; and
2. That Bylaw No. 4607 be adopted.
3. That Bylaw No. 4611, "Capital Regional District Ticket Information Authorization Bylaw, 1990, Amendment Bylaw No. 79, 2024", be introduced and read a first, second and third time; and
4. That Bylaw No. 4611 be adopted.
CARRIED

6.4. 24-484 Bylaw No. 4610 - Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2024

R. Smith spoke to Item 6.4.

Discussion ensued on the following:
- demolition and renovation waste
- clean versus salvageable wood waste

MOVED by Director Caradonna, SECONDED by Director Tobias,
The Environmental Services Committee recommends to the Capital Regional District Board:
1. That Bylaw No. 4610, "Hartland Landfill Tipping Fee and Regulation Bylaw No. 6, 2013, Amendment Bylaw No. 5, 2023", be read a first, second and third time; and
2. That Bylaw No. 4610 be adopted.
CARRIED

6.5. 24-406 Biosolids Literature Review - Update

B. Desjardins spoke to Item 6.5.

Discussion ensued on the provincial application of biosolids.

MOVED by Director Caradonna, SECONDED by Director Tobias,
The Environmental Services Committee recommends to the Capital Regional District Board:
1. Direct staff to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.
2. That staff be directed to proceed with an independent unbiased legal review of:
a) the risks associated with the legal land application of biosolids; and
b) the risks associated if noncompliant with the provincial regulatory framework for biosolids.

MOVED by Director Thompson, SECONDED by Director Caradonna,
That the main motion be amended in 2. a) to delete the word "legal" and add the words "that is compliant with the provincial regulatory framework" after the words "land application of biosolids".
Opposed: Wickheim
CARRIED

MOVED by Director Caradonna, SECONDED by Director Tobias,
That the main motion be amended in 2. to replace the words "to proceed" with the words "report back to the Environmental Services Committee prior to proceeding".
CARRIED

The question was called on the main motion as amended:
The Environmental Services Committee recommends to the Capital Regional District Board:
1. Direct staff to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.
2. That staff be directed to report back to the Environmental Services Committee prior to proceeding with an independent unbiased legal review of:
a) the risks associated with the land application of biosolids that is compliant with the provincial regulatory framework; and
b) the risks associated if noncompliant with the provincial regulatory framework for biosolids.
CARRIED

6.6. 24-487 Previous Minutes of Other CRD Committees and Commissions for Information

The following minutes were received for information:
a) Solid Waste Advisory Committee - May 3, 2024

7. Notice(s) of Motion

There were no notice(s) of motion.

8. New Business

There was no new business.

9. Adjournment

MOVED by Director Caradonna, SECONDED by Director Thompson,
That the May 15, 2024 Environmental Services Committee meeting be adjourned at 2:47 pm.
CARRIED

_____
CHAIR

_____
RECORDER

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EEP 24-31

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, JUNE 19, 2024

SUBJECT **Millstream Meadows Remediation Project**

ISSUE SUMMARY

To seek approval to increase the budget for the Millstream Meadows remediation project.

BACKGROUND

Millstream Meadows, located at 1965 Millstream Road (Site), is a 12.8-hectare (32-acre) property in the District of Highlands (Highlands) that was used for the unregulated disposal of septage and other trucked liquid waste between the early 1940s and 1985 (Appendix A). Since 2005, the Capital Regional District (CRD) and the Province of BC (the Province) have worked cooperatively to investigate and remediate contamination at the CRD-owned property, with the end goal of divestiture. The overall project approach, schedule and budget are managed in cooperation with, and are approved by, the Province.

A large excavation of the most contaminated material took place in 2007-2008; however, soil and groundwater contamination remain below the surface at and adjacent to the Site. Beginning in 2016, the CRD implemented a Detailed Site Investigation (DSI) to delineate the degree and extent of contamination, which is a requirement of the BC Ministry of Environment and Climate Strategy (ENV). A Human Health and Ecological Risk Assessment (HHERA) is underway to demonstrate the remaining contamination does not pose a risk to human health or the environment, and the Site is eligible for certification under commercial land use in accordance with BC Contaminated Sites Regulations (CSR). A soil vapour investigation is currently underway as part of the HHERA and will be completed by the fall. Upon final completion of the DSI and HHERA, the CRD intends to apply to ENV to obtain a risk-based Certificate of Compliance, which will ultimately enable site redevelopment.

Beginning in 2020, the project experienced significant external delays. In August 2020 and May 2021, the CRD submitted two Protocol 6 Pre-approval Applications to ENV. Protocol 6 applications are filed when an alternative approach to site investigation or remediation is desired over the standard approaches set out within the CSR framework. The CRD's applications required ENV approval before the DSI and HHERA could be finalized. Typically, the ENV review process is expected to take three to six months; however, during the Covid-19 pandemic, ENV's response times were extended and the CRD's approval was not issued until 35 months later, in July 2023.

ENV's pre-approval application review process lasted close to three years, resulting in unbudgeted site monitoring and carrying costs. The additional 2.5 years of site care and maintenance from 2020 through 2023 resulted in approximately $280k of unanticipated costs. The largest share of these costs was approximately $200k paid for bottled water delivery to residents within one kilometer of the Site, as required under the project terms. Other costs included domestic drinking water well monitoring, project management, site maintenance and invasive species management.

ALTERNATIVES

Alternative 1

The Environmental Services Committee recommends to the Capital Regional District Board:
That the Millstream Meadows project budget increase from $14.7M to $15.32M be incorporated into the 2024 capital plan, with the additional project budget of $0.62M funded from uncommitted project capital on hand.

Alternative 2

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

IMPLICATIONS

Financial Implications

The CRD Board approved an overall project budget of $14.7M in 2020, representing an increase from the previous project budget of $14.32M. The 2020 project budget amendment funded additional groundwater well installation and sampling to delineate deep groundwater contaminant migration under neighbouring properties.

Project costs are shared between the CRD and the Province at 61% and 39%, respectively. The CRD's share has been funded through: Municipal Finance Authority debt, requisition, Hartland tipping fees and the septage disposal service capital reserve.

The Millstream Meadows Remediation project budget of $14.7M will be fully spent and committed by the end of August 2024. A budget increase of $0.62M, to a total of $15.32M, is required to fund the remaining estimated costs, including:

- soil vapour investigation and completion of HHERA
- ENV and Contaminated Sites Approved Professionals submission fees
- resident bottled water delivery service and other site carrying costs
- groundwater monitoring well decommissioning
- follow-up reporting, performance verification plan and contingency

The requested $0.62M budget increase will be fully funded from uncommitted Millstream Meadows Remediation project capital on hand.

Intergovernmental Implications

The CRD and the Province committed to remediate the Site to protect human health and the environment. Completion of the project and receiving Certificates of Compliance are necessary to meet these commitments.

The future land use of the Site is expected to remain consistent with current commercial and industrial land uses allowed; however, the Highlands is currently in the process of updating its Official Community Plan, which may result in changes to allowable land use.

CONCLUSION

The Millstream Meadows Remediation project is approaching completion; however, regulatory approval delays resulted in unanticipated site-related costs. Additional funds are required to complete key deliverables and tasks for the project. Staff recommend an increase in the overall project budget sourced from the Millstream capital budget reserve. The CRD plans to apply for Certificates of Compliance by the end of 2024, with risk-based certificates expected from the Ministry of Environment and Climate Strategy in early 2025.

Upon project completion, the CRD must proceed with offering the property for sale, as defined in the existing project terms, or it may seek to retain the property to provide solid waste management services.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:
That the Millstream Meadows project budget increase from $14.7M to $15.32M be incorporated into the 2024 capital plan, with the additional project budget of $0.62M funded from uncommitted project capital on hand.

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

ATTACHMENT

Appendix A: Millstream Meadows Site Location – Map

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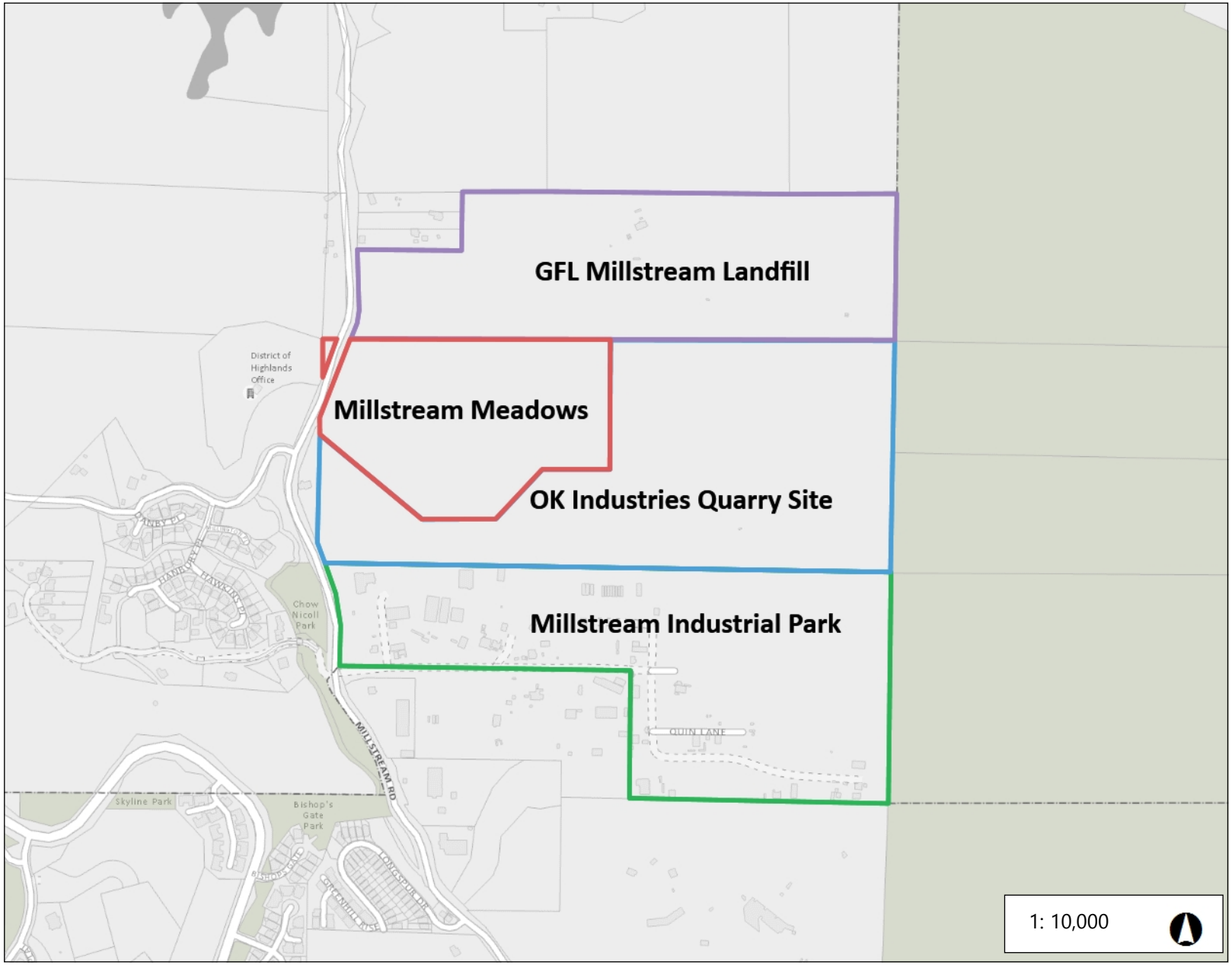
Millstream Meadows and Surrounding Properties



Legend

Notes

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REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, JUNE 19, 2024

SUBJECT **Biosolids Literature and Legal Review – June Update**

ISSUE SUMMARY

To provide follow-up on Board direction to evaluate the Capital Regional District's (CRD) risks associated with land application of biosolids. Staff seek clarity from the Environmental Services Committee (ESC) on criteria that should be used to select an unbiased, independent research group to undertake a literature review on the human health and ecological risks of biosolids land application, and to provide the ESC with a summary of the criteria and direction that will be given to a recommended law firm to assess the legal liability of various aspects of land application.

BACKGROUND

At the August 9, 2023 CRD Board meeting, staff were directed to prepare a proposal for undertaking literature and legal reviews of biosolids land application. These efforts were delayed in anticipation of the province releasing a similar literature review specific to the Organic Matter Recycling Regulation (OMRR), which likely would have answered many of the ESC's outstanding questions on the human health and ecological risk of biosolids land application. The provincial review has been delayed until at least the Fall 2024, resulting in the ESC requesting that staff reassess CRD-led reviews.

At the May 15, 2024 ESC meeting, staff brought forward a proposal to hire an academic research group to undertake the review, and a proposed Terms of Reference (Appendix A). Subsequent ESC and Board discussions have reaffirmed direction for the CRD-led reviews, with the following motions coming from the May 15 ESC and June 12, 2024 Board meetings:

1) *That staff be directed to continue the process of identifying suitable academic researchers to undertake an independent biosolids literature review, and report back to the Environmental Services Committee.*
2) *That staff be directed to report back to the Environmental Services Committee prior to proceeding with an independent unbiased legal review of:*
    a) *the risks associated with the land application of biosolids that is compliant with the provincial regulatory framework; and*
    b) *the risks associated if noncompliant with the provincial regulatory framework for biosolids.*

Literature Review

Staff continue to search for suitable academic reviewers for this scope. Qualifications for suitable candidates include:

- Academic tenure, which ensures independence from external influences for researchers at Canadian universities. This allows researchers to undertake research, develop conclusions and publish research consistent with their findings.

- Publishing the research in peer-reviewed journals, which ensures an open discussion in the scientific literature that guards against any bias in the research or interpretations. Peer-reviewed research ensures the studies can be repeatable, verified before being published, confirms the validity and reliability of the research, and is the basis for scientific advancement of knowledge.
- Knowledge in some or all of the fields of soil science, hydrogeomorphology, contaminant transport, environmental chemistry and toxicology and an understanding of human health and environmental risk assessment would be key to a successful literature review.
- Subject matter knowledge, including the application of science for policy development, should be critical to providing a relevant literature review for the Board's consideration.
- Absence of publicly stated positions in the matter of land application of biosolids. This criteria, as directed by the Board, aims to ensure a balanced approach to the work and mitigate public perception of bias.
- Knowledge of current and proposed regulatory frameworks in Canada and BC, currently listed as an asset but not a requirement (to avoid making the requirement list too astringent).

The process of securing a suitable reviewer in a timely matter is posing a major challenge given the type of work (which is academic in nature, where suitable candidates do not respond to the CRD's traditional work procurement methods (i.e., requests for proposals); and the time required to identify candidates, confirm interest and availability, report to the ESC (and Board), and finalize the engagement.

Staff have identified a few other qualified Canadian university researchers that may have capacity and interest to complete the work. To streamline the timeline and improve chances of securing suitable candidates, the ESC may choose to direct staff to award the scope of work to a suitable candidate, as long as the candidate fulfills the conditions noted above. Alternatively, staff can continue to reach out to those identified teams and report back to ESC and the Board seeking direction to award.

Legal Review

The ESC previously received copies of a Selected Cases on Biosolids Application to Land report (Appendix B) that suggests potential liability to the CRD in limited circumstances, though this has never been confirmed or provided to internal or external legal counsel for review or consideration. As highlighted at the October 18, 2023 ESC meeting, any legal opinion would be specific to the CRD and based on biosolids generated in the capital region, not on biosolids generally, as the facts and assumptions would need to be defined and applicable to the region's risk profile.

As such, staff recommend selection of a law firm that does not regularly perform work for the CRD but has expertise with environmental and local government matters. The scope of work is to assess:

1. The legal liability to the CRD:
    a) If the OMRR is determined in the future to not be sufficiently protective of human health and/or the environment due to currently non-regulated chemical constituents potentially found in CRD biosolids destined for land application;
    b) If contractors that land apply CRD biosolids in the future do so either:
        i. in compliance with OMRR; or
        ii. out of compliance with OMRR;

c) If regional biosolids continue to be disposed of in the landfill;
d) If not all CRD biosolids are beneficially reused, as per provincial directive and federal expectations.

2. The applicability to the CRD of biosolids-related case law summarized in the Selected Cases on Biosolids Application to Land report and more recent case law in Canada;
3. A backgrounder on regulatory offence law; the law of nuisance; the law of negligence; and other potential sources of environmental claims that may be of assistance to decision-makers on these issues.

The proposed selection process addresses the Board's concerns for independence through the nature of the lawyer-client relationship. Through this agreement, the hired firm has a duty to be an advocate for their client's interest and to provide the best information possible.

Staff have identified several potential law firms with strong reputations that meet the above criteria. If the Board approves of the selection criteria and scope of work outlined in this report, staff will approach potential law firms to determine availability and cost options and then proceed with obtaining the requested legal opinion.

ALTERNATIVES

Alternative 1
The Environmental Services Committee recommends to the Capital Regional District Board:

1. That staff be directed to secure a tenured professor that fulfills the qualification criteria outlined in this report, to undertake the independent literature review, as per the terms of reference previously approved for this work, with a budget not to exceed $40,000; and
2. That staff be directed to procure a legal review in alignment with the selection criteria and scope of work presented in this report, with a budget not to exceed $25,000.

Alternative 2
That this report be referred back to staff for further consideration.

IMPLICATIONS

Financial Implications

The cost to complete the external literature and legal review will be covered by existing funds in the Liquid Waste Management Plan planning budget. The timeline for the tasks is expected to be three to four months from the time of procurement.

CONCLUSION

The CRD Board directed staff to consider options for a fulsome review of the current science and legal liabilities associated with potential risks associated with the Short and Long-term Biosolids Management Strategy and associated plans. This work will involve procuring external experts to review the current available science and legal and regulatory framework to inform the Board's ongoing biosolids management program. The use of tenured university academics for the scientific literature review, and a law firm knowledgeable in regulatory and municipal compliance for the legal review, will achieve the objectives of independent and unbiased opinions for the Board's consideration. The work will likely take three to four months from the time of procurement.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:

1. That staff be directed to secure a tenured professor that fulfills the qualification criteria outlined in this report, to undertake the independent literature review, as per the terms of reference previously approved for this work, with a budget not to exceed $40,000; and
2. That staff be directed to procure a legal review in alignment with the selection criteria and scope of work presented in this report, with a budget not to exceed $25,000.

Submitted by:	Glenn Harris, Ph.D., R.P. Bio., Senior Manager, Environmental Protection
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental 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: Biosolids Literature Review – Terms of Reference
Appendix B: Selected Cases on Biosolids Application to Land (October 30, 2013)

APPENDIX A

BIOSOLIDS LITERATURE REVIEW

TERMS OF REFERENCE

June 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 final review and approval by the CRD Board and is due to ENV by June 18 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. As such, the CRD Board has given preliminary approval to include non-agricultural out-of-region land application options in the long-term management plan. Non-agricultural in-region land application options are only to be used as a last resort. This plan is scheduled for Board discussion and approval on June 12, 2024. 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, general 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. The authors should not have made any previous public statements regarding biosolids land application.

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.

SELECTED CASES ON BIOSOLIDS APPLICATION TO LAND

BY GRACE JACKSON, ARTICLED STUDENT
and
BRUCE WARNSBY, LAW STUDENT
October 30, 2013

This summary was prepared by an articling student and a law student and is for information purposes only. It should not be relied on as legal advice.

The following is a summary of just some of the relevant case law involving the land application of biosolids in North America. The purpose of this summary is to point out areas of potential legal liability which the CRD may wish to investigate before deciding whether or not to repeal its ban on the application of biosolids to lands within the CRD.

PROVINCIAL OVERSIGHT

In British Columbia, in one case so far, the Environmental Appeal Board found that a permit issued by the province of BC allowing the use of biosolids as fertilizer did not ensure protection of the environment as per the necessary requirements under BC's *Waste Management Act* (WMA) (*Organic Producers Assn. of Cawston & Keremeos v. British Columbia (Assistant Regional Waste Manager*[1]). In that case, the permit was rescinded.

This case illustrates the potential for omissions by the province in its regulation of biosolids. It also illustrates how various administrative bodies might come to different conclusions about the environmental safety of biosolids application to land.

LOCAL GOVERNMENT JURISDICTION

In the United States, the battle over whether biosolids should be applied to land is being litigated in the context of jurisdiction. On the one hand, there are cases such as *Welch v. Board of Supervisors of Rappannock County*[2], where a local ordinance banning the land application of sewage sludge was upheld despite provisions of the federal *Clean Water Act* that encouraged the land application of biosolids. On the other hand, there are cases such as *Blanton v. Amelia County*[3], where a local ordinance banning biosolids application was overruled by state permits allowing such application.

US case law suggests that courts in that country will attempt to harmonize two levels of regulation over the same subject area, and only if the regulations cannot be harmonized will the state law trump the local law (*O'Brien v. Appomattox County Virginia*[4], *Queen Anne's Country v. Soaring Vistas*[5]). However, this principle can be applied with inconsistent results.

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[1] *Organic Producers Assn. of Cawston & Keremeos v British Columbia (Assistant Regional Waste Manager)* (11 April 2002), 2000WAS-024, online: BCEAP <http://www.eab.gov.bc.ca/waste/2002WASList.htm>

[2] *Welch v Board of Supervisors of Rappannock County,* 888 F Supp 753, 759 (WD Va 1995).

[3] *Blanton v Amelia County,* 540 SE 2d 869 871 (2001).

[4] *O'Brien v Appomattox County,* 293 F Supp 2d 660 (WD Va 2003) affirmed *O'Brien v Appomattox County,* 71 Fed. Appx. 176 (4t ct App 2003.

[5] *Queen Anne's Country v. Soaring Vistas* 121 Md. App. 140 (1997).

As another example, in *Thayer v. Town of Tilton*,[6] the Supreme Court of New Hampshire upheld a local ban on the use of more hazardous "Class B" biosolids, stating that federal and state law left space for the town to protect the health and wellbeing of its residents through the ban. Conversely, in the case of *Franklin County v. Fieldale Farms*[7], the Supreme Court of Georgia found that allowing such local ordinances would breach the principle of uniformity.

The US battle continues on in places such as Kern County, California, where residents seek to ban the application of biosolids to land despite state legislation that promotes the use of biosolids. That case, *Los Angeles v. Kern County*,[8] is currently being appealed to the Supreme Court of California.

A similar battle took place in Quebec, in the context of a prohibition on applying biosolids to farm land in Elgin County. Quoting the municipality's plenary powers to enact by-laws for the general welfare of its people, and the Supreme Court of Canada's direction to use the precautionary principle to deal with cases of conflicting scientific evidence, the prohibition was upheld at trial. However, on appeal the prohibition was held to be *ultra vires* the municipality and was overturned due to the specific wording of the various laws (*Ferme L'Évasion inc. c. Elgin (Municipalité du canton d')* 2011 QCCA 967).

These cases demonstrate different approaches that may be taken by courts in trying to deal with divergent rationales for regulation and conflicting scientific evidence about health and environmental concerns.

EMERGING ISSUES

In addition to local governments, it may be that Indian Tribes in the United States also have the ability to regulate the depositing of biosolids on their land. In a September 2013 decision, *St. Isidore Farms v. Coeur D'alene Tribe of Indians*,[9] the federal District court for Idaho ruled that the tribal court had jurisdiction to deal with concerns of the Tribe. The Tribe is concerned about the health risks for members who consume wildlife which grazes on a property located on the reserve that had sludge injected into it pursuant to state approval. In order to make that finding, the court found that the affidavits and expert evidence presented by the Tribe was sufficient to show that the health and safety of the Tribe may be threatened. To our knowledge, the case is now before the Tribal Court which will weigh the evidence.

While the authority of First Nations in Canada to regulate biosolids has not been addressed in courts to our knowledge, the *Coeur D'alene Tribe of Indians* case illustrates logic that Canadian courts could potentially adopt in considering whether applying biosolids to lands that provide habitat to wildlife may interfere with not just human health, but also aboriginal rights. If there was, for example, a First Nation that had valid health concerns about eating wildlife that had come into contact with biosolids, it is possible that a court could find that the application of biosolids effectively eliminated the aboriginal right to hunt for food or other purposes. It therefore may be

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[6] 151 N.H. 483; 861 A.2d 800; 2004 N.H. LEXIS 186
[7] 270 Ga. 272; 507 S.E.2d 460; 1998 Ga. LEXIS 1157; 47 ERC
[8] 214 cal app 4th 394.
[9] 2013 U.S. Dist. LEXIS 127705

that the constitutional duty to consult and accommodate aboriginal rights is triggered in relation to governments' decisions to allow the application of biosolids in areas that provide habitat to wildlife that may be eaten.[10]

COULD APPROVING THE LAND APPLICATION OF BIOSOLIDS GIVE RISE TO LIABILITY?

Approving the land application of biosolids may open up various parties to legal liability if it results in public health or environmental problems.

HAS LIABILITY BEEN ATTRIBUTED TO THE GOVERNMENT?

The United States Department of Agriculture (USDA) was ordered by a federal judge to compensate a farmer whose cows died due to the land application of biosolids in the case of *R. A. McElmurray v. United States Department of Agriculture*[11]. In that case, the judge concluded that the USDA had failed to professionally monitor, test and record the toxicity levels of the biosolids it applied to the farmer's land.

CAN FARMERS BE HELD PERSONALLY LIABLE?

It remains the fact that farmers in the US can be held liable for damages caused by the land application of biosolids despite the protections offered by Right to Farm acts. This is because the application of biosolids may be considered to be outside the scope of normal farm practices, and because Right to Farm acts do not protect against negligence, trespass or the escape of a dangerous substance under the rule in *Rylands v Fletcher*. This is also the case despite the US federal *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) if the sludge that is applied to lands ends up containing particularly hazardous materials, and even if the farmer was unaware that the sludge was toxic (*Fallowfield Development Corp. v. Strunk*[12]).

In Quebec, neighbours of a farm storing municipal sludge were awarded a total of $2000 plus interest and costs due to the presence of odors. The farmer was held liable in that case primarily due to the fact that he had been issued two violations of the provincial environmental quality act (*Maisonneuve c. Fermes Lebec inc.*, 2013 QCCQ 5923 (CanLII)).

Although none of these cases are from BC, they demonstrate the potential for litigation on this topic, and therefore suggest that care be taken in regulating the application of biosolids to lands.

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[10] See, for example, *Haida Nation v. British Columbia* (Minister of Forests), [2004] 3 SCR 511, 2004 SCC 73.

[11] *R.A.McElmurray v United States Department of Agriculture,* 535 F Supp 2d 1318 (SD Ga 2008).

[12] 1994 WL 498316 (ED Pa).

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EEP 24-37

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, JUNE 19, 2024

SUBJECT **Biosolids Beneficial Use Options - Request for Expressions of Interest**

ISSUE SUMMARY

The Capital Regional District (CRD) must develop biosolids management options in accordance with the Long-term Biosolids Beneficial Use Strategy.

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 production and land application of biosolids at CRD facilities and parks, and on farmland in the CRD; 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.

On June 12, 2024, the CRD Board approved a long-term biosolids beneficial use strategy (strategy), which outlines and prioritizes how biosolids will be beneficially used in the coming years. As directed by the BC Ministry of Environment and Climate Change Strategy, the strategy was submitted for provincial review on June 18, 2024, with the intention that it will be implemented by January 1, 2025. The strategy indicates a tiered approach to biosolids management options, with Tier 1 indicating a preference for, and commitment to, developing advanced thermal processing of biosolids in the region. The strategy indicates Tier 1 will require 7-10 years to pilot technology and, if successful, then procure, commission and permit a full-scale advanced thermal facility. Therefore, the strategy includes creating a portfolio of out-of-region options (Tier 2) that the CRD will utilize to ensure regulatory compliance is continuously achieved to bridge the biosolids management program as the CRD pursues Tier 1 options.

As previously reported to the Board in the Monthly Short-term Biosolids Management Plan updates, the contingency mine reclamation project in Cassidy, BC, may also reach capacity in 2024 and therefore does not provide sufficient, reliable viability under current conditions. In addition, staff will be meeting with LaFarge senior staff to assess next steps in improving the reliability of the Richmond cement kiln incineration project. Additionally, staff recognize that landfilling biosolids is not a beneficial use accepted under current provincial regulations and utilizes much needed airspace at the Hartland landfill.

Considering these factors, staff are recommending a Request for Expressions of Interest (RFEOI)

process to identify partners with an interest in biosolids management, with the intention of creating a portfolio of options. The scope of the RFEOI would align with Tier 2 of the Long-term Management Strategy, such that:

Options explored must be out-of-region, and can include:
(i) Industrial land reclamation, such as mine and quarry sites
(ii) Forest fertilization
(iii) Production of biosolids growing medium and/or feedstock in soil production
(iv) Partnerships with established biosolids programs
(v) Fuel combustion in cement manufacturing facilities
(vi) Additional industrial partners interested in combustion

Upon concluding the RFEOI process, staff will present outcomes to inform next steps.

ALTERNATIVES

Alternative 1
The Environmental Services Committee recommends to the Capital Regional District Board:
That staff be directed to issue a Request for Expressions of Interest for biosolids management under Tier 2 of the Long-term Biosolids Beneficial Use Strategy

Alternative 2
That this report be referred back to staff with alternate direction.

IMPLICATIONS

Financial Implications

The current options that are available under Tier 2 are limited to conventional thermal (combustion) and land application. Through the research by the CRD's technical consultant during the biosolids long-term plan development, Tier 2 options will likely be similar (<$300 per tonne). A caveat for any combustion options is that the cost of implementation would be higher if significant capital investment is required for specialized receiving, storage and handling of biosolids.

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. The CRD is at risk to landfilling biosolids under an emergency situation, if additional options cannot be procured before the end of July. This would be out of line with regulatory requirements and may have serious consequences for delivery of the solid waste service, as airspace is currently limited in cell 3 of the landfill while cell 4 is under development.

Alignment with Board and Corporate Priorities

Procurement of Tier 2 options under the 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. 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 specific options are identified, CRD staff will provide advanced 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.

CRD staff do not anticipate a need to amend the current Short-term Biosolids Management Plan (2020-2025) in order to implement additional beneficial use options during the provincial review of the long-term strategy submission.

CONCLUSION

On June 12, 2024, the CRD Board approved a long-term biosolids beneficial use strategy that outlined and prioritized how biosolids will be beneficially used in the coming years. The strategy includes creating a portfolio of out-of-region compliance options that the CRD will utilize to ensure regulatory compliance is continuously achieved until the preferred option (advanced thermal processing) is available. Staff have also identified an immediate need for additional contingency capacity for biosolids management and have identified an out of region option that aligns with the Board's strategy and will meet regulatory requirements. Staff are seeking approval to pursue a contract to address the immediate need for biosolids management and Issue a Request for Expressions of Interest for biosolids management under Tier 2 of the Long-term Biosolids Beneficial Use Strategy.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:
That staff be directed to issue a Request for Expressions of Interest for biosolids management under Tier 2 of the Long-term Biosolids Beneficial Use Strategy.

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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EFE 24-38

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, JUNE 19, 2024

SUBJECT **Biosolids Advanced Thermal Demonstration Plant – Project Update**

ISSUE SUMMARY

To provide an update on the status of the project to procure and carry out a biosolids advanced thermal demonstration plant.

BACKGROUND

At the April 12 2023 meeting, the Capital Regional District (CRD) Board directed staff to issue a Request for Expressions of Interest (RFEOI) for the design and operation of a Biosolids Advanced Thermal Demonstration Plant. An open call was posted on BC Bid and ten submissions from companies world-wide were received and evaluated, resulting in six proponents being shortlisted for the next step, an invitational Request for Proposals (RFP). On October 11, 2023, the Board also provided direction that consideration should be given to the processing of a secondary waste stream as part of the demonstration project.

Since that time, a business advisor has been engaged, Reshape Strategies, a Vancouver-based firm that was instrumental in the renewable natural gas project. Also, an RFP for an owner's engineer/technical advisor was issued and GHD was selected to fill this role. The RFP for the design-build-operation of the demonstration facility is under development and is scheduled to be issued to the six proponents in mid-July. The CRD has a standard RFP document and contract for services that is being customized for this procurement due to the unique nature of the project. Work is advancing on the technical specifications, as well as the general conditions that will form the main elements of the RFP.

Primary considerations in this RFP for the demonstration plant include the following:

- The trial period will be for 15 months, as this is the maximum trial duration allowed under a provincial approval pursuant to the Environmental Management Act.
- The technologies that will be accepted as an advanced thermal process include gasification, pyrolysis and any variations thereof, but will not include incineration.
- The intent is that this trial will be a Design Build Operate Maintain project.
- The RFP will provide the proponents with several options on payment for the equipment, including a straight purchase or a lease for the duration of the trial period.
- The capacity required will be based on a minimum of 2.5 tonnes per day (tpd) but will allow for any larger amount up to 10 tpd based on the proponent's standard available model.
- Proponents can optionally propose one or more secondary streams of solid waste to be processed as part of the demonstration plant trial.
- The RFP period will be conducted concurrently with the first stage of regulatory authorization to expedite project delivery.

IMPLICATIONS

Climate Implications

Operational greenhouse gas (GHG) emissions will be one of the evaluation criteria included within the Request for Proposals. During the pilot period, the pilot will evaluate end uses for the

byproducts, which are expected to include biochar, syngas and a bio-oil. As part of this evaluation, an analysis of the GHG sequestration potential and value of carbon credits that could result from biochar will be included.

Financial Implications

Following the RFEOI process, the Board approved pursuing an advanced thermal demonstration plant project, with a preliminary estimate of $10M, including all soft costs, which is based on preliminary costs provided by several respondents. There are no indications that this will be insufficient at this time.

Submissions will be evaluated on the costs of both the pilot project, including any salvage value remaining at the end of the pilot period, along with the (indicative) levelized cost of a permanent plant over an assumed 15-year life span. Because of the lengthy regulatory process required for permitting of a permanent plant after a (successful) pilot period, staff are not yet certain if it will be possible to reuse equipment from the trial period.

Intergovernmental/Regulatory Implications

Staff and the technical advisor have identified several regulatory permitting requirements that are required for this project. First is obtaining authorization for air discharges under the Environmental Management Act. Staff have initiated the first of this two-stage process and anticipate an approximate 4-6-month timeline for completing the pre-application stage. Following pre-application, staff, the selected proponent, and the CRD's technical advisor will compile and submit a detailed application for provincial review and approval, which staff anticipate will take an additional 18-22 months. If the pilot project is successful, this process will need to be repeated for a full commercial-scale facility.

In addition to the above, the CRD may require several permits for completing a development project from the District of Saanich, as well as permits from Technical Safety and WorkSafe BC. However, until the project details are established through the RFP process, these specific requirements cannot be determined.

Service Delivery Implications

The project schedule calls for issuing the RFP by mid-July and staff are currently on schedule to meet that date. The schedule originally allowed for the RFP to be open for five weeks but the CRD's business advisor has recommended allowing eight weeks, plus potential for up to four additional weeks, if extensions are requested. The reasoning is that a shorter timeline may result in some proponents choosing to not submit a proposal, particularly as this period of time occurs during the summer vacation season. Staff feel it is prudent to follow this recommendation to ensure all six proponents have ample opportunity to respond with a bona fide proposal. With the longer initial RFP open period and potential extensions, it is anticipated that the results of the RFP and staff recommendation will be presented to the ESC at the October 16 meeting. The RFP period will therefore be taking place concurrently with the first stage of regulatory authorization to expedite the overall project delivery.

The Fall staff report will establish an overall project schedule based on the input of the preferred proponent and the response from the Province.

CONCLUSION

At the direction of the CRD Board, staff issued a Request for Expressions of Interest for a Biosolids Advanced Thermal Demonstration Plant and a subsequent Request for Proposals is being developed to be issued to the six shortlisted proponents. The RFP will be issued in mid-July and the project is deemed to be on budget at this time. The pre-application has been submitted to the province and a response is expected in the Fall, at which time an updated project schedule will be presented to the Environmental Services Committee.

RECOMMENDATION

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

Submitted by:	Steve May, P.Eng., Senior Manager, Facilities Management & Engineering Services
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

Capital Regional District

Meeting Minutes

Solid Waste Advisory Committee

Friday, June 7, 2024

CRD Boardroom
625 Fisgard Street
Victoria, BC V8W 2S6

PRESENT: R. Anderson (EP), F. Baker, M. Hauzer, E. Klimke (EP), M. Kurschner, E. Latta, M. McCullough (EP), D. Monsour, J. Oakley (EP), R. Pirie, C. Remington, J. Shaw, R. Tooke (Vice-Chair), S. Young Jr.

STAFF: A. Chambers (Recorder), R. Smith, D. Moghaddam, L. Ferris, K. Masters

REGRETS: C. Blanchard, M. Coburn, B. Desjardins (Chair), S. Gose, A. Sibley, J. Smith, W. Stevens, D. Thran

GUESTS: Chelsea McLellan and Emilio Velazquez (Malatest)

EP - Electronic Participation

The meeting was called to order at 12:30 pm.

1. Tour of Hartland Landfill

2. Territorial Acknowledgement

3. Approval of Agenda

Agenda for the June 7, 2024 Solid Waste Advisory Committee meeting.

MOVED by J. Shaw SECONDED by R. Pirie
That the agenda be approved as circulated.
CARRIED

4. Adoption of Minutes

Minutes from the May 3, 2024, Solid Waste Advisory Committee meeting.

MOVED by F. Baker, SECONDED by D. Monsour
That the minutes of the May 3, 2024, Solid Waste Advisory Committee meeting be adopted as circulated.
CARRIED

5. Chair's Remarks

There were none.

6. Presentations/Delegations

There were none.

7. Committee Business

a. Market Research and Engagement Study Workshop

Malatest, who are doing the Solid Waste Market Research and Engagement Study for the CRD, came and conducted a focus group with the Solid Waste Advisory Committee.

In the fall, after they complete their market research, they will report back to the SWAC with their findings.

b. Solid Waste Management Plan – 2023 Progress Report

L. Ferris presented to the group on the Solid Waste Management Plan – 2023 Progress Report. The report is attached as Appendix A.

c. Actual and Projected Monthly Refuse Tonnages at Hartland Landfill (standing item)

The tonnage graphs are posted via this link: https://www.crd.bc.ca/about/data/hartland-landfill-tonnage.

8. Correspondence

There was no correspondence.

9. Other Business

There was no other business.

10. Next Meeting

The next Solid Waste Advisory Committee meeting will be September 6, 2024.

11. Closing Comments

There were no closing comments.

12. Adjournment

The meeting was adjourned at 14:36

MOVED by J. Shaw, SECONDED by F. Baker
That the Solid Waste Advisory Committee be adjourned.
CARRIED

APPENDIX A

Rethink waste

2023 Solid Waste Management Plan Progress Report

CRD
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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, SŦÁUTW̱ (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.

Terms and Abbreviations

3Rs - Reduce, Reuse, Recycle
5Rs - Reduce, Reuse, Recycle, Recovery and Residual Management
C&D - Construction and Demolition
CEC - Compost Education Centre
CRD - Capital Regional District
EPR - Extended Producer Responsibility
ENV - Ministry of Environment & Climate Change Strategy
GHG - Greenhouse Gas
ICI - Industrial, Commercial and Institutional Sector
MFD - Multi-family Dwelling
MSW - Municipal Solid Waste
PPP - Packaging and Paper Products
RNG - Renewable Natural Gas
SWAC - Solid Waste Advisory Committee
SWMP - Solid Waste Management Plan

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.

Table of Contents

Cover image: Rebounce Victoria used funding from the Rethink Waste Community Grant to set-up used tennis ball collection totes at different recreation centres in the capital region. People can take the tennis balls for reuse and the leftover balls are used for energy recovery, instead of being landfilled.

Aerial view of the active face at Hartland Landfill.

Overview

The 2023 SWMP Progress Report highlights activities undertaken by the CRD in 2023 and satisfies the regular reporting requirements associated with the CRD's SWMP. The SWMP has a target of reducing waste in the region by more than one-third by 2031. Through zero waste and circular economy principles, the plan includes strategies for reducing all streams of solid waste to extend the life of Hartland Landfill to 2100 and beyond.

All costs associated with the CRD's solid waste service are funded through tipping and user fee revenues at Hartland Landfill, collection agreements with product producers, sale of landfill gas and sale of recyclables.

Regulations and Commitments

The CRD became responsible for solid waste disposal for the region in 1973 when, at the request of the CRD Board, the Province of BC established solid waste disposal as a regional function of the CRD. In 1975, the CRD acquired Hartland Landfill and subsequently assumed direct operation of the site in 1985.

The site currently operates under a Design, Operations and Closure Plan, in accordance with an Operational Certificate issued by the ENV, as well as the BC Landfill Criteria for Municipal Solid Waste. There is also a provincial authorization in place for asbestos management.

Any solid waste originating from outside of Canada is managed at Hartland Landfill, in accordance with the International Waste Directive under the authority of the Canada Border Service Agency and the Canadian Food Inspection Agency.

Solid Waste Management Planning

The *Environmental Management Act* requires all regional districts in BC to develop plans for the management of MSW and recyclable materials. Solid waste management planning is a proven way to reduce the amount of solid waste requiring disposal in a region, contributing to the protection of the environment.

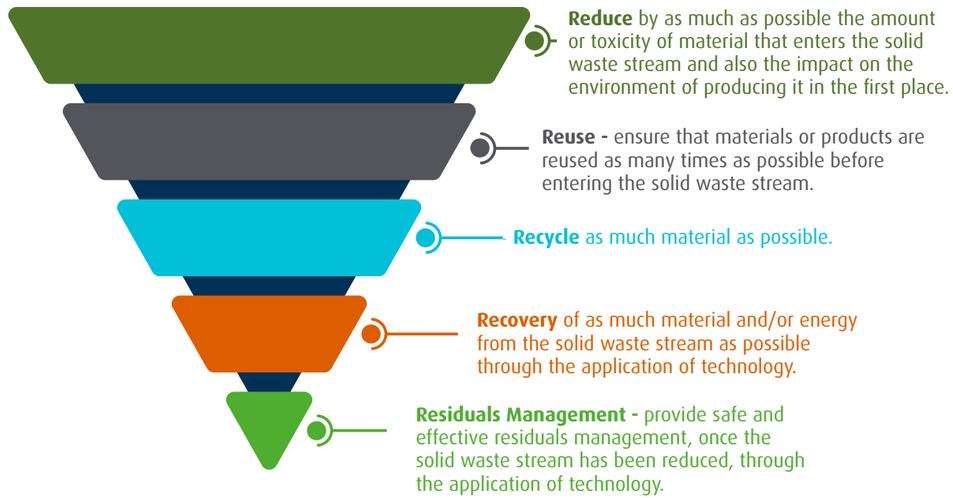
Landfill Operating and Monitoring Requirements

Hartland Landfill is authorized through an Operational Certificate under the *Environmental Management Act*. The Operational Certificate specifies the relevant environmental legislation applicable to the site and sets out requirements for environmental monitoring and annual reporting. Under this regulatory framework, the CRD has established a comprehensive environmental monitoring program to ensure Hartland is not impacting the surrounding environment. More details can be found in the *Hartland Landfill Operating & Environmental Monitoring 2022-2023 Report*.

Solid Waste Management Plan

In BC, regional districts develop SWMPs under the provincial *Environmental Management Act* that are high-level, long-term visions of how the regional district would like to manage its solid waste, in accordance with the 5R Pollution Prevention Hierarchy.

5R Pollution Prevention Hierarchy



The SWMP for the region was endorsed by the CRD Board in May 2021, and was approved by the ENV in July 2023. The final Plan includes strategies and actions for reducing and managing all streams of solid waste—including recyclables, compostable material and garbage—with an eye to extend the life of Hartland Landfill to 2100 and beyond.

Waste reduction, reuse and recycling can reduce GHG emissions both by lowering the demand for new materials and products (reducing upstream environmental impacts), and by minimizing downstream environmental impacts, such as transporting waste over long distances and disposing of it in landfills.

The SWMP's progress is monitored by the SWAC, an advisory committee established by the CRD's Environmental Services Committee to provide input on solid waste management matters and meet the requirements of the ENV's *Guide to Solid Waste Management Planning*. Members of the SWAC represent a diversity of background, interests and geographical location, with a balance between technical and non-technical members and industry and public members.

Goals

The Province's guidelines for solid waste management planning require SWMPs to have goals—the long-term aims to be achieved as an outcome of the plan. A goal may be achieved within the timeframe of this plan, but a goal may also be aspirational, something for the CRD to strive for beyond that timeframe. The CRD's SWMP goals are:

- To surpass the provincial per capita waste disposal target (350 kg/capita/year) and aspire to achieve a disposal rate of 125 kg/capita/year;
- To extend the life of Hartland Landfill to the year 2100 and beyond;
- To have informed citizens that participate effectively in proper waste management practices; and
- To ensure that the CRD's solid waste services are financially sustainable.

Focus Areas

The SWMP identifies three focus areas consisting of 15 strategies with 72 actions. Over the lifetime of the SWMP, the strategies and actions contained within form the basis of service plans and work plans that are approved by the Board annually as part of the financial planning process. Collaboration with First Nations Governments, municipalities, other solid waste services, CRD divisions and stakeholders will be integral to this process.

The 15 strategies with 72 actions and associated timelines are divided into the following focus areas:

- Reduce and Reuse
- Recycling
- Recovery and Residuals Management

For more details on the SWMP's 15 strategies, consult *Appendix A: SWMP Report Card*.

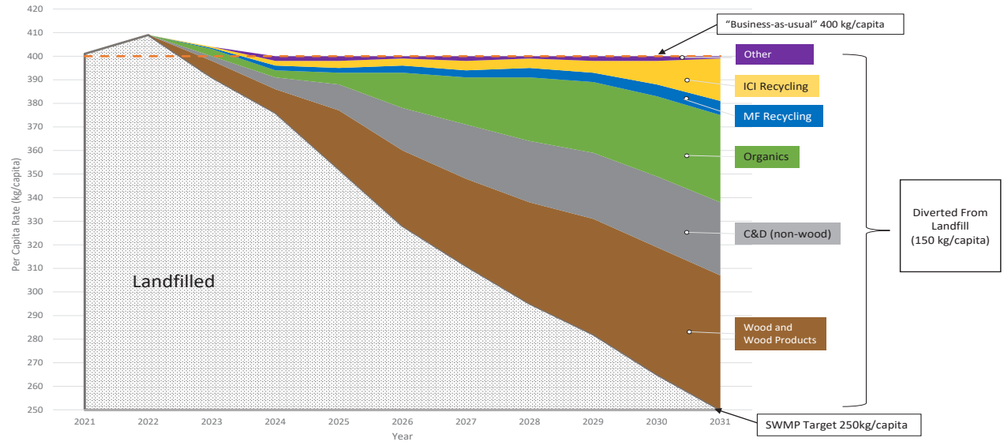
The Pender Island Recycling Depot used funding from the Rethink Waste Community Grant to implement zero waste initiatives at the Pender Island Fall Fair.

Targets and Tracking

The targets established for this plan are focused on reducing the amount of waste landfilled on a per capita basis. By the end of the 10th year of this plan, the capital region's per capita disposal rate target is 250 kg or less, surpassing the Province's long-term target of 350 kg per capita.

Below is a chart plotting one conceptual pathway to reducing the regional per capita disposal rate from 2021 levels to 250 kg per capita. The actual path taken to achieve waste reduction targets will depend on the actions the community takes to reduce waste, and the work the CRD does to support diversion activity and redirect waste material back into the economy. The chart represents an aggressive timeline to divert materials from the landfill, in accordance with the strategies and actions in *Appendix A: SWMP Report Card*.

Conceptual Pathway to Regional Waste Disposal Rate of 250 kg/capita



The metrics used to track the SWMP targets in 2023 are the regional per capita disposal rates, and the Solid Waste Stream Composition Study, which provides a breakdown of categories and sectors to focus on. In the spring of 2023, CRD staff worked with the SWAC to develop Progress Report Performance Indicators to enable tracking of progress towards meeting the SWMP goals and targets. Additional data collection was proposed to allow for comparisons over time, and the following studies were added to the Environmental Resource Management workplan and 2024-2028 budget: the Market Research and Engagement Study (2024), the Waste Generator Study (2025) and the Waste Composition Study (2026).

Per Capita Disposal

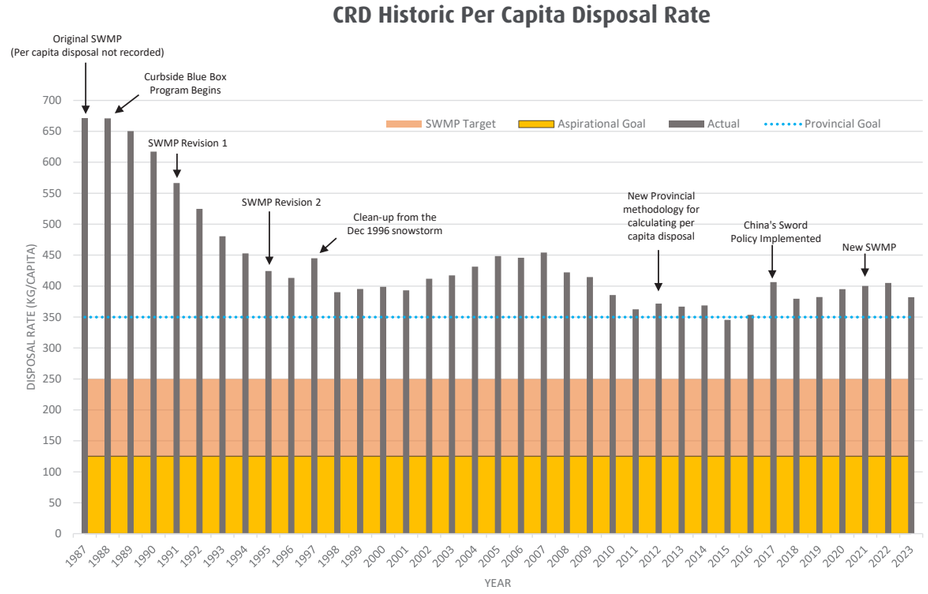
In 2012, the Province of BC began using per capita disposal rates as the standard solid waste metric. The provincial per capita disposal rate in 2021, the latest provincial numbers reported, was 506 kg per capita, while the capital region's rate in 2021 was 400 kg per capita, the second lowest in the province. Regional disposal rates reported to the ENV include general refuse from the residential sector and ICI sources, including blended biosolids, as well as waste from construction, demolition and renovation activities. Disposal rates do not include controlled waste like asbestos, biomedical, or agricultural waste, heavy industry or contaminated soil.

In the SWMP, the per capita waste disposal rate is used to help the CRD and residents of the region understand progress towards the plan's waste reduction goals and targets. The per capita disposal rate reported below excludes blended biosolids, as this material stream is not included within the SWMP. See pg. 11 for more information.

General Refuse Disposal - Per Capita Disposal Rate for the Capital Region

Year	Population[2]	Hartland Landfill[1]			Disposal Rate kg/ person	Percentage Change from 2021
		Received	Beneficial Use[3]	Landfilled[4]		
2021	432,062	173,899	-1,013	172,886	400	N/A
2022	439,950	183,397	-5,107	178,290	405	+1.31%
2023	455,092	179,075	-5,100	173,975	382	-4.43%

1 Excludes blended biosolids; see pg. 11 for more information
2 BC Stats
3 Onsite beneficial use of material based on ENV guidelines
4 The figure for 2021 includes 6,730 tonnes landfilled at Tervita Highwest Landfill



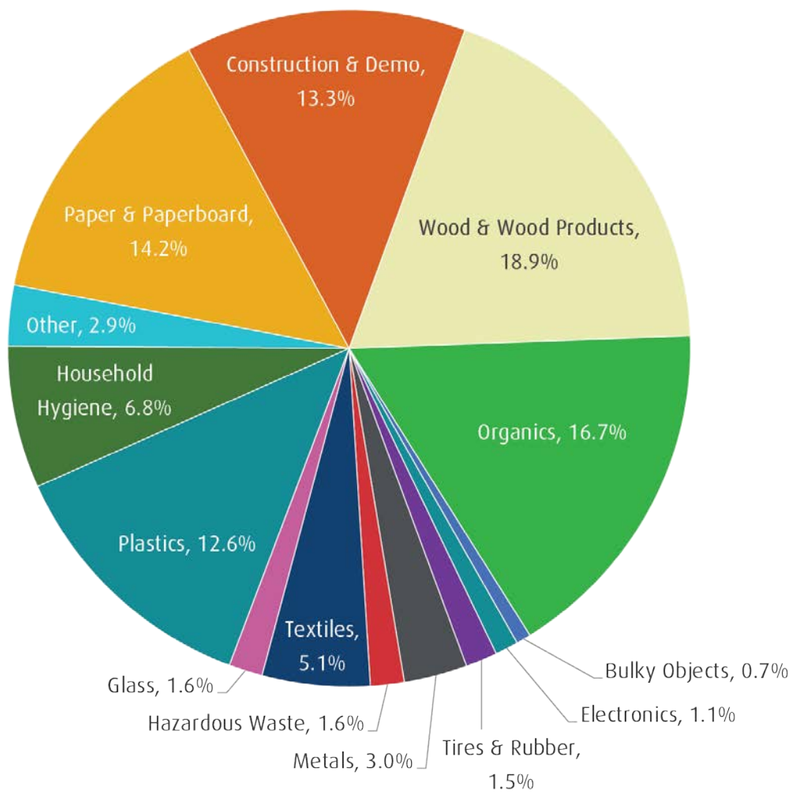
Left: The Victoria Francophone Society received funding from the Rethink Waste Community Grant to help purchase a dishwasher to reduce the need for single-use items. Right: Transition Salt Spring received funding to host a toy swap.

Solid Waste Stream Composition Study

Solid waste stream composition studies provide valuable benchmark data and analysis for evaluating the success of existing solid waste programs and SWMP initiatives.

Since 1990, the CRD has commissioned seven studies to assess the composition of waste being landfilled at Hartland. The most recent analysis took place in 2022; the next study will take place in 2026. In the past, studies have taken place approximately every five years; however, in consultation with the SWAC, the CRD has committed to more frequent studies.

2022 Solid Waste Stream Composition Study Results



Solid Waste Market Research and Engagement Study

The solid waste market research and engagement study will help determine if the CRD's waste reduction programs are effective, and identify and address any challenges, limitations, or gaps within each program area. This study will help the CRD to better understand the public's attitudes, knowledge of and behaviours towards the CRD's waste reduction programming and behaviour change initiatives within the capital region.

The first study will take place in 2024, and results will be included in the 2024 SWMP Progress Report. The study will be conducted once every three years during the life of the SWMP.

Waste Generator Study

The waste generator study will help the CRD gather data on where waste in generated, such as a household, business, industry or community. The purpose of such a study is to gain insights into the patterns of waste generation, understand the composition of the waste stream and identify opportunities for waste reduction, recycling or proper disposal.

Currently, the CRD's diversion data is limited to the recyclable and reusable items accepted at the Hartland Landfill and through administering PPP contracts on behalf of Recycle BC for the curbside blue box program and the Electoral Area depots. Along with identifying where garbage is generated and where it ends up, the waste generator study will help identify a complete picture of diversion activities happening across a variety of sectors.

The first study will take place in 2025, and results will be included in the 2025 SWMP Progress Report. The study will be conducted once every three years during the life of the SWMP.

Diversion Programs Funded or Administered by the CRD

CRD Program Diversion (tonnes)	2021	2022	2023
Hartland Diversion	17,525	16,642	18,924
Curbside Blue Box	18,613	17,293	17,438
Electoral Area Depot Funding	915	929	907
Total tonnes diverted	37,053	34,864	37,269

Challenges and Opportunities

As the management of unwanted materials is a shared responsibility, successful implementation of the SWMP will require involvement from the entire community, including residents, businesses, institutions, First Nations, municipalities and non-profit associations, as well as the local waste management industry. Each of the stakeholders involved in solid waste management has a unique role to play, but there are many competing priorities.

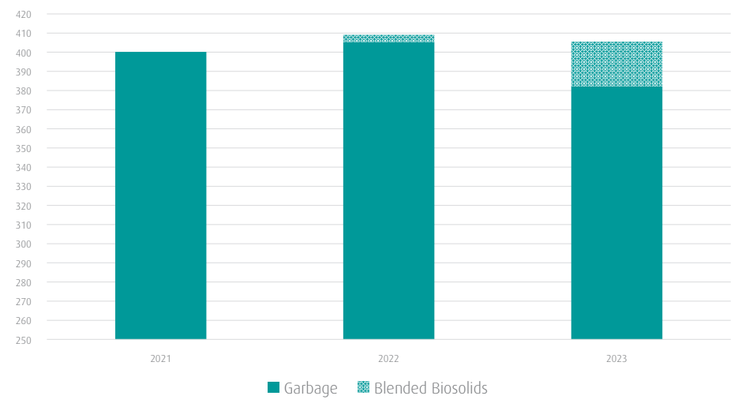
Solid Waste Roles and Responsibilities

The main policy levers the CRD has control of, outside of solid waste, are limited to what is accepted at Hartland Landfill. In 2023, the CRD Board approved bylaw changes at Hartland Landfill, including new material bans, adjusted tipping fee structure and increased bylaw fines. The changes are intended to support diversion activity in the community; however, if the policies do not achieve the desired diversion, or if waste appears to be migrating out of the region, staff will return to the Board for consideration of flow control policies.

Blended Biosolids at Hartland Landfill

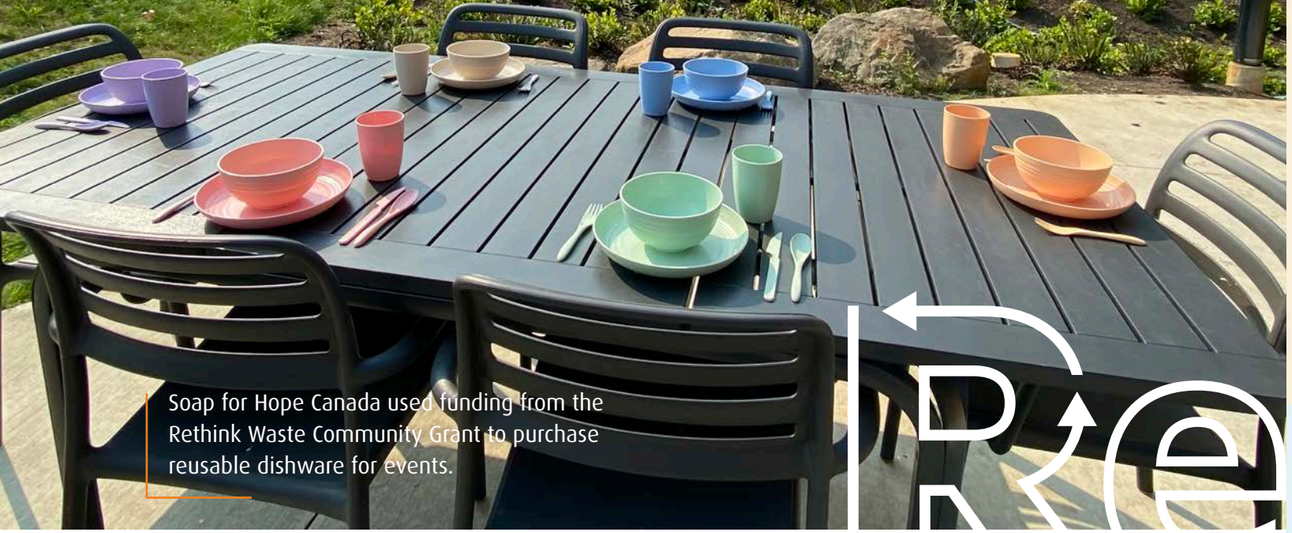
The CRD's short-term plan for Class A Biosolids beneficial use relies primarily on incineration at a cement production facility, and when the cement kiln is unable to receive biosolids, the contingency is to create biosolids growing medium (BGM) for use on engineered cover systems at Hartland Landfill. Due to operational challenges and use of BGM at the landfill being exceeded, Class A Biosolids, blended with sand to render them inert (blended biosolids), began to be landfilled as general refuse at Hartland Landfill in 2022.

General Refuse Landfilled (kg per capita)



In 2023, the CRD landfilled 10,591 tonnes of blended Class A Biosolids as general refuse at Hartland Landfill. Factoring this material into the 382 kg per capita disposal rate for 2023, it increases 6.28% to 406 kgs per capita. The ENV requires the CRD to report the 406 kg per capita disposal rate for the region, even though beneficial use strategies for biosolids are not included within the SWMP.

The CRD will submit a long-term plan outlining the beneficial uses for Class A Biosolids by June 2024, as required by the provincial government. Landfilling blended biosolids has been used as an emergency measure and is not being considered as a long-term management option.



Soap for Hope Canada used funding from the Rethink Waste Community Grant to purchase reusable dishware for events.

Progress Summary

The following sections are intended to provide a high-level, easy-to-understand overview of the CRD's progress related to implementing the SWMP and to summarize progress made in 2023 as it relates to the plan's goals and focus areas.

Goals

The four goals of the SWMP may be achieved within the timeframe of this plan, but a goal may also be aspirational, something for the CRD to strive for beyond the timeframe of this plan. Measures of success and progress staus definitions for the goals were developed with the SWAC in 2023.

Focus Areas

The focus areas form the basis of service plans and work plans that are approved by the Board annually as part of the financial planning process. Collaboration with First Nations governments, municipalities, other solid waste services, CRD divisions and stakeholders will be integral to this process. The 15 strategies and 72 actions contained within the SWMP are divided into three focus areas:

- Reduce and Reuse
- Recycling
- Recovery and Residuals Management

For more details on the SWMP's 15 strategies, consult *Appendix A: SWMP Report Card*.

2023 Overall SWMP Progress

On track

Goal Areas

Goal 1: To surpass the provincial per capita waste disposal target (350kg/capita/year) and aspire to achieve a disposal rate of 125 kg/capita/year.

Goal 2: To extend the life of Hartland Landfill to the year 2100 and beyond.

Goal 3: To have informed citizens that participate effectively in proper waste management practices.

Goal 4: To ensure that the CRD's solid waste services are financially sustainable.

Focus Areas

Reduce and Reuse

Recycling

Recovery and Residuals Management

Focus Area Icon Legend

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

Goal Area Icon Legend

On Track

Opportunity for Improvement

Attention Required

Developed in collaboration with the SWAC, each goal has a unique definition for "On Track", "Opportunity for Improvement" and "Attention Required." Review the following section for definitions.

Goal Area Progress Summary

Opportunity for Improvement

Goal 1

To surpass the provincial per capita waste disposal target (350kg/capita/year) and aspire to achieve a disposal rate of 125 kg/capita/year.

Indicators and Inputs Summary:

- Calculated a disposal rate of 382 kg/capita, an decrease of 4.43% or 18 kg/capita from when the plan began in 2021.
- 2022 Solid Waste Stream Composition study indicated 47% of the garbage sent to Hartland Landfill could have been diverted through reuse, recycling or energy recovery.
- In 2025, the CRD will complete a waste generator study to further analyze where and how waste is generated.

Icon Definitions

- Community is trending towards a per capita disposal rate to be **less than 350 kg/capita** over the life of the plan.
- Community is trending towards a per capita disposal rate of **350 kg/capita** over the life of the plan
- Community is trending towards a per capita disposal rate **above 350 kg/capita** over the life of the plan.

Opportunity for Improvement

Goal 2

To extend the life of Hartland Landfill to the year 2100 and beyond.

Indicators and Inputs Summary:

- Achieved a compaction density rate of 0.98 tonnes of general refuse per cubic metre*, surpassing the landfill guideline target of 0.85 tonnes per cubic metre by 17.18%, indicating an efficient waste compaction process that utilized the available landfill space more effectively than initially planned.
- Landfilled 173,975 tonnes of general refuse at Hartland Landfill, an increase of 1,089 tonnes (0.63%) from when the plan began in 2021.
- Additionally, 10,591 tonnes of blended Class A Biosolids were landfilled at Hartland as general refuse as a Long-Term Biosolids Plan is developed in 2024.

** Compaction density data is from 2022*

Icon Definitions

- Air space utilization is on track to extend the life of Hartland Landfill to the year **2100 and beyond**.
- Air space utilization is only trending to extend the life of Hartland Landfill to the year **2100**.
- Air space utilization will not extend the life of Hartland Landfill to the year **2100**.

On Track

Goal 3

To have informed citizens that participate effectively in proper waste management practices.

Indicators and Inputs Summary:

- Provided $244,265.44 in funding for non-profit waste reduction organizations, organics diversion education and the Rethink Waste Grant, a 20.64% increase from when the plan began in 2021.
- Delivered 8,574 waste reduction workshops and tours (landfill tours, 3Rs, composting) to children and adults in the capital region, a 70.63% increase from when the plan began in 2021.
- In 2024, the CRD will complete a Solid Waste Awareness and Engagement Market Research Study to further evaluate the CRD's programming and behaviour change initiatives.

Icon Definitions

- Engagement and participation in proper waste management practices is **higher** than previous years.
- Engagement and participation in proper waste management practices is **equivalent** to previous years.
- Engagement and participation in proper waste management practices is **less** than previous years.

On Track

Goal 4

To ensure that the CRD's solid waste services are financially sustainable.

Indicators and Inputs Summary:

- Solid waste service continues to be a self-funded and achieves a surplus.

Icon Definitions

- Solid waste service self-funding model is **financially sustainable** for the remainder of the plan.
- Solid waste service self-funding model is **trending in the wrong direction**, adjustments may be necessary.
- Solid waste service self-funding model is trending in the wrong direction and is currently **not sustainable** for the remainder of the plan.

Reduce and Reuse

Governments, residents, non-profits and business all have an important role to play in reducing and diverting waste from the landfill. Reducing the amount of waste created, and finding ways to repurpose and reuse waste, eliminates the need to dispose of items later.

Overall Status
On Track

CRD Roles

Municipal collaboration

Provincial and Federal Government advocacy

Funding and supporting non-profits

Education and outreach

This focus area includes

6

SWMP strategies

Salt Spring Island Printmaker Society

Progress Summary

- The SWMP received approval from the ENV in July 2023.
- The CRD Board approved bylaw changes at Hartland Landfill, including new material bans, adjusted tipping fee structure and increased bylaw fines. These have the potential to divert up to 40,500 tonnes of waste a year, contributing to reducing the region's waste by more than one-third.
- Developed the Waste Stream Collector Incentive program, which offers Hartland Landfill account customers a $25/tonne rebate on general refuse if they provide their customers multi-stream collection services and voluntarily report on waste collection data.
- Between the Hartland Landfill Public Tours, Hartland Landfill Technical Tours, 3Rs K-12 program and outreach events, the CRD connected with 5,971 residents.
- The CRD provided funding to 20 community-based projects totalling $57,175 under the Rethink Waste Community Grant. To highlight how individuals and organizations are using the grant to reduce waste, the CRD produced and promoted four videos on Rethink Waste Community Grant recipients.
- Continued to provide support ($68,000) for 10 local non-profit reuse organizations to assist them in managing unusable donations and partnered with five non-profit reuse organizations for the redistribution of 37 tonnes of usable textiles, bicycles and large appliances collected at the Hartland Depot.

ReWood used funding from the Rethink Waste Community Grant to salvage wood from construction sites to build garden beds, compost bins and greenhouses for community gardens.

Recycling

By participating in recycling programs, residents and businesses take responsibility for the products they've purchased, and support a system where these materials can be used repeatedly.

Overall Status
On Track

CRD Roles

Hartland Depot

Landfill bans

Provincial and Federal Government advocacy

Curbside recycling contract

Recycling in Electoral Areas

Education and outreach

This focus area includes

7

SWMP strategies

Hartland Depot

Progress Summary

- Received Board approval to ban wood (clean, treated and salvageable), asphalt shingles and carpet and underlay from general refuse at Hartland Landfill in 2024. These materials will be accepted at Hartland for a reduced tipping fee and transferred offsite for reuse, recycling or energy recovery.
- Received Board approval to accept mixed C&D waste (garbage mixed with wood, asphalt shingles and/or carpet and underlay) for $300/tonne to encourage source separation at the waste generator level.
- Piloted the MFD Waste Diversion Project by hiring two outreach assistants to conduct site visits and offer advice, signage and resources on best practices and setup for the waste collection area. In the end, 50 buildings totalling 2,499 units across eight municipalities participated and the project will continue and expand in 2024.
- Added single-use and packaging-like products to the CRD's Blue Box Program and depot programs. This initiative aligns with Recycling Regulation changes and subsequent expansion of Recycle BC's list of accepted items.
- Participated in Recycle BC's Five-Year Program Plan consultation and provided feedback to both Recycle BC and ENV in seven key areas, including the need to invest and work with industry to enhanced service levels in all areas, particularly for MFD residents.

An apartment building participating in the Multi-family Dwelling Waste Diversion Project.

Recovery and Residuals Management

Once material has been reduced and technology has been applied to recover as much energy as possible, residuals management provides a safe and effective way to manage materials that don't have a next and best use.

Overall Status

Opportunity for Improvement

CRD Roles

Landfill bans and enforcement

Hartland Landfill

Technology research

Landfill Gas Management

This focus area includes

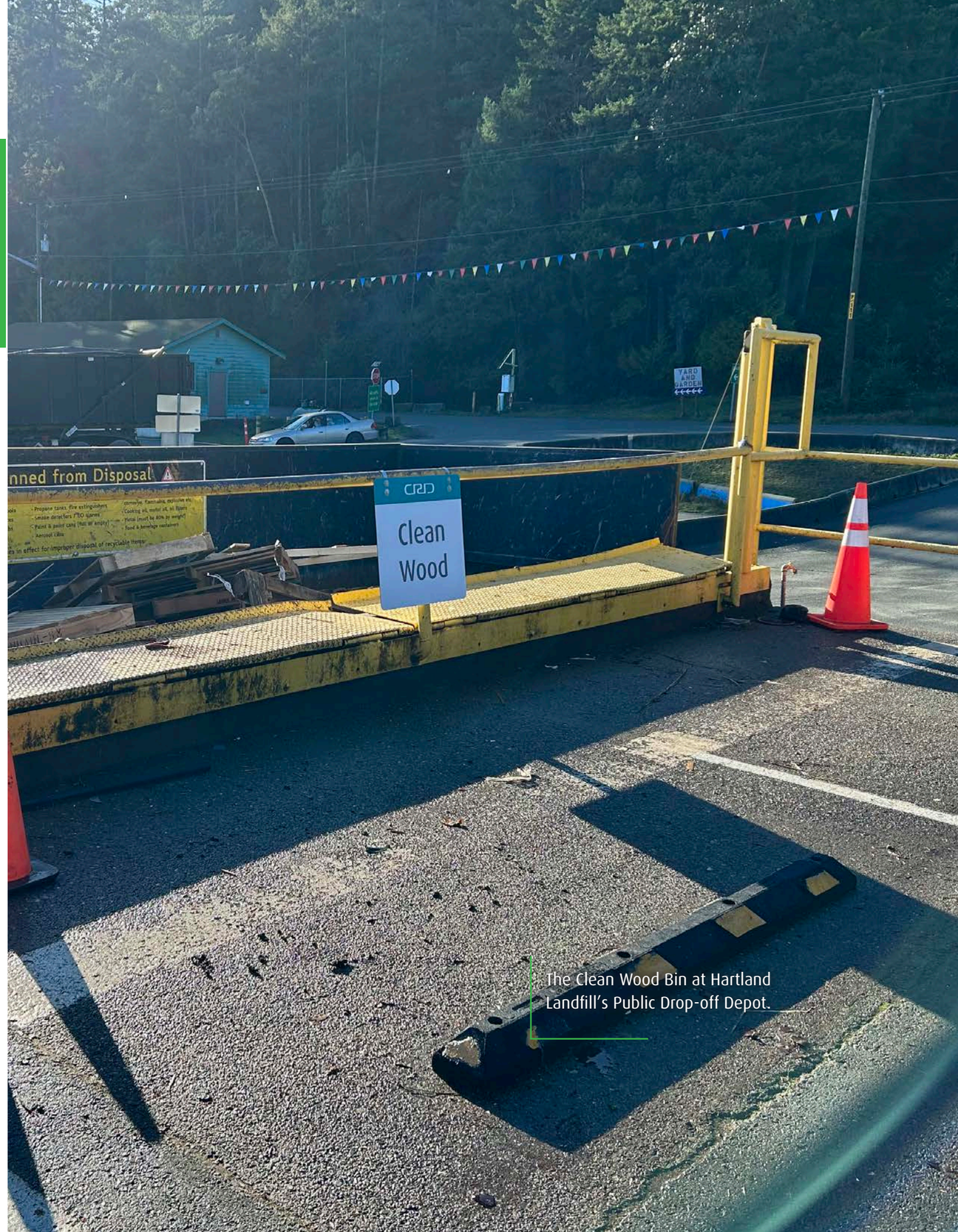
2

SWMP strategies

Active Face

Progress Summary

- Calculated a disposal rate of 382 kg/capita, a decrease of 6.02% or 23 kg/capita from 2022.
- Received Board approval to increase Hartland Landfill's general refuse tipping fee from $110 to $150/tonne.
- Initiated the procurement process to design, build, operate and maintain a Material Diversion Transfer Station at Hartland Landfill to process wood (clean, treated and salvageable), asphalt shingles and carpet and underlay before it's transferred offsite for reuse, recycling or energy recovery.
- Issued 715 tickets and 37 warnings primarily related to banned materials in garbage.
- Completed design of Cell 4 Liner and procured and awarded Cell 4 Liner Construction Contract and began construction activities.
- Conducted additional shredding trials, with specific material streams, to manage incoming volumes and further densify material.
- Removed 30,000 m^3 of overburden and 197,000 m^3 of in-situ rock to prepare the new landfilling cell to receive future garbage.
- Provided the Township of Esquimalt with $50,000 to further explore an Integrated Resource Management approach for managing municipal solid waste, kitchen scraps and yard and garden waste using thermal technologies.
- Achieved a gas collection efficiency of 64% based on the ENV model, and a 74% gas collection efficiency based on the UBCi model in 2023.



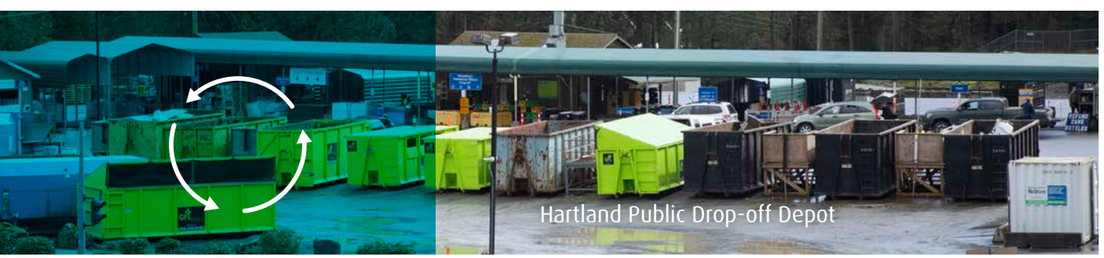
The Clean Wood Bin at Hartland Landfill's Public Drop-off Depot.

Looking Ahead

The CRD will continue to show a leadership role by supporting local, municipal, and federal waste diversion efforts, and continue to move waste up the 5R Pollution Prevention Hierarchy to its next and best use.

Some activities planned for 2024 include:

- **Implement and Monitor New Policies to Divert Waste from Hartland Landfill:** The CRD Board has approved bylaw changes at Hartland Landfill, including new material bans, adjusted tipping fee structure and increased bylaw fines. The changes to the Hartland Landfill Tipping Fee and Regulation Bylaw No. 3881 and Ticket Information Authorization Bylaw No. 1857 will come into effect in two phases in 2024.
- **Expanded Hours at Hartland Landfill:** Pilot and evaluate increasing Hartland public access hours, to better support waste reduction and diversion activity relating to the new SWMP and the significant solid waste policy changes that come into effect in 2024.
- **New Curbside Collection Contractor:** New collection contractor begins January 1, 2024 for the 2024-2029 Curbside Blue Box Program. The new contractor will be using 23 compressed natural gas vehicles and two electric vehicles.
- **Waste Stream Collector Incentive Program and Waste Flow Management:** Using research to explore how the capital region can feasibly implement waste flow management to increase the diversion of recyclable materials, as well as prevent disposal of out-of-region MSW at Hartland Landfill.
- **MFD/ICI Sector Strategy:** Expand the MFD Waste Diversion Project and begin developing Space and Access Guidelines, in collaboration with municipalities.
- **Solid Waste Market Research and Engagement Study:** The study will determine the effectiveness of the CRD's current waste reduction programming and behaviour change initiatives and will help inform existing programs and guide the development of future programming moving forward.
- **Hartland Landfill Operations:** Research and pilot new technologies to maximize the densification and compaction rate at the active face. Decrease use of raw materials (such as aggregate) for cover by increasing beneficial use of select waste material as per the ENV guidelines.



Hartland Public Drop-off Depot

Compost Education Centre workshop

Appendix A: Solid Waste Mangement Plan Report Card

The SWMP Report Card is intended to provide a high-level, easy-to-understand overview of the CRD's progress related to implementing the SWMP and to summarize progress made in 2023.

Methodology

The SWMP identifies specific strategies and actions to guide the CRD's efforts over the lifespan of the Plan. Over the lifetime of the SWMP, the strategies and actions contained within will form the basis of service plans and work plans that are approved by the Board annually as part of the financial planning process. Collaboration with First Nations governments, municipalities, other solid waste services, CRD divisions and stakeholders will be integral to this process.

These include 15 strategies with 72 actions and associated timelines divided into the following three focus areas.

2023 Overall SWMP Progress

On track

The 15 strategies with 72 actions contained within the SWMP are divided into three focus areas. Scores are based on the current status of each strategy with their focus area.

Focus Areas

- **Reduce and Reuse**
- **Recycling**
- **Recovery and Residuals Management**

Focus Area Icon Legend

- **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**

Reduce and Reuse

Reducing the amount of waste created, and finding ways to repurpose and reuse waste, eliminates the need to dispose of items later.

Overall Focus Area Status

On track

Status	Strategy	Update
Progress on Strategies		
	1 **Continue and enhance education programs**	• Developed and circulated 6 issues of the CRD's Rethink Waste Newsletter to 379 residents and businesses • Responded to 19,597 Infoline inquiries via phone and email and received 215,276 visits to myrecyclopedia.ca • Delivered 103 3R programs to 3,567 students, and sent 3 Educator Newsletters to 556 teachers • Delivered 8 public landfill tours to 231 residents, 11 community group tours to 263 residents and 15 technical landfill tours to 400 industry partners • CEC delivered 136 composting workshops to 2,690 K-12 students and 26 composting workshops to 467 adults on behalf of the CRD • Conducted 5 solid waste public education campaigns, including advertorials, movie theatre pre-roll, digital advertising, print advertising and bus advertising • Hired a social media assistant, which led to increased social engagement for solid waste public education campaigns across all CRD social platforms (LinkedIn, Facebook, Instagram) • CRD staff attended 16 community events with solid waste messaging, including Love Food Hate Waste, household hazardous waste and Rethink Waste/3Rs display; CEC staff attended 31 community events on behalf of the CRD to promote at home composting and organics diversion • Received 8,588 new RecycleCRD app installs and received 6,620 Ready, Set, Sort! game plays by residents • Added 12,725 residents to receive reminders and alerts via RecycleCRD app, email, voicemail and mobile calendar for the curbside recycling program • Continued participation in Coast Waste Management Association communications/educators working group • Continued sponsorship of Ecostar awards • Refreshed and updated the solid waste webpages, including adding a dedicated education page crd.bc.ca/rethinkwaste to communicate to a broader audience (e.g., MFD, ICI) • Updated PowerPoint template, educational campaigns, video, website and infosheet to include the Rethink Waste brand; further updates to solid waste collateral will take place in 2024 • Received funding approval to conduct a Solid Waste Market Research and Engagement Study every 3 years beginning in 2024 to evaluate the effectiveness of the CRD's waste reduction programming and behaviour change initiatives
	2 **Encourage waste prevention**	• Continued to provide funding under the Rethink Waste Community Grant and supported 20 projects ($57,175) • Produced and promoted 4 videos on Rethink Waste Community Grant recipients, to highlight how individuals and organizations are coming together to reduce waste • Town of Sidney - Single Use Plastics Bylaw 2231 came onto effect January 1, 2023 • City of Victoria - Single-Use Items Reduction Bylaw council readings completed in April, and it has since been awaiting approval by the Province before final adoption

Reduce and Reuse

Status		Strategy	Update
Progress on Strategies			
⏩	3	**Support reduction of avoidable food waste**	• Conducted a fall Love Food Hate Waste education campaign, which featured movie theatre ads, social media, local print and digital media ads • Provided $94,738 in funding to the CEC to deliver waste diversion and composting programs to adults and children in the region • Updated and renewed the Organics Diversion and Compost Education Partnership for 2024-2025 with the CEC • Participated in the City of Victoria's Circular Economy Speaker Series: Reducing Food Waste event
⏩	4	**Support reuse activities in the region**	• Continued to provide support ($68,000) for 10 local non-profit reuse organizations to assist them in managing unusable donations • Collected 37 tonnes of reusable goods at Hartland Depot for redistribution by local non-profit reuse organizations • Supported 8 reuse projects through the CRD's Rethink Waste Community Grant
⏩	5	**Support local governments in working towards zero waste and a circular economy**	• Continued leading the Local Government Waste Reduction Working Group; 12 municipalities participated, 7 meetings held in 2023 • Continued work with WSANEC Leadership Council/CRD Solid Waste Working Group • Continued discussions with Pacheedaht First Nation on future, mutually beneficial long-term waste management for the broader Port Renfrew community • CRD Board endorsed the Vancouver Island and Coastal Communities Committee's Terms of Reference and appointed the Environmental Services Committee Chair as the CRD's elected representative • Conducted jurisdictional scan to review BC/other landfills 'pay as you throw' systems to learn more about disposal fee structures in surrounding areas, informing staff on best practices for increasing fees for waste disposal
⏩	6	**Continue and enhance policy development**	• Received approval from the ENV for the SWMP in July 2023 • Received Board approval to amend Hartland Landfill Tipping Fee and Regulation Bylaw No. 3881 and Ticket Information Authorization Bylaw No. 1857 in 2024 to include new material bans, adjustments to the tipping fee structure and increased bylaw fines • Effective January 2024, clean wood will be banned from general refuse; the general refuse tipping fee will increase from $110 to $150/tonne; segregated clean wood will be accepted at a tipping fee of $80/tonne and will be transferred offsite for recycling or energy recovery; rates for various offences will increase (some up to $500) • Effective July 2024, treated wood, salvageable wood, carpet and underlay and asphalt shingles will be banned from being accepted at the landfill as general refuse but will be accepted as segregated materials at a reduced tipping fee • Developed the Waste Stream Collector Incentive program to offer Hartland account customers a $25/tonne rebate beginning in 2024 on general refuse for those who provide multi-stream collection services (source-separated food scraps, general refuse, and recyclables including glass) and voluntarily report waste collection data • Created a communications plan to educate and inform the public about the 2022 Solid Waste Stream Composition Study and the 2024 policy and bylaw changes at Hartland Landfill • Continued administration of the solid waste local service for the Port Renfrew community, including securing grant funding for site upgrades and efficiencies, as well as a business case study for the future operation of the service • Participated in a Disaster Debris Management Planning workshop with the City of Victoria to understand best practices for disaster debris management planning and provided information on collaboration opportunities with the City of Victoria and other agencies • Initiated the development of a Request for Expressions of Interest for Disaster Debris Management Planning in collaboration with the City of Victoria

Recycling

By participating in recycling programs, residents and businesses take responsibility for the products they've purchased and support a system where these materials can be used repeatedly.

Overall Action Status

On Track

Status	Strategy	Update
Progress on Strategies		
	**7 Increase residential diversion**	• Partnered with Recycle BC for local collection of 19,162 tonnes of residential PPP through the Hartland Depot, the curbside single-family home recycling program and depot services for rural/island residents • Received 4,637 tonnes of recyclable material and 69 tonnes of orphan household hazardous waste as the Hartland Depot • Continued to support the Southern Gulf Islands Recycling Coalition as they deliver waste reduction and diversion services for their communities • Participated in Recycle BC's Five-Year Program Plan consultation and provided feedback to both Recycle BC and ENV in 7 key areas, including the need to provide adequate per household funding that meets the actual costs of collection of PPP from single family homes, as well as concerns around maintaining support for existing depots, the need to establish new depots and potential to broaden PPP collectors' access to processing and marketing services • The SWAC directed CRD staff to set aside funding to conduct a Waste Generator Study every 3 years, beginning in 2025, to understand how much waste is recycled, composted or put in the garbage at the waste generator level (single-family home, MFD, ICI)
	**8 Increase multi-family diversion**	• Piloted the MFD Waste Diversion Project by hiring 2 term outreach assistants to conduct site visits to offer advice, signage and resources on best practices and setup for the waste collection area; 50 buildings totalling 2,499 units across 8 municipalities participated • Developed signage and education materials for MFDs, including sorting guides, move-in and move-out guides and signage to promote proper waste disposal; resources available to download from website • Presented on MFD Waste Diversion: Challenges & Solutions at the Coast Waste Management Associate Virtual Panel & Roundtable Discussion event • Participated in Recycle BC's Five-Year Program Plan consultation and provided feedback to both Recycle BC and ENV in 7 key areas, including the need to invest and work with industry to enhanced service levels in all areas, particularly for MFD residents • City of Victoria - In June 2023, Council directed staff to develop and report back on options for a MSW collection service model for MFD and explore design regulations or guidelines for solid waste storage facilities in MFD and commercial developments
	**9 Increase diversion from industrial, commercial and institutional facilities**	• Performed a jurisdictional scan on Space, Access and Source Separation for MFD and ICI to help inform staff with policy options • Initiated internal business case to hire a new staff position in 2024 that will focus on shifting disposal ban enforcement to generator, rather than hauler.
	**10 Support existing and new extended producer responsibility programs**	• Continued to partner with 12 EPR stewards for local collection of 20,681 tonnes of provincially-regulated recyclables through the Hartland Depot, Gulf Islands and Port Renfrew Depot and the Curbside Blue Box Program • Added single-use and packaging-like products to the CRD's Blue Box Program and depot programs to align with Recycling Regulation changes and subsequent expansion of Recycle BC's list of accepted items January 1, 2023 • Conducted a pilot project with Major Appliance Recycling Roundtable (MARR) at the Hartland Depot that tested hard plastics from refrigerators for use in waste to energy • Continued to engage in opportunities to refine the EPR system in BC by participating on the BC Product Stewardship Council, working with program stewards to support and enhance their services offered in the capital region and providing feedback on the five-year EPR program plan reviews

Recycling

Status	Strategy	Update
Progress on Strategies		
•••	**11 Increase organics diversion and processing capacity**	• Provided consolidation, transfer and processing services for 11,249 tonnes of kitchen scraps collected by municipalities and private service providers • Provided transfer and processing services for 2,088 tonnes of yard and garden material received at Hartland Depot • Continued to plan and design for a new kitchen scraps transfer station • Continued to support restoration activities by offering reduced tipping fees for safe disposal of source-separated invasive species material • Evaluated and reported to Board on pathways to support mandatory separation of curbside collection and diversion of organics
▶▶	**12 Increase construction, renovation and demolition material diversion**	• Hired a full-time permanent Waste Diversion Coordinator • Retained a technical advisor and issued a Request for Expressions of Interest to understand the processing and marketing capacity to determine landfill material bans • Conducted a jurisdictional scan to learn about other landfills' waste acceptance criteria and associated bylaw fines • Investigated other jurisdictions C&D strategies; started with District of North Vancouver C&D checklist and other resources provided • Received Board approval to ban wood (clean, treated and salvageable), asphalt shingles, and carpet and underlay from general refuse in 2024 • Received Board approval to accept mixed C&D waste (garbage mixed with wood, asphalt shingles and/or carpet and underlay) for $300/tonne beginning in 2024 to encourage source separation at the waste generator level • Hosted a webinar for private and public solid waste industry partners on the 2024 changes at Hartland Landfill and the Waste Stream Collector Incentive program • Hosted a Diversion and Deconstruction Workshop with the City of Victoria at Hartland Landfill to learn about best practices in deconstruction and waste diversion from local experts • Conducted characterization of shredded construction and demolition waste to determine potential alternative end uses • Diverted 1,402 tonnes of clean wood for off-site use to produce energy for pulp operations • WorkSafe BC announced new regulations around training and certification for workers involved in asbestos abatement beginning in 2024. Hartland staff affected will take the Foundational Awareness Course and the Surveying Safety Course in 2024. • The ENV has new regulations around the need for contingency plans in relation hazardous waste and stewardship programs. Hartland is working towards improving their plans for Stewards in 2024. • City of Victoria - Following the enactment of the Demolition and Deconstruction Bylaw, the city worked with the homebuilding and construction industry on an approach to salvage valuable wood from house demolitions that aligns with regional market capacity for material reuse
•••	**13 Encourage proper public space waste management activities**	• Conducted an education campaign on illegal dumping/abandoned waste, highlighting how residents can dispose of unwanted items according to the 5R Pollution Prevention Hierarchy • Provided $1,252 in funding for the Community Clean-up Program • Participated in Recycle BC's Five-Year Program Plan consultation and provided feedback to both Recycle BC and the ENV in 7-key areas, including the need to enhance streetscape programming in urban areas • Supported Pacheedaht First Nation as they completed removal of debris associated with illegal dumping activity in their community • Responded to 8 inquiries regarding illegal dumping activity in Electoral Areas

Recovery and Residuals Management

Once material has been reduced, and technology has been applied to recover as much energy as possible, residuals management provides safe and effective ways to manage materials that don't have a next and best use.

Overall Action Status

Opportunity for improvement

Status	Strategy	Update
Progress on Actions		
	14 Optimize landfill gas management	• Achieved a gas collection efficiency of 64% (ENV model) 74% (UBCi model) • Produced 7.9 megawatts of green power • Broke ground on construction of new methane to RNG facility • Continued to implement strategies to improve gas collection and mitigate fugitive emissions. • Continued annual installation of landfill gas collection infrastructure • Continued to partner with the University of Victoria on the fugitive emissions study
	15 Enhance Hartland disposal capacity	• Calculated a disposal rate of 382 kg/capita, a decrease of 6.02% or 23 kg/capita from 2022 • Received Board approval to increase Hartland Landfill's general refuse tipping fee from $110 to $150/tonne, ban clean wood from general refuse and increase bylaw fines beginning January 1, 2024 • Received Board approval to ban treated wood, asphalt shingles, and carpet and underlay from general refuse beginning July 1, 2024 • Used the results of the 2022 Solid Waste Stream Composition Study to help inform the 2024 policy changes at Hartland Landfill • Initiated the procurement process to design, build, operate and maintain a Material Diversion Transfer Station at Hartland Landfill to process wood (clean, treated and salvageable), asphalt shingles and carpet and underlay before it's transferred offsite for reuse, recycling, or energy recovery • Continued with onsite beneficial use opportunities, with 5,100 tonnes of select waste material streams processed and utilized onsite in place of virgin material, as per the ENV guidelines. • Conducted additional shredding trials, with specific material streams in an effort to manage incoming volumes and further densify material • Achieved a landfill utilization factor of 0.66 t of refuse/m^3 of airspace • Removed 30,000 m^3 of overburden and 197,000 m^3 of in-situ rock to prepare the new landfilling cell to receive future garbage • Completed design of Cell 4 Liner, awarded Cell 4 Liner Construction Contract and began construction • Produced and applied biosolids growing medium as a topsoil alternative, as outlined in the approved Biosolids Beneficial Use Contingency Plan • Landfilled 10,591 tonnes of blended biosolids at Hartland as general refuse as Long Term Biosolids Planning solutions are developed in 2024 • Received 21,124 tonnes of controlled waste and 2,957 tonnes of asbestos-containing material • Issued 715 tickets and 37 warnings, primarily related to recyclable material being found commingled in the garbage • Conducted feasibility work on the thermal pilot to study disposal alternatives for managing C&D material • Initiated work on a jurisdictional scan of municipal solid waste processing technologies, including investigating incineration with energy recovery, gasification, and pyrolysis thermal processing systems • Provided the Township of Esquimalt with $50,000 to conduct biochar testing to explore an Integrated Resource Management approach to manage municipal solid waste, kitchen scraps and yard and garden waste using thermal technologies

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TECHNICAL AND COMMUNITY ADVISORY COMMITTEE
CORE AREA WASTEWATER TREATMENT
Meeting Minutes

Wednesday, May 22, 2024 **1:30 pm** **Online only (MS Teams)**

PRESENT: B. Donald, C. Coleman (Chair), C. Valeo, D. Kobayashi, D. Monsour, J. Andrews, J. Clary, J. Paul, L. Hatch, M. Engelsjord, S. Rennick

STAFF: D. Green, L. Nickerson (Recorder), P. Kickham

GUESTS: D. Liddy, K. Hamilton, R. Beise

REGRETS: C. Caunce, C. Remington, G. Gillespie, G. Harris, I. Leung, J. Roe, K. Wilson, W. Pugh

Electronic Participation Only

Chair Coleman called the meeting to order at 1:31 pm.

1. Territorial Acknowledgement

Chair Coleman provided a Territorial Acknowledgement.

2. Approval of Agenda

Agenda for the May 22, 2024 Technical and Community Advisory Committee meeting:

MOVED by D. Kobayashi and SECONDED by B. Donald
That the agenda be approved as circulated.
CARRIED

3. Adoption of Minutes of March 14, 2024

Minutes from the March 14, 2024 Technical and Community Advisory Committee meeting.

MOVED by D. Kobayashi and SECONDED by B. Donald
That the minutes of the March 14, 2024 Technical and Community Advisory Committee be adopted as circulated.
CARRIED

4. Chair's Remarks

Chair Coleman thanked the committee members for their involvement and interest, and thanked Vice Chair Kobayashi for chairing the March 14, 2024 meeting.

5. Review of Long-Term Biosolids Management Plan

a. Update to long-term management options format - P. Kickham, CRD

P. Kickham informed the group of the long-term management options for biosolids that were presented to the Capital Regional District (CRD) Board during their meeting on May 8. The options have been divided into three different tiers in order of preference.

These changes are consistent with the recommendations from GHD (CRD's technical advisor for long-term biosolids management planning) except for specifying a distinction between in and out of region, compliance or contingency options, and there are greenhouse gas implications of transporting biosolids longer distances. See Item 7.2 from the CRD Board May 8 meeting.

The group provided comments, asked questions and P. Kickham provided answers.

b. Public consultation update - K. Hamilton, Tavola Strategy Group

K. Hamilton gave a recap and update on the biosolids public consultation process (see Attachment A).

The "What We Heard" Summary Consultation Report, captured and analyzed all of the feedback received.

c. First Nations engagement summary - P. Kickham, CRD

P. Kickham provided an overview of the First Nations engagement process. See the report titled Long-term Biosolids Management Plan First Nations Engagement What We Heard Report. The Board directed staff to explore beneficial use opportunities for biosolids with any First Nations that have expressed interest.

d. Process and next steps - P. Kickham, CRD

The revised long-term biosolids strategy is posted on the Get Involved website showing Tiers 1, 2 and 3 in detail, available for public comment until June 3. All comments received will be included in the final reporting at the June 12 Board meeting. If the Board approves this long-term strategy, it will be submitted to the Province on June 18.

The Board directed staff to retain an independent, unbiased academic researcher to look at the risks and benefits of land application of biosolids and to hire a law firm or legal expert to provide the Board with an understanding of the potential legal liabilities associated with land application of biosolids. CRD staff will be providing information to the CRD Environmental Services Committee and back to the CRD Board in the coming months.

6. Draft Amendment 13 (Inflow and Infiltration and Sanitary Overflows) update on process and next steps - D. Green, CRD

An invitation to review and discuss the Kerr Wood Leidal (KWL) consultant report and draft Liquid Waste Management Plan (LWMP) Section 5 (endorsed by the TCAC at the February meeting) has been sent to Esquimalt and Songhees First Nations for their input and comment. CRD staff hope to have a response by mid-June to engage with both nations as they have a significant interest in the shorelines of the core area.

Staff will also do a wider First Nations notice to the nations in the British Columbia Consultative Database that have interest in this region. Online public consultation will be via the CRD website (similar to how Get Involved is used for other CRD initiatives).

All input will go back to the CRD Core Area Liquid Waste Management Committee. CRD staff anticipate it will also go to the municipalities for their endorsement as the seven core municipalities are participants in the LWMP. It will then go the Board to send Amendment 13 to the Province for their consideration before the end of the year.

7. Next meeting

There are no more meetings scheduled at the moment but that may change.

8. Closing Comments

Chair Coleman thanked the group for their involvement as it has been very helpful in understanding a series of issues.

9. Adjournment

The meeting was adjourned at 1:56 pm.

MOVED by D. Kobayashi and all in favor
That the Technical and Community Advisory Committee meeting be adjourned.
CARRIED