Capital Regional District

Meeting Minutes

Solid Waste Advisory Committee

Friday, April 9, 2021	**12:30 PM**	**6th Floor Boardroom** **625 Fisgard St.** **Victoria, BC V8W 1R7**

PRESENT:
M. Coburn (EP), J. Collins (EP), B. Desjardins (Chair), S. Gose (EP), J. Hillis (EP), L. Jenson (EP), M. Kurschner (EP), E. Latta (EP), M. McCullough (EP), A. Meisen (EP), D. Monsour (EP), J. Oakley (EP), Dave Paul Jr. (EP), J. Shaw (EP), R. Speller (EP), R. Tooke (Vice Chair), C. Tuggle (EP), S. Wiebe (EP)

Staff: A. Chambers, Senior Administrative Secretary, Environmental Resource Management (ERM) (Recorder); W. Dunn, Project Coordinator, ERM; E. Kelch, First Nations Relations; R. Smith, Senior Manager, ERM; M. Tromp-Hoover, Supervisor, Communication and Education Development, Environmental Protection; T. Watkins, Manager, Policy & Planning, ERM

Regrets: K. King, K. Seifried, J. Smith, S. Young Jr.

EP - Electronic Participation

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

1. Territorial Acknowledgement

2. Approval of Agenda

Agenda for the April 9, 2021 Solid Waste Advisory Committee meeting.

MOVED by R. Tooke SECONDED by M. McCullough
That the agenda be approved as circulated.
CARRIED

3. Adoption of Minutes

Minutes from the March 5, 2021 Solid Waste Advisory Committee meeting.

MOVED by R. Tooke, SECONDED by M. Kurschner
That the minutes of the March 5, 2021 Solid Waste Advisory Committee meeting be adopted as circulated.
CARRIED

4. Chair's Remarks

We are still advertising for the two vacancies on the committee:
1. First Nations
2. Solid Waste Technology Representative

The deadline for receipt of applications was extended to April 28, 2021. To date, we have received one application for the *Solid Waste Technology Representative.*

5. Staff Report: Finalization of the Solid Waste Management Plan

R. Smith provided an overview of the report and highlighted what changes have been implemented in the draft plan and to organics processing. The report is attached as Appendix A.

Discussion ensued on the following:

- Organics processing
- Plan Monitoring Advisory Committee
- Solid Waste Management Plan, next steps and amendment process (once approved)

B. Desjardins, on behalf of the Environmental Services Committee, thanked the Solid Waste Advisory Committee members for the long haul and hard work on the Solid Waste Management Plan.

MOVED by A. Meisen, SECONDED by D. Monsour

That the Solid Waste Advisory Committee advises revisions to the Capital Regional District's Solid Waste Management Plan (dated March 31, 2021) so that it includes:

1. **disposal estimates for each waste strategy and action in order to confirm that the annual solid waste disposal target of 250 kg per capita is indeed achievable by 2030, following the progress indicated on page 46 of the Solid Waste Management Plan;**
2. **evidence of the interest and ability of waste recyclers and processors to support the CRD solid waste disposal target by 2030;**
3. **outlines of the fate of each major waste component diverted from the Hartland Landfill, including components diverted for export from the CRD;**
4. **a description of the Circular Economy concept, together with its strengths and limitations, and the applicability of the concept to the major waste components identified in the CRD Solid Waste Management Plan;**
5. **information from other cities on solid waste innovations with applicability to the CRD, stating also where the CRD would benefit from innovation through research and advanced professional practice; and**
6. **more definitive strategic options for the Hartland Landfill that address its capacity limitations, potential capacity extensions, and neighbourhood impacts, referenced to total waste disposal estimates**.

MOVED by B. Desjardins, SECONDED by J. Shaw

That the motion be amended by striking, "*That the Solid Waste Advisory Committee advises revisions to the Capital Regional District's Solid Waste Management Plan (dated March 31, 2021) so that it includes:"* and inserting, "*With the plan approval, as part of the Solid Waste Management Plan implementation and monitoring, the Solid Waste Advisory Committee will look for the following information*:".

The question was then called on the main motion as amended.

With the plan approval, as part of the Solid Waste Management Plan implementation and monitoring, the Solid Waste Advisory Committee will look for the following information:

1. **disposal estimates for each waste strategy and action in order to confirm that the annual solid waste disposal target of 250 kg per capita is indeed achievable by 2030, following the progress indicated on page 46 of the Solid Waste Management Plan;**
2. **evidence of the interest and ability of waste recyclers and processors to support the CRD solid waste disposal target by 2030;**
3. **outlines of the fate of each major waste component diverted from the Hartland Landfill, including components diverted for export from the CRD;**
4. **a description of the Circular Economy concept, together with its strengths and limitations, and the applicability of the concept to the major waste components identified in the CRD Solid Waste Management Plan;**
5. **information from other cities on solid waste innovations with applicability to the CRD, stating also where the CRD would benefit from innovation through research and advanced professional practice; and**
6. **more definitive strategic options for the Hartland Landfill that address its capacity limitations, potential capacity extensions, and neighbourhood impacts, referenced to total waste disposal estimates.**

CARRIED

MOVED by R. Tooke, SECONDED by S. Gose

That Capital Regional District staff, as part of the Solid Waste Management Plan implementation, report back on an annual basis on on-island organics processing capacity.

CARRIED

MOVED by R. Tooke, SECONDED by J. Shaw

That the Solid Waste Advisory Committee receive the Finalization of the Solid Waste Management Plan report for information.

CARRIED

6. Tabled Motion from the March 5, 2021 Solid Waste Advisory Committee Meeting:

That the Capital Regional District Board encourage the Capital Region Hospital District, a Corporation of the Capital Regional District, to use the opportunity in the redevelopment of the Oak Bay Lodge Site to prioritize a deconstruction rather than a demolition procedure for this development and thus serve as a model of how the benefits of such a change from the demolition can be achieved.
MOTION WITHDRAWN

Staff committed to bring back to the Solid Waste Advisory Committee, as soon as possible, an information report on what was done with the Oak Bay Lodge site demolition and deconstruction.

R. Tooke noted that City of Victoria will publish a report on May 13, 2021 regarding providing council recommendation for a municipal deconstruction policy. When available, R. Tooke will bring this report to the Solid Waste Advisory Committee.

7. Other Business

There was no other business

8. Next Meeting

The next Solid Waste Advisory Committee meeting will be May 7, 2021**.**

12. Closing Comments

There were no closing comments.

13. Adjournment

The meeting was adjourned at 14:06.

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

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REPORT TO SOLID WASTE ADVISORY COMMITTEE
MEETING OF FRIDAY, APRIL 09, 2021

SUBJECT **Finalization of the Solid Waste Management Plan**

ISSUE SUMMARY

To provide the Solid Waste Advisory Committee the staff reports being presented to the Environmental Services Committee regarding finalizing the Solid Waste Management Plan (SWMP) and Organics Processing Next Steps.

BACKGROUND

At its meeting of October 14, 2020, the Capital Regional District (CRD) Board approved a motion directing staff to proceed with the second phase of the engagement process in the development of the new SWMP. This second phase of consultation is now complete and the results have been incorporated into the final draft SWMP. Provided in Appendix A is a staff report to the Environmental Services Committee that presents the results of phase two consultation, the final draft SWMP and recommendations for the next steps for its adoption, approval and implementation.

In light of increasing capacity on Vancouver Island, the organics processing report (Appendix B) recommends that the CRD continue with the status quo of utilizing private sector processing facilities to manage kitchen scraps rather than pursuing the establishment of a facility at Hartland Landfill. In view of this recommendation, the final draft SWMP has been revised to reflect this change but it retains enabling language to allow for the establishment of a facility in the future should private sector capacity prove inadequate to meet the CRD's needs.

CONCLUSION

Phase two of the SWMP consultation process has been completed and the final draft of the Plan has been prepared for approval by the CRD Board and submission to the BC Ministry of Environment and Climate Change Strategy for regulatory approval. Appendix A provides a copy of the staff report to the Environmental Services Committee for information and comment by the Solid Waste Advisory Committee.

RECOMMENDATION

That the Solid Waste Advisory Committee receive for information and provide comments to the Environmental Services Committee on the Finalizing the Solid Waste Management Plan and Organics Processing Next Steps staff reports.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Environmental Services Committee - Finalizing the Solid Waste Management Plan Staff Report
Appendix B: Environmental Services Committee – Organics Processing Next Steps Staff Report

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ERM 21-13

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, APRIL 21, 2021

SUBJECT **Finalizing the Solid Waste Management Plan**

ISSUE SUMMARY

To present the results of phase two consultation and the final draft Solid Waste Management Plan (SWMP), and to recommend next steps for adoption, regulatory approval and implementation.

BACKGROUND

The Capital Regional District (CRD) has completed the second phase of consultation as part of the multi-phase public engagement process to develop a new SWMP. The SWMP seeks to reduce how much material is sent to Hartland Landfill and guide how the region's waste is managed in a safe, secure and sustainable way now and in the future, with a focused planning horizon of 10-years. The SWMP is a "living document" that may be amended to reflect new considerations, technologies and issues as they arise. Development of a SWMP is a regulatory requirement under the Environmental Management Act.

Work on revising the SWMP was substantially initiated in 2011, put on hold in 2014 to investigate integrated resource management alternatives, and re-initiated in 2018. The CRD is now in phase four of the 4-step solid waste management planning process identified by the Province of BC.

Throughout the planning process, the Solid Waste Advisory Committee has provided feedback on the development of the draft SWMP, including the plan goals, targets and strategies which were endorsed by the Environmental Services Committee and CRD Board. Public engagement has been a key part of developing the plan, and staff have coordinated two rounds of public consultation. Results from this engagement have been incorporated into the final draft Plan (Appendix A), proposed plan revisions are summarized in Appendix B. If the final draft SWMP is approved by the CRD Board, it will be forwarded to the Ministry of Environment and Climate Change Strategy for their review and approval.

ALTERNATIVES

Alternative 1

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

1. That the final draft Solid Waste Management Plan be approved, that the final draft plan be submitted to the Ministry of Environment and Climate Change Strategy for regulatory approval, that staff immediately begin implementing the Solid Waste Management Plan, and that the Solid Waste Advisory Committee begins to function as the Plan Monitoring Advisory Committee;

2. That staff work with the W̱SÁNEĆ Leadership Council to implement recommendations from their February 9, 2021 letter, including establishing a W̱SÁNEĆ Leadership Council/Capital

Regional District negotiation table and related meeting schedule, and providing information regarding the Solid Waste Management Plan; and,

3. That staff prepare a package of Hartland area road access mitigation options costing up to $4 million funded by the Capital Regional District's Environmental Resource Management division, review these options with District of Saanich staff and area residents, and return to the CRD Board for direction on next steps.

Alternative 2

That the final draft Solid Waste Management Plan not be approved and alternate direction be provided.

IMPLICATIONS

Intergovernmental Implications

Staff reached out to electoral areas and municipalities inviting feedback on the draft plan, offering presentations and requesting letters of support. CRD staff provided presentations to Victoria, Central Saanich, Saanich, Oak Bay, Esquimalt, Highlands and Colwood. All municipalities that received presentations formally provided expressions of support for the plan, except for Highlands and Colwood, which provided neither support nor opposition. Municipalities not listed above provided no response.

Specific feedback received, along with copies of letters of response are included in Appendix C. A summary of feedback is as follows:

- There was support for the draft Plan and its focus on the 5R pollution prevention hierarchy;
- Desire was expressed for the CRD to maximize the use of municipal authorities to reduce waste and provide the necessary resources to support municipalities;
- Desire was expressed for the CRD to provide bold leadership and facilitate accelerated regional collaboration on actions that achieve waste disposal targets;
- It was identified that *Zero Waste Victoria* plan is aligned with the SWMP, and a desire to prioritize actions within the SWMP to support implementation of *Zero Waste Victoria;*
- It was requested to add a section to the Plan regarding integrated resource management and gasification;
- It was requested that the Plan reference the additional benefits of a regional organics processing facility associated with the greenhouse gas emissions savings from the reduced transportation of organics outside of the region;
- It was requested that the CRD work with local governments to advocate for flow control to regulate the export of solid waste.
- There was no formal opposition to the plan expressed by any municipality or electrical area;

A summary of all feedback received by municipalities, cross referenced against the draft Plan, along with how this feedback is addressed in the final draft Plan is found in Appendix D.

Staff reached out to all First Nations communities located within the CRD region inviting feedback on the draft plan, offering a presentation and requesting letters of support. CRD staff met with W̱SÁNEĆ Leadership Council (W̱LC) and delivered a presentation. W̱LC expressed desire for the

CRD to educate First Nation communities about the Plan and waste reduction principles as well as establish an ongoing WLC/CRD negotiation table and associated meeting schedule regarding impact benefit and partnership agreements. Esquimalt First Nation also received a presentation. Further information about the First Nation engagement process, and copies of the letters of response received are included within Appendix C.

The CRD reached out by letter to neighbouring regional districts inviting feedback and requesting letters of support. The Regional District of Cowichan Valley provided formal written support of the Plan. Regional District of Nanaimo reciprocated the CRD's invitation with a presentation of their own SWMP. Further information on neighbouring regional district responses is included in Appendix C.

Social Implications

Phase two consultation occurred between November 18, 2020 and February 15, 2021, and adhered to the Provincial guidance provided in the *Guide to Solid Waste Management Planning*. A high-level summary of what was heard through the phase two consultation process is provided in the 'implications' sections, below. An in depth report documenting the consultation approach, summary results, along with verbatim results of consultation are included as Appendix C.

Insert here - SWAC feedback from April 9, 2021 meeting

Feedback was solicited from the general public through a variety of media including a media release, social medial (paid and earned), print media, emails to a resident database and an online public information session. Feedback sentiment was a mix of supportive, critical and neutral. Similar reoccurring themes emerged. The three most commonly occurring 'supportive' themes included:

- That the plan reflects ambitious reduction goals;
- That the plan is based on rational analysis;
- That the plan reflects a well thought out multi-pronged approach.

'Critical' feedback focused on four key issues of concern:

- Strong opposition to removal of trees (this was the most frequently heard comment);
- Desire for more aggressive waste reduction initiatives rather than landfill expansion (zero-waste);
- Negative impact the plan will have on park/mountain bike trails;
- Feeling that the plan is not in alignment with addressing the climate emergency.

Other reoccurring feedback themes included:

- Desire for the exploration of gasification and incineration options as a means to eliminate expansion requirements; also desire to avoid thermally combusting waste and opposition to gasification and incineration;
- Looking for additional incentives or penalties to encourage/enforce reduction of waste.

Much of the phase two public consultation was conducted with community associations in proximity to Hartland Landfill including the Prospect Lake Community Association, Willis Point

Community Association and Highlands Community Association. Consultation activities included small-group site tours, focused community input meetings, direct neighborhood outreach and through receipt of and staff responses to letters and emails.

While vocal opposition was expressed to elements of the draft Plan, conversations were productive with both concerns and mitigation opportunities raised. Key areas of concern include:

- Strong opposition to any full build-out of the Hartland property and strong support for more aggressive waste reduction targets;
- Strong opposition to tree removal and destruction of natural habitat;
- Concerns around illegal dumping;
- Concerns around loss of peaceful parkland and impact on bike trails;
- Concern that a reliance on tipping fees to fund Hartland operations is counter-intuitive to zero-waste.

Proposed mitigation suggestions include:

- Postpone a final decision on the full build-of out of the Hartland property until after waste diversion rates are known;
- Provide unmet funding to secure the 49-acre Mountain Road Forest as parkland to offset the future impact of using forested areas of the Hartland property for landfilling;
- Continue to build and enhance the mountain biking trails on Mount Work, specifically ensuring a sustainable multi-use trail network through the entire park;
- Increase bylaw enforcement for dumping, illegal truck traffic and unsecured loads;
- Develop of transfer station serving the Westshore community;
- Invest in the playground at Hamsterly Beach.

To meet operational requirements, the CRD will need to shift the commercial Hartland Landfill vehicle access to Willis Point Road in 2023. While this topic is out of scope of the SWMP, it was identified by the community as a primary area of concern. A traffic study was commissioned and placed on the CRD rethink waste website for reference and comment, and focused community input meetings were held to gather input. Primary feedback included strong concerns around traffic and traffic safety, including vehicle, cycling and pedestrian safety at key intersections; concern that slow-moving commercial traffic will impede the traffic flow on Willis Point Road; and concern that moving the Hartland Access to Willis Point Road will reduce property values on the road. Conversely, other residents expressed strong support for moving the commercial traffic access, and the view that this shift will improve overall traffic safety in the area.

Through this discussion, the community suggested a variety of road access mitigation and community benefit options including:

- addition of a new parking lot near the Hartland North Entrance and Durrance Lake/Mount Work;
- trailhead improvements at Interurban Trail terminus;
- addition of uphill passing lane or uphill vehicle pull outs;
- intersection improvements at the Willis Point/Wallace Road intersection and the Wallace Road/West Saanich Road intersection;
- addition of bike lanes on Willis Point Road;
- electronic signaling to control commercial vehicle flow on Willis Point Road; and
- changing the name of Willis Point Road between West Saanich Road and Durrance Lake.

Further information on road access mitigation and community benefit options is included in Appendix E. While the CRD's jurisdiction over these activities is limited (other than the addition of the parking lot), the CRD could provide funding in support of a package of road access improvements. Staff have initiated preliminary conversations with District of Saanich staff (jurisdictional authority) which has indicated initial support for intersection improvements, and identified that further engineering analysis is required to determine if improvements would result in increased safety.

Two advocacy organizations provided feedback to the plan: Zero Waste BC, and the Mount-Work Coalition. Specific feedback received are included in Appendix C. A review of this feedback cross referenced against the draft Plan, along with how this feedback is addressed in the final draft Plan is found in Appendix D.

Financial Implications

The strategies and actions outlined in the final draft SWMP are intended to decrease community waste generation from 380kg per capita down to 250kg per capita over the 10 year planning horizon. The CRD currently spends approximately $5.8 million per year on diversion activities, net of the revenues received from extended producer responsibility, sale of recyclables, tip fees at the organics processing transfer station and recycling fees. The annual incremental cost to deliver the new strategies and actions in the final draft SWMP is $320,000 to $345,000. This is an increase of approximately 1% per year, and will fund activities including sustained and enhanced education programs, waste prevention, increasing residential and multi-family, industrial commercial and institutional and construction, renovation and demolition diversion, and enhancing public space waste management.

The 10-year operating and capital projections for the CRD's solid waste services, including the proposed SWMP investments, road access mitigation funding and resulting tonnage reductions, can be funded by tipping fees ($110/tonne), program revenues, reserve balances and other projected revenues (including renewable natural gas), without the need for tax requisition or external debt. Schedule D of the final draft Plan shows the estimated financial impact of the projected expenditures and decreasing per capita disposal including proposed spending of up to $4 million on a package of Hartland area road access mitigation alternatives.

Environmental & Climate Implications

In 2019, the CRD Board identified Climate Action & Environmental Stewardship as a priority for the region and approved a motion to declare a climate emergency. The goals and guiding principles of this plan build upon the 5R pollution prevention hierarchy, focusing first on strategies that promote zero waste and support a circular economy to reduce the greenhouse gas emissions associated with producing materials that eventually become waste. This plan also considers strategies to beneficially use waste as a resource and to manage the residual waste stream to minimize fugitive emissions.

Service Delivery Implications

The final draft SWMP includes an Implementation Schedule as Schedule C to the document. The schedule identifies actions that will be implemented in the short term (3- years) and medium term (5-years) timeframe. Once the final draft Plan is approved, staff will immediately begin

implementation, and return to the Environmental Services Committee with an implementation update that considers the requests for prioritization of certain actions made by municipalities.

CONCLUSION

The CRD is now in phase four of the 4-step solid waste management planning process identified by the Province of BC. Throughout of planning process, the Solid Waste Advisory Committee has provided feedback on the development of the draft SWMP, including the plan goals, targets and strategies which were endorsed by the Environmental Services Committee and CRD Board. Public engagement has been a key part of developing the plan, and staff have coordinated two rounds of public consultation. Results from this engagement have been incorporated into the final draft Plan. If the final draft SWMP is approved by the CRD Board, it will be forwarded to the Ministry of Environment and Climate Change Strategy for their review and approval, and staff will begin implementation.

RECOMMENDATION

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

1. That the final draft Solid Waste Management Plan be approved, that the final draft plan be submitted to the Ministry of Environment and Climate Change Strategy for regulatory approval, that staff immediately begin implementing the Solid Waste Management Plan, and that the Solid Waste Advisory Committee begins to function as the Plan Monitoring Advisory Committee;

2. That staff work with the W̱SÁNEĆ Leadership Council to implement recommendations from their February 9, 2021 letter, including establishing a W̱SÁNEĆ Leadership Council/Capital Regional District negotiation table and related meeting schedule, and providing information regarding the Solid Waste Management Plan; and,

3. That staff prepare a package of Hartland area road access mitigation options costing up to $4 million funded by the Capital Regional District's Environmental Resource Management division, review these options with District of Saanich staff and area residents, and return to the CRD Board for direction on next steps.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENTS

Appendix A: Final Draft Solid Waste Management Plan
Appendix B: Proposed Plan Revisions
Appendix C: Phase Two Engagement Summary
Appendix D: Consultation Summary Table
Appendix E: Hartland Access Consultation

APPENDIX A

Capital Regional District

Prepared by:
MWA Environmental Consultants Ltd.

Draft Report Date: *November 9, 2020*
Final Report Date: March 31, 2021
Date approved by Ministry of Environment: TBD

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Glossary

Advisory Committee	The Solid Waste Advisory Committee (see description below)
Disposal	Landfilling
Diversion	Activities that divert waste materials away from disposal as garbage to alternatives such as recycling or composting. Does not include combustion of garbage to produce energy.
Circular Economy	An economic system aimed at eliminating waste and the continual use of resources. Circular systems employ reuse, sharing, repair, refurbishment, remanufacturing and recycling to create a closed-loop system, minimizing the use of resource inputs and the creation of waste, pollution and carbon emissions
Controlled Waste	Selected waste materials that are not suitable for disposal on the active face of the landfill because of specific health and safety or environmental concerns associated with the physical or chemical properties of the waste. Items that are considered controlled waste include animal feces, sewage contaminated grit, catch basin waste and dead animals.
CRD	Capital Regional District
CR&D	Construction, renovation and demolition
EPR	Extended producer responsibility
(Waste) Generation	The sum of all materials discarded that require management as solid waste, including garbage, recycling and composting. Does not include organic waste composted at home.
ICI	Industrial, commercial and institutional (does not include heavy industry)
Ministry of Environment	BC Ministry of Environment & Climate Change Strategy
MSW	Based on BC's Environmental Management Act, municipal solid waste (MSW) is refuse that originates from residential, commercial, institutional, demolition, land clearing or construction sources, or refuse specified by a Ministry of Environment director to be included in a waste management plan
Organic Waste / Organics	Generally refers to kitchen scraps, food waste, yard and garden waste.
Plan	CRD's Solid Waste Management Plan
Producer Responsibility Organization	A "producer responsibility organization" (PRO), is usually a not-for-profit organization or an industry association, that is designated by a producer or producers to act on their behalf to administer an extended producer responsibility or product stewardship program (e.g. Encorp Pacific, Product Care Association, Recycle BC)
Recycle BC	Formerly MMBC (Multi-Material BC), the producer responsibility organization established to manage the residential packaging and paper products EPR program

Residuals / Residual Waste	Residual waste refers to discarded materials that are not diverted to reuse, recycling or composting and therefore require disposal
SWMP	Solid Waste Management Plan
Solid Waste Advisory Committee	A multi-stakeholder committee established to advise the CRD, and to provide input on matters related to solid waste management upon request by the CRD, including the development and implementation of the Solid Waste Management Plan.
Transfer Station	A site at which municipal solid waste or recyclable material is received from the general public and is sorted, compacted, consolidated or rearranged and stored for subsequent transfer off-site for further processing or final disposal.
Zero Waste	Zero waste is a philosophy and aspirational goal that envisions a point where nothing is wasted. It eliminates traditional concepts of managing waste materials and instead focuses on design for environment. It is intended as an approach to pursuing sustainability through circular economy and is aligned with the Pollution Prevention Hierarchy, seeking to move materials up the hierarchy from residual management through recovery, recycling, reuse and ultimately reduction.

1 Introduction

In British Columbia, regional districts develop solid waste management plans 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 Pollution Prevention Hierarchy. This plan should ideally be renewed approximately every ten years to ensure that it reflects the current needs of the regional district, as well as current market conditions, technologies and regulations.

The Capital Regional District (CRD) initiated a process to update its 1995 Solid Waste Management Plan (SWMP) to identify goals and strategies for the next ten years. The SWMP update process considered existing solid waste management policies and programs; identified and evaluated options for reduction, diversion and residual management; and addressed system financing.

This draft document represents an update of the CRD's 1995 SWMP and once approved by the Province (along with any approval conditions), becomes a regulatory document for solid waste management in the CRD, and serves to guide solid waste management related activities and policy development. In conjunction with regulations and operational certificates that may apply, this plan regulates the operation of sites and facilities that make up the region's waste management system.

1.1 Guiding Principles

The principles guiding the development and implementation of this plan are a slightly modified version of those recommended in the BC Guide to Solid Waste Management Planning and were prepared by the CRD's Solid Waste Advisory Committee in June 2018 to enhance their clarity, and were subsequently approved by the CRD Board in October 2018. They are:

1. Promote zero waste approaches and influence others in support of a circular economy;
2. Promote the first 3Rs (Reduce, Reuse and Recycle);
3. Maximize beneficial use of waste materials and manage residuals appropriately;
4. Support polluter-pay and user-pay approaches and manage incentives to maximize positive behaviour outcomes;
5. Prevent organics, recyclables and hazardous household waste from going into the garbage wherever practical;
6. Collaborate with other jurisdictions wherever practical;
7. Develop collaborative partnerships with interested parties, both within and outside of the CRD, to achieve regional targets set in plans; and
8. Level the playing field within regions for private and public solid waste management facilities.

1.2 Plan Goals

The Province's guidelines for solid waste management planning require Solid Waste Management Plans to have goals and targets. Goals are 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 the timeframe of this plan. Targets (see section 1.3), on the other hand, are a way of measuring the plan's progress and have clear timelines.

The goals for this plan are:

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

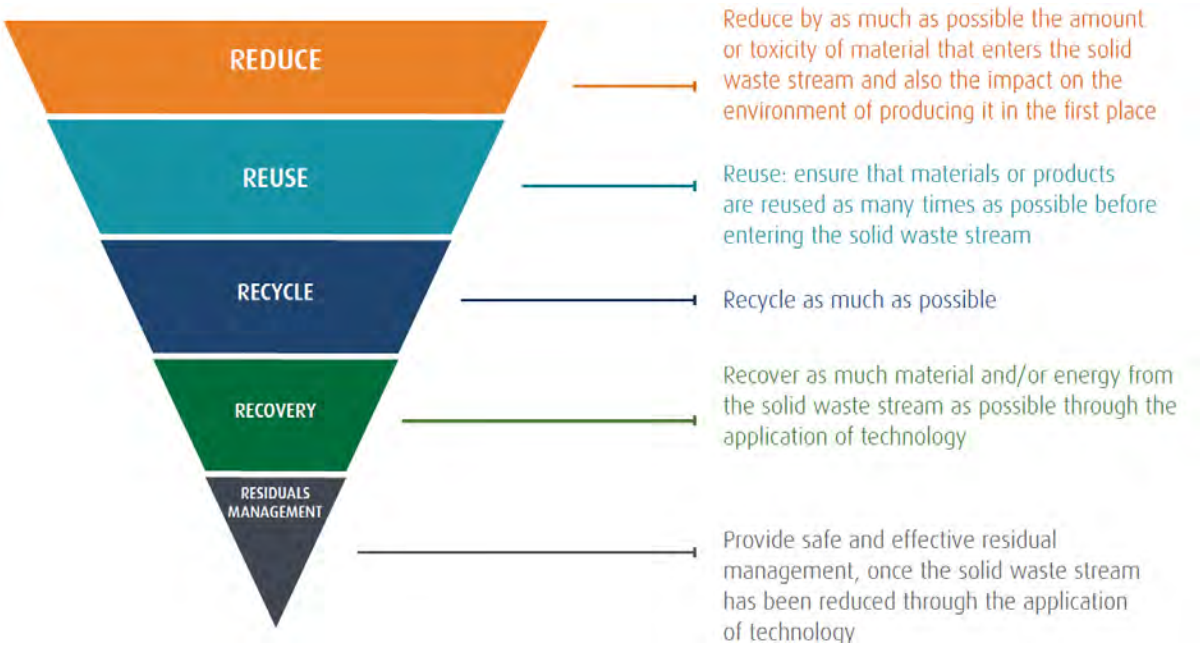
These goals were established by the Solid Waste Advisory Committee in 2018 based on a review of the Existing System Report, and a discussion of the challenges and opportunities presented by the current system. The first goal associated with reducing the amount of waste disposed was refined in 2020 based on further input from the Solid Waste Advisory Committee to include an aspirational disposal target of 125 kg per capita.

1.3 Pollution Prevention Hierarchy

This plan adopts the 5R Pollution Prevention Hierarchy (see Figure 1-1). Strategies to address each tier in the hierarchy are laid out in Section 5. Implementation of these strategies over the plan's 10-year timeframe is expected to contribute to the provincial disposal rate target of 350 kg per person (capita), and result in achievement of the following regional targets. These targets are discussed further in Section 8.

1. By the end of the 3rd year of this plan, the CRD's per capita disposal rate will be 340 kg or less.
2. By the end of the 5th year of this plan, the CRD's per capita disposal rate will be 285 kg or less.
3. By the end of the 10th+ year of this plan, the CRD's per capita disposal rate will be 250 kg or less.

Figure 1-1: 5R Pollution Prevention Hierarchy



1.4 Climate Change and the Solid Waste Management Plan

What we consume and how we dispose of it contributes to climate change. Greenhouse gas emissions are generated from the management of waste in the region—primarily from decomposing garbage, especially organic waste like food scraps and wood, but also from transportation and management.

We can reduce our collective emissions by decreasing the amount of waste we produce and by managing Hartland Landfill in a sustainable manner. By finding beneficial ways to use our waste materials, we can also displace other sources of greenhouse gas emissions in the region.

In 2019, the CRD Board identified Climate Action & Environmental Stewardship as a priority for the region and approved a motion to declare a climate emergency. The goals and guiding principles of this plan build upon the 5R Pollution Prevention Hierarchy, focusing first on strategies that promote zero waste and support a circular economy to reduce the greenhouse gas emissions associated with producing materials that eventually become waste. This plan also considers strategies to beneficially use waste as a resource and to manage the residual waste stream to minimize fugitive emissions.

Greenhouse gas emissions associated with the 5th R – residuals management, are generated from the disposal of residual waste in the region—primarily from decomposing garbage, especially organic waste like food scraps and wood, but also from transportation and management.

What we consume, the production of new products and extraction of raw materials and how we manage items at end-of-life all contribute to climate change. We can reduce our collective emissions by decreasing the amount of waste we produce, and managing Hartland Landfill in a sustainable manner. By finding beneficial ways to use our waste materials, we can also displace other sources of greenhouse gas emissions in the region.

1.4.1 Hartland Landfill's Contribution to Greenhouse Gas Emissions

When organic matter decomposes within the landfill, it produces gas which is mainly made up of carbon dioxide and methane, a very potent greenhouse gas. Landfills are typically one of the largest contributors of greenhouse gas emissions in the community. In 2020, the CRD completed a regional greenhouse gas emissions inventory based on a recognized global standard (called the GPC Basic+) to measure emissions generated locally from buildings, transportation and waste. Total regional emissions are approximately 1.7 million tonnes of carbon dioxide equivalents. Waste contributes approximately 5% of the region's greenhouse gas emissions, with Hartland Landfill accounting for the majority[1].

The CRD is actively working to improve landfill gas collection efficiency and produce renewable natural gas using captured methane from the historical waste decomposing in the landfill in addition to minimizing any fugitive emissions. Strategy 14, 'Optimize Landfill Gas Management', will support and accelerate this work.

1.5 Alignment with Other CRD Strategies and Plans

The SWMP is aligned with several other CRD strategies and plans. Figure 1-2 shows each of these strategies and plans and how they are linked with this plan.

[1] Source: Capital Regional District 2018, GPC BASIC+ Community Greenhouse Gas Emissions Inventory Report (Stantec, August 2020).

1.6 Alignment with Provincial Targets

The Province has two solid waste performance targets:

1. Lower the provincial municipal solid waste (MSW) disposal rate to 350 kg per capita; and
2. 75% of BC's population covered by organic waste disposal restrictions.

The CRD supports these two provincial goals through its current solid waste management system, which prohibits the disposal of both kitchen scraps and yard waste at Hartland Landfill, and through this SWMP which presents strategies that aim to reduce the per capita disposal rate to even less than 350 kg per capita.

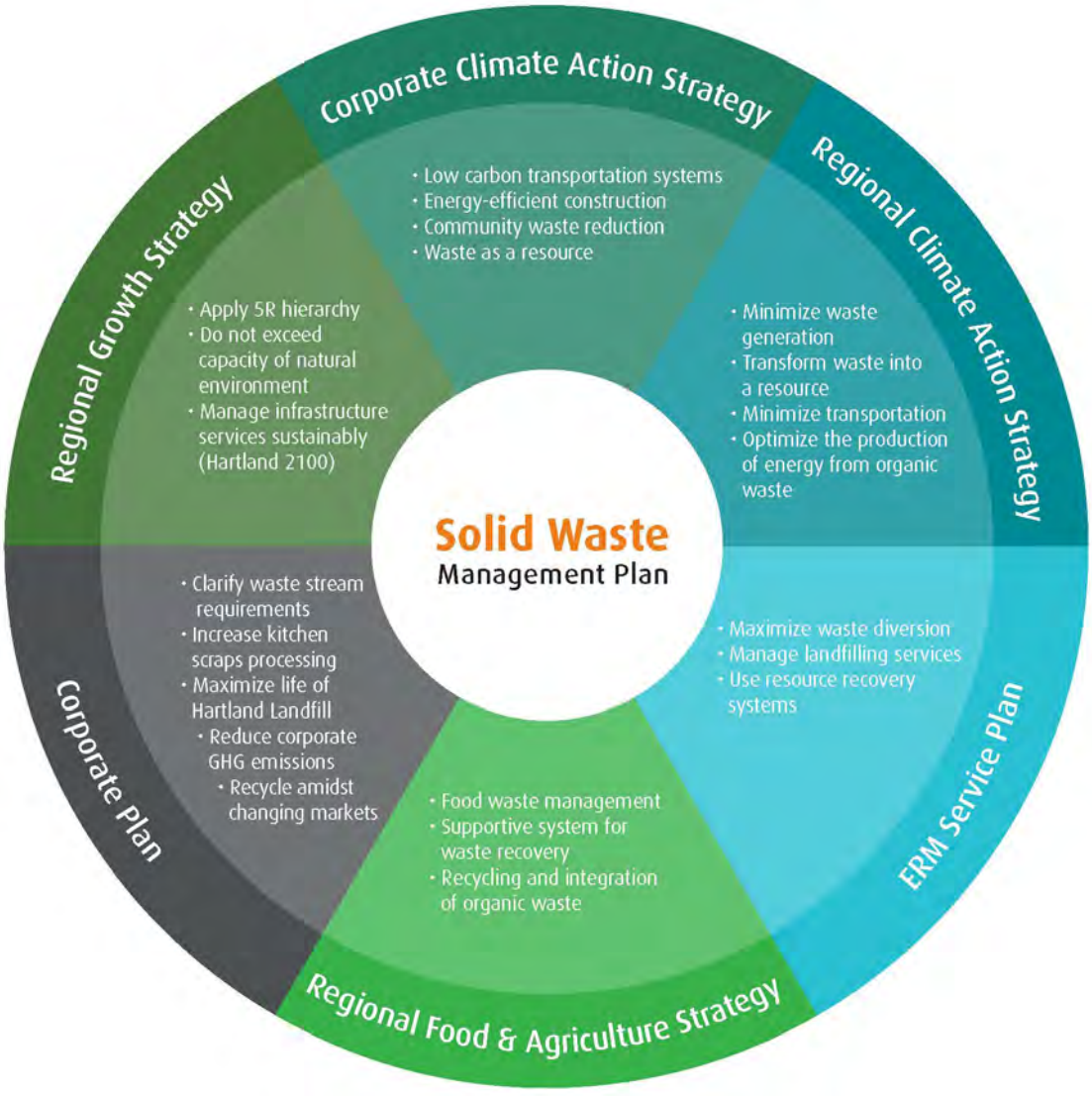


Figure 1-2 Alignment with CRD Strategies and Plans

2 Plan History and Development

The CRD's first SWMP was approved by the Province in 1989. It was updated in 1991, and again in 1995. Since 1995, eight amendments have been added to the Plan and most of the original goals have been achieved. The eight amendments are listed in Table 2-1.

Table 2-1: Plan Amendments

Amendment 1 (2005)
To allow the Capital Regional District (CRD) to regulate composting in the CRD through the adoption of a regulatory bylaw under Section 25 (3) of the *Environmental Management Act.*
Amendment 2 (2001)
To allow the Capital Regional District (CRD) to regulate transfer stations on Salt Spring Island through the adoption of a regulatory bylaw.
Amendment 3 (2004)
To modify the legal description of Hartland Landfill to include additional land that was acquired as a buffer strip.
Amendment 4 (2004)
Add a new Section 16.0 that outlines the CRD's public review process for solid waste related matters.
Amendment 5 (2004)
Establishes procedures for resolving conflicts associated with the Hartland Landfill.
Amendment 6 (2007)
Include the Highwest Waste Management Facility in the SWMP and set operating requirements (replaces Section 10.1.28 in the Plan). This section includes cessation of burning at the site by the end of 2009.
Amendment 7 (2007)
Replace Section 15.1 of the Plan with "Funding for all Hartland Capital Works will be borrowed through loan authorization bylaws or cash flow generated from solid waste operations in accordance with the CRD *Solid Waste Disposal Local Services Establishment Bylaws."*
Amendment 8 (2013)
To allow the siting, construction and operation of a biosolids treatment and resource recovery facility at Hartland Landfill for treatment, processing, storage and beneficial utilization of screenings and waste sludge.

2.1 Process to Update the Plan

In March 2011, the CRD Board passed a motion to undertake a process to update the CRD's 1995 SWMP. In 2012, the CRD embarked on the process to create a new plan that would reflect the changes that have been made since 1995, including the eight plan amendments and changes to the solid waste management system, such as the significant expansion of Extended Producer Responsibility as a means of managing solid waste. Updating the Plan would also allow for consideration of future options for solid waste management in the CRD within the current context and to create an updated vision.

In 2012, a Public and Technical Advisory Committee was formed to provide input into the development of an updated plan. This committee reviewed several reports prepared by consultants, including a 2012 Existing System Report and technical memorandum outlining options for consideration in the new plan.

The planning process, however, was put on hold in 2015 to investigate integrated resource management opportunities. In November 2017, the Board approved restarting the process to update the SWMP.

The process to update the SWMP was restarted in 2018, with the preparation of an updated Existing System report and the establishment of new multi-stakeholder committee, with a mandate of being an advisory committee to the CRD's Environmental Services Committee for the SWMP update process. This new committee is called the Solid Waste Advisory Committee and it also serves as an advisory body on current solid waste management initiatives in the CRD referred to it by the Environmental Services Committee. This committee will also be the Plan Monitoring Advisory Committee upon completion of the SWMP update process. Terms of Reference for the Solid Waste Advisory Committee are included as Schedule A.

The members of the Solid Waste Advisory Committee represent a diversity of backgrounds, interests and geographical locations and includes technical and non-technical members.

Table 2-2: Composition of the Solid Waste Advisory Committee

Representation	Number of Members
Regional district director (member of Environmental Services Committee)	1
Municipal engineering staff who are involved in solid waste collection	2
Electoral Area representative	1
First Nations	2
Environmental organizations	1
Business groups	1
Non-profit group with an interest in solid waste (e.g. reuse organization)	1
Large waste generators (industrial, commercial, institutional)	2
Owners/operators of private waste management facilities	2
Private sector industry collection service providers	2
Composting industry representative	1
Product stewardship agency	1
Community representative (representing Prospect Lake/Hartland area)	1
Public representatives, at large	3
Willis Point community representative	1
District of Highlands representative	1
Solid Waste Technology representative	1

In October 2018, the Board approved the guiding principles, objectives and goals developed by the Solid Waste Advisory Committee for the new plan. In September 2019, the Board reviewed the Solid Waste Advisory Committee's proposed strategies, actions and targets for the updated SWMP, and directed that these be taken out for public consultation.

The first phase of public consultation took place between October 18, 2019 and December 1, 2019, and included a media launch event, public open houses, stakeholder meetings and extensive social media outreach. A dedicated web page was created where people could sign up for project updates, review background information and submit their feedback through a survey. Overall, there was a high level of support for all plan elements. Some actions—particularly those associated with ensuring Hartland Landfill is used as effectively and efficiently as possible—generated important questions from the community.

The results of the consultation and an initial draft Plan were presented to the Solid Waste Advisory Committee in the summer of 2020. As a result of consultation and the Solid Waste Advisory Committee's input, the draft Plan was modified to improve clarity and the waste minimization goal was strengthened, however no changes were made to the draft Plan's strategies and actions.

3 Plan Area

The CRD is the regional government for 13 municipalities and three electoral areas, covering an area of 2,341 sq. km on the southern tip of Vancouver Island. A map showing the administrative boundaries of the CRD is provided in Figure 3-1.

Member municipalities include:

- District of Central Saanich
- City of Colwood
- Town of Esquimalt
- District of Highlands
- City of Langford
- District of Metchosin
- District of North Saanich
- District of Oak Bay
- District of Saanich
- Town of Sidney
- District of Sooke
- City of Victoria
- Town of View Royal

Unincorporated areas are organized into electoral areas. The three electoral areas in the CRD are:

- Salt Spring Island Electoral Area;
- Southern Gulf Islands Electoral Area, which includes Galiano Island, North Pender Island, South Pender Island, Saturna Island, Mayne Island, and smaller islands in the vicinity; and
- Juan de Fuca Electoral Area, which includes the areas of East Sooke, Jordan River, Malahat, Otter Point, Port Renfrew, Shirley, Willis Point, and inland rural areas.

First Nations communities located within the region include: Beecher Bay, Esquimalt, Malahat, Pacheedaht, Pauquachin, Penelakut, Songhees, Tsartlip, Tsawout, Tseycum and T'Sou-ke Bands. Each of these Bands has reserve lands within the boundaries of the CRD as shown in Figure 3-2.

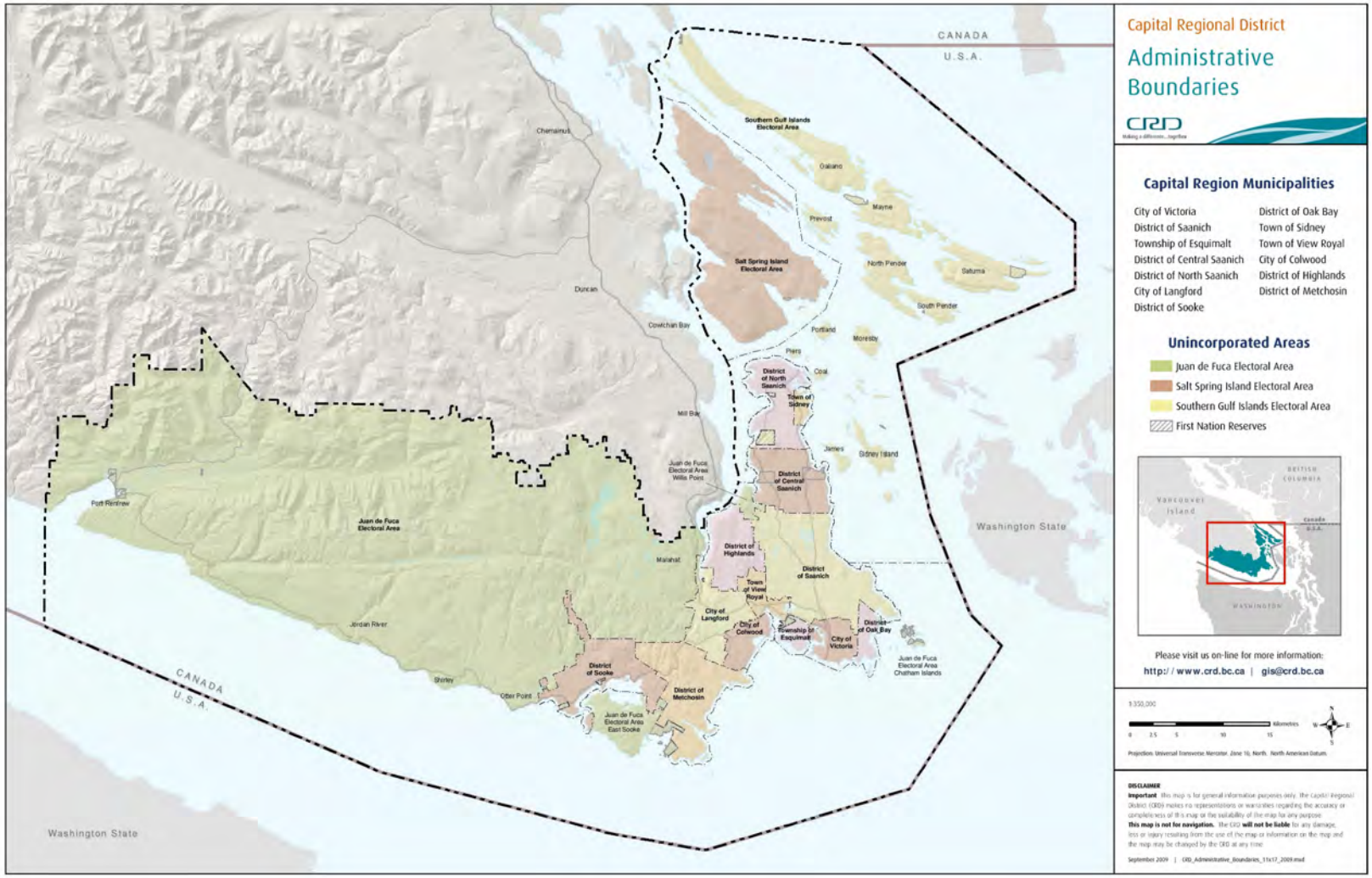


Figure 3-1: Map of Capital Regional District

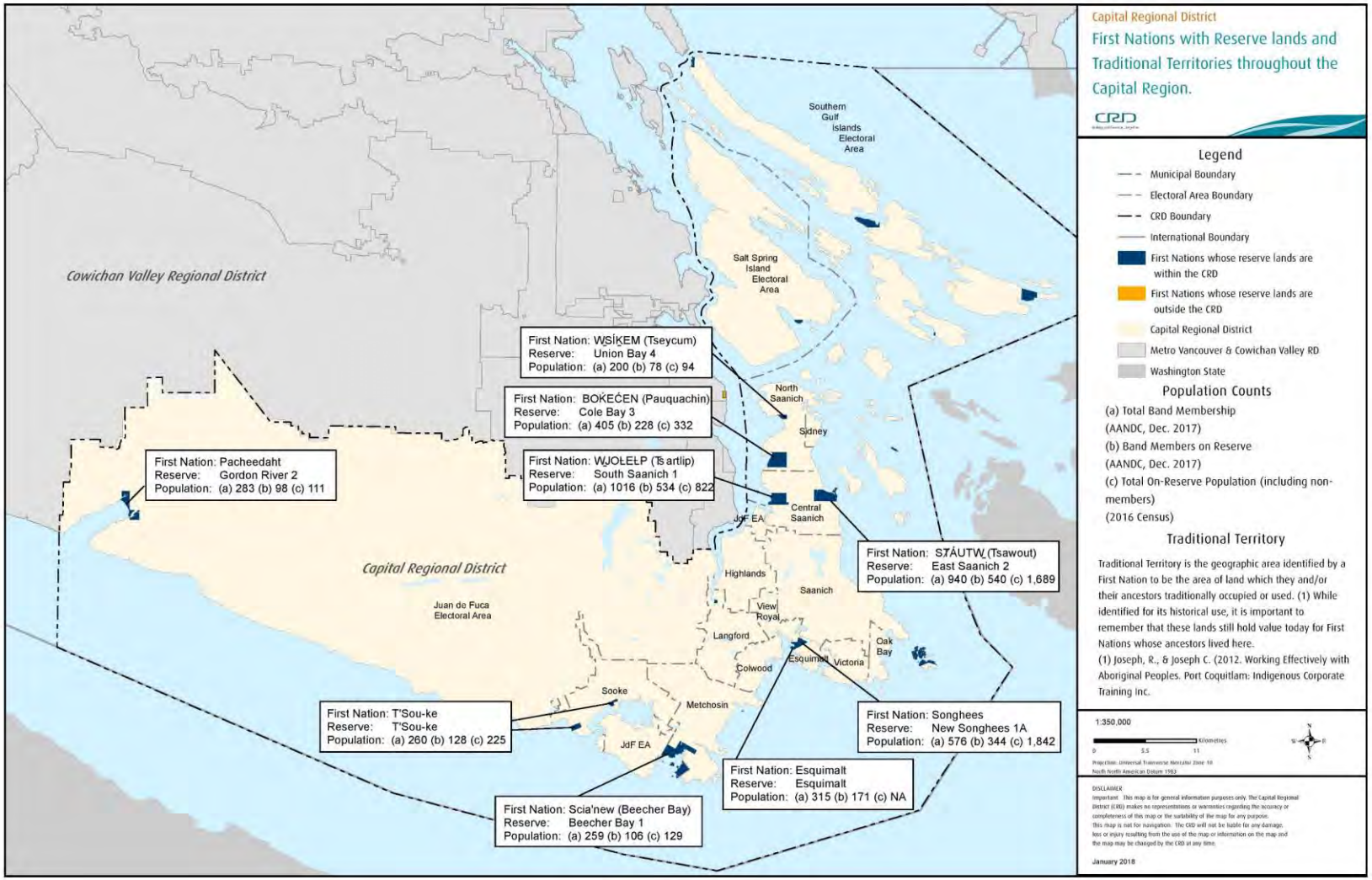


Figure 3-2: First Nations Reserves in the Region

3.1 Population

As shown in Table 3-1, the population of the CRD in 2019 was estimated at 418,414, including persons living on First Nations Reserves. Table 3-2 provides population projections to 2030, as supplied by BC Stats. Based on these estimates, the population of the region is expected to grow by 10% over the next decade

Table 3-1: Population, By Area (2019 estimate)[2]

Area	2017 Population	% of CRD total
CAPITAL REGION	**418,414**	
Central Saanich	18,089	4%
Colwood	18,867	5%
Esquimalt	18,716	4%
Highlands	2,481	1%
Langford	42,653	10%
Metchosin	5,168	1%
North Saanich	11,876	3%
Oak Bay	18,568	4%
Saanich	122,173	29%
Sidney	12,235	3%
Sooke	14,657	4%
Victoria	94,005	22%
View Royal	11,567	3%
Unincorporated Areas		
Juan De Fuca Electoral Area	5,427	1%
Salt Spring Island Electoral Area	11,247	3%
Southern Gulf Islands Electoral Area	5,072	1%
First Nation Reserves	5,613	1%

[2] CRD website: https://www.crd.bc.ca/docs/default-source/regional-planning-pdf/population/population-pdfs/2019_populationestimate.pdf?674c4fcc_2

Table 3-2: Capital Region Population Projections[3]

Year	Population Projection
2020	421,613
2021	426,029
2022	430,530
2023	435,114
2024	439,761
2025	444,330
2026	448,825
2027	453,249
2028	457,563
2029	461,765
2030	465,850

3.2 Housing

Table 3-3 provides a breakdown of the housing types in the region, based on 2016 Census data and building permits for residential structures.

Table 3-3: Housing in the Capital Region[4]

	#	%
Single Detached Houses	70,630	41.5%
Semi Detached Houses (includes flats, duplexes)	32,375	19.0%
Row Houses	10,380	6.1%
Apartments (all types)	54,775	32.2%
Mobile Homes	1,990	1.2%
Total	170,150	100.0

3.3 Economic Data

The CRD has a well-diversified economy. A large public sector comprised of the provincial government offices and military installations as well as universities and colleges are the key drivers of this area's economy.

The area also has a growing technology and health services sector, along with a vibrant tourism industry. Retirement living and residential expansion continue to shape the demographics of this community.

[3] Source: https://www.bcstats.gov.bc.ca/apps/PopulationProjections.aspx

[4] Data provided by the CRD. Does not include housing on First Nation Reserves.

Based on the 2016 census, the main employment sectors in the region are health care (13% of employment), public administration (12%), retail (11%), accommodation and food services (9%), and professional, scientific and technical services (8%).[5]

4 Existing System Overview

The following is a high-level overview of the current system for solid waste management in the region. A more detailed description is provided in the report *Existing Solid Waste Management System (2018)* which can be found on the CRD's website (https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/2018existingsystemsreport.pdf).

4.1 Disposal Data and Trends

Figure 4-1 shows how per capita disposal in the CRD has changed over the past two decades, incorporating the quantities of waste disposed at Hartland Landfill and the privately owned Highwest Landfill. In 2019, the per capita disposal rate was 382 kg per capita, a reduction of 43% since 1989.

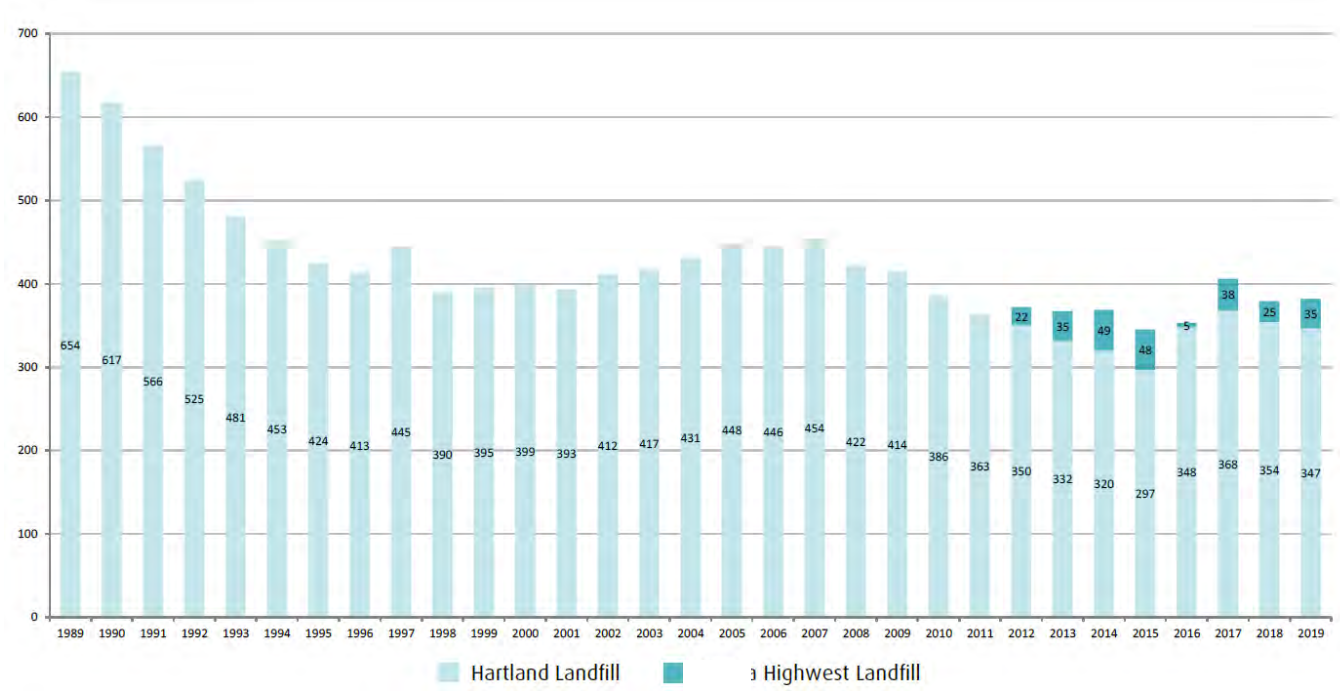


Figure 4-1: CRD Disposal (1989 – 2018)

[5] Source: 2016 Census Profile Statistics Canada

Figure 4-2 shows the estimated composition, by weight, of the waste landfilled at Hartland in 2016 (the last time a waste composition study was conducted at the site). The largest component of the garbage arriving at Hartland Landfill was compostable organics (21.1%), followed by wood and wood products (17.0%), paper (15.4%), and plastic (14.3%).

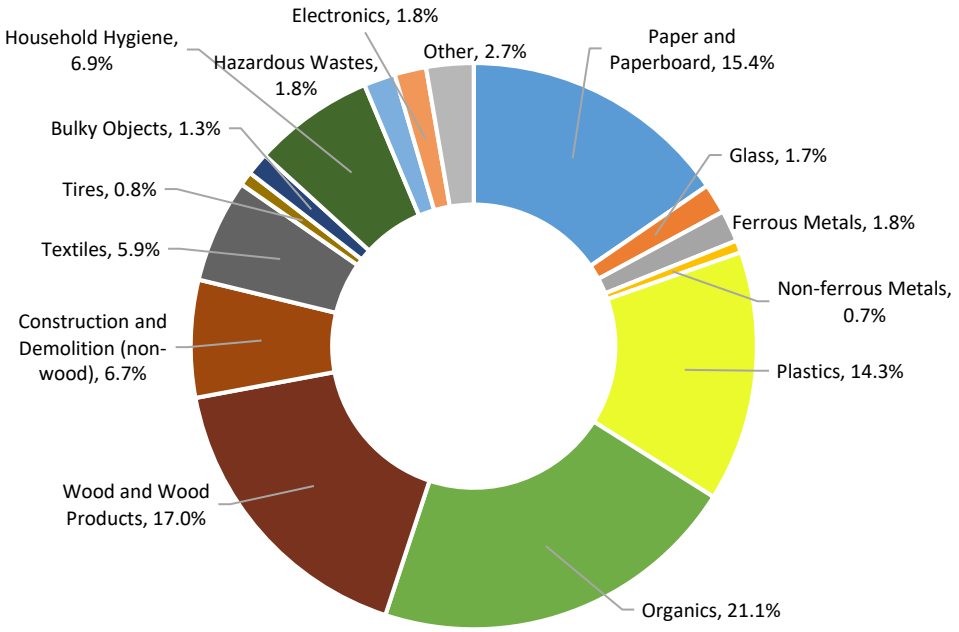


Figure 4-2: Estimated Composition of All Waste Landfilled at Hartland (By Weight), 2016

Figure 4-3 shows the proportion of waste sent to Hartland Landfill in 2019 from each sector. As shown, 41% comes from Industrial/Commercial/Institutional (ICI) activities, while 38% comes from residences (curbside residential plus multi-family).

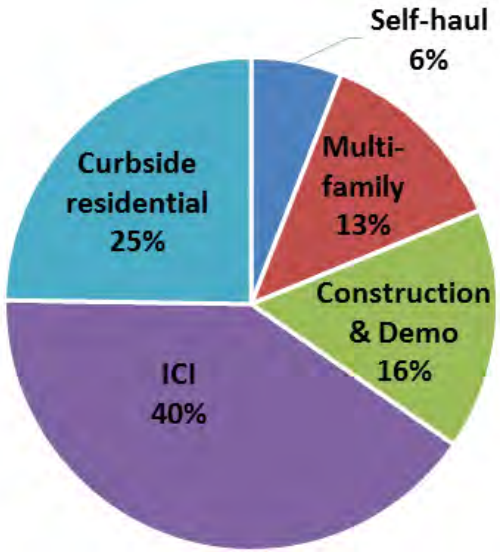


Figure 4-3: Sectors Contributing to Waste Disposed at Hartland (2019)

4.2 Existing System Description

This section provides an overview of the components that currently make up the system for managing solid waste in the region.

4.2.1 Solid Waste Management Facilities

Figure 4-4 is a map showing the location of solid waste management facilities operating in the region as of 2020; including CRD-operated sites (shown in yellow), private waste management operations such as recyclers, recycling depots and transfer stations (in red), non-profit second-hand stores (in green), municipal recycling and yard waste depots (in blue), and Gulf Island recycling depots (in purple).

The region is home to two landfills authorized by the Province of BC: Hartland and Highwest. Both landfills have Operating Certificates issued by the Ministry of Environment that define the activities permitted at these sites. The Highwest Landfill is expected to permanently close in 2021 (see next section for additional details). Additional information on these two facilities can be found in Section 4.3.1.

Future Facilities

This plan anticipates the potential addition of an organic waste processing facility located at the Hartland site. Additional information on this potential facility can be found in Sections 5.2 and 6.

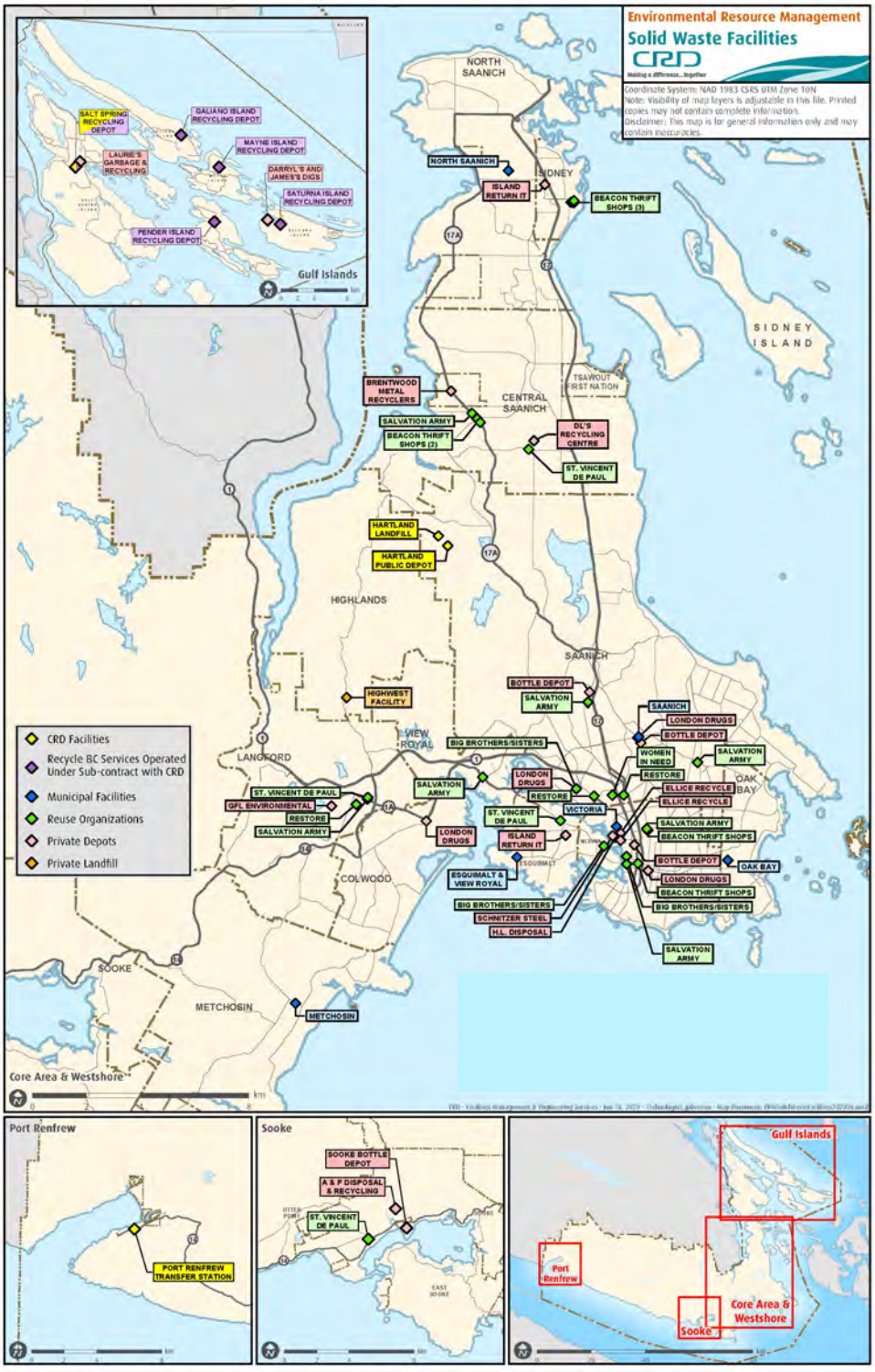


Figure 4-4: Map of Solid Waste Facilities

4.2.2 Solid Waste Disposal

4.2.2.1 Hartland Landfill

The CRD became responsible for solid waste disposal for the region in 1973 when, at the request of the CRD Board, the Province of British Columbia established solid waste disposal as a regional function of the CRD.

In 1975, the CRD acquired the Hartland Landfill site, which had been operating as a private facility since the 1950s. The facility continued to be managed by a private operator under contract to the CRD until 1985, when the CRD assumed direct operation of the site.

Lands surplus to the needs of the landfill operation were subsequently transferred to CRD Parks for public use. This included 210 hectares in 1994, and another 40 hectares in 2003. These areas formed a large portion of the land conserved within Mount Work Regional Park. An additional 29 hectares of land adjacent to the current landfill footprint was temporarily leased to CRD Parks until 2019.

Hartland Landfill is located 14 km northwest of Victoria and is the only sanitary landfill in the capital region. The 125-hectare site is owned by the CRD and operated by a combination of CRD staff and contractors. The landfill is operated under Operational Certificate # PR12659 issued under the Environmental Management Act and follows a detailed Operating Plan based on the Operational Certificate. Figure 4-5 shows the current property boundary of Hartland Landfill. In 2013, the CRD acquired additional land to the east of the site to increase the buffer around the landfill. Additional land acquisitions to further increase the buffer are under consideration and may be acquired during the lifespan of this SWMP. Additional buffer land acquisitions would be consolidated into a single parcel of land. The acquisition of any additional lands are to increase the buffer lands and operational flexibility at Hartland and not to expand the area for landfilling.

In 2013, the Minister of Environment approved Amendment No. 8 of the current SWMP that allows the siting of a biosolids treatment facility at Hartland. A Residuals Treatment Facility has been constructed at Hartland North.

The Hartland Landfill site is a multi-purpose facility that currently includes the following waste management functions:

- Disposal and landfill service for residential and non-residential customers;
- Disposal facility for controlled waste;
- Public drop-off depot for:
    - Recyclable materials;
    - Extended producer responsibility materials
    - Household hazardous waste materials;
    - Reusable goods;
    - Yard and garden material;
- Kitchen scraps transfer station;
- Leachate collection, treatment and disposal;
- Landfill gas collection, processing, conversion utilization and sale;
- Administration and weigh scale facilities; and
- Other solid waste disposal and diversion initiatives as approved by the CRD Board.

Over the years, the CRD has sought to ensure the conservation of landfill space. The practice of banning the disposal of specific wastes at Hartland Landfill when viable recycling alternatives are in place, has been used by the CRD since 1991. Current landfill bans include drywall (implemented in 1991), cardboard, directories, large appliances, tires (1993), scrap metal, fill, aggregate, concrete, asphalt, rubble and clean soil (1995), paper fibres (1998), yard and garden waste (2006), EPR materials (current and future) designated under BC's Recycling Regulation (2011), and kitchen scraps (2015).

The waste diversion and disposal services and policies at Hartland will continue to evolve as needed based on available recycling markets, changes to provincial regulations like BC's Recycling Regulation, and community need.

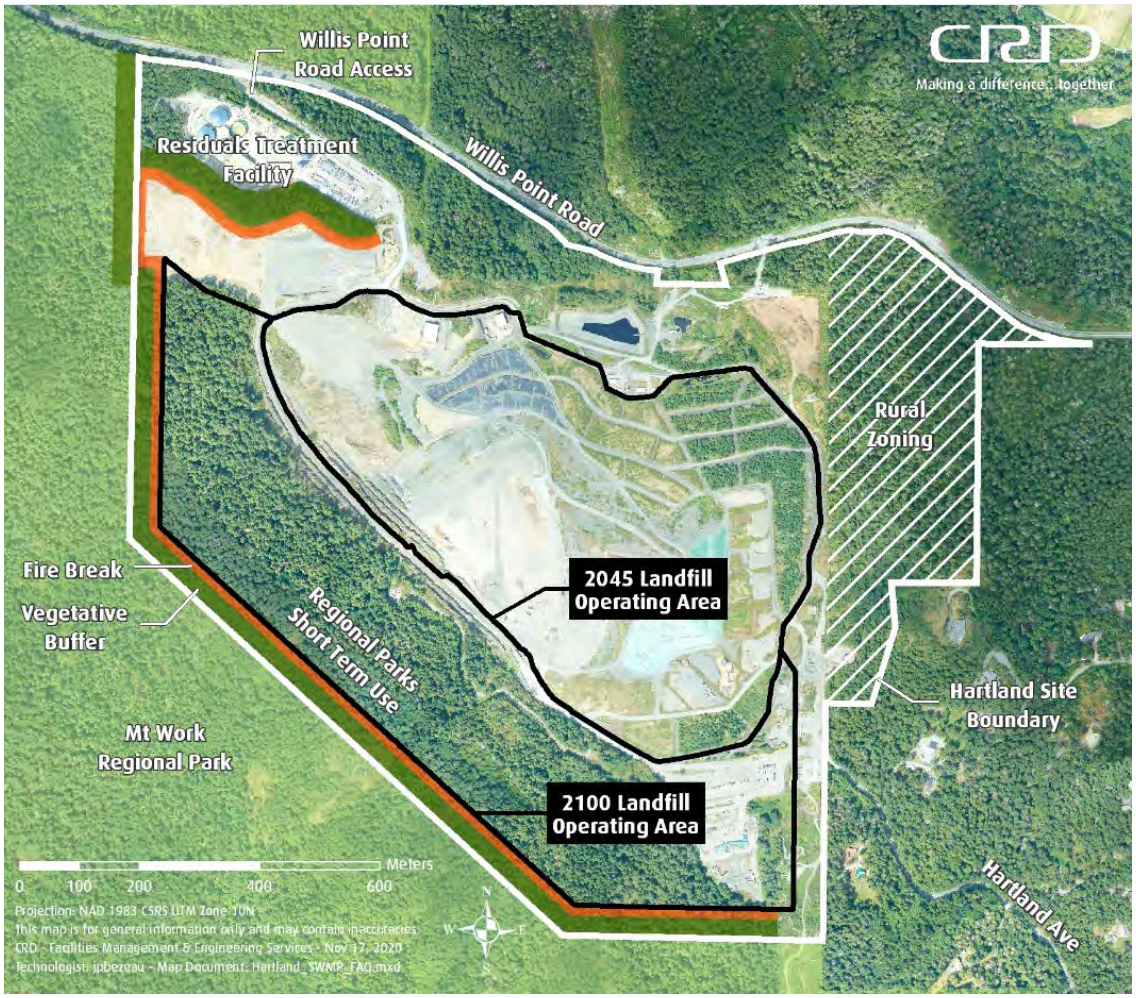


Figure 4-5: Hartland Landfill Boundaries

4.2.2.1.1 Phase 1 and Phase 2 History

Phase 1 is the original part of Hartland Landfill that was completely closed by 1998. This area was filled with approximately 4.5 million cubic metres of garbage. It is permanently covered with a specially designed durable plastic liner and soil cap.

The Final Closure design for Phase 1 was completed in 2010 which included a final cover complete with a new wetland sedimentation pond in addition to gas, leachate and road upgrades. More than 22,000 native trees and bushes have been planted over the Phase 1 area.

Phase 2 refers to the current active filling area which was officially opened on April 30, 1997. It consists of a system of liners, drains and collection pipes to provide for long-term engineered, environmentally secure waste disposal.

Phase 2 is designed to accept approximately 10.3 million cubic metres of solid waste. The most recent final closure was of the north face of Phase 2, Cell 1 in 2011. In 2016, progressive closure of the East and South Faces of Phase 2, Cell 2 was put in place and construction and initial filling of a new landfill cell (Phase 2, Cell 3) began.

4.2.2.1.2 Hartland Landfill Infrastructure

In addition to the landfill itself, the site has other infrastructure that supports its operation. This includes a staffed scale house that weighs all incoming and outgoing vehicles and an automatic scale for account holders. Weighing of vehicles allows the CRD to track the quantity of the waste received at the facility and to charge fees based on the weight of waste deposited at the site. Material collected at the depot and transfer station for subsequent transportation off site is also tracked using the scale system.

Other infrastructure is associated with pollution control and includes leachate and landfill gas management infrastructure, which are described below.

4.2.2.1.3 Gas Management

As garbage decomposes in the landfill, landfill gas is generated. Landfill gas is primarily methane but also includes other organic compounds. Methane is a powerful greenhouse gas – 20 to 30 times more potent than carbon dioxide. To minimize greenhouse gas impacts, reduce odours associated with landfill gas and reduce risk of fires associated with the buildup of methane, active collection and management of the landfill gas is a critical part of managing Hartland Landfill.

Landfill gas has been collected at Hartland for about 20 years. Prior to 2004, the collected gas was flared off and thermally destroyed. Since 2004, the gas is used for generation of electricity and only the excess gas above the generator's capacity is flared. The generator typically produces enough energy to power 1,600 homes annually. In 2013, the CRD purchased their private sector partner's portion of the power project which gives the CRD full control over the landfill gas.

A site specific Landfill Gas Management Plan was approved in 2012 which detailed a strategy for capturing landfill gas and meeting BC Ministry of Environment collection targets. The Plan includes installation, operation and maintenance of collection infrastructure and routine reporting. This has resulted in landfill gas collection increasing by nearly 40% since 2000 and reductions in greenhouse gas emissions by approximately 50% since 2010. Collection infrastructure continues to be installed in accordance with the Landfill Gas Management Plan. Strategy 14 of this plan seeks to optimize and maximise landfill gas collection for beneficial use.

4.2.2.1.4 Leachate Management

Water that has filtered through garbage is called leachate. To minimize the leachate generation area, impermeable covers are installed as cover on the landfill and perimeter ditches are lined to divert more clean surface water away from the landfill. The leachate generated in the landfill is collected, contained and conveyed via a micro-tunnel to two leachate storage lagoons. The leachate is tested on a once-a-month basis and managed through the sanitary sewer system.

4.2.2.1.5 Monitoring

An environmental monitoring, assessment and management program to identify potential impacts of landfill operations on groundwater, surface water and air, is in place in accordance with BC Ministry of Environment requirements. With over 40 years of engineered controls and continuous improvement, groundwater and surface water quality at Hartland Landfill has improved. Monitoring stations include a series of test wells both on and off the landfill site.

The 2016 landfill gas collection efficiencies were within estimated ranges in the Landfill Gas Management Plan, working effectively and reducing greenhouse gas emissions from closed areas of the landfill. New gas wells installed in Phase 2 as part of the long-term gas management plan resulted in gas infrastructure improvements.

The progressive closure of the East and South Faces of Phase 2, Cell 2 that occurred in 2016 significantly reduced the total leachate generation area of the landfill.

The newly constructed Phase 2 Cell 3 area included installation of new leachate containment with gravity flow conveyance piping that discharges into the upper leachate lagoon. Groundwater quality monitoring data obtained in 2016 indicated that landfill leachate is effectively contained and controlled on site.

Leachate quality monitoring, done at the point that it is discharged to the sewer system, confirms that leachate discharged from the site is in compliance with the CRD's Sewer Use Bylaw which regulates discharges to the sanitary sewer. Surface water monitoring in 2016 indicated that nearby surface water bodies are not impacted by leachate.

4.2.2.1.6 Estimated Lifespan

Based on current estimates and assuming no major changes to the volume of waste being disposed of in the near-term, Phase 2 of Hartland Landfill is expected to reach capacity around 2045.

Provincial legislation requires the CRD to provide a safe, secure and sustainable disposal option for regional solid waste in perpetuity. With this responsibility in mind, an additional 29 hectares of landfill property adjacent to the current Phase 2 footprint could be developed to extend the life of Hartland Landfill to 2100 and beyond.

This undeveloped landfill property was temporarily leased to CRD Parks until 2019 and is currently used for recreation by visitors to the adjacent Mount Work Regional Park, including hikers and mountain bikers. When regional demand requires the landfill to develop further, the recreational users of this portion of landfill property will be impacted by the loss of these temporary trails (see section 4.2.2.1.7 for details).

The vision for Hartland 2100 is to keep the landfill's footprint as small as possible. This property will need to be developed for future landfilling starting in approximately 2030 unless significantly more waste is diverted or a new technology for managing waste becomes available and economically feasible for the

CRD. With this planning horizon in mind, development of a Hartland 2100 design concept has been included in this Solid Waste Management Plan in Section 5.3, but its implementation will be phased in over the next 10 years in alignment with evolving regional demand and the landfill's Operational Certificate requirements. CRD staff will review and report out on regional demand as it relates to Hartland Landfill capacity as part of its annual progress report on this solid waste management plan.

Future development of landfill property, including the removal of second-growth trees, would be offset by the reforestation program already in place for all closed areas of the landfill, including 20 acres of reforested land now that will have grown to 50 acres by 2040. The Hartland 2100 design concept will also include a progressive reforestation plan that will reduce the greenhouse gas emissions generated by the landfill through carbon sequestration.

4.2.2.1.7 Community Benefits and Engagement

Based on current population growth and waste trends, the CRD anticipates needing to permanently close the existing biking trails on undeveloped Hartland Landfill property before the landfill reaches capacity in 2045. As CRD staff review and report out on regional demand as it relates to Hartland Landfill capacity and work towards phasing-in implementation of the Hartland 2100 design concept, staff will collaborate with the mountain biking community on alternative options.

There are also residents who live near Hartland Landfill, share the use of transportation routes in the area with landfill-bound traffic and feel impacted by the landfill's location. The CRD endeavours to operate and develop the landfill in a manner that recognizes the interests of the community (recreational and residential), while continuing to provide an essential regional service. The CRD has engaged and will continue to engage with these communities to ensure that their perspectives continue to be understood and that the ongoing development the Hartland site is done with these interests in mind.

4.2.2.2 Highwest Landfill

In addition to the Hartland Landfill, there is the privately owned and operated Highwest Landfill located at 1943 Millstream Road in the District of Highlands. This landfill receives construction and demolition waste and non-hazardous/non-putrescible ICI waste for disposal. This facility is expected to permanently close in 2021 once it reaches capacity. Highwest operates under an Operational Certificate #100193 issued by the Province of BC.

4.2.3 Transfer Stations

The CRD owns and operates a transfer station in Port Renfrew where garbage is received from local residents and transferred to Hartland Landfill. Source separated recyclables and kitchen scraps are also accepted at the site for recycling.

Additionally, there are several private transfer stations in operation in the CRD. Many of these sites offer recycling services as well.

Transfer stations on Salt Spring Island are subject to *Capital Regional District Bylaw 2810, a Bylaw to Regulate the Operation of Transfer Stations on Salt Spring Island* which requires all transfer stations to hold a license. This bylaw was put in place to ensure that all transfer stations on Salt Spring Island are operated at a standard that ensures the protection of environmental and community health.

4.2.4 Solid Waste Collection

Collection of residential and commercial garbage and kitchen scraps is conducted by the private sector, with the exception of single-family dwelling collection service offered by six of the region's municipalities.

The private sector also collects recycling from multi-family buildings, commercial buildings and institutions, and garbage and recycling from construction / demolition sites.

The CRD provides region-wide residential recycling service through a combination of single-family dwelling curbside collection and depot collection programs under contract to Recycle BC.

4.2.5 Streetscape Waste Management

Litter and recycling collection in public spaces such as urban streetscapes is a municipal service, as well as a responsibility of Recycle BC. Streetscape recycling is part of the Recycle BC's EPR program for packaging and printed papers. Encorp also provides streetscape recycling containers for beverage containers.

4.2.6 Reduce and Reuse

There are a broad range of rental and repair services throughout the region plus many opportunities for reuse of goods through private and non-profit retailers, online platforms (e.g. Used Victoria, Kijiji) and informal activities (e.g. garage sales, rummage sales). The CRD supports reuse through two main mechanisms:

- **Diversion Funding for Non-Profit Organizations**: Since 1992, the CRD has provided funding to non-profit organizations involved in recycling clothing and used household goods. The funding assists with their garbage disposal costs at Hartland, in recognition that some donated used goods are unusable and destined for the landfill. Ten organizations participated in the program in 2019.

- **Hartland Reusable Materials Program**: The CRD partners with five organizations for the management of donated items received in the Hartland depot. Goods such as textiles, household items, some building materials and bicycles are redistributed through a variety of networks operated by these non-profit associations.

4.2.7 Communications, Outreach and Education Programs

Environmental education is of paramount importance to the CRD's waste reduction strategies. The CRD provides a number of communications, education and outreach programs to support the 5R hierarchy and promote resident awareness and participation in waste reduction and disposal services, including:

- **School Outreach Programs:** Curriculum-linked educational workshops and tours for students from Kindergarten to Grade 12.

- **The Hartland Learning Centre**: Located at Hartland Landfill, this recycled building is the venue for school and community workshops, as well as the starting point for tours. Tours are provided to school groups, community groups, members of the public and technical groups.

- **Community Outreach and Events:** Displays are set up at fairs, festivals, community gatherings and other community events or locations. The displays often focus on ways to reduce and divert waste,

proper sorting techniques for recyclable materials or more specific topics such as how to prepare demolition waste and dispose of asbestos.

- **MyRecyclopedia.ca:** A comprehensive online listing of items including local recycling listings and tips on how to reduce and reuse.

- **Infoline**: This dedicated phone line and email address allows the CRD to respond to inquiries about waste reduction, waste management, recycling and Hartland Landfill.

- **Ready, Set, Sort!:** An online waste sorting game where residents can test their knowledge about local recycling opportunities.

- **CRD website**: The CRD's website has a range of information associated with the 5Rs and CRD's solid waste services.

- **Compost Education Centre:** Through a contract with the CRD, the centre offers organic waste diversion presentations, workshops, and educational demonstrations at on-site gardens and throughout the community.

- **Public Education Campaigns:** The CRD develops and implements a number of seasonal, multi-media public education campaigns to promote and provide information on a range of waste management subjects. In 2019, those subjects included:

    - end markets for recyclable materials
    - household hazardous waste
    - safe renovation waste disposal
    - avoidable food waste reduction
    - illegal dumping prevention
    - holiday season waste reduction
    - abandoned boat reporting and prevention

In addition to the above activities undertaken by the CRD, municipalities with waste management services, waste management companies, EPR organizations and many environment-oriented non-profit organizations provide their own communication and education services.

4.2.8 Recycling Depots

There are public and privately operated depots located throughout the region accepting recyclables of many types, kitchen scraps, yard waste, EPR products, and household hazardous waste. Some of these depots also receive garbage.

The public drop-off depot at Hartland receives garbage, reusable goods, recyclables and household hazardous waste. This area is intended for residential quantities and limits vehicle size to 5,500 kg gross vehicle weight.

Residents on Salt Spring Island and the Southern Gulf Islands are provided recycling services through drop-off programs set up at depots in their communities. The CRD, under agreement with Recycle BC, partners with local on-island non-profit associations for recycling services for residential packaging and paper products at these depots. In addition to receiving packaging and paper products, most depots offer additional services such as scrap metal, electronics recycling and other recycling.

4.2.9 Extended Producer Responsibility

British Columbia's industry-led product stewardship programs require producers of designated products to take extended producer responsibility for the life-cycle management of their products, including collection and recycling.

The BC Recycling Regulation, under authority of the Environmental Management Act, sets out the requirements for product stewardship in BC. The region is served by all of BC's EPR programs through a broad range of take-back programs and service providers, including depots and retailers. The CRD participates directly in EPR by acting as a collector for the following EPR programs at Hartland depot:

- Beverage Containers
- Electronics, Electrical Products, Batteries, Smoke Detectors and Lighting Products
- Lead-Acid Batteries
- Paints, Solvents, Flammable Liquids, Gasoline and Pesticides
- Residential Packaging and Paper Products
- Tires
- Used Lubricating Oil, Filters and Containers and Antifreeze

4.2.10 Household Hazardous Waste Management

Most household hazardous waste in the CRD is collected through EPR programs, including those provided at the Hartland depot.

Since not all HHW is currently covered by EPR programs, the CRD accepts both EPR and non-EPR household hazardous waste materials at the Hartland depot. This program will remain available as long as there is a need for the service.

The CRD will continue to encourage the province to expand the list of household hazardous waste products covered by EPR so that the cost of managing all household hazardous waste is ultimately borne by the producers and consumers of these products.

4.2.11 Organics Management

Regional Kitchen Scraps Strategy

In January 2015, a landfill ban on kitchen scraps was implemented, saving a valuable resource, conserving landfill space and reducing greenhouse gas emissions from Hartland Landfill. Collected kitchen scraps are currently processed at composting facilities in outside of the capital region.

Compost Facilities Bylaw

The CRD Board adopted the regional composting bylaw in December 2005. The bylaw regulates the operation of composting facilities in the region to protect public health and the environment. In 2019, there were no facilities licensed under the bylaw in the region.

Yard and Garden Material Landfill Restriction

In 2006, a yard and garden material landfill ban came into effect. A number of private facilities in the area accept the region's yard and garden material.

In 2019, 1,142 tonnes of source-separated yard and garden material was received at Hartland where it was ground and beneficially used on-site. The landfill ban excludes invasive, infectious and noxious plants

which are received at Hartland as garbage or controlled waste at a discounted tipping fee in an effort to reduce their proliferation.

4.2.12 Illegal Dumping Mitigation

The CRD's aims to mitigate illegal dumping through the following on-going measures:

- Communication campaigns that target specific illegal dumping behaviours;
- Funding to non-profit associations to conduct clean-up events in public places;
- Funding for the removal of abandoned boats and marine debris;
- Support of non-profit organizations involved in recycling clothing and used household goods;
- Funding towards the disposal and recycling of unusable materials received as donations;
- Provision of safe disposal of abandoned hazardous materials; and
- A web page on illegal dumping on the CRD website that provides information on how to reduce illegal dumping and abandonment.

4.2.13 Participants in the Solid Waste Management System

There are many participants in the solid waste management system, as described in Table 4-1.

Table 4-1: Participants in the Solid Waste Management System

Who	Roles in Solid Waste Management
BC Ministry of Environment	• Regulates municipal solid waste management through the Environmental Management Act • Establishes provincial targets for management of solid waste in B.C. • Approves regional solid waste management plans • Authorizes discharges to the environment through permits and operational certificates • Enforces provincial regulations and the conditions set out in discharge permits and operational certificates • Mandates EPR in BC through the Recycling Regulation
Capital Regional District	• Operates the Hartland Landfill site and the Port Renfrew transfer station • Provides residential recycling services through a combination of curbside and depot collection (through a contract with Recycle BC) • Prepares the regional solid waste management plan (SWMP) • Works with municipalities and First Nations to implement the SWMP • Regulates the operation of composting facilities through the Compost Facility Bylaw • Regulates the operation of transfer stations on Salt Spring Island through the Salt Spring Island Transfer Station Bylaw • Reports annual MSW disposal rate to ministry • Provides education and outreach • Monitors the implementation of the SWMP through the Solid Waste Advisory Committee
Municipalities	• May provide various curbside collection or drop-off services to residents • Litter collection, streetscape sanitation and waste collection services for public spaces • Provides education and outreach associated with local solid waste services • Municipal waste management planning, which may include zero waste planning • Liaises with the regional district with regards to solid waste services and issues • Participates in the development and implementation of the SWMP • May undertake local zero waste initiatives • Provides land use zoning approval for a variety of solid waste and recycling facilities in their municipality

Who	Roles in Solid Waste Management
First Nations	• May provide curbside collection of garbage and kitchen scraps to residents • Provides education and outreach associated with the local solid waste services • Liaises with the regional district on items of mutual interest • May participate in the development and implementation of the SWMP
Producer Responsibility Organizations	• Provides collection services for stewarded products • Provides education/promotion to increase product recovery • Provides deposit refunds to consumers (where applicable) • Monitors and reports on diversion/recovery rates to the Province • Participates in the development and implementation of the SWMP
Private sector involved in waste management (e.g., haulers, facility operators)	• Provides garbage and recycling collection services to municipalities, businesses, residents, institutions, and construction/ demolition projects • May operate private facilities such as bottle depots, recycling depots, transfer stations and composting facilities • May be regulated by Provincial government • Liaises with waste generators (customers) to minimize contamination of waste streams • Complies with CRD requirements for source separation of controlled waste • Participates in the development and implementation of the SWMP
Waste generators (residents and businesses)	• Participates in municipal and regional solid waste management programs and services • Is informed regarding source separation requirements, disposal restrictions and options to minimize waste sent to disposal
Non-profit organizations	• Provide recycling depot services on Salt Spring and the Southern Gulf Islands • Receive reusable goods for sale in thrift stores and distribution in social support programs

4.2.14 Bylaws

The CRD has the following bylaws in place for the purposes of managing solid waste:

Bylaw 1903, Solid Waste Disposal Local Service Establishment Bylaw No. 1, 1991 establishes a local service to allow the CRD to acquire, construct, establish, maintain, operate and regulate:

(a) transfer depots and facilities for receiving collected waste for packing, processing, loading and transporting the waste to disposal grounds;
(b) facilities for collecting, processing, storing, marketing and disposing of recyclable waste;
(c) facilities for composting waste;
(d) facilities for collection, storage and disposal of hazardous, biomedical or special waste;
(e) facilities for carrying out resource recovery from waste; and
(f) waste disposal grounds and facilities.

The above bylaw has been amended twice since 1991:

- **Bylaw 2564 To Amend Bylaw No. 1903 "Solid Waste Disposal Local Service Establishment Bylaw No. 1, 1991"** to establish the service of the regulation, storage and management of municipal solid waste and recyclable material, including the regulation of facilities and commercial vehicles used in relation to these matters
- **Bylaw 3900 To Amend Bylaw 1903 "Solid Waste Disposal Local Service Establishment Bylaw No. 1, 1991"** to include facilities for carrying out resource recovery from recyclable material, and the generation of energy from landfill gas.

Bylaw 3881, The Hartland Landfill Tipping Fee and Regulation Bylaw lists items that are banned from disposal at Hartland Landfill and established tipping fees for garbage and recyclables.

Bylaw 2810, a Bylaw to Regulate the Operation of Transfer Stations on Salt Spring Island requires all transfer stations on Salt Spring Island to hold a license. This bylaw was put in place to ensure that all transfer stations on the island are operated at a level that ensures the protection of environmental and community health.

Bylaw 2736, a Bylaw to Regulate the Operation of Composting Facilities ensures that composting operations do not contaminate ground or surface water, or generate unacceptable levels of nuisance odour, vectors, litter or dust, and to protect the public from composting operations which violate the requirements of the bylaw. The CRD bylaw supplements existing provincial regulations under the Organic Matter Recycling Regulation.

The bylaw sets out four classes of licenses, as follows:

- Class 1: composting general organic matter on an impermeable surface or in-vessel (this type of facility is exempt from licensing unless the facility generates leachate or creates nuisance odours, vectors, litter or dust).
- Class 2: composting biosolids with general organic matter on an impermeable surface or in-vessel.
- Class 3: composting restricted organic matter.
- Provisional: operations not using proven technology to compost restricted organic matter.

Bylaw 2290, **a Bylaw for the purpose of establishing regulations for the use of recycling containers and the collection of recyclable material** within the Capital Regional District.

In addition to the above, municipalities may have bylaw provisions associated with the waste management services they provide, in addition to littering, open burning, zero waste, and the location of waste management facilities.

5 Strategies and Actions

This section outlines the strategies to be implemented to achieve the Plan's goals and the specific actions to be undertaken as part of each strategy. Figure 5-1 provides a graphical summary of the four goals of this plan and the associated strategies.

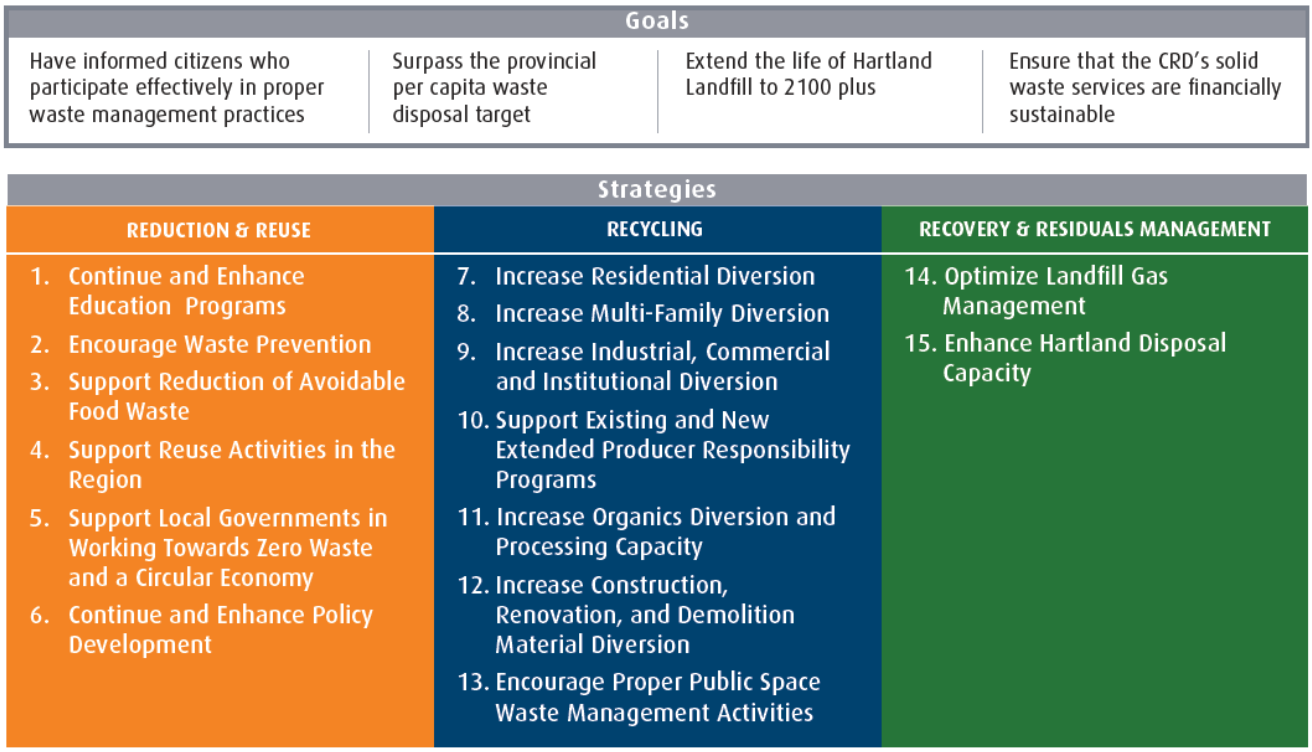


Figure 5-1: Plan Goals and Strategies

The selection of the plan's strategies and actions were based on feedback from the Solid Waste Advisory Committee and an evaluation of each strategy for:

- Technical Feasibility and Effectiveness;
- Environmental Impact and Benefits;
- Social Impact;
- Effect on Waste Disposal, and
- Cost Considerations.

These actions are deliberately broad in scope to enable a wide range of current, emerging and future activities related to each program area. This Plan is intended as a guiding document and does not encompass operational details or articulate every ongoing program or activity undertaken by the CRD. The guiding principles, goals, targets and strategies outlined in this Plan provide the policy framework to guide CRD's programming around solid waste. Activity progress will be reported annually through a detailed plan monitoring report.

Implementation of the actions outlined in this plan will require collaboration with many participants in the solid waste system.

This Plan does not preclude municipalities, First Nations, local businesses, institutions or non-profit organizations of undertaking their own initiatives, except for where those initiatives require inclusion in the regional Plan

5.1 Reduction and Reuse

Strategy #1: Continue and Enhance Education Programs

Actions:

A. Ensure ongoing, up-to-date promotion and education resources to enable effective participation in CRD programs and initiatives.
B. Incorporate behaviour change components wherever possible; using a variety of education and communication strategies and tools.
C. Expand and prioritize education programs for the multi-family and ICI sectors.
D. Enhance K-12 school program to include concepts of zero waste and the circular economy.
E. Collaborate with stakeholders on education campaigns (in partnership with First Nations communities, municipalities and product stewards).
F. Continue supporting environmental stewardship recognition.
G. Continue to engage residents on solid waste matters using the appropriate level of consultation.

Strategy #2: Encourage Waste Prevention

Actions:

A. Promote less consumption and advocate for consumer responsibility.
B. Establish a community-based waste reduction grant program.
C. Support municipal, provincial and federal single-use item reduction efforts.
D. Promote sustainable and/or packaging-free purchasing options.
E. Advocate provincially and federally to limit or eliminate the manufacturing, distribution and/or sale of single use items and non-recyclable materials.
F. Advocate provincially and federally for sustainable product and packaging design.

Strategy #3: Support Reduction of Avoidable Food Waste

Actions:

A. Continue to support residential food waste reduction through education campaigns and composting promotion.
B. Continue to encourage the donation of edible food and support food recovery organizations.
C. Advocate for regulations that support avoiding food waste.

Strategy #4: Support Reuse Activities in the Region

Actions:

A. Continue to provide funding for non-profit reuse organizations to help offset costs for managing unusable donated items.
B. Continue to support and promote donations to reuse establishments.
C. Support reuse, renting and sharing programs (e.g. tool libraries, repair cafes and centres, sewing hubs, etc.) and other materials exchange activities.
D. Investigate the possibility of a free store at Hartland or other facilities.

Strategy #5: Support Local Governments in Working towards Zero Waste and a Circular Economy

Actions:

A. Develop model language for bylaws, best practices, official community plans, and economic development strategies for use by local governments using research and collaboration to guide this process (in partnership with municipalities and potentially other regional districts).
B. Work with local governments to identify the need for solid waste facilities and zoning for waste management activities. To be done in partnership with member municipalities.
C. Use policy tools to enable local recycling infrastructure.
D. Investigate 'pay-as-you-throw' principles to use as tools to incent less waste disposal.
E. Investigate use of clear bags for garbage or recyclables collection to encourage proper recycling of materials, where practicable and enforceable (e.g. at events).

Strategy #6: Continue and Enhance Policy Development

Actions:

A. Develop model procurement policies for use by local governments, non-profits, etc. To be done in partnership with member municipalities and other interested organizations.
B. Continue to expand material bans when viable alternatives exist.
C. Investigate licensing waste management facilities in the region to encourage transparency, consistency, and a requirement that all facilities protect public health and the environment.
D. Investigate regulatory mechanisms to manage municipal solid waste and recyclable materials in the region.
E. Investigate options for managing debris from extreme weather (e.g. community chipping days, special burning allowances in electoral areas).

5.2 Recycling

Strategy # 7: Increase Residential Diversion

Actions:

A. Continue to promote residential diversion of recyclable materials (including organics), ensuring that education campaigns strive to minimize contamination in these streams.
B. Collaborate with municipal and private sector service providers to support depot diversion efforts in the region for non-curbside materials.
C. Encourage local processing and markets for residential recyclables.
D. Develop tools, such as a guide, to support event recycling.

Strategy # 8: Increase Multi-Family Diversion

Actions:

A. Allocate resources to support multi-family recycling, for example, by developing standardized education materials.
B. Work with local governments and private sector service providers to develop multi-family waste source separation requirements.
C. Develop policy guide and recommendations for recycling, composting and garbage space and access in multi-family developments.
D. Collaborate with stakeholders (e.g., private haulers who service multi-family buildings or multi-family property managers) to implement support for multi-family recycling.

Strategy # 9: Increase Industrial, Commercial and Institutional Diversion

Actions:

A. Allocate resources to increase ICI diversion, for example, a business waste reduction liaison.
B. Advocate to expand the packaging and paper product EPR program to the ICI sector.
C. Create a business waste reduction toolkit, including education about how to apply circular economy principles.
D. Encourage municipalities to require waste management plans with business licenses.
E. Develop policy guide for ICI waste management space and access requirements.
F. Work with local governments and private sector service providers to develop ICI waste source separation requirements.
G. Investigate shifting disposal ban enforcement to the ICI generator, rather than hauler.

Strategy #10: Support Existing and New Extended Producer Responsibility Programs

Actions:

A. Advocate to the province to expand EPR programs.
B. Collaborate with stewards to increase consumer awareness about EPR programs.
C. Advocate for increased return-to-retailer opportunities.
D. Advocate federally to standardize EPR programs across Canada.

Strategy #11: Increase Organics Diversion and Processing Capacity

Actions:

A. Continue to promote organics waste material diversion.
B. Continue to utilize and monitor existing private sector organics processing capacity and seek to develop a facility at the Hartland Landfill site in the future should needed processing capacity not be found to be sufficiently available to meet the region's requirements. (Additional information on the process to develop this facility is in Section 6).
C. Support compost markets by purchasing back materials.
D. Collaborate with service providers and users (e.g., local businesses) to develop guidelines for use of compostable products and packaging.

Strategy #12: Increase Construction, Renovation and Demolition (CR&D) Material Diversion

Actions:

A. Develop a comprehensive CR&D strategy, including characterization of materials, best practices, and pilot projects.
B. Develop educational tools to support CR&D material diversion (e.g. create an industry toolkit, a deconstruction guide, and/or guidelines for diverting and utilizing reused materials).
C. Promote green building standards.
D. Continue collaboration with local governments to develop and use policy tools (e.g., construction permits, building codes) to maximize diversion and to align management plans.
E. Investigate beneficial uses of CR&D waste, including a clean wood waste landfill ban.
F. Investigate banning or surcharging mixed CR&D loads at the landfill to encourage source separation
G. Further develop programs for managing hazardous materials(e.g. asbestos)

Strategy #13: Encourage Proper Public Space Waste Management Activities

Actions:

A. Develop educational materials to prevent and reduce litter and abandoned materials in our neighbourhoods and public spaces.
B. Continue promoting alternatives to abandoned materials and illegal dumping by educating about proper management and disposal
C. Collaborate with stakeholders, including local governments and private sector facilities, to develop a regional approach to prevention of illegal dumping.
D. Investigate developing regionally-aligned litter bylaws. To be done in partnership with member municipalities.
E. Develop and pilot methodologies to 'observe, record, and report' on abandoned materials and illegal dumping incidents throughout the region.
F. Investigate options for large bulky item disposal, e.g., free drop-off days or large item pick-up days

5.3 Recovery and Residuals Management

Strategy #14: Optimize Landfill Gas Management

Actions:

A. Continue to maximize and optimize the capture of landfill gas for beneficial use.[6]
B. Investigate collaboration opportunities with educational institutions to research new beneficial uses and technologies.

Strategy #15: Enhance Hartland Disposal Capacity

Actions:

A. Review Hartland tipping fee structure and ban enforcement levels, subject to recycling market conditions
B. Continue to operate Hartland Landfill using best practices.
C. Develop design options that maximize the disposal capacity of Hartland Landfill to 2100 and beyond. (Note: See section 4.2.2.1.6 for details. Design and aggregate management options could extend landfill life significantly.)
D. Continue to conduct research, investigate and report out on emerging waste management technologies (including alternatives to landfilling such as integrated resource management and gasification).

[6] On April 22, 2020, the CRD announced approval in principle of an agreement where FortisBC will purchase renewable natural gas (RNG) generated from Hartland Landfill for beneficial use in its natural gas distribution system. The CRD and FortisBC are currently working together on a supply contract that will be submitted to the British Columbia Utilities Commission for approval. If approved by the commission, the CRD will continue to be responsible for the ownership and operation of the Hartland Landfill, the landfill gas collection system and the upgrade facility. The project is expected to reduce the region's greenhouse gas emissions by approximately 264,000 tonnes of carbon dioxide equivalent over the 25-year project life.

6 Organic Processing Facility Decision Process

Strategy #11 includes an action to continue to utilize and monitor existing private sector organics processing capacity, and seek to develop a facility at the Hartland site in the future should needed processing capacity not be found to be sufficiently available to meet the region's needs. This section provides additional detail on the history of organic material management and potential future management options.

The CRD implemented a kitchen scraps disposal ban at Hartland Landfill in 2015. In recognition of a lack of sufficient local processing capacity, the CRD expanded the kitchen scraps transfer area at Hartland to receive additional volumes of kitchen scraps collected within the region. Kitchen scraps are received from municipal and private sector split packer and single stream collection vehicles, loaded for efficient transport and hauled for processing at facilities on southern Vancouver Island.

The CRD intends to continue to provide the community with receiving and transport services for kitchen scraps through the transfer facility at Hartland while monitoring in-region and on-island processing capacity.

In response to a need to secure additional processing capacity for the community, a facility at Hartland may also be pursued in an effort to reduce the greenhouse gas emissions associated with the current transportation and processing model.

7 Implementation Schedule

In the short-term (the first 3 years of the plan's implementation), the focus will be on the actions that target the reduction and diversion of CR&D waste and organic materials. Also in the short-term, the actions associated single-family, multi-family, and ICI diversion will be implemented.

In the medium-term (4-5 years), the focus will be on continuing and improving the single-family, multi-family, and ICI programs.

In the long-term (full plan implementation), all programs will be refined to maintain and/or improve diversion levels. Additionally, new EPR programs are anticipated to be implemented within the timeframe of this plan; in particular the Plan anticipates the introduction of EPR for ICI-generated paper and packaging and textiles.

Schedule C provides a detailed planned implementation schedule for the Solid Waste Management Plan from 2021 to 2030.

8 Plan Targets

The targets established for this plan are focused on reducing the amount of waste landfilled on a per capita basis. The CRD has set a goal of exceeding the provincial target for per capita waste disposal. At the time of preparing this plan, the provincial target is 350 kg per capita. The per capita disposal targets proposed for the CRD are based on the strategies and actions described in Section 5 and are presented below in Table 8-1.

Table 8-1: Plan Targets

	Short-Term Goal (3 years)	Medium-Term Goal (5 years)	Long-Term Goal (10+ years)
Targeted Sectors/ Materials	▪ Construction, Renovation, and Demolition waste ▪ Organic waste from: • Single-family • Multi-family • Industrial, Commercial and Institutional	▪ Recyclables and organic waste from: ▪ Single-family ▪ Multi-family ▪ Industrial, Commercial and Institutional	▪ Extended producer responsibility for Industrial, commercial and institutional - generated paper and packaging and textiles ▪ Refine programs to increase performance for all sectors
Disposal Target (kg per capita)	**340**[1]	**285**	**250**[2]

1. This target is aggressive and assumes that disposal bans for CR&D materials would be implemented.
2. This target is aggressive and assumes that new EPR programs will be implemented by the Ministry in the long-term timeframe.

9 Financing

The strategies and actions outlined in this Solid Waste Management Plan are intended to decrease community waste generation from 380kg per capita down to 250kg per capita over the 10 year planning horizon.

In 2019, all costs associated with solid waste disposal and diversion programs in the CRD were funded through tipping and user fee revenues at Hartland Landfill, collection contract revenues, sale of electricity and sale of recyclables. The costs of the CRD's solid waste services, including the funding of reserves, was $27,646,550.

The annual incremental cost to deliver the strategies and actions identified in the Solid Waste Management Plan is $320,000 to $345,000 per year as shown in Table 9-1. This is an increase of approximately 1% per year.

Table 9-1: New Costs Associated with Solid Waste Management Plan Strategies and Actions

Strategy		**Annual Cost**
1	Continue and Enhance Education Programs	$100,000
2	Encourage Waste Prevention	$50,000
7	Increase Residential Diversion	$25,000 (for 2 years)
8	Increase Multi- Family Diversion	$50,000
9	Increase Industrial, Commercial and Institutional Diversion	$50,000
12	Increase Construction, Renovation and Demolition Material Diversion	$50,000
13	Enhance Public Space Waste Management	$20,000
	Total	**$320,000 - $345,000**

The 10 year operating and capital projections for the CRD's solid waste services, including the proposed SWMP investments and resulting tonnage reductions, can be funded by tipping fees, program revenues, reserve balances and other projected revenues (including renewable natural gas), without the need for tax requisition or external debt. Schedule D shows the estimated financial impact of the projected expenditures and decreasing per capita disposal.

10 Plan Flexibility

Due to changing circumstances and priorities that may evolve over time, and with the input of the Solid Waste Advisory Committee and interested parties, all major actions identified in the Plan will be reviewed for appropriateness before implementation. This will generally occur on an annual basis. The Plan's implementation schedule will be flexible enough to reflect the availability of technologies that may arise over time, as well as the potential changes in regional issues and priorities. In addition, it will also take into account the financial priorities of member municipalities and other partners, the availability of funding to undertake actions listed in this Plan, and the availability of contractors and service providers.

The Plan is a "living document" that may be amended to reflect new considerations, technologies and issues as they arise.

An amendment of this Plan would be required if there were major changes to the solid waste management system of the following nature:

a. The opening (or changes to the location or status) of a site or facility that is *not* already identified in this *Plan* and requires an authorization under BC's Environmental Management Act; or any other facility that could have an adverse impact to human health or the environment, as determined by the BC Environmental Management Act;
b. Waste import / export options which would significantly impact the CRD's or neighbouring regional district's solid waste systems, or not conform to provincial legislation, goals and/or waste reduction targets;
c. Significant changes to the *Plan's* disposal targets or reductions in programs supporting the first 3Rs;
d. A change in the boundary of the *Plan*, which would significantly change the amount of solid waste to be managed under the *Plan* or significantly change the population of the *Plan* area;
e. The addition, deletion or revision of policies or strategies related to the conditions outlined in the Minster's approval letter; and
f. Major financial changes that warrant seeking elector assent.

If a Plan amendment becomes necessary, the CRD would need to undergo a public consultation process and submit an amended plan to the Minister of Environment for approval, along with a detailed consultation report.

11 Plan Monitoring and Measurement

The implementation of the Solid Waste Management Plan will be monitored to determine its on-going effectiveness. As part of this monitoring, CRD staff will review and report out on regional demand as it relates to Hartland Landfill capacity. Annual measurement and monitoring allows for course corrections to be made in a timely manner, and to consider strengthening plan targets.

The following monitoring and measurement actions will be undertaken.

1. **Plan Monitoring:** Monitoring progress on the Plan's implementation will be undertaken by the Solid Waste Advisory Committee on an annual basis. This will maintain the linkage between the development of the plan and its implementation. The terms of reference for the Solid Waste Advisory Committee are included in this Plan as Schedule A.

2. **Annual Reporting**: On an annual basis, CRD staff will continue to prepare and publicize an Environmental Resource Management Progress Report that describes the CRD's current solid waste management activities and provides several metrics including the amount of waste landfilled per capita. This report will include the status of the Plan's implementation and progress toward the Plan's targets. Additionally, the report will identify any challenges or opportunities that are affecting (or have the potential to affect) the Plan's implementation. This report will be provided to the Solid Waste Advisory Committee and the Board. It will also be promoted publicly through a range of CRD communications channels.

3. **BC Disposal Calculator:** CRD will continue to compile data annually on all of the municipal solid waste disposal activities in the regional district for reporting to the BC Ministry of Environment's on-line disposal calculator.

4. **Interim Assessment / Plan Update:** As per the BC Guidelines for Solid Waste Management Planning, five years into the implementation of the Plan, the CRD intends to carry out a review of the plan's implementation and effectiveness. The CRD also intends to undertake a Plan renewal after ten years.

5. **Waste Composition Study:** The CRD has been undertaking waste composition studies approximately every 5 years since 1990. The CRD will continue undertake these studies to provide valuable insight into how the Plan's implementation is affecting what is landfilled. This information will also help to inform the preparation of the Interim Assessment and next Plan renewal.

12 Inter-Regional District Cooperation

The CRD recognizes the value of collaborating with other regional districts with an aim to improve cost-efficiencies of providing solid waste services, and also to learn from each other through sharing ideas and experiences. To this end, the CRD are members of the following organizations:

- Coast Waste Management Association
- Recycling Council of BC
- Association of Vancouver Island and Coastal Communities Solid Waste Management Committee
- BC Product Stewardship Council
- Solid Waste Association of BC

Additionally, the CRD has partnered with the Cowichan Valley Regional District and the Regional District of Nanaimo to undertake solid waste technical studies of mutual interest.

During the implementation of this Plan, the CRD will continue to participate in the above organizations as a means of collaborating with other BC regional districts, and particularly to work on solid waste solutions for Vancouver Island.

13 Plan Amendments

This Plan represents the current understanding and approach to the solid waste management challenges being faced by the CRD. The Plan is a "living document" that may be amended to reflect new considerations, technologies and issues as they arise.

The need for a plan amendment will be triggered by major changes to the solid waste management system which would include:

a. The opening of a site or facility that requires an authorization under the Environmental Management Act that is not currently recognized in this Plan;
b. Any other facility that could have an adverse impact to human health or the environment, as determined by the BC Environmental Management Act;
c. Waste import / export options which would significantly impact the regional district's or neighbouring solid waste systems, or not conform to provincial legislation, goals and / or targets; and
d. Major financial changes that warrant seeking elector assent.

When a plan amendment becomes necessary, the CRD will undergo a public consultation process and submit an amended plan to the Minister of Environment for approval, along with a detailed consultation report.

14 Dispute Resolution

Although consultation efforts may prevent or minimize conflicts, at times disputes may arise during development or implementation of the plan. To this end, a dispute resolution procedure has been included to address complaints or concerns that occur during plan development or implementation.

This dispute resolution procedure, included as Schedule B, may apply to the following types of conflicts that could arise during plan implementation:

- Administrative decisions made by the regional district such as:
  - The issuance of a license
  - Interpretation of a statement, bylaw, policy or provision in the plan
- Any other matter not related to a proposed change to the wording of the plan or an operating certificate

Schedule A: Solid Waste Advisory Committee Terms of Reference

PREAMBLE

The Capital Regional District (CRD) Solid Waste Advisory Committee is an Advisory Committee established by the CRD Environmental Services Committee to provide input on solid waste management matters and meet the requirements of the Ministry of Environment's Guide to Solid Waste Management Planning for an advisory committee on the development and implementation of the Solid Waste Management Plan (SWMP).

The Committee's official name is to be: Solid Waste Advisory Committee

1.0 PURPOSE

The mandate of the Committee includes advising the Environmental Services Committee regarding the following:

a. providing input on major solid waste management matters
b. serving as the advisory committee to the Steering Committee (Environmental Services Committee) on the development of Revision 3 of the SWMP
c. acting as plan monitoring advisory committee for the new SWMP, once approved

2.0 ESTABLISHMENT AND AUTHORITY

a. The Environmental Services Committee will:
    - appoint the committee members for up to a three-year term
    - act as the Steering Committee for Revision 3 of the SWMP
    - appoint a member as the liaison between the advisory committee and the Environmental Services/Steering Committee
b. The Committee will report its input to the Environmental Services Committee for consideration. The CRD Board is the final decision-making authority.

3.0 COMPOSITION

The Committee shall consist of members representing a diversity of background, interests and geographical location, representing a balance between technical and non-technical members and industry and public members, as follows:

Representation	Number of Members
Regional district director (member of Environmental Services Committee)	1
Municipal engineering staff who are involved in solid waste collection	2
Electoral Area representative	1
First Nations	2
Environmental organizations	1
Business groups	1
Non-profit group with an interest in solid waste (e.g. reuse organization)	1
Large waste generators (industrial, commercial, institutional)	2
Owners/operators of private waste management facilities	2
Private sector industry collection service providers	2
Composting industry representative	1
Product stewardship agency	1
Community representative (representing Prospect Lake/Hartland area)	1
Public representatives, at large	3
Willis Point representative	1
District of Highlands representative	1
Solid Waste Technology representative	1

4.0 PROCEDURES

a. The CRD Board Procedures Bylaw will apply.
b. Member from Environmental Services Committee shall be Chair of Solid Waste Advisory Committee.
c. The committee shall meet at the call of the Chair and have special meetings, as required.
d. The agenda will be finalized in consultation between staff and the Chair.
e. A quorum is a majority of the committee membership and is required to conduct committee business.

5.0 RESOURCES AND SUPPORT

a. The Senior Manager, Environmental Resource Management, will lead the coordination and allocation of resources to the Committee.
b. Minutes and agendas are prepared and distributed by the Environmental Resource Management division.

Schedule B: Plan Dispute Resolution Procedures

Disputes will be settled using the following procedure:

Negotiation	• Parties involved in the dispute shall make every effort to resolve the dispute on their own through non-facilitated communication. If necessary, the parties will provide each other with a written summary of their position and any relevant supporting documentation. • Parties may agree to make use of a facilitator.
If this is unsuccessful, then:	
Environmental Services Committee	• Parties involved in the dispute will have opportunity to speak to the Committee. • Committee will review, consider and provide recommendations to the Board. Committee may refer to the Solid Waste Advisory Committee.
Then:	
CRD Board	• Board will receive recommendations from the Committee and settle the dispute; or, recommend mediation.
If the board is unable to settle the dispute, then:	
Mediation	• A neutral, impartial third-party facilitator who is acceptable to all the parties to the dispute will be selected. Using appropriate mediation techniques, the facilitator will attempt to develop a solution which satisfies all parties. The facilitator has no decision-making authority. If the parties cannot agree on a mediator, the matter shall be referred to the BC Mediation Roster Society or equivalent roster organization for selection of a mediator. • All efforts will be made to reach an agreement through mediation. • Costs for mediation will be shared by the parties in dispute.
If this is unsuccessful, then:	
Independent Arbitrator	• If the dispute cannot be resolved by a mediator, the matter will be referred to arbitration and the dispute will be arbitrated in accordance with any applicable legislation. A neutral, impartial third-party arbitrator who is acceptable to all the parties to the dispute will be selected. The arbitrator hears each party's evidence and arguments and renders a final, binding decision. • Costs for arbitration shall be apportioned at the discretion of the arbitrator.

Further to the above, the following principles will be followed if and when the dispute resolution process is invoked:

i. The parties will make all reasonable efforts to attempt to resolve the dispute in an amicable manner without outside intervention

ii. Disputes will be attempted to be resolved as early and at the lowest administrative level as possible; every effort will be made to avoid disputes requiring a formal resolution process

iii. The formal process is not intended to deal with inconsequential or frivolous disputes

iv. The cost of mediation or adjudication will be shared by the parties to the dispute

v. Information or data related to the dispute will be shared by the parties

vi. Rules of confidentiality and freedom of information will apply

Schedule C: Implementation Schedule

	Ongoing
	Planning/Design Phase
	Implementation Phase

Implementation Schedule is subject to revision based on annual review and Board direction.
Actions listed have been condensed in this schedule for readability, full descriptions can be found in Section 5.

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Reduction and Reuse										
Strategy #1: Continue and Enhance Education Programs (medium-term, 5 year goal)										
A. Ensure ongoing, up-to-date promotion and education resources										
B. Incorporate behaviour change components wherever possible										
C. Expand and prioritize education programs for the multi-family and industrial, commercial and institutional sectors										
D. Enhance K-12 school program to include concepts of zero waste and the circular economy										
E. Collaborate with stakeholders on education campaigns										
F. Continue supporting environmental stewardship recognition										
G. Continue to engage residents on solid waste matters										
Strategy #2: Encourage Waste Prevention (medium term, 5 year goal)										
A. Promote less consumption and advocate for consumer responsibility										
B. Establish a community-based waste reduction grant program										
C. Support municipal, provincial and federal single-use item reduction efforts										
D. Promote sustainable and/or packaging-free purchasing options										
E. Advocate to limit or eliminate manufacturing, distribution and/or sale of single use and non-recyclable materials										
F. Advocate provincially and federally for sustainable product design										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Strategy #3: Support Reduction of Avoidable Food Waste (short-term, 3 year goal)										
A. Continue to support residential food waste reduction										
B. Continue to encourage the donation of edible food and support of food recovery organizations										
C. Advocate for regulations that support avoiding food waste										
Strategy #4: Support Reuse Activities in the Region (medium term, 5 year goal)										
A. Continue to provide funding for non-profit recycling organizations for managing unusable donations										
B. Continue to support and promote donations to reuse establishments										
C. Support reuse, renting and sharing programs										
D. Investigate the possibility of a free store at Hartland or other facilities										
Strategy #5: Support Local Governments in Working towards Zero Waste and a Circular Economy (medium term, 5 year goal)										
A. Develop model language for use by local governments										
B. Work with local governments to identify need for solid waste facilities/zoning for activities										
C. Use policy tools to enable local recycling infrastructure										
D. Investigate 'pay-as-you-throw' principles										
E. Investigate use of clear bags for garbage/recyclables collection										
Strategy #6: Continue and Enhance Policy Development (medium term, 5 year goal)										
A. Develop model procurement policies for use by local governments, non-profits, etc.										
B. Continue to expand material bans when viable alternatives exist										
C. Investigate licensing waste management facilities in the region										
D. Investigate regulatory mechanisms to manage municipal solid waste and recyclable materials in the region										
E. Investigate options for managing debris from extreme weather										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Recycling										
Strategy # 7: Increase Residential Diversion (medium term, 5 year goal)										
A. Continue to promote residential diversion of recyclable and organic materials										
B. Support depot diversion efforts for non-curbside materials										
C. Encourage local processing and markets for residential recyclables										
D. Develop tools to support event recycling										
Strategy #8: Increase Multi-Family Diversion (medium term, 5 year goal)										
A. Allocate resources to support multi-family recycling										
B. Develop multi-family waste source separation requirements										
C. Develop policy guide and recommendations for waste management in multi-family developments										
D. Implement support for multi-family recycling										
Strategy #9: Increase Industrial, Commercial and Institutional Diversion (medium term, 5 year goal)										
A. Allocate resources to increase ICI diversion										
B. Advocate to expand the packaging and paper product extended producer responsibility program to the industrial, commercial and institutional sector										
C. Create a business waste reduction toolkit, including education about circular economy principles										
D. Encourage municipalities to require waste management plans with business licenses										
E. Develop policy guide for industrial, commercial and institutional waste management space and access requirements										
F. Develop industrial, commercial and institutional waste source separation requirements										
G. Investigate shifting disposal ban enforcement to industrial, commercial and institutional generator, rather than hauler										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Strategy #10: Support Existing and New Extended Producer Responsibility Programs (medium term, 5 year goal)										
A. Advocate to the province to expand extended producer responsibility programs										
B. Increase consumer awareness about extended producer responsibility programs.										
C. Advocate for increased return-to-retailer opportunities										
D. Advocate federally to standardize extended producer responsibility programs across Canada										
Strategy #11: Increase Organics Diversion and Processing Capacity (short term, 3 year goal)										
A. Continue to promote organic waste material diversion										
B. Continue to utilize and monitor existing processing capacity										
C. Support compost markets by purchasing back materials										
D. Develop guidelines for use of compostable products and packaging										
Strategy #12: Increase Construction, Renovation & Demolition Material Diversion (short term , 3 year goal)										
A. Develop a comprehensive construction, renovation & demolition strategy										
B. Develop educational tools to support construction, renovation & demolition material diversion										
C. Promote green building standards										
D. Develop and use policy tools to maximize diversion and to align management plans										
E. Investigate beneficial uses of construction, renovation & demolition waste, including a clean wood waste landfill ban										
F. Investigate banning or surcharging mixed construction, renovation & demolition loads at the landfill										
G. Further develop programs for managing hazardous materials (like asbestos)										
Strategy #13: Encourage Proper Public Space Waste Management Activities (med term, 5 year)										
A. Develop educational materials to prevent and reduce litter and abandoned materials										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
B. Continue promoting alternatives to abandoned materials and illegal dumping activity										
C. Develop a regional approach to prevention of illegal dumping										
D. Investigate developing regionally-aligned litter bylaws										
E. Develop and pilot methodologies to 'observe, record and report' abandoned material and illegal dumping incidents										
F. Investigate options for large bulky item disposal										
Recovery and Residuals Management										
Strategy #14: Optimize Landfill Gas Management										
A. Continue to maximize and optimize the capture of landfill gas for beneficial use										
B. Investigate collaboration opportunities with educational institutions										
Strategy #15: Enhance Hartland Disposal Capacity										
A. Review Hartland tipping fee structure and ban enforcement levels										
B. Continue to operate Hartland Landfill using best practices										
C. Develop design options to maximize disposal capacity of Hartland Landfill to until 2100 and beyond										
D. Continue to conduct research and investigate and report out on emerging waste management technologies										

Schedule D: Estimated Financial Impact

ERM Budget Implications Arising From Achieving 250 kg Per Capita Disposal Rate by 2030										
	2021	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Total Revenue [1, 2, 4]	**$24,413,500**	**$24,472,500**	**$24,182,090**	**$27,322,276**	**$27,163,064**	**$27,004,459**	**$26,736,469**	**$26,469,099**	**$26,202,355**	**$25,881,243**
Total Expenditures[3]	$25,462,000	$24,453,000	$24,178,000	$31,403,000	$27,403,000	$27,403,000	$27,403,000	$28,087,000	$28,275,000	$28,742,000
Net Annual Surplus/Deficit	**-$1,048,500**	**$19,500**	**$4,090**	**-$4,080,724**	**-$239,936**	**-$398,541**	**-$666,531**	**-$1,617,901**	**-$2,072,645**	**-$2,860,757**
Combined Reserve Fund Balance[3, 4]	$49,671,000	$34,824,000	$19,671,000	$15,590,276	$15,350,340	$14,951,799	$14,285,268	$12,667,366	$10,594,721	$7,733,964
Per Capita Disposal Rate	316	313	310	302	295	287	278	269	260	250

[1] General refuse tipping fee is $110 per tonne

[2] Controlled waste and asbestos tipping fees are $157 per tonne

[3] From CRD Finance and includes Sustainability, Equipment, Capital, Closure and Air Space reserve funds (2021 budget doc - Sept 2020).

[4] The Hartland renewable natural gas project significantly impacts reserve balances to fund construction (2022-2023) and increases revenues starting in 2024

APPENDIX B

PROPOSED PLAN REVISIONS

In line with provincial guidance, staff have considered all feedback received through phase two consultation. A fulsome summary of the feedback received, cross referenced against the draft plan, along with proposed approach to addressing feedback is found in Appendix D of the staff report. In response to phase two consultation, staff recommend a series of revisions that have been incorporated into the final draft Plan. These revisions include:

Glossary

- Definition of zero waste has been added to the plan.

Section 1.4: Climate Change and the Solid Waste Management Plan

- Content has been strengthened to further highlight the inter-relationship between climate change and solid waste management. This section discusses the greenhouse gas implications of the waste system more broadly than the landfill, references the important roles that zero waste and the circular economy play in addressing climate change, and identifies the potential to mitigate fugitive emissions from the landfill.

Section 4.2.2.1.6: Hartland Landfill (Estimated Lifespan)

- Content has been revised to speak more explicitly to the vision to keep the Hartland footprint as small as possible, and to review evolving regional demand and landfill capacity as part of the annual progress report on the Solid Waste Management Plan before phasing-in future development of the Hartland Property in 2030, unless more waste is diverted, or a new technology for managing waste becomes available and economically feasible for the CRD.

Section 4.2.2.1.7: Hartland Landfill (Community Benefit)

- Content has been revised to speak to how phasing-in future development of the Hartland Property will impact the existing mountain biking trails, and that if closing trails is necessary, staff will work with the mountain biking community on alternative trail options.

Section 5: Strategies and Actions

- A new paragraph has been added in the preamble that explains why the actions are articulated at a high-level and clarifies the scope of the plan as a guiding document intended to provide the policy framework to guide the CRD's programming around solid waste, rather than specific operational details.
- Minor revisions have been made to actions throughout, to clarify intent and ensure actions are consistent in their level of detail.
- Action 1E has been revised to explicitly reference First Nations groups.
- Actions 3B and 3C have been merged into one for clarity.
- Action 11B has been revised from "develop an organic waste processing facility at the Hartland Landfill site to receive and process kitchen scraps" to "continue to utilize and monitor existing private sector organics processing capacity and seek to develop a facility at the Hartland Landfill site in the future, should needed processing capacity not be found to be sufficiently available to meet the region's needs".
- Action 14A has been revised to clarify the CRD's intent to both maximize and optimize the beneficial use of landfill gas.
- Action 15C has been revised to explicitly reference the revised content within 4.2.2.1.6 on Hartland Landfill estimated lifespan (see above).
- Action 15D has been revised, based on feedback from the Township of Esquimalt, to clarify intention to explore alternatives to landfilling—including integrated resource management and gasification—and report out on findings.

Section 6: Organics Processing Facility Decision Process

- Section has been revised to indicate that the CRD intends to continue to provide the community with receiving and transport services for kitchen scraps through the transfer facility at Hartland, while monitoring in-region and on-island organics processing capacity. In response to a need to secure additional processing capacity for the community, a facility at Hartland may also be pursued in an effort to reduce the greenhouse gas emissions associated with the current transportation and processing model.

Section 11: Plan Monitoring and Measurement

- Section 11 now includes explicit commitment to publicly promote the annual report/per capita disposal rate.

Plan Appendices

- Following the *Guide to Solid Waste Management Planning*, the detailed evaluation of the plan strategies and actions, and the public consultation feedback on Hartland Landfill was included for engagement purposes and has been removed from the final draft Plan and is on the CRD website. The phase one and phase two engagement reports will be filed directly with the Ministry as part of the submission seeking plan approval, and are also on the website. The final draft plan now includes four schedules:
  - Schedule A: Solid Waste Advisory Committee Terms of Reference
  - Schedule B: Plan Dispute Resolution Procedures
  - Schedule C: Implementation Schedule
  - Schedule D: Estimated Financial Impact.

There have been no significant changes to the content of these schedules, except Schedule D, Estimated Financial Impact now considers the financial impact of the proposed Hartland access mitigation funding of up to $4 million.

Capital Regional District

Phase 2 Engagement Summary — Draft Solid Waste Management Plan

Final Report Date: March 29, 2021

Report prepared by Catapult Strategy on behalf of Capital Regional District

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Executive Summary

The Capital Regional District (CRD) is developing a new Solid Waste Management Plan (SWMP)—the plan that guides how the region will manage solid waste in the coming years. Solid waste includes recyclables, compostable materials and garbage from homes, businesses, institutions, and construction and demolition sites.
Solid waste management planning is a regional district responsibility, guided by the provincial Environmental Management Act and the provincial Guide to Solid Waste Management Planning. Public engagement is an important aspect of the development of a SWMP. In October 2018, the CRD Board approved guiding principles, goals and objectives for the new plan. In September 2019, the Board approved a waste reduction target and 15 proposed strategies with associated actions and directed staff to conduct a first phase of public consultation.

Phase 1 of public engagement was extensive and took place between October 18 and December 1, 2019. This first round was largely focused on research and consultation with the general public and a consultation report was completed in February 2020. Phase 2 of public and interested parties engagement took place from November 18, 2020 to February 15, 2021. This phase focused on consultation with CRD municipalities, local First Nations, neighbouring regional districts, Hartland neighbours as well as additional general public consultation.
The primary focus of this document is to present a summary the approach and feedback gathered in Phase 2.

Various forms of outreach were used in the consultation process including Chief Administrative Officer (CAO) letters offering presentation and invitation for input, a media release, social media (paid and earned), print media, emails to interested residents, online public information sessions, site tours of Hartland Landfill, focused community input meetings and direct neighbourhood outreach. The outreach approach adhered to Ministry of Environment and Climate Change's (ENV) provincial consultation requirements.

Several CRD municipal councils received presentations and formally provided expressions of support for the Draft Plan as well as confirmed many areas of alignment within their own municipal plans, including Victoria, Central Saanich, Saanich, Oak Bay and Esquimalt. Highlands received a presentation and provided neither support nor opposition to the Draft Plan. All other municipalities provided no response. What we heard from municipalities:

- No formal opposition was expressed from any municipality;
- Support for the Draft Plan and its focus on the 5R Pollution, Prevention Hierarchy;
- Desire for the CRD to maximize the use of municipal authorities to reduce waste, providing the necessary resources to support municipalities;
- Desire for the CRD to provide bold leadership and facilitate accelerated regional collaboration on powerful actions that achieve the waste disposal targets;

- City of Victoria's *Zero Waste Victoria* plan aligned. A desire to prioritize actions within the SWMP to support the City's implementation of *Zero Waste Victoria*.

Similarly, neighbouring Cowichan Valley Regional District provided formal written support of the Draft Plan and Regional District of Nanaimo reciprocated CRD's invitation with a presentation of their own SWMP.

CRD staff also met with WSÁNEĆ Leadership Council (WLC) and delivered a presentation that was well received. The WLC expressed desire for the CRD to establish a WSÁNEĆ Leadership Council/Capital Regional District negotiation table and provide information regarding the Solid Waste Management Plan to WSÁNEĆ communities. Esquimalt First Nations also received a presentation and the meeting was generally positive.

Public Consultation in Phase 2 was built upon extensive Phase 1 consultation activities. The 'public' category was subdivided into two segments: A) general public and B) community groups/residents living near Hartland Landfill. Much of Phase 2 public consultation was with community associations and community groups in immediate proximity to Hartland Landfill for whom the expansion and changes in traffic patterns would have the most direct impact. Specifically, Highlands District Community Association (HDCA), Prospect Lake District Community Association (PLDCA), Willis Point Community Association (WPCA) and the Mount Work Coalition (MWC).

Both MWC and WPCA have expressed vocal opposition to the Draft Plan. There appears to be some overlap between these two groups as MWC is comprised of mostly of WPCA residents as well as residents living close to the area. Summary of key feedback we heard:

- Traffic/traffic safety around Hartland Landfill was a key concern (vehicle, cycling and pedestrian safety; key intersections)
- Opposed any expansion and strongly supported more aggressive reduction targets
- Strongly opposed to any tree removal and destruction of natural habitat
- Concerned about illegal dumping
- Concerned about loss of peaceful parkland/ impact on bike trails
- Felt reliance on tipping fees to fund Hartland's operations is counter-intuitive to zero waste
- Want Hartland decision postponed so that both waste reduction achieved in the CRD, and the effectiveness of alternative methods be reviewed by Hartland staff and the CRD board in 2028 prior to any approval of Draft Plans to expand the landfill

PLDCA also expressed concerns though almost entirely focused on a single issue — traffic/traffic safety as it relates to the operational change to move commercial access to Hartland Landfill. Although this change is not part of the Draft Plan, a traffic study was commissioned and a copy of this study was placed on the website for reference and comment during Phase 2 consultation in recognition that traffic was a key concern for Hartland-area neighbours.

Phase 1 Recap

The Capital Regional District (CRD) is developing a new Solid Waste Management Plan (SWMP)—the Draft Plan that guides how the region will manage solid waste in the coming years. Solid waste includes recyclables, compostable materials and garbage from homes, businesses, institutions, and construction and demolition sites.

Solid waste management planning is a regional district responsibility, guided by the provincial Environmental Management Act and the provincial Guide to Solid Waste Management Planning. Public engagement is an important aspect of the development of a SWMP. In October 2018, the CRD Board approved guiding principles, goals and objectives for the new plan. In September 2019, the Board approved a waste reduction target and 15 proposed strategies with associated actions and directed staff to conduct a first round of public consultation.

The CRD carried out an extensive first phase of public engagement that sought feedback on the goals and strategies proposed for a new regional solid waste management plan in late 2019.

Phase 1 public engagement took place between October 18 and December 1, 2019. During this phase, all capital region residents were invited to provide their input through a variety of channels, including an online feedback form—the CRD received more than 1000 of these forms during the course of phase one—and in-person opportunities at 21 open houses and stakeholder meetings.

A phase 1 consultation report was completed in February 2020. Draft Plan elements and detailed feedback are available for review at www.crd.bc.ca/rethinkwaste

Phase 2 Engagement Approach

Phase 2 consultation took place between November 18, 2020 and February 15, 2021. It was focused on CRD municipalities, local First Nations, neighbouring regional districts as well as additional public consultation. Outreach methods were comprised of letters, phone calls, presentations, advertising, social media, site tours, website, rolling FAQ and information sessions. A breakdown of approach by audience segment is summarized below.

Municipalities, Electoral Areas and Neighboring Regional Districts Outreach Approach

At the outset of Phase 2 engagement, CAO letters were sent to each CRD municipality, electoral area as well as Nanaimo and Cowichan Valley Regional Districts offering presentation and invitation for feedback. Response from municipalities was mixed with several groups requesting presentations whereas others provided letter of support without presentation, others provided no response at all.

- Presentations and letters of support: Central Saanich, Victoria, Saanich, Oak Bay, Esquimalt
- City of Colwood staff asked for a meeting to discuss the Draft Plan but did not bring the report to council.

- Town of Sidney provided a letter of support without a presentation.
- District of Highlands requested a presentation but have not yet provided a letter of support or opposition.
- Municipalities that did not respond at all include most of the West Shore and North Saanich.

First Nations Outreach Approach

Similar to the approach taken with municipalities and regional districts, a CAO letter offering presentation and invitation for feedback was sent to local First Nations.

General Public Outreach Approach

From November 18, 2020 to February 15, 2021, general public outreach to inform and solicit feedback took a few different forms:

- Media Release
- Print Advertising: Times Colonist and Black Press newspapers (two rounds)
- Social Media (paid and organic): Eight Facebook posts and nine tweets
- Emails: Four emails sent to SWMP project subscriber list inviting feedback (358 residents)
- Online Public Information Session: Moderated by Gregor Craigie (via YouTube Live) the session received
  410 total views with 82 people watching live for some or all of the session.
  110 questions came in via Slido for this event that were either answered live or in the FAQs following the event.

Figure 1. Example of earned media Nov 18, 2020

Figure 2. Social media post promoting live-streamed information session

Hartland Neighbours Outreach Approach

Recognizing that municipalities and communities in close proximity to Hartland Landfill would be most affected by landfill development and traffic changes, an outreach program was specifically designed to engage with these audiences. Formal touchpoints included:

- Direct Outreach: At the outset of the public engagement process, a copy of the Draft Plan along with an invitation for input was sent to Highlands District, Prospect Lake District and Willis Point Community Associations.
- Small Group and Individual Site Tours: Three tours of Hartland Landfill and the Residuals Treatment Facility were organized. One took place, two were cancelled due to new provincial health orders. As an alternative, CRD staff offered individual tours of the site to all members of the Willis Point,Prospect Lake and Highlands District Community Associations. Several reminders of this tour offer were made via email and during Zoom calls held in January. To date nobody has taken up this opportunity.
- Focused Community Input Meetings: CRD staff organized two video meetings with the Highlands District, Prospect Lake District and Willis Point Community Associations on January 13 (27 area residents participated) and January 21 (38 areas residents participated).

It is acknowledged that the CRD SWMP public engagement process occurred during the Covid-19 pandemic. Some outreach initiatives were modified from in-person to online to reflect provincial health orders.

Opposition Groups Outreach Approach

One community association and one advocacy group have expressed vocal opposition to the Draft Plan — the Willis Point Association (WPCA) and Mount Work Coalition (MWC). There appears to be some overlap between these two groups as MWC is comprised of mostly of WPCA residents as well as residents living close to the area.

In addition to the formal communication touchpoints noted above, CRD staff responded to every request received during the feedback period. This included 15 inquiries and requests for access to reports and operational documents that were satisfied in a timely manner.

Confirmation of Adherence to Provincial Consultation Requirements

The Ministry of Environment and Climate Change's *Guide to Solid Waste Management Planning* was used by CRD as its framework for consulting with the general public and interested parties.

Consultation audiences per ENV Guidelines included First Nation communities, municipalities and electoral areas, neighbouring regional districts and the general public. In addition, though not stipulated by the Guidelines, CRD's

Board required Hartland neighbours be segmented for additional consultation as they most directly experience any impacts of landfill development and traffic changes.

The design of the consultation process reflects section B4.2 of the Guidelines and included numerous touch points to engage, build understanding of the Draft Plan and solicit input. Through its approach, CRD has demonstrated that the public and interested parties were consulted on the Draft Plan and that the outcome of consultation were considered in the finalization of the Draft Plan.

Municipal Governments Consultation Findings

Each of Capital Regional District's 13 municipalities and three electoral areas were consulted in Phase 2. Each received a CAO letter with the offer of a presentation and invitation for input. In response, several municipalities provided letters of support. These letters can be found in Appendix A.

District of Central Saanich

A presentation of the Draft Plan was delivered at a council meeting. Following this, District Councilors reviewed and provided a letter endorsing the Draft Plan.

City of Colwood

City of Colwood staff asked for a meeting to discuss the Draft Plan but did not bring the report to council. An endorsement letter has not been received to date though a suggestion that one might be coming was conveyed.

Township of Esquimalt

A presentation of the Draft Plan was delivered at a council meeting. Following this, Council provided a letter that expressed support of the Draft Plan along with a request for modification.

WHAT WE HEARD

- Specially, that the Draft Plan is deficient in not referring to the Township's attempt to carry out an integrated resource management strategy for solid waste, kitchen scraps and yard/garden waste streams generated within the Township. The Township is requesting the CRD include, within the SWMP, supportive language that addresses the Township's efforts in this endeavor.

District of Highlands

CRD staff met with the District of Highlands and delivered a presentation of the Draft Plan at a council meeting. To date neither a letter of support or opposition has been provided.

District of Oak Bay

District Council reviewed and provided a letter of support endorsing the Draft Plan as well as thanked CRD for the input opportunity.

"As a municipal partner in regional solid waste management, Council very much appreciated your offer to have CRD staff meet with them to review the Plan in more detail and as questions" Lou Varela, CAO

District of Saanich

Saanich is among the largest contributing regions of waste disposed of at Harland. A presentation of the Draft Plan was delivered at a council meeting. Following this, District Council provided a letter expressing support for the Draft Plan and for its focus on the 5R Pollution, Prevention Hierarchy.

WHAT WE HEARD

- Desire for the CRD to provide bold leadership and facilitate accelerated regional collaboration on powerful actions that achieve the waste disposal targets.
- The desire for the CRD to maximize the use of municipal authorities to reduce waste, providing the necessary resources to support municipalities, including the development of additional bans, surcharges, CRD bylaws, model municipal bylaws, processing facilities, requirements and guidelines that support actions such as waste stream management licensing, construction waste diversion, source separation in multi-family residences, use and acceptance of compostable and bio-based food service ware etc.
- The desire for the Draft Plan to reference the additional benefits of a regional organics processing facility associated with the greenhouse gas (GHG) emissions savings from the reduced transportation of organics outside of the region.

"These actions are clearly aligned with the CRD Draft SWMP. Further, most of the strategies and actions identified within the Draft SWMP will support the District of Saanich in implementing Climate Plan Strategy F2 and assist us in reaching our climate targets. As such, staff support the strategies and actions outlined in the Draft SWMP."

Town of Sidney

Town Council reviewed and provided a letter conveying their endorsement of the Draft Plan.

City of Victoria

It is estimated that one-third of the waste disposed at Harland is generated by residents, businesses, industry and construction activities within Victoria. A presentation of the Draft Plan was delivered at a council meeting. Following

this, letters of support were received by both Victoria City Manager as well as the Mayor. They reinforced that the City's *Zero Waste Victoria* plan aligned well with CRD's SWMP and a desire for collaboration exists.

WHAT WE HEARD

Desire to prioritize actions within the SWMP to support the City's implementation of Zero Waste Victoria:

1. Organics diversion
    - That the CRD accelerate the creation of requirements for source separation in multi-family residences and commercial businesses, including through a model bylaw, to promote consistent messaging and compliance.
    - That the CRD accelerate the development of guidelines for the use and acceptance of compostable and bio-based food service ware.
2. Construction, renovation and demolition material diversion
    - That the CRD establish a waste stream management licensing bylaw for private solid waste transfer stations and recycling facilities operating in the region.
    - That the CRD prioritize implementing bans and/or surcharges for clean wood waste and mixed construction waste at the Hartland Landfill.
    - That the CRD prioritize work with member municipalities to develop requirements and guidelines for construction waste diversion including measures to grow the regional market for salvaged construction and demolition materials.
3. Supporting municipalities working toward zero waste and circular economy
    - That the CRD lead regional collaboration and leverage municipal authority.
    - The CRD can also demonstrate leadership by prioritizing waste stream management licensing (Strategy 6.C) and source separation requirements (Strategies S.B and 9.F).

"Victoria staff very much welcome the comprehensive and progressive range of strategies and actions and comment the inclusive and collaborative approach taken by your team in developing this highly important plan."

Non-Response Municipalities

The following communities received the Draft Plan, CAO letter offering of presentation and invitation for input. To-date no response either in support or in opposition has been received.

City of Langford

District of Metchosin

District of North Saanich

District of Sooke

Town of View Royal

Electoral Areas

The following electoral areas received the Draft Plan, CAO letter offering of presentation and invitation for input. To date no response either in support or in opposition has been received from Salt Spring or Southern Gulf Islands electoral areas. Willis Point is within Juan de Fuca electoral area, is a Hartland neighbouring community and has expressed concerns about the Draft Plan.

Salt Spring Island Electoral Area;

Southern Gulf Islands Electoral Area, which includes Galiano Island, North Pender Island, South Pender Island, Saturna Island, Mayne Island, and smaller islands in the vicinity; and

Juan de Fuca Electoral Area, which includes the areas of East Sooke, Jordan River, Malahat, Otter Point, Port Renfrew, Shirley, Willis Point, and inland rural areas.

First Nations Consultation Findings

First Nations communities located within the CRD region include: Beecher Bay, Esquimalt, Malahat, Pacheedaht, Pauquachin, Penelakut, Songhees, Tsartlip, Tsawout, Tseycum and T'Sou-ke Bands. Each of these Bands has reserve lands within the boundaries of the CRD.

CRD staff met with Esquimalt First Nation and delivered a presentation of the Draft Plan and this meeting was generally positive. Neither support nor opposition was expressed.

Similarly, CRD staff also met with WSÁNEĆ Leadership Council (WLC) and delivered a presentation that was well received. In return WLC provided a letter with feedback and suggestions. A copy of this letter can be found in Appendix B.

WHAT WE HEARD

Commitment to inform among First Nations communities

WLC would like CRD to share information regarding the SWMP with Tsartlip, Tsawout, and Tseycum community members by way of WLC communication portals, social media and a newsletter. Inform communities about opportunities on an ongoing basis and, considering the extent of the SWMP and Hartland Landfill facilities, deeper and more meaningful consultation moving forward.

Educate First Nation communities on waste reduction principles

Educational material needs to be made available to the WSÁNEĆ community to promote the principles of waste reduction and share information on waste reduction opportunities.

Creation of WLC-CRD negotiation table

Request the creation of negotiation table and meeting schedule per agreement under the current Residual Treatment Facilities Memorandum. Given that Hartland Landfill is a major CRD operation in the WSANEC territory and also is the site of the SWMP, WLC is interested in negotiating impact benefits and partnership agreements.

GENERAL COMMENTS

"WLC would like to acknowledge the work the CRD is doing toward reconciliation and look forward to the next steps in our relationship."

Neighbouring Regional Districts

CRD's outreach to interested parties including the neighbouring Regional Districts of Cowichan Valley and Nanaimo. Both received CRD's Draft Plan and an offer of a presentation and invitation for input.

Cowichan Valley Regional District provided a letter of support confirming Board adoption of a resolution to endorse CRD's Draft Plan. This letter of support can be found in Appendix C.

In the spirit of regional collaboration, staff from the Regional District of Nanaimo gave a presentation of their SWMP to CRD's Environmental Services Committee in February, 2021.

"The CRD definitely has one of the lowest per capita disposal rates in the Province and, I would argue, it's one of the lowest per capita disposal rates in the world." — Larry Gardner, Manager of Solid Waste for Regional District of Nanaimo

Several of members of the public, community association and groups mentioned municipalities of Victoria and Nanaimo as examples of regions with strong solid waste management initiatives. As such, it should be noted that in March 2021, CRD was ranked as the top regional district with the lowest waste level per household among all British Columbia municipalities.

Public Consultation Findings

Phase 2 built upon public consultation activities of Phases 1. The 'public' category can be subdivided into two segments: A) general public and B) community groups/residents living near Hartland Landfill.

As acknowledged by Ministry of Environment in its *Guide to Solid Waste Management Planning*, it is unrealistic to expect everyone involved in the process to agree on approaches to solid waste management planning in the region. Through its approach, CRD has demonstrated that the public and interested parties were consulted on the Draft Plan and that the outcome of consultation was considered in the finalization of the Draft Plan.

GENERAL PUBLIC

Through February 15, 2021, feedback was received from the general public through www.crd.bc.ca/rethinkwaste A comprehensive summary of all 208 verbatims gather through the entire consultation process can be found in Appendix F. Feedback sentiment was a mix of supportive and critical. Similar reoccurring themes emerged.

Additionally, 18 letters from the general public were sent to the CRD Board directly. Most were the same form letter expressing opposition of the Hartland Landfill expansion and were the result of an effort by regional advocacy group, Mount Work Coalition.

WHAT WE HEARD

Supportive

Of the feedback that could be interpreted as 'supportive' of the Draft Plan, the three most commonly reoccurring feedback were:

- Felt the Draft Plan reflects ambitious reduction goals
- The Draft Plan is based on rational analysis
- Reflected a well-thought multi-pronged approach

"As a lifetime resident of Victoria (69 years), I support the expansion of Hartland waste facility and the adoption of a waste treatment plan based on rational analysis considering costs and not on dogma."

"I am 100% in favour of moving the commercial access to Willis Point Road and think it is logical and supported by facts as per the traffic study. I also support the guiding principles and goals outlined in the plan."

Critical

Of the feedback identified as 'critical' in nature, most appear to be based on the same four key issues of concern:

- Strongly opposed to the removal of trees (most frequently recurring comment)
- Desire for more aggressive waste reduction initiatives rather than landfill expansion (zero-waste)
- Negative impact on park/mountain bike trails
- Feel the Draft Plan is not in alignment with addressing climate emergency

"I am against the destruction of more natural habitat and instead I propose that strategies for the reduction of waste get more attention and funding. "

"I just read Jon O'Riordon's recent article, "Strive for zero waste, not expanding landfill" (Times Colonist Dec. 17, 2020), and have also read portions of the CRD draft solid waste management plan. I feel that the zero-waste target that the CRD has set (250 kilograms/person by 2030) is not nearly ambitious enough…."

Contrasting feedback

Some strategies and actions generated both positive sentiments and a desire for changes to the Draft Plan. These theme areas included:

- Desire for the exploration of gasification and incineration options as a means to eliminate expansion requirements; also desire to avoid thermally combusting waste and opposition to gasification and incineration;
- Looking for additional incentives or penalties to encourage/enforce reduction of waste;
- Range of views around the plan's waste diversion targets from a desire to strengthen the target to a feeling that the target is too ambitious.

"I am heartened by the knowledge that reforestation on closed areas of Hartland Landfill are ongoing, but also hope that the CRD will look for opportunities to expand public parkland elsewhere in the region to make up for the loss of trails that must be closed. Thank you for the opportunity to review the plan and offer feedback."

"The CRD and partnering municipalities should explore gasification as a means of generating energy and reducing deposits to the landfill.

HARTLAND NEIGHBOURS

Much of Phase 2 public consultation was with three community associations in immediate proximity to Hartland Landfill for whom the development and changes in traffic patterns would have the most directimpact. Specifically, Willis Point Community Association (WPCA), Highlands District Community Association (HDCA) and Prospect Lake District Community Association (PLDCA). Letters from the community associations can be found in Appendix D.

In tandem with the creation of the Draft Plan a traffic study was commissioned to understand the potential impacts of moving commercial access to Hartland Landfill from Hartland Avenue to Willis Point Road. Although not a formal part of the Draft Plan, a copy of the traffic study was placed on the website for reference and comment given that the predominant concerns from Hartland neighbours were traffic related.

1. Prospect Lake District Community Association

WHAT WE HEARD

Traffic safety is key concern

Vehicle, cycling and pedestrian safety is a primary concern

Illegal dumping

Observation of illegal dumping in various locations including Meadowbrook Road and BC Hydro right-of-way site as well as roadside litter due to poorly secure loads travelling to the landfill.

Loss of peaceful park land

Noise and traffic near Durrance Lake

IDEAS AND SUGGESTIONS

Mountain Road Forest fundraising goal

- We encourage CRD to secure the Mountain Road Forest as parkland. While we are grateful the CRD has committed great deal of money from the Land Acquisition Fund, there is still risk the sale will fall through without enough funding.

Speed and litter mitigation efforts

- Signage at trailhead, signage reminders, garbage receptacles
- Ensuring safety of parking situation at Durrance Lake
- Increase speeding enforcement

Illegal dumping

- Targeted campaign – both impact on community and how to report
- Install no dumping signs
- Clean-up of illegal dumping more quickly
- Expand landfill hours, possible for residents only.
- Increased bylaw enforcement

Better road cycling infrastructure

- Introduce a bike lane along Wallace Drive to connect to Interurban Rail trail
- Safety crossing
- Bike repair station

2. The Willis Point Community Association

WHAT WE HEARD

Opposed to tree removal, natural habitat and de facto park

Particularly concerned about the removal of 73 acres of forest, destruction of habitat and engaging in extensive blasting and quarrying. Doing so undermines CRD's commitments to address climate change. It also impacts recreational opportunities for the community, particularly the mountain biking community.

Adopt more aggressive waste reduction strategies

In doing so, extend the life of the Landfill. Regional examples cited include Victoria's *Zero Waste Strategy*, waste to energy project (explored by Esquimalt) and *One Planet Saanich*.

Concerns over plans to move Hartland traffic to Willis Point Road

Concerns expressed over the Draft Plan to redirect commercial truck traffic accessing the Landfill from Hartland Avenue to Willis Point Road, beginning in 2023, and diverting all Landfill-bound traffic in 2040.

Traffic related safety concerns

Want CRD to address a number of safety, traffic circulation and perception issues related to heavy truck traffic on to Willis Point Road. This includes icy surfaces in winter on the straight 9 percent grade, and the impact of heavy traffic on the mountain bikers, recreational and competitive cyclists that also use the road. Specific problem areas include:

- Problem intersection at the junction of Wallace Drive and West Saanich Road.
- Truck Bypass on Willis Point Road Northbound

Road Name Connotations

Concerned that the name Willis Point Road will be associated with access to the landfill and have negative affect on property values.

IDEAS AND SUGGESTIONS

Postpone Decision on Hartland Expansion

- Would like approval of any expansion of Hartland to be Stage-Gated so that both actual waste reduction achieved in the CRD, and the effectiveness of alternative methods be reviewed by Hartland staff and the CRD board in 2028 prior to any approval of Draft Plans to expand the landfill

Improve traffic safety

- A proper bike lane should be constructed up to the point where trucks will enter the Landfill.
- Improve problem intersection at the junction of Wallace Drive and West Saanich Road.
- We believe it is essential that a couple of truck pull-offs be created along with appropriate signage to ensure trucks travelling below 40kmph comply. Doing so will mitigate slow-downs of traffic and unsafe passing.

Renaming Lower Part of Willis Point Road

- Disassociate the road with “access to the dump”. Willis Point Road would begin at Ross Durrance Road and run north to connect Willis Point residences with the southern section of the road. The name “Mount Work Parkway” has been suggested.

Explore and adopt more aggressive reduction strategies

GENERAL COMMENTS

“The CRD is to be commended for looking ahead at the waste disposal requirements of the region up to the year 2045 and beyond. Unfortunately, we find the SWMP wanting in several respects with regard to these factors.”

ADVOCACY GROUPS

3. Mount Work Coalition

Similar views are shared between Mount Work Coalition and The Willis Point Association. Only new feedback, suggestions and comments not previously stated are reflected below. It should also be noted that MWC coordinated anad hoc petition related to Strategy 15 of the draft plan ('Enhance Hartland Landfill Capacity') and submitted their documentation to the CRD Board.

WHAT WE HEARD

Business as usual mindset approach to the Draft Plan

A belief that the Draft Plan is written with a preconceived mindset that the landfill requires expansion rather than a mindset to retain the existing size and seek more aggressive reduction initiatives.

Does not meet carbon neutral goals

The Draft Plan does not address the climate emergency and commitment of the CRD to become carbon neutral by 2050. It is in direct conflict with the Province's stated Climate Action goals and will not enable us to meet our 2030 greenhouse gas emissions targets.

*Reliance on tipping fees to fund Hartland**'s** operations is counter-intuitive to zero waste.*

The tipping fee model provides no material incentive to reduce waste rather, it is a disincentive as is demonstrated by concerns to keep all waste disposal in the region.

Hartland and FortisBC methane agreement

We disagree with this strategy as it relies on a steady stream of decomposing waste being dumped into a landfill to feed the FortisBC system for a small amount of RNG.

IDEAS AND SUGGESTIONS

Add more concrete waste management actions into the Draft Plan

- As examples dedicated funding for a public educational campaign and financial incentives to encourage startups and incentivize waste management businesses that reuse waste, such as scrap businesses and plastic and rubber recycling.

Multi-pronged approach should be a cornerstone to the region's solid waste management plan.

- Reduce waste through promoting circular economies, changing consumer behaviour such as banning single use plastics, and investigating alternative uses for waste to energy projects such as gasification
- The CRD staff must work in partnership with other leaders using best practices

Tipping fees levers

- Tipping fees must be used to incentivize waste diversion as is being done in the Nanaimo Regional District and if alternate sources of funding are required to maintain the Landfill operation, a general tax levy may be required.

Develop a strategy to optimize landfill gas management

Amended the SWMP submitted in 2025 must establish a target of 125kg/person/year by 2040

Notify the Ministry of Environment

- CRD should notify MOE of its intention to submit an amendment to the Draft Plan by 2025 with strategies for attaining this target including an aggressive Zero Waste program, and an independent analysis and testing of alternative technologies such as IRM/gasification/Waste to Energy.

Reference Esquimalt project

- The Draft Plan submitted in 2021 should contain a placeholder for the Esquimalt waste to energy project subject to a business case being completed.

Strengthen the Draft Plan's Zero Waste initiatives by adding concrete plans

- As examples dedicated funding to create business incentives for entrepreneurs; create a public education campaign to draw awareness to Zero Waste, and use tipping fees to incentivize waste reduction instead of encouraging continued use of landfilling as a source of revenue.

Conduct an independent environmental assessment

- Prior to any plans to expand or alter the design of the landfill, conduct an independent environmental assessment including the spread of biosolids, to protect the natural ecosystem, wildlife, community health and the recreational users of the area.

GENERAL COMMENTS

"The Coalition is pleased to see that the Board [CRD] at its February 10, 2021, meeting reiterated that it was prepared to consider a more aggressive approach to waste reduction a year following the submission of the SWMP this summer."

4. Zero Waste BC

During the consultation period, CRD staff received a review of the Draft Plan from Zero Waste BC, a non-profit organization based on the Lower Mainland.

Staff reviewed the 38 recommendations made in this report and found that most suggestions were either existing CRD activities or ideas that are enabled by the actions in the Draft Plan. Many of these recommendations will be further investigated when the SWMP is implemented.

One feature of the Zero Waste BC report is its anti-incineration stance. A copy of the report can be found in Appendix E: Advocacy Group Feedback.

Impact of Consultation Findings on the Draft Plan

Following consultation with CRD municipalities, local First Nations, neighbouring regional districts, members of the general public and Hartland neighbours, feedback was collated and evaluated to determine how the Draft Plan should be refined. A summary chart was created and cross referenced feedback with the Draft Plan to determine where the Draft Plan already addressed feedback, where gaps exists and how to address them. Additionally, similar feedback received from multiple sources was colour coded to distinguish between singular recurring feedback.

As a result of input from Phase 2 consultation, several revisions have been made for clarity and to provide context for the strategies and actions in the Draft Plan. In quite a few cases, feedback provided was already accounted for in strategies outlined in the Draft Plan. It also became clear there is some confusion about the role of the CRD and the need for this to be explained better. In several cases input not reflected in the Draft Plan was due to it being outside of CRD jurisdiction or regulatory framework. The Feedback Summary / Cross Reference Chart can be found in Appendix C of the CRD staff report presenting these findings.

Appendix A: Municipal Letters of Support

Support Letter: City of Victoria

CITY OF VICTORIA

February 12, 2021

Robert Lapham, Chief Administrative Officer
Capital Regional District
625 Fisgard Street, Victoria BC
PO Box 1000
Via email: rlapham@crd.bc.ca

Dear Robert,

Re: Draft Solid Waste Management Plan

Thank you for the opportunity to provide feedback on the Capital Regional District's Draft Solid Waste Management Plan (SWMP). Victoria staff very much welcome the comprehensive and progressive range of strategies and actions and commend the inclusive and collaborative approach taken by your team in developing this highly important plan.

The development of the SWMP is well timed to complement renewed efforts to improve plastics management and recycling performance from the provincial and federal government. This region has a long-standing history and embedded community values of environmental stewardship and the SWMP positions the region as a leader in waste reduction and a facilitator for municipal collaboration around shared goals.

The City sees itself as a key stakeholder in the Hartland Landfill asset. It is estimated that one-third of the waste disposed at Hartland is generated by residents, businesses, industry and construction activities within Victoria. The City recently approved *Zero Waste Victoria*, which outlines 40 strategies to achieve a 50% reduction in waste disposal by 2040 with many of these aligning with strategic actions identified in the draft SWMP. It is also telling that 15 actions within the draft plan require direct involvement from CRD member municipalities to be successful and many more would benefit from municipal support and cross promotion.

Municipalities will play a vital role in meeting our regional solid waste targets, through the provision of their solid waste services and programs, and through the authorities granted under the *Community Charter* and *Local Government Act* that influence waste reduction. Available municipal tools include zoning, permitting, business regulation and nuisance regulation.

1

The City of Victoria recognizes the Songhees and Esquimalt Nations in whose traditional territories we live and work
"Hay swx qa"

Victoria also has the authority to regulate land use, with existing permitting processes in place for development and construction and can influence the local market for reused and recycled construction materials through procurement as a land holder and purchaser, and through major expenditures for capital projects. Additionally, municipalities can influence the generation of solid waste in the community through regulations for the protection of the natural environment, subject to provincial approval.

There are opportunities for the CRD to leverage these municipal tools and authorities to maximize waste reduction potential and to this end, there are elements of the SWMP that are closely aligned with the City's own waste reduction goals and opportunities for local government collaboration.

This letter also provides recommendations for prioritizing actions under the SWMP to support the City's successful implementation of Zero Waste Victoria. Specifically:

1. Organics diversion
2. Construction, renovation and demolition material diversion
3. Supporting municipalities working towards zero waste and a circular economy

This will allow ongoing CRD/City engagement and collaboration and will create a framework for City staff to report back to Council on aligned strategies and planned implementation timelines.

1. ORGANICS DIVERSION

Despite regional landfill bans in place for kitchen scraps and yard waste, high volumes of organic material continue to be landfilled and downstream enforcement is challenging. Approximately 6% of Victoria's GHG emissions (21,000 tonnes CO_2e annually) are attributed to landfilled organic waste. Multifamily buildings and the commercial sector are responsible for about 85% of landfilled organic material generated in Victoria and improving source separation for this sector, including through regional harmonization, will be critical for reducing organics disposal.

Numerous BC jurisdictions have source separation guidelines or bylaws in place or planned, including the City of Surrey, Regional District of Nanaimo (RDN) and Metro Vancouver. Surrey's *Rethink Waste* organics collection service requires apartment residents to separate their organic waste from their regular household garbage. The RDN's Solid Waste Management Plan proposes to expand source separation requirements to all waste generators including businesses and multi-family residences. This action is supported through the licensing of waste haulers, which requires haulers to provide separated organics and recyclables collection. Metro Vancouver's Board has approved a commercial waste hauler licensing program, pending approval from the Minister of Environment and Climate Change Strategy, which aims to reduce waste and increase diversion at multifamily, commercial and institutional properties. Under the proposed bylaw, haulers will be required to provide their clients with bins for the separate collection of recyclables, organics and mixed municipal solid waste.

Improving source separation of waste materials is a short-term (2021-2023) priority action in Zero Waste Victoria and Victoria Council has explicitly directed staff to report back on options for increasing diversion rates for multi-family and commercial properties.

The CRD's SWMP highlights the importance of source separation requirements for multi-family and commercial waste diversion (Strategies 8.B and 9.F). The City has also heard strong support from local businesses and the community for consistent standards for private organics, recycling and waste collection. As part of implementing the SWMP, the CRD should create a model bylaw for such source separation requirements. This would support standardization across the region, consistent messaging and improved sorting behaviour.

To complement source separation requirements, the City of Victoria also supports shifting landfill disposal ban enforcement to the generator (Strategy 9.G). This action would increase compliance for current and future banned materials and avoid placing the burden of compliance only on haulers.

An additional challenge for organics diversion is inconsistent messaging for the acceptance of compostable and bio-based food service-ware and packaging at composting facilities. These materials represent significant waste management challenges and cause consumer confusion when sorting waste materials. Through engagement on Zero Waste Victoria, the City heard a desire from the business community for sustainable food service-ware purchasing guidelines that align with regional composting capacity.

Increased diversion of organics will require additional capacity for organics processing, preferably within the region and the City of Victoria is committed to working collaboratively with the CRD to support this essential infrastructure.

- **RECOMMENDATION:** That the CRD accelerate the creation of requirements for source separation in multi-family residences and commercial businesses, including through a model bylaw, to promote consistent messaging and compliance.

- **RECOMMENDATION**: That the CRD accelerate the development of guidelines for the use and acceptance of compostable and bio-based food service ware.

2. CONSTRUCTION, RENOVATION AND DEMOLITION MATERIAL DIVERSION

Material from the construction sector makes up between 23 and 37%[1] of Victoria's landfilled waste. Regionally, wood and wood products comprise 64% of waste from the construction and demolition sector disposed at the Hartland Landfill. Zero Waste Victoria includes several strategies to reduce waste from the construction sector, including requiring the salvage of reusable materials from building demolition, requiring recycling of other construction waste, and strengthening reuse markets for building materials.

Increasing local salvage and reuse of building materials presents new economic opportunities. A study produced for the Vancouver Economic Commission estimates that wood salvaged through deconstruction (i.e., dismantling rather than traditional demolition of buildings) in Metro

[1] Exact quantity not known. Between 50 and 75% of construction waste is estimated to leave the region and therefore not included in the reporting of material at the Hartland Landfill.

Vancouver is worth up to $340 million per year. Salvaging building materials will also create new jobs, including low-barrier and entry level employment.[2]

Complementary action by the CRD can accelerate diversion and salvage of valuable demolition materials, as the SWMP highlights. Specifically, the City of Victoria strongly supports the implementation of a clean wood waste ban and surcharges for mixed loads from the construction sector that contain recyclable or salvageable materials (SWMP Strategies 12.E and 12.F). The City also supports the CRD leading the development of, and facilitating regional collaboration on, policy and tools to support construction waste diversion (Strategies 12.B and 12.D). Additionally, collaborative action is needed to identify further opportunities to support material reuse markets in the region.

Waste stream management licensing is crucial for improving construction waste diversion. Waste stream management licensing has been shown to enable and support municipal tools and compliance in the lower mainland. For example, Metro Vancouver tracks construction and demolition waste through facility licensing under the Municipal Solid Waste and Recyclable Material Regulatory Bylaw which in turn supports member municipalities' construction and demolition recycling rules. The City of Victoria strongly recommends that the CRD prioritize the establishment of waste stream management licensing (Strategy 6.C). Facility licensing will provide crucial compliance tools for regulation of waste from the construction sector by the City of Victoria.

As an additional overall benefit, waste stream management would assist in tracking progress on the SWMP and municipal strategies, and support waste reduction through data disclosure and better understanding of material flow in the capital region.

- **RECOMMENDATION:** That the CRD establish a waste stream management licensing bylaw for private solid waste transfer stations and recycling facilities operating in the region.

- **RECOMMENDATION:** That the CRD prioritize implementing bans and/or surcharges for clean wood waste and mixed construction waste at the Hartland Landfill.

- **RECOMMENDATION:** That the CRD prioritize work with member municipalities to develop requirements and guidelines for construction waste diversion, including measures to grow the regional market for salvaged construction and demolition materials.

3. SUPPORTING MUNICIPALITIES WORKING TOWARDS ZERO WASTE AND A CIRCULAR ECONOMY

Regional District and member municipality waste reduction efforts are complementary and interdependent. Within this response to the draft Plan, we have sought to highlight the important role that municipalities play in reaching regional waste reduction targets. The success of Zero Waste Victoria depends on the CRD undertaking robust implementation of the SWMP.

[2] Elliot, K., E. Locatelli and C. Xu; The Business Case for Deconstruction (2020). Retrieved from: https://www.vancouvereconomic.com/research/the-business-case-for-deconstruction/

Likewise, the success of the CRD's SWMP requires action from member municipalities and leveraging of municipal authority.

Strategy 5 in the SWMP highlights several ways the CRD can support municipal waste reduction efforts. The City recommends that in addition to these measures, the CRD take a strong leadership role in facilitating regional collaboration on waste reduction and should establish a program to maximize use of municipal authorities to reduce waste. Such a program could include a working group or municipal liaison and support the development of regional tools and resources.

- **RECOMMENDATION:** That the CRD lead regional collaboration and leverage municipal authority.

The CRD can also demonstrate leadership by prioritizing waste stream management licensing (Strategy 6.C) and source separation requirements (Strategies 8.B and 9.F). These enabling actions will strongly support regional waste management and create opportunities to reduce waste from all sectors, in addition to organics and construction waste, as described above.

Concluding Remarks

The City of Victoria supports the strategies and actions drafted in the CRD's Solid Waste Management Plan and offers specific recommendations that relate to the implementation of the proposed plan in alignment with Zero Waste Victoria.

With the recent adoption of Zero Waste Victoria and given the important role within the region Victoria has in advancing waste reduction, on behalf of Council, I would like to invite your team to a future Committee of the Whole meeting to provide a presentation and take questions on the draft Solid Waste Management Plan.

Thank you again for providing this opportunity to comment.

Sincerely,

Jocelyn Jenkyns
City Manager

Support Letter: Victoria Mayor

THE CITY OF VICTORIA  OFFICE OF THE MAYOR

February 10, 2021

Dear Mr. Lapham and Ms. Hutcheson,

On behalf of Victoria City Council, it is my great pleasure to share *Zero Waste Victoria*, our plan to reduce waste disposal by 50% by 2040. Council recently approved this document which includes 40 strategies that eliminate unnecessary products, make reuse an everyday activity and improve our current recycling system.

When developing strategies and actions to implement this plan, we have been guided by our Waste Reduction Hierarchy which prioritizes reducing, reusing, and moving to a circular economy as areas with the biggest potential for cities to have an impact. However, proper disposal of waste plays a very important role and to this aim, Council has approved a Short-Term Action Plan which includes:

- Development of new single-use item regulations
- Changes to building permits to reuse and recycle materials from building demolitions
- New requirements for organics and recycling at multifamily and commercial properties
- Enhancements to the City's solid waste services

The City's waste services are guided by the Capital Regional District's Solid Waste Management Plan. As the CRD's Solid Waste Management Plan is under review, it is timely to share *Zero Waste Victoria* and to note our desire to continue collaborating at the staff and board levels on the review and updated plan, which will greatly impact our regional climate action.

Further, on behalf of Victoria Council I am also requesting that the CRD work with the City of Victoria and other local governments to advocate for "flow control" to regulate the export of solid waste outside the region. A regional approach is key to ensuring proper diversion from the landfill and eliminate the ability to simply export waste to another landfill outside our region.

We are proud of this action-oriented plan to steward a sustainable, prosperous future, and proud of City staff's hard work on *Zero Waste Victoria,* which involved two years of comprehensive analysis. It aligns well with the work that is underway at the CRD and we would welcome the opportunity to share more information or respond to any questions.

Sincerely,

Lisa Helps
Victoria Mayor

1 Centennial Square Victoria British Columbia Canada V8W 1P6
Telephone (250) 361-0200 Fax (250) 361-0348 Email mayor@victoria.ca
www.victoria.ca

Support Letter: District of Central Saanich

Central Saanich
1903 Mt. Newton Cross Road | Saanichton, BC Canada | V8M 2A9 | 250.652.4444

January 29, 2021 File No. 0400-60/21

Capital Regional District
625 Fisgard Street, PO Box 1000
Victoria, BC V8W 2S6

Attention: Russ Smith, Senior Manager of Environmental Resource Management

Dear Mr. Smith,

Re: Phase 2 of the Regional Solid Waste Management Plan

At their January 25, 2021 Regular Meeting, the Municipal Council of the District of Central Saanich passed the following motion:

That Council endorse the Capital Regional District's Solid Waste Management Plan.

Should you have any questions with respect to the above, please do not hesitate to contact the undersigned at 250-544-4202.

Sincerely,

Liz Cornwell,
Corporate Officer

Support Letter: Town of Sidney

TOWN OF SIDNEY
2440 Sidney Avenue, Sidney, British Columbia V8L 1Y7
Phone: 250-656-1184 Fax: 250-655-4508
Email: admin@sidney.ca Website: www.sidney.ca

January 29, 2021

VIA EMAIL: kmorley@crd.bc.ca

Kristen Morley
General Manager, Corporate Services
Capital Regional District
625 Fisgard Street
Victoria, BC V8W 1R7

Dear Ms. Morley:

Subject: CRD's Solid Waste Management Plan- Phase 2 of Public Consultation

Further to Mr. Lapham's letter dated November 20, 2020, this is to advise that Town Council, at a meeting held on January 25, 2021, considered the above subject Plan and resolved as follows:

> *That Council endorse the Capital Regional District's Draft Solid Waste Management Plan.*

I trust you will find this satisfactory.

Yours truly,

Sandi Nelson
Corporate Officer

Support Letter: District of Saanich

District of Saanich
Sustainability
770 Vernon Ave.
Victoria BC V8X 2W7

t. 250-475-5471
f. 250-475-5430
saanich.ca

PLANNING

Russ Smith
Senior Manager of Environmental Resource Management
Parks & Environmental Services
Capital Regional District
625 Fisgard Street
Victoria, BC, V8W 1R7

March 18, 2021

Dear Mr. Smith,

Re: CAPITAL REGIONAL DISTRICT DRAFT SOLID WASTE MANAGEMENT PLAN – DISTRICT OF SAANICH FEEDBACK

Thank you for the opportunity to review and provide feedback on the Capital Regional District (CRD) Draft Solid Waste Management Plan (SWMP) and for your presentation to Saanich Council on March 8, 2021.

This letter confirms that at the Special Committee of the Whole meeting held March 8, 2021, Saanich Council considered the report of the Director of Planning and Director of Engineering, dated February 25, 2021, regarding the CRD Draft Solid Waste Management Plan and resolved as follows:

"That Council:

1. *Receive the report of the Directors of Engineering and Planning dated February 25, 2021 for information; and*
2. *Direct staff to provide feedback to the Capital Regional District on the Draft Solid Waste Management Plan outlining, amongst more detailed comments, the following:*
   a) *Support for the Draft Plan and its focus on the 5R Pollution Prevention Hierarchy;*
   b) *The desire for the Capital Regional District to provide bold leadership and facilitate accelerated regional collaboration on powerful actions that achieve the waste disposal targets;*
   c) *The desire for the Capital Regional District to maximize the use of municipal authorities to reduce waste, providing the necessary resources to support municipalities, including the development of additional bans, surcharges, Capital Regional District bylaws, model municipal bylaws, processing facilities, requirements and guidelines that support actions such as waste stream management licensing, construction waste diversion, source separation in multi-family residences, use and acceptance of compostable and bio-based food service ware etc.; and*
   d) *The desire for the Draft Plan to reference the additional benefits of a regional organics processing facility associated with the greenhouse gas (GHG) emissions savings from the reduced transportation of organics outside the region."*

The attached staff report provides additional details related to the above resolution and outlines the alignment with key Saanich plans and policies, notably the Official Community Plan and the Climate Plan: 100% Renewable & Resilient Saanich. Municipalities play a vital role in meeting the regional solid waste targets through our services, programs and the authorities granted

under the Community Charter and Local Government Act that influence waste reduction. As such, the CRD and member municipality waste reduction efforts are complementary and interdependent and we have a considerable role to play in collaborating with the CRD to achieve implementation of the Draft SWMP.

Similarly, robust implementation of the CRD SWMP will be required to support the District of Saanich in implementing our strategic climate goals and targets. The CRD will need to provide bold leadership and facilitate accelerated regional collaboration on powerful waste reduction actions that maximize the use of municipal authorities in order to achieve this.

We hope the information outlined above and within the Staff report attached are useful in refining the CRD SWMP and we look forward to working with the CRD on bold action to implement the final Plan and its actions once adopted by your Board.

Yours sincerely,

Rebecca Newlove
Manager of Sustainability

Steve Wiebe
Manager of Fleet & Solid Waste Services

cc. Sharon Hvozdanski, Director of Planning
Harley Machielse, Director of Engineering

Enc.: Special Committee of the Whole Meeting Minutes, March 8, 2021
Report of the Director of Planning and Director of Engineering: Capital Regional District Draft Solid Waste Management Plan, February 25, 2021

Support Letter: District of Oak Bay

THE CORPORATION OF THE DISTRICT OF OAK BAY
MUNICIPAL HALL – 2167 OAK BAY AVENUE – VICTORIA, B.C. V8R 1G2
PHONE 250-598-3311 FAX 250-598-9108 WEBSITE: www.oakbay.ca

February 16, 2021

Mr. R. Lapham
Chief Administrative Officer
Capital Regional District
625 Fisgard Street, PO Box 1000
Victoria, BC V8W 2S6
Via email to: rlapham@crd.bc.ca

Dear Mr. Lapham,

Re: CRD Solid Waste Management Plan
District of Oak Bay Endorsement and Request for Presentation

Thank you for your correspondence of November 20, 2020 seeking endorsement from the District of Oak Bay Council on the Capital Regional District's draft Solid Waste Management Plan.

Council reviewed the draft Plan during their regular meeting of Monday, February 8, 2021 and subsequently passed the following resolution:

> *THAT the Draft Solid Waste Management Plan be endorsed and a letter be sent to the Capital Regional District thanking them for the opportunity to provide input and advising of Council's endorsement.*

As a municipal partner in regional solid waste management, Council very much appreciated your offer to have CRD staff meet with them to review the Plan in more detail and ask questions. As per your suggestion, I will follow up Mr. Russ Smith, Senior Manager, Environmental Resource Management to make the necessary arrangements.

Sincerely,

Lou Varela
Chief Administrative Officer

cc: Oak Bay Council
D. Horan, Director of Engineering and Public Works

Support Letter: Corporation of the Township of Esquimalt

CORPORATION OF THE TOWNSHIP OF ESQUIMALT
Municipal Hall, 1229 Esquimalt Road, Esquimalt, B.C. V9A 3P1
Website: www.esquimalt.ca Email: info@esquimalt.ca
Voice: (250) 414-7100
Fax: (250) 414-7111

Via email to: rsmith@crd.bc.ca

February 12, 2021

Russ Smith
Senior Manager, Environmental Resource Management
Capital Regional District
625 Fisgard Street
Victoria, BC
V8W 2S6

Dear Mr. Smith:

Thank you for presenting your Solid Waste Management Plan at the January 25th Township of Esquimalt council meeting. At our February 1st meeting, unanimous approval was given by council re: early budget approval to study the implementation of Integrated Resource Management.

As our next council meeting is not until February 22nd, we are unable to formulate any comments to meet your requested deadline of February 15th. Following the February 22nd meeting comments will be further developed and forwarded to you.

This letter constitutes that the Township will have more detailed comments to be forwarded to the CRD at a later date and request it be included in the collection of feedback you are gathering from CRD municipalities.

Yours truly,

Barbara Desjardins

Barbara Desjardins
Mayor

Support and Request for Modification: **Township of Esquimalt**

CORPORATION OF THE TOWNSHIP OF ESQUIMALT

Municipal Hall, 1229 Esquimalt Road, Esquimalt, B.C. V9A 3P1
Website: www.esquimalt.ca Email: info@esquimalt.ca
Voice: (250) 414-7100
Fax: (250) 414-7111

File No. 0560-01

Via email to: rsmith@crd.bc.ca

March 1, 2021

Russ Smith
Senior Manager, Environmental Services
Capital Regional District
625 Fisgard Street
Victoria, BC V8W 2S6

Re: Comments on Draft Solid Waste Master Plan and Request for Modification

Dear Mr. Smith,

On February 22, 2021, Council had the opportunity to meet and discuss the Draft Solid Waste Master Plan (SWMP) that the Capital Regional District (CRD) presented at the January 25, 2021 Council meeting. The comments from this meeting are the ones referred to in the Township's letter of February 12, 2021. Please see the attachment for a copy of the February 22, 2021 report.

Council has reviewed the SWMP and agree with the draft as presented. However, the Township feels that the document is deficient in not referring to the Township's attempt to carry out an integrated resource management strategy for the solid waste, kitchen scraps and yard/garden waste streams generated within the Township. To rectify this deficiency, the Township is requesting that the CRD include, within the SWMP, an initiative that addresses the Township's efforts in this endeavour.

The Council resolution is contained within the attached report but reads as follows:

"That Council direct staff to contact the Capital Regional District to request that a section regarding Integrated Resource Management/Gasification be included in the submission of the draft Solid Waste Master Plan, as outlined in Staff Report No. EPW-21-006."

Please review the report and contact me to discuss how this deficiency can be addressed.

Yours truly,

Jeff W. Miller, P. Eng.
Director of Engineering and Public Works

Cc: Kristen Morley, Corporate Officer, Capital Regional District

Encl. Staff Report No. EPW-21-006

Appendix B: First Nations Letter

February 9, 2021

VIA EMAIL

Capital Regional District
PO Box 1000, Victoria, BC V8W 2S6

Re: Solid Waste Management Plan

The W̱SÁNEĆ Leadership Council (WLC) is an organization that has the mandate to represent the W̱SÍKEM (Tseycum), STÁUTW̱ (Tsawout) and the W̱JOŁEŁP (Tsartlip) First Nations in developing a relationship with the CRD and other organizations in our territory.

The W̱LC Board of Directors received a presentation and had discussions regarding the proposed Solid Waste Management Plan (SWMP). Considering the extent of the SWMP and Hartland Landfill facilities, the WLC expressed the necessity for deeper and more meaningful consultation. The W̱LC has made two recommendations regarding the direction they would like to proceed.

The W̱LC requests that information regarding the SWMP be provided to Tsartlip, Tsawout, and Tseycum community members by way of W̱LC communication portals, social media and a newsletter. Educational material needs to be made available to the W̱SÁNEĆ community to promote the principles of waste reduction and share information on waste reduction opportunities.

Further, the W̱LC Board of Directors seeks the creation of a W̱LC-CRD negotiation table and related meeting schedule. This work has been previously agreed to under the current Residuals Treatment Facility Memorandum of Understanding. The CRD and W̱LC are to "jointly assess, discuss and explore the Project and in good faith, move forward together in a negotiated agreement that considers the Project's presence within W̱SÁNEĆ territory"; and the W̱LC and CRD "will engage in further discussions towards an agreement involving the broader relationship between the CRD and W̱SÁNEĆ Nations that takes into considerations the CRD's operations within W̱SÁNEĆ territory."

Given the Hartland Landfill is a major CRD operation in the WSANEC territory and also is the site of the SWMP, the WLC is interested in negotiating with the CRD for impact benefits and partnership agreements. These should address: the imminent expansion of Hartland landfill, environmental contamination and remediation, loss of use and infringement on Douglas Treaty Rights, economic development, revenue sharing, and jobs and training opportunities.

We would like to acknowledge the work the CRD is doing toward reconciliation and look forward to the next steps in our relationship.

Respectfully,

Gordon Elliott
Director of Operations
W̱SÁNEĆ Leadership Council

Appendix C: Regional District Support Letter

Cowichan Valley Regional District

CVRD

175 Ingram Street
Duncan, BC V9L 1N8
www.cvrd.bc.ca

Office: 250.746.2500
Fax: 250.746.2513
Toll Free: 1.800.665.3955

February 09, 2021 File No.: 5360-01

Russ Smith
Senior Manager, Environmental Resource Management
Capital Regional District
PO Box 1000
625 Fisgard Street
VICTORIA BC V8W 2S6

Dear Russ Smith:

Re: **Capital Regional District Solid Waste Management Plan (SWMP) Consultation**

Thank you for the opportunity to consult on the Capital Regional District's (CRD) Solid Waste Management Plan (SWMP). I am pleased to advise that the Cowichan Valley Regional District (CVRD) Board has adopted the following resolution at its meeting on January 13, 2021:

> *"That a letter be sent to the Capital Regional District (CRD) in support of their Solid Waste Management Plan update and that Cowichan Valley Regional District staff participate in the consultation process for development of the CRD's Solid Waste Management Plan."*

The CVRD Board supports the CRD's proposed updates to their Solid Waste Management Plan as drafted in the Solid Waste Management Plan report, dated November 9, 2020. The CVRD is particularly interested in the future progress of composting capacity within the CRD and increased capacity for the institutional and commercial Construction and Development (C&D) materials management within the CRD.

Fifteen strategies and action plans within the Draft SWMP will provide consistency in managing the solid waste as well as promote 5Rs of pollution prevention hierarchy across the two regional districts.

Sincerely,

Aaron Stone
Chair

Pc: Tauseef Waraich, Manager, Recycling & Waste Management

K:\0550-20 Council Meetings\2021-01-13 Board Support for CRD SWMP RPT Attachment B.docx

COWICHAN VALLEY REGIONAL DISTRICT

cowichan

Appendix D — Community Association Letters

Community Association Letter: **Prospect Lake District Community Association**

Prospect Lake District
COMMUNITY ASSOCIATION

February 4, 2021
RE: Commercial vehicle access to Hartland

To: Mr. Russ Smith
Senior Manager, Environmental Resource Management
Capital Regional District (CRD)

Thank-you for hosting the community conversations about commercial vehicle access to Hartland Landfill last month. As previously discussed, we have canvassed our members and compiled a list of concerns and mitigation suggestions for the CRD to consider as this project progresses.

On behalf of our members, we submit the following list of concerns, both directly related to the operational change, and additional concerns the CRD can support within our community:

1. Vehicle, cyclist, and pedestrian safety, specifically at the following locations:
    a. The intersection of West Saanich Road and Wallace Drive
    b. The intersection of Wallace Drive and Willis Point Road
    c. Rural roads in the area that often have illegal truck traffic (Wallace Drive, Prospect Lake Road)
2. Meadowbrook Road concerns:
    a. Increased use of the trail at the end of Meadowbrook Road has led to concerns including dog poop, traffic, parking, speeding, and litter
3. Illegal dumping
    a. Some notable locations include the BC Hydro right-of-way on Prospect Lake Road and several mailbox pull outs on Prospect Lake Road.
4. Roadside litter from poorly secured loads travelling to the landfill
5. The loss of peaceful parkland in our community due to noise and traffic near Durrance Lake

Further to these concerns, we offer the following mitigation ideas for your consideration:

1. The first, and most urgent way the CRD can help our community is to secure the Mountain Road Forest as parkland. While we are grateful the CRD has committed great deal of money from the Land Acquisition Fund, there is still risk the sale will fall through without enough funding. No amount of sidewalks, parking, infrastructure, or litter pick up can replace a natural forest. With the loss of forest in Mount Work Park and the detrimental effects of the construction at Hartland on the Durrance Lake area, we are

Prospect Lake District
COMMUNITY ASSOCIATION

losing greenspace. The single most effective thing the CRD can do for our community is to ensure the Mountain Road Forest fundraising goal is reached.

   a. The CRD should spread awareness of the fundraiser on social media and other available outlets to encourage community fundraising support.
   b. The CRD should commit any outstanding money at the culmination of the fundraising efforts. This land is not going to be for sale again; we cannot miss this opportunity. It would be a tragedy if we missed the target by a narrow margin. We need to add greenspace, not remove it.

2. Meadowbrook Road
   a. Speed limit and/or "respect the neighbours" sign on Meadowbrook Road
   b. Signage at the trailhead indicating "pack in, pack out" for trash
   c. Signage reminding dog owners to pick up poop and control their dogs
   d. Garbage receptacle installed and maintained at trailhead
   e. "No parking" signage along right-hand side of Wildview Crescent, or an assessment of parking issues in the area
3. Illegal dumping
   a. Campaign educating people about illegal dumping, something to make them think of how it affects us all. The average mattress or couch is not an expensive as many think it is to dispose of at the landfill; education goes a long way.
   b. Install no dumping signage with threats of fines in problem areas.
   c. Educate people on how to report illegal dumping.
   d. Clean up illegal dumping quicker.
   e. Expand landfill hours to include Sunday, possibly for residents only.
      i. Many people do their clean-ups and junk removal on weekends. This leads to people wanting to take their loads to the landfill on Sunday, finding the landfill closed, and then dumping illegally in our neighbourhoods.
4. Better road cycling infrastructure
   a. Bike lane along Wallace Drive to connect to Interurban Rail Trail
   b. Safe crossing for cyclists at the termination of the Interurban Rail Trail to cross or continue onto Wallace.
   c. A bike repair station in the area (many cyclists experience flat tires due to debris on the road in the area). Either the intersection of Wallace and West Saanich or Sparton and West Saanich would be excellent choices, as they would capture casual riders on the trail as well as road biking enthusiasts who ride along West Saanich Road.
5. Many residents live here for the access to mountain biking. It would serve a great deal of our community to continue to better the mountain biking trails on Mount Work, specifically ensuring a sustainable multi-use trail network throughout the entire park.

Prospect Lake District
COMMUNITY ASSOCIATION

6. Ensuring the safety of the parking situation for Durrance Lake. Residents do not want a huge parking lot encouraging more visitors than the natural space can handle, but they do want to be sure those parking are doing so safely.
7. Increased by-law enforcement for dumping, illegal truck traffic, and unsecured loads.
8. Increased police enforcement for speeding and other unsafe driving.
9. A transfer station serving the continuously growing Westshore community would have positive impacts for GHG emissions, road safety, and general traffic volume in our community. If it is unreasonable to have the landfill open to residents on Sundays, having a transfer station open could serve weekend users, in addition to these other benefits.
10. As the number of young families in the area is increasing, there is always desire for more playgrounds and other outdoor play areas for children. One idea is that the playground at Hamsterly Beach is in need of an overhaul, with plenty of space available.

As a Community Association Board, we are aware that we are not experts on implementing these changes, but we hope to inspire the CRD to help our community in a tangible way. Thank-you for considering these issues.

Sincerely,

Zoe Hole,

Secretary, Prospect Lake District Community Association

Community Association Letter: The **Willis Point Community Association**

The Willis Point Community Association, *6933 Willis Point Road, Victoria BC, V9E 2A1*

February 14, 2021

Colin Plant
Chair, Capital Regional District
625 Fisgard Street
Victoria, BC, V8W 1R7

Copies to:

All CRD Board Members
Hon. George Heyman, Minister of the Environment and Climate Change
Hon. Lana Popham, MLA
Adam Olsen, MLA
Russell Smith, CRD Staff
Larisa Hutcheson, CRD Staff

Dear Mr. Plant,

I am writing on behalf of the Willis Point Community Association in response to the invitation for public comment on the CRD's Solid Waste Management Plan (SWMP).

The CRD is to be commended for looking ahead at the waste disposal requirements of the region up to the year 2045 and beyond. This plan needs to take into account a number of variable factors; population growth in the region, particularly on the West Shore, new technologies and strategies targeting zero waste and the climate emergency facing the region, the province, the nation and the globe. Unfortunately, we find the SWMP wanting in several respects with regard to these factors.

Landfill Expansion-Destruction of Natural Habitat

As the community association representing the Willis Point area, we are particularly concerned about the impact that the current plan will have on the Hartland Landfill, particularly the Plan's goal (based on the current waste reduction targets and strategy) to expand the waste disposal cells to the full perimeter of the property, in the process removing 73 acres of forest and engaging in extensive blasting and quarrying. These 73 acres are immediately adjacent to Mount Work Regional Park, and indeed have been a de facto part of the park for a number of years. They provide recreational opportunities for the community, particularly the mountain bike community, and are home to a number of endangered plant and animal species. Moreover, destruction of 73 acres of mature second-growth trees undermines the CRD's commitments to address climate change by removing a significant area of carbon sequestration. Continued expansion of the Landfill will also create more methane emissions, notwithstanding the intention to capture a portion of the increased emissions as renewable natural gas.

Explore More Aggressive Waste Reduction Alternatives

The alternative to Landfill expansion is to adopt more aggressive waste reduction strategies so that volumes of waste going to Hartland are significantly reduced, thus extending the life of the Landfill without expanding it and destroying part of Mount Work. There are several such initiatives underway in the region, such as the City of Victoria's Zero Waste Strategy, the waste-to-energy project being

explored by Esquimalt and Saanich's ***One Planet Saanich***. The current SWMP takes no account of these initiatives, and instead relies on a series of underfunded "best efforts" campaigns to reduce waste targets to 250kg per person in the region by 2030, in the process continuing to rely of a steady flow of waste in order to generate tipping fees to fund Hartland's operation. The Plan needs to go much further, as has been recommended by your own Solid Waste Advisory Committee.

Postpone Decision on Hartland Expansion

Given these developments, it would be irresponsible in our view for the CRD Board to approve any planned expansion of Hartland at this time. Instead, new more aggressive waste reduction targets and strategies should be explored and adopted. In the meantime, approval of any expansion of Hartland should be put on hold until progress in reducing waste is assessed.

In specific terms, the WPCA would like approval of any expansion of Harland to be Stage-Gated so that both actual waste reduction achieved in the CRD, and the effectiveness of alternative methods of dealing with MSW be reviewed by Hartland staff and the CRD board in 2028 prior to any approval of plans to expand the landfill.

Beyond planning for a Phase or Stage Gated review in 2028 to verify that there is a need for expansion, it would seem **no approval of expansion plans needs to be part of the current SWMP**.

Since no expansion implementation needs to take place before 2030, that allows time to consider expansion if necessary, and the Board and public will have had ample opportunity to apply new waste reduction strategies. We urge you to amend the SMWP accordingly, before it is submitted to the Ministry of the Environment for approval.

Moving Hartland Traffic to Willis Point Road

In addition to opposing the expansion of Hartland Landfill, we have grave concerns over the plan to redirect commercial truck traffic accessing the Landfill from Hartland Avenue to Willis Point Road, beginning in 2023, and diverting all Landfill-bound traffic in 2040. Despite earlier assurances in 2019 received from CRD staff that there were no plans to divert traffic, it would seem that a decision has already been made to do so. Our Association was offered two public consultation sessions to discuss this "proposed" change and was told that the decision was a "fait accompli", with the only thing left to discuss being mitigation efforts. While earlier discussion had argued for a road change based on "safety considerations" (despite the fact that Hartland Avenue has served quite adequately as the point of entry for the past half century), the rationale now put forward is "operational requirements". We have been told that there is "no viable alternative" to changing the access owing to the configuration of the Landfill which makes construction of internal access roads too expensive and challenging.

Safety Concerns

Unfortunately, the process of dealing with the traffic question has been less than transparent. That said, if this change is going to happen regardless of community opposition, then it is important that the CRD address a number of safety, traffic circulation and perception issues that will inevitably arise. The transfer of heavy truck traffic on to Willis Point Road will lead to several safety concerns, notably icy surfaces in winter on the straight 9 percent grade, and the impact of heavy traffic on the numerous

mountain bikers, recreational and competitive cyclists that regularly use the road. A proper bike lane should be constructed up to the point where trucks will enter the Landfill.

Willis Point Road is also heavily used by recreational users of Durrance Lake in Mount Work Park and McKenzie Bight in Gowland Tod Park, by commuters using the route through the Highlands to the West Shore and by residents of Willis Point. Willis Point Road is our only secure means of reaching the rest of the region. While the Bunt traffic study argues that Willis Point Road is designed for a heavier traffic load than Hartland Avenue, it ignores that fact that unless there is smooth traffic flow on to and off Willis Point Road, there will be traffic congestion and safety issues affecting residents, school bus operations, casual users and indeed the trucks accessing the Landfill. The biggest problem is the intersection at the junction of Wallace Drive and West Saanich Road.

Intersection of Wallace Drive and West Saanich Road

This intersection was not designed with heavy traffic loads in mind. It has a pull off area for residential mail collection and is also where the Interurban bike trail terminates. At the same time, it will be where heavy trucks collect to turn either north (left) on to West Saanich Road or south (right). In either case, trucks turning north will block sight lines and vehicles turning right. Wallace Drive joins West Saanich Road at the bottom of a hill where south bound traffic tends to pick up speed. Unless this intersection is redesigned, there will be serious safety and traffic concerns. The response from CRD staff during the traffic consultation was not encouraging. They noted the problems raised but indicated that the responsibility for addressing them lay with the District of Saanich. We are concerned that funding the necessary redesign and reconstruction will not be a priority for Saanich as relatively few Saanich residents will be directly affected. Therefore, it is important that the CRD recognize its responsibility to allocate funding for this work. If internal roads were constructed within Hartland to avoid shifting access to Willis Point Road, this would be feasible but costly. As the CRD will be saving considerable funds by using the public infrastructure of Willis Point Road, provided and funded by Saanich, it should allocate some of these savings to address the imminent real traffic and safety concerns of regular users of Willis Point Road.

Truck Bypass on Willis Point Road Northbound

Given the regular use of this road by Willis Point residents and the likely delays that will occur when traffic is stuck behind a slow moving heavily-loaded truck going uphill, we believe it is essential that a couple of truck pull-offs be created, with appropriate signage to ensure that trucks moving below 40 kph comply. The road speed limit is 60 kmph (although it is constructed for higher speed) and if traffic is impeded, there is a risk that drivers will take chances to pass despite only limited areas to do so. The traffic report, which argued against the construction of a passing lane, claims that traffic will be held up by less than a minute but that assumes that all trucks will maintain a speed of 60 kmph on the uphill grade, which is most unlikely. The provision of pullouts would be a compromise between doing nothing and risking impeding traffic and inviting unsafe driving, and constructing a full passing lane, which has apparently already been ruled out.

Renaming Lower Part of Willis Point Road

In addition to addressing concrete congestion and safety concerns on Willis Point Road and at the intersection of Wallace Drive and West Saanich Road, there is an additional, low-cost measure that the CRD can take to address concerns of Willis Point residents. In the minds of many, there will be an

unfortunate association of Willis Point with the Landfill once the new access point becomes the primary entry for trucks. This could have an impact on public perceptions, ultimately affecting property values, leaving the impression that Willis Point Road is the "access to the dump". We have discussed and support re-naming the lower part of Willis Point Road, the section running from Wallace Drive to Ross Durrance Road. Willis Point Road would begin at Ross Durrance Road and run north to connect Willis Point residences with the southern section of the road. We propose that the new name be connected to the prime function of this section of the road, which is to access Mount Work Park. The name "Mount Work Parkway" has been suggested.

Fortunately there are no residences on the part of the road to be re-named, and only one street sign (at Wallace Drive) to be changed. The new Residuals Treatment Plant is designated as "280 Willis Point Road". It has already been sign-posted so one small address change would be required but otherwise a change of road name would have no postal or property registration implications. While a cosmetic change, this would decouple the name "Willis Point" from the Landfill and is something that the Willis Point Community Association strongly endorses and advocates. We hope the CRD will work with Saanich to effect this name change.

Biosolids

We are one of the communities most affected by changes to the use of Hartland. Our community suffered through two years of construction as the new sewage pipeline was constructed and there continue to be occasional road interruptions. We have been subjected to odour problems arising from the commissioning of the Residuals Treatment Plant (RTP), which are ongoing. We are also concerned about the plan to spread biosolids at Hartland, once the RTP begins to produce them, as this could affect human, plant and animal life in areas adjacent to the Landfill. Given these and other concerns, we are hopeful that the CRD Board will review our input carefully and take action where possible.

Summary and Thank you

The CRD SWMP is important to the WPCA because of both proximity and general love of nature and concern for the environment among Willis Point residents. I believe that the general environmental and climate concerns expressed affect the greater community of the CRD well beyond Willis Point.

I thank you for the opportunity to provide the views of the Willis Point Community Association on the current draft of the Solid Waste Management Plan and related traffic issues.

Yours sincerely,

Daniel J. Kenway, P.Eng
President

Appendix E: ADVOCACY GROUP FEEDBACK

Advocacy Group Letter: Mount Work Coalition

FROM THE DESK OF

MOUNT WORK COALITION

February 12, 2021

Colin Plant, Chair CRD Board, and

CRD Board Directors

Feedback to the CRD on the draft Solid Waste Management Plan

Please find feedback to the draft Solid Waste Management Plan (the Plan) from the Mount Work Coalition, a non-profit society that formed as a group of concerned citizens with a mission to provide voice and support for the protection and responsible stewardship of the Mount Work Park area through education, advocacy and research.

1. Expanding the landfill

The Plan includes a proposal to extend the Hartland landfill site and earmarks 73 forested acres of carbon sequestering trees to be removed to prepare the area for blasting and excavating the side of a mountain. This is not a 21st century solution to waste management.

The Plan was written through the lens of a business as usual mindset predicting the landfill will reach capacity and therefore need to be expanded no later than 2045 - rather than through a lens of retaining the size of the existing landfill without expansion by rolling out new aggressive programs to reduce the waste over the next two decades. With less waste being dumped in the landfill, there will be less leachate into the rivers and lakes in the area. The Plan requires concrete waste management actions such as dedicated funding for a public educational campaign and financial incentives to encourage startups and incentivize waste management businesses that reuse waste, such as scrap businesses and plastic and rubber recycling.

This biodiverse forest of 73 acres should be kept intact to provide a natural buffer between the park and landfill, to protect species at risk, to protect the lakes and

streams and to protect the human health of those using/living next to Mount Work Park directly beside the landfill. The existing trails should remain for the enjoyment of mountain bikers.

The Coalition is pleased to see that the Board at its February 10, 2021, meeting reiterated that it was prepared to consider a more aggressive approach to waste reduction a year following the submission of the SWMP this summer. We strongly urge the Board not to trigger the expansion of the current footprint of the landfill until the amended plan is completed by 2025. The much more aggressive best practice solutions including Zero Waste, Circular Economy and emerging waste to energy technologies will reduce methane emissions to net zero through a complete transformation.

We firmly believe that the CRD can attain its aspirational target of 125 kg per person per year by 2040 with waste reduction strategies already being contemplated such as Zero Waste Victoria; the proposed waste to energy IRM project in Esquimalt and a change in tipping fees application as we will explain later. This new target should be included in the amended SWMP by 2025.

The current plan does not address the climate emergency and the commitment of the CRD and a number of municipalities to become carbon neutral by 2050, continues dumping of over a fifth of total waste in the form of organic matter though banned in law creates more methane and is in direct conflict with the Province's stated Climate Action goals and will not enable us to meet our 2030 greenhouse gas emissions targets.

According to the World Meteorological Organization's bulletin, "Carbon dioxide levels continue at record levels, despite COVID-19 lockdown", approximately 40 per cent of methane comes from natural sources, such as wetlands and termites, but 60 per cent comes from human activities, including cattle breeding, paddyfields, mines, landfills and biomass burning. Nature is now sending us a message, through wind storms and wildfires, and we must act now to do our part, as we have the ability to curb harmful methane emissions from a landfill.

2. What alternatives to landfilling has the CRD considered?

Landfills are a 19th-century solution to waste disposal. Today there are significant alternative technologies that can generate value from waste products. Furthermore, it is clear that without taking a hard look at how we consume and create waste, we will not be able to address the climate challenge that threatens our environment.

Governments across the globe, supported by their citizens have been installing multi-pronged strategies to reduce waste through promoting circular economies, changing consumer behaviour such as banning single use plastics, and investigating alternative uses for waste to energy projects such as gasification now under consideration in Esquimalt. This multi-pronged approach should be a cornerstone to the region's solid waste management plan. It can eliminate the need to build a bigger landfill, instead moving us in the appropriate direction of zero waste. The CRD staff must work in partnership with other leaders using best practices:

- Esquimalt is looking to be an early adopter of IRM/gasification technology that would see their waste converted to energy
- The Regional District of Nanaimo is promoting the 4Rs by cultivating a circular economy; uses tipping fees to encourage waste diversion rather that waste dumping and plans to divert 90% of its waste by 2027. If RDN can achieve a target of 109 kg/person/ year, so should the CRD.
- San Francisco is a global leader in waste reduction, has an effective pricing strategy that uses cost incentives/disincentives between waste and recycling.
- Switzerland has 100% waste recovery where they use a combination of material recovery and incineration for energy
- Sweden recovers 99% of its waste, converting it into heat that warms homes, power buses and taxis.
- The City of Victoria released its Zero Waste Victoria Plan to reduce current waste to Hartland by 50% by 2040.

3. Traffic Diversion to Willis Point Road

The planned relocation of commercial dump traffic to Willis Point Road is part of the draft SWMP. This decision is premature, given the opposition to expanding a landfill in the 21st century, the movement to Zero Waste, a circular economy, and waste-to-energy technologies.

The CRD staff should revisit this decision based on the premise that the landfill will not be expanded and that other regional municipalities will be implementing new technologies to manage their own waste. With less waste being trucked to the landfill, there will be less traffic, no expansion and no reason to reroute traffic. The CRD should be able to construct internal roads and fill alternate cells closer to the existing entrance off Hartland Avenue.

4. Biosolids

The CRD Board reversed its longstanding ban on the spreading of biosolids on land and will be spreading toxic biosolids within the Hartland perimeter for up to 6-8 weeks a year while the Lower Mainland facility undergoes maintenance. CRD communication describes this as a temporary solution, which is absurd since once spread, biosolid toxins remain in the ground, waterways and air - they are not temporary. CRD characterizes the area around the dump as a rural area, which is incorrect - it is a semi-rural with local residential communities and schools very close to the dump area, and the regional tourist attraction of Butchart Gardens, concerned as they are downstream of the dump and use the water in Todd Creek. The area is also home to many organic farmers in close proximity.

The primary challenge with the decision to spread biosolids at the Hartland dump is the lack of scientific evidence to demonstrate that it is safe for the human and wildlife populations in the area. Biosolids, even treated to Class A standards, contain microplastics. The scientific community is now researching the effects of microplastics in our lakes, rivers and streams. As the basic tenet of good environmental governance is the precautionary principle – given the lack of scientific certainty, the decision should be not to spread the biosolids.

Biosolids contain over 300 chemicals. Some will survive the drying process, and any trace of toxic chemical even at the lowest risk is unacceptable and will do significant damage to the 16 species that are endangered or threatened in the area, including the Western Painted Turtle and the Western Screech-Owl. Biosolids soak into the ground water and the wetlands and the 16 at risk species will digest or absorb the chemicals from the biosolids, destroying these endangered wildlife.

5. End Reliance on Tipping Fees as the Primary Source of Funding for Hartland

Reliance on tipping fees to fund Hartland's operations is counter-intuitive to zero waste. The tipping fee model provides no material incentive to reduce waste; indeed it is a disincentive as is demonstrated by concerns to keep all waste disposal in the region. Tipping fees must be used to incentivize waste diversion as is being done in the Nanaimo Regional District and if alternate sources of funding are required to maintain the Landfill operation, a general tax levy may be required. This is a small price to pay to meet climate change goals.

6. Strategy to Optimize Landfill Gas Management

The Hartland landfill signed an agreement with FortisBC to collect methane from the landfill. We disagree with this strategy as it relies on a steady stream of decomposing waste being dumped into a landfill to feed the FortisBC system for a small amount of RNG. Expanding the landfill and relying on a small fraction of the resulting methane gas collection is contrary to the mandate for the region to reduce GHGs. The landfill must be sustainable into the future without relying on outdated expansions.

In Summary

Our mission is to protect the Mount Work Park region and ensure science-based decisions are made concerning the Hartland landfill activities that impact the parks. As the CRD has declared a state of climate emergency and a goal for carbon neutrality, we believe that expanding a landfill by removing a biodiverse carbon sequestering forest, moving dump traffic and spreading biosolids is contrary to this goal and will lead to an overall increase in carbon. There are opportunities for emissions reductions using new technologies, zero waste initiatives, and increasing carbon sequestration by not expanding the landfill as trees absorb CO2. Minimizing GHG emissions are critical for meeting the CRD's goals.

1. Delay any approval for landfill expansion until an updated and amended plan is adopted in 2025.
2. The amended SWMP submitted in 2025 must establish a target of 125kg/person/year by 2040.
3. Notify the Ministry of Environment that the CRD intends to submit an amendment to the plan by 2025 with strategies for attaining this target including an aggressive Zero Waste program, and an independent analysis and testing of alternative technologies such as IRM/gasification/Waste to Energy.
4. The Plan submitted in 2021 should contain a placeholder for the Esquimalt waste to energy project subject to a business case being completed.
5. Conduct an independent environmental assessment prior to any plans to expand or alter the design of the landfill, including the spread of biosolids, to protect the natural ecosystem, wildlife, community health and the recreational users of the area.
6. Strengthen the plan's Zero waste initiatives by adding concrete plans such as dedicated funding to create business incentives for entrepreneurs; create a public education campaign to draw awareness to Zero Waste, and

use tipping fees to incentivize waste reduction instead of encouraging continued use of landfilling as a source of revenue

7. Ensure protection of species at risk in Mount Work Park, we are requesting the BC Ministry of Environment reinstate its longstanding ban (2011 and 2013) on the spreading of biosolids, planned to begin in February 2021.
8. Delay the decision to reroute landfill traffic to Willis Point Road until decisions are made to have regional municipalities manage their own waste with Zero waste and new waste to energy technologies.
9. The Amended Plan by 2025 would be subject to full public consultation during its development to ensure the public has ample opportunity to engage in accordance with Ministry policy.

Elaine Klimke, Chair on behalf of
Mount Work Coalition

cc: Russ Smith, Senior Manager, Environmental Resource Management

Larisa Hutcheson, General Manager of Parks & Environmental Services

Barb Desjardins, Chair, CRD Environmental Services Committee

Sources: https://public.wmo.int/en/media/press-release/carbon-dioxide-levels-continue-record-levels-despite-covid-19-lockdown

A Zero Waste Review of the Capital Regional District's Draft Solid Waste Management Plan

ZERO waste BRITISH COLUMBIA

February 10, 2021

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1 CONTEXT

Under the *Environmental Management Act,* the Province of BC requires that each Regional District develop and implement a Solid Waste Management Plan (SWMP). These plans are to be renewed every ten years (previously every five years but now with an effectiveness review at five years) and require public consultation before submission to the Ministry of the Environment and Climate Change Strategy (the Ministry) for ministerial approval.

The Capital Regional District (CRD) last updated SWMP is from 1995 and though it has been amended over the years, the 2020 draft SWMP represents the first update since then.

This report is a review of the draft SWMP from a Zero Waste perspective, which is to greatly decrease the need for landfill expansion through minimizing waste with all of the concurrent benefits. The report will outline what Zero Waste is and why it should be pursued, followed by a review of the draft SWMP using the Zero Waste Hierarchy and a discussion of solid waste system funding.

2 ZERO WASTE

2.1 Definition

Zero Waste is "The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health."[1] This Zero Waste International Alliance (ZWIA) definition is peer-reviewed and is in contrast to "Zero Waste to Landfill" which is an industry-created definition meant to promote burning of waste and often requires no changes in separation of materials nor reduction of waste. Many organizations, including the City of Victoria, are using the ZWIA definition to provide the vision of what their actions are driving towards. While some may focus on the elimination of waste at the end of pipe, the key aspect is the conservation of resources and eliminating problematic materials and products, starting at the design stage. The highest level of recognition as a Zero Waste Community by ZWIA is when a local government has reduced disposal (to landfills, incineration and the environment) by 90% or more but communities are encouraged to embark on the process beginning with the level "Working Towards Zero Waste".[2]

2.2 Zero Waste Hierarchy

To aid in understanding the scope of policies and strategies that are part of Zero Waste plans and to evaluate them, ZWIA developed a hierarchy (see Appendix A). The Zero Waste hierarchy defines each level of the hierarchy and includes the guiding questions, principles and definitions. Zero Waste is more than just having no waste but includes systemic changes to our ways or producing and consuming materials starting at the top of this hierarchy.

The levels of the hierarchy are shown in Figure 1. The upper levels of the hierarchy are larger to emphasize that the most benefit in terms of the guiding principles arises from actions taken in these areas. The top three levels help to prevent waste while recycling and composting put the materials back in the useful loop. Material recovery

[1] Zero Waste International Alliance (2018). Definition accessed at http://zwia.org/zero-waste-definition/.
[2] Zero Waste International Alliance (2014). Zero Waste Community Certification. Accessed at http://zwia.org/zero-waste-community-certification/.

can put further materials back in the loop or sequester materials that would be harmful to recirculate (such as mercury or asbestos). Residuals management looks at what can be learned from what remains to continually improve Zero Waste systems. Destructive disposal systems are deemed unacceptable for many reasons. They destroy materials and thus the materials and the embodied energy[3] are lost; the technology is usually very expensive to both build and operate, and takes years to build so the opportunity costs[4] are high; all atoms going in must come out in some form and sometimes new more harmful molecules (such as dioxins and furans) are formed so pollution is a concern, and pollution reduction or capture technologies are expensive and do not fully mitigate the issue; the energy produced is often carbon-based with significant greenhouse gas impacts; and there is still residual waste to manage in landfills. This clear stance is in contrast to the pollution prevention hierarchy still used by the Province[5] which has the steps of Reduce, Reuse, Recycle, Recovery (materials and/or energy) and then Residuals Management. The Zero Waste Hierarchy was developed, in part, based on the experience of Europe where waste to energy or incineration was used extensively at significant expense but with harmful consequences and no real reduction in the throughput of materials.[6] Both hierarchies are designed to be planning tools, starting at the top, and the provincial website states that "once all achievable opportunities at a higher level have been taken, only then should the next level be looked at."[7]

Figure 1 Zero Waste Hierarchy

[3] Embodied energy is the energy all along the lifecycle that it took to make and deliver the products.
[4] Opportunity costs are what other actions were not taken due to the resources (staff, time or money) being spent elsewhere.
[5] Ministry of Environment and Climate Change Strategy (2020). 5R pollution prevention hierarchy. Accessed at https://www2.gov.bc.ca/gov/content/environment/waste-management/zero-waste.
[6] GAIA (2020). 5 reasons why Europe's garbage burning is a big problem. Accessed at https://www.no-burn.org/europewasteburning/.
[7] Ministry of Environment and Climate Change Strategy (2020). 5R pollution prevention hierarchy. Accessed at https://www2.gov.bc.ca/gov/content/environment/waste-management/zero-waste.

2.3 Circular Economy

A related concept to Zero Waste is the Circular Economy, with both having roots in the Cradle to Cradle concept of McDonough and Braungart.[8] Like Zero Waste, the Circular Economy also looks to design out waste and pollution, keep materials and products in use and regenerate natural systems.[9] Both concepts propose to move from a linear take-make-waste system to a circular model. This concept helps to highlight the employment and economic opportunities from reducing material throughput and waste and has growing momentum. The provincial waste planning guideline recommends both concepts be part of solid waste management plans.[10]

2.4 Why Zero Waste

As noted, Zero Waste is about more than having no materials for disposal, it is about reducing our footprint on the planet. Consumption patterns globally are not sustainable (see Figure 2 below).[11] Collectively humans use more than one planet's worth of area to provide goods and absorb wastes. This results in an ecological deficit where resources are not replenishing nor wastes absorbed to match the rate of consumption of materials or production of wastes. Growing and extracting materials and producing products has resulted in habitat and species loss, diminished soil quality, increased energy and water use, greenhouse gas emissions and other forms of pollution as well as the resulting solid waste. In addition to these ecological symptoms, there are also social ones such as inequity, injustices and human health risks. We are all starting to see the consequences of this, locally and globally.

Figure 2 Ecological Footprint of Consumption

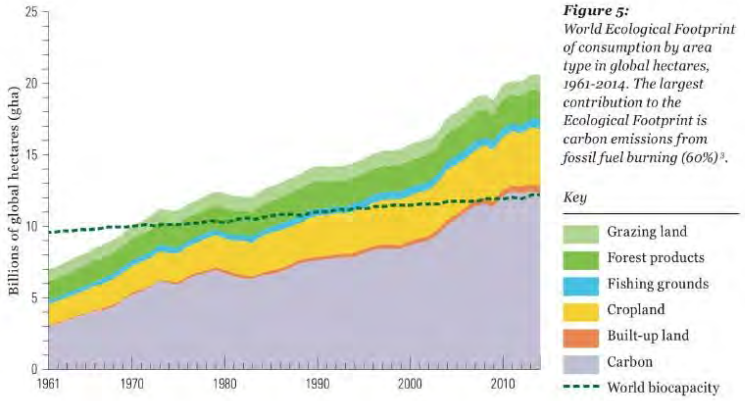
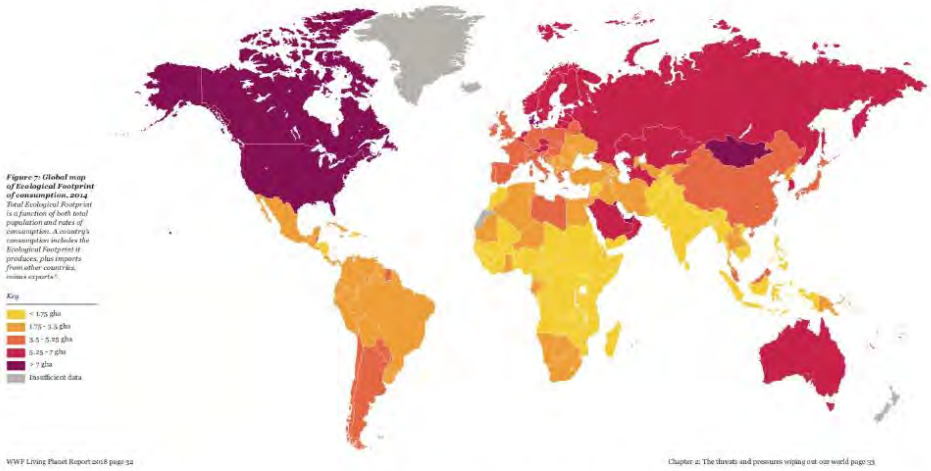


Figure 5:
World Ecological Footprint of consumption by area type in global hectares, 1961-2014. The largest contribution to the Ecological Footprint is carbon emissions from fossil fuel burning (60%)[3].

[8] McDonough, W. & Braungart, M. (2002). Cradle to Cradle: Remaking the Way We Make Things. More info at https://mcdonough.com/cradle-to-cradle/.
[9] Ellen MacArthur Foundation (2020). Accessed at https://www.ellenmacarthurfoundation.org/circular-economy/concept
[10] BC Ministry of Environment (2016). A Guide to Solid Waste Management Planning. Accessed at https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/swmp.pdf. Page 16.
[11] World Wildlife Fund (2018). Living Planet Report 2018. Accessed at https://wwf.panda.org/knowledge_hub/all_publications/living_planet_report_2018/

Figure 3 below[12] shows that Canada and the US use a disproportionate amount of resources and so need to do more than other regions to decrease consumption of materials and production of wastes. To remedy this, we need to change to Zero Waste and Circular Economy systems. We also need all parties to do their part, whether it is federal, provincial and municipal governments, and businesses pursuing Zero Waste Strategies to citizens choosing purchases wisely and sharing or renting items.

Figure 3 Global Map of Ecological Footprint of Consumption



In addition to the environmental and social reasons to pursue Zero Waste, there is also a strong business case for it as a report commissioned by the Ministry showed with a net economic benefit, an increase in GDP and generation of income tax revenue.[13] There are many jobs and business opportunities that come with the pursuit of Zero Waste.

There is momentum building for Zero Waste and Circular Economy initiatives globally. In the EU, many cities have signed on to the Circular Cities Declaration.[14] The federal and provincial governments are also planning to take more steps and both have had recent papers out for feedback on some of their next steps. The CRD is well-placed to be a leader in this with the City of Victoria pushing for Zero Waste, Saanich's recent adoption of a plastic bag ban, neighbouring Regional Districts setting good examples, expertise within local academia and the community, a growing number of Zero Waste businesses, and broad support from citizens and environmental groups.

[12] Ibid.
[13] Hood, I. (2013). Zero Waste Business Case. Accessed at https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/zero_waste_business_case_draft.pdf.
[14] Circular Cities (n.d.). European Circular Cities Declaration. Accessed at https://circularcitiesdeclaration.eu/fileadmin/user_upload/Images/Pages_Images/Circular_City_Declaration/CircularCitiesDeclaration.pdf.

2.5 Role in Climate Change

Key elements of direct emissions from the solid waste management system include gas released from landfills (usually methane and carbon dioxide as a result of organic materials breaking down in anaerobic conditions) and transportation of materials from collection until the final destination. Landfill gas can be captured but the draft plan notes that only 68% was captured in 2018 at the Hartland Landfill. Ministry best practices aim for 75%[15] of the gas (though some systems report higher capture rates) meaning that significant amounts of gas, at least half of it methane, escape. This is especially problematic as methane is a very powerful GHG with a shorter lifespan (an impact of 84-87 global warming potential over a 20 year time span rather than 28-36 of 100 year time span is used).[16] There can also be significant emissions from burning of waste but this is not the case in the CRD at this time.[17]

Greenhouse gas (GHG) emissions are often looked at from a sector perspective as dictated by the Community Energy and Emissions Inventory protocol and from this view waste makes up 9% of the 2017 CRD emissions with buildings (36%) and on-road transportation (55%) making up the remainder. However, when looking at emissions from a systems perspective as Figure 4 below shows where all of the upstream emissions for the provision of goods, food and other consumption are included, it is apparent that choices of consumption and wastefulness have a bigger impact on GHGs. When the full ecological footprint is considered, it is clear that consumption choices have a very large impact.[18] This figure shows the comparison for the City of Victoria, which was one of the pilot communities for developing this tool, though other studies have found similar if not identical results.[19]

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[15] BC Ministry of Environment (2011). Technologies and Best Management Practices for Reducing GHG Emissions from Landfill Guidelines. Accessed at https://www2.gov.bc.ca/gov/content/environment/waste-management/garbage/landfills.

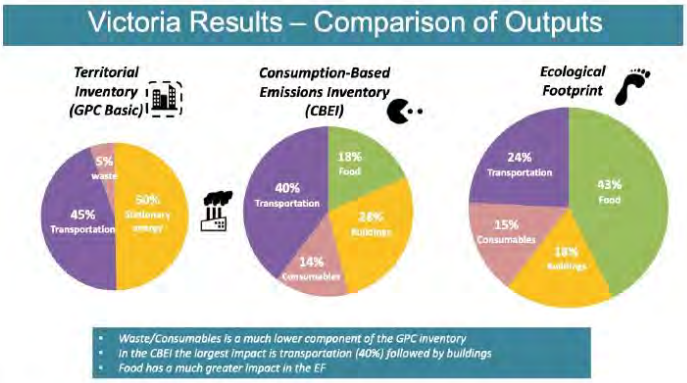
[16] US EPA (2020). Understanding Global Warming Potentials. Accessed at https://www.epa.gov/ghgemissions/understanding-global-warming-potentials#Learn%20why.

[17] Using data from Metro Vancouver's financial plan and 2019 Biennial report, despite handling only ¼ of the region's solid waste, the Burnaby incinerator's operating costs were more than double the cost per tonne of the landfill and emitted more than double the GHGs per tonne of the landfill.

[18] Moore, J. & Hallsworth, C. (2018). ecocity Footprint Tool -Pilot Project Results Webinar. Accessed at https://static1.squarespace.com/static/5ba7f601a09a7e3943945c4e/t/5bd28b31a4222fa1ffa274d3/1540524851172/Tool+Results+Webinar.pdf.

[19] Stolaroff, J. (2009). Products, Packaging and US Greenhouse Gas Emissions. Accessed at https://www.researchgate.net/publication/237808802_Products_Packaging_and_US_Greenhouse_Gas_Emissions#pf5.

Figure 4 Global Protocol for Community Emissions (GPC) versus Consumption-Based Emissions Inventory (CBEI) versus Ecological Footprint



Because these upstream emissions are not counted in the current scope of the local government reporting, they are usually ignored and so both climate action and solid waste plans often do not include strategies to address them. They still exist however, and a study for the C40 Cities suggested "urban consumptions-based emissions must be cut by at least 50% by 2030 to maintain the possibility of keeping global temperature rise below 1.5 C."[20] Of the cities examined for that study, 85% of the emissions associated with goods and services consumed within their boundaries are imported from elsewhere. This same report goes on to advocate for ambitious action in the next ten years, noting the need for high income urban areas to reduce the climate impact of consumption by 2/3 in the next decade. While each of these studies uses slightly different methodologies and cover different geographies, the bottom line is that consumption of materials, including food, has a GHG impact at each stage of the process from growing or extracting resources to manufacturing to sales to home or business to disposal. By reducing wasteful and unnecessary consumption, GHGs can be reduced more significantly than with a sole focus on waste diversion (recycling or composting) and far, far more than any energy recovery system would. The Closing the Loop report found that aggressive Zero Waste policies could save 6.2 million tonnes of CO_2e by 2040 while creating 7000 new green jobs in BC.[21] The City of New York's One NYC 2050 Plan also acknowledges that "carbon neutrality necessitates New York City achieving zero waste."[22] The City of Amsterdam's Circular Strategy

[20] C40 Cities (2019). New Research Shows How Urban Consumption Drives Global Emissions. Accessed at https://www.c40.org/press_releases/new-research-shows-how-urban-consumption-drives-global-emissions.
[21] Lee, M., Legg, R., Maxwell, S. and Rees, R. (2013). Closing the Loop -Reducing Greenhouse Gas Emissions and Creating Green Jobs Through Zero Waste in BC. Accessed at https://pics.uvic.ca/sites/default/files/uploads/Closing%20the%20Loop...pdf.
[22] The City of New York (2019). One NYC 2050 Building a Fair and Strong City. Accessed at http://1w3f31pzvdm485dou3dppkcq.wpengine.netdna-cdn.com/wp-content/uploads/2020/01/OneNYC-2050-Full-Report-1.3.pdf

notes that a circular economy is needed to stay within planetary boundaries and is part of their path to climate neutrality.[23] They also use doughnut economics[24] and recognize the need for social justice.

This realization that consumption drives a significant portion of GHG regardless of where the actual emissions may occur is why many progressive communities are looking at adopting consumption-based emissions inventories to help them better understand their impact and develop suitable strategies. Looking at waste and GHGs with this lens changes the focus from the traditional one: what we discard from our homes, institutions and businesses, to what we choose to consume, how we do that (owning versus sharing, reusable versus disposable), how long we keep the items in use and then how we discard them.

As noted in the Regional Climate Action Strategy,[25] which includes a goal to minimize waste generation, there are many co-benefits of climate action and similarly there are also many co-benefits from pursuing Zero Waste which go beyond less waste and GHGs.

The Ministry's guidelines for solid waste planning recommend that plans address the climate impacts of waste. According to the CRD website,[26] "in February 2019, the Capital Regional District (CRD) Board identified Climate Action & Environmental Stewardship as a priority for the region and approved a motion to declare a climate emergency... The CRD is developing and implementing strategies to address this issue." A strengthened Solid Waste Management Plan could be one of those strategies.

Finally, it is important to acknowledge that while GHGs alter the global climate, the impacts can be seen locally, here in BC experienced as increased forest fires and smoke, altered rainfall patterns (droughts and floods) and loss of species, which will have knock-on effects and costs to many communities and businesses. It is through our collective global action to reduce the GHG emissions that the local impacts can be minimized.

3 REVIEW OF DRAFT PLAN

The draft SWMP was reviewed through the lens of Zero Waste and using the Zero Waste Hierarchy. Each level of the hierarchy is noted below as well as the plan direction and supporting systems.

3.1 Plan Direction

The plan adopts and strengthens the guiding principles (including Zero Waste and the Circular Economy) that are recommended by the Ministry.[27]

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[23] Municipality of Amsterdam (2020). Amsterdam Circular 2020 -2025 Strategy. Accessed at http://carbonneutralcities.org/wp-content/uploads/2020/06/Amsterdam-Circular-2020-2025_Strategy_HighRes.pdf.

[24] Doughnut economics aims to have an economy that is within the ecological boundaries of the planet while providing the basic needs of its citizens (social boundaries).

[25] CRD Regional Climate Strategy (2017). Accessed at https://www.crd.bc.ca/docs/default-source/crd-document-library/plans-reports/climate/2017-04-12_regionalclimateactionstrategy_final.pdf?sfvrsn=da2e32ca_18.

[26] CRD (2019). Climate Action webpage. Accessed at https://www.crd.bc.ca/project/climate-action.

[27] BC Ministry of Environment (2016). A Guide to Solid Waste Management Planning. Accessed at https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/swmp.pdf.

The goals for the plan are to:

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

As the preface of this section states these are aspirational, these goals could be far more inspiring. The guiding principles include a Zero Waste approach and so the aspirational target should be Zero Waste, rather than 125 kg/capita/year. If that goal is seriously pursued then the lifespan of the Hartland Landfill could be greatly extended and its role could be more as a hub for materials, research and education than for waste disposal. The role of citizens in a Zero Waste and circular economy system should be more than as correct sorters of materials, but instead as active participants developing a vibrant circular economy that minimizes material throughput and environmental harms while maximizing local benefits. Businesses, institutions and other sectors should also be actively engaged. It is appropriate to ensure the long-term financial stability of the solid waste services.

The plan uses the pollution prevention hierarchy which covers many of the same aspects as the Zero Waste Hierarchy but misses the top level where the systemic rethink and redesign considerations are included. The pollution prevention hierarchy includes energy recovery as acceptable (unlike the Zero Waste one and places it above residual management).

From a starting point of 382 kg/capita in 2019, targets for the per capita disposal rate are set at 340 kg or less for the third year, 285 kg for the fifth year and 250 kg for the tenth year. It also should be noted that the CRD has been close to the provincial target of 350 kg/capita for two of the past five years and so while this may be a stretch target for some regions, it may not be rigorous enough for others including the CRD.
The importance of stretch goals can be seen from history. In 1989, BC set a goal to reduce the average per capita disposal rate by 50% by the year 2000.[28] During those years, waste disposal per capita in the CRD fell from 654 kg/capita to 399 kg/capita. The target of 327 kg was not reached but the drop was significant. Since then the per capita number has fluctuated between 352 and 454.

In comparison, the City of Victoria has a target of 50% less waste disposed by 2040 and fully circular by 2050.[29] Victoria represents 1/3 of the waste going to the Hartland Landfill. The C40 Cities has a Zero Waste Declaration (to which Vancouver is a signatory) which sets a goal of 50% less waste disposed by 2030 (compared to 2015).[30] The equivalent for the CRD would be 172 kg/capita. The C40 Declaration also sets targets for waste generation (as in all materials discarded which includes waste, recycling and organics) to be 15% less and for diversion to increase to 70% by 2030. The cities commit to biannual public reporting. While the CRD draft plan does not show the diversion rate, Figure 1 of Zero Waste Victoria shows that its diversion rate is 51%.[31] The Regional District of Nanaimo (RDN)

[28] Government of Canada (2006). An Analysis of Resource Recovery Opportunities in Canada and the Projection of Greenhouse Gas Emission Implications. Accessed at https://www.rcbc.ca/files/u3/RR-opport-data-report.pdf.
[29] City of Victoria (2020). Zero Waste Victoria. Accessed at https://www.victoria.ca/EN/main/residents/climate-change/waste-reduction.html.
[30] C40 Cities (n.d). Advancing Towards Zero Waste Declaration. Accessed at https://www.c40.org/other/zero-waste-declaration.
[31] Same as footnote 28

had comparable waste per capita to the CRD (347 kg in 2014 -RDN to 369 kg for the CRD) and yet their target is far more aggressive at 109 kg by 2027.[32]

Recommendations:

- Adopt Zero Waste as the goal and engage all sectors of society in pursuing this.
- Adopt the Zero Waste Hierarchy as a guide.
- Adopt stronger targets (similar to the Regional District of Nanaimo).
- Gather information and add targets for reduced waste generation and waste diversion that at least match the C40 Zero Waste Declaration.

3.2 Rethink/Reconsider

Under the rethink/reconsider level of the hierarchy, the CRD draft plan includes some good measures. Developing and implementing a purchasing policy can encourage production of products made from reused, recycled or sustainably-harvested renewable, non-toxic materials and products that are durable, repairable, reusable, fully recyclable or compostable, and easily disassembled. The purchasing policy could also improve the market for the finished compost material. This should be developed in partnership with member municipalities as noted but also regional districts, universities, the provincial government, and institutions to maximize the impact. The CRD could join the Canadian Collaboration for Sustainable Procurement to maximize the impact and reduce the work involved in research. An annual report back to the Board as happens for the City of Vancouver is recommended. Incentives are another key component and the plan includes a fund for waste reduction (action 2B) and Pay As You Throw (PAYT) for tipping fees. A key one needed is to have higher tipping fees (more on tipping fees in section 4), ideally matching the CVRD fees to prevent waste migration and provide stronger disincentive to wasting. Additional fees will help to fund programs. The CRD has differential fees (free for recycling and Household Hazardous Waste (and lower for yard waste than garbage)[33] however the charge for kitchen scraps is higher than for waste which would encourage putting kitchen scraps in the waste. In addition, there is no surcharge or penalty for mixed waste loads such as for the Sunshine Coast, Whistler and Squamish, where fees may be double if the waste has a significant amount of banned materials (including recyclables and organics). The Regional District of Kootenay Boundary charges five times the tipping fee for loads with banned recyclable materials.[34] In addition to PAYT at the landfill, the CRD should work with member municipalities to have PAYT at the curb and elsewhere that makes it progressively more expensive by weight or volume to waste.

Other areas that need addressing for fees are for tires and unsecured loads. The fees for rimmed tires may be a disincentive. Work should be done with Tire Stewardship BC and the Ministry to ensure that the Extended Producer Responsibility (EPR) program is covering all costs associated with their products including the handling of rimmed tires so that the landfill does not need to charge fees to the end user. Unsecured loads can create litter enroute to the disposal facilities. One way to prevent this is to charge an additional fee for loads arriving unsecured as is done by many other regional districts.

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[32] Regional District of Nanaimo (2018). Regional District of Nanaimo: Solid Waste Management Plan -Planning for the Future of Our Waste -Road to 90% Waste Diversion. Accessed at https://www.rdn.bc.ca/sites/default/files/inline-files/2018%20SWMP%20Amendment_1.pdf.
[33] CRD (2020). User Guide Hartland Depot. Accessed at https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/hartlanduserguide.pdf?sfvrsn=88e2c3ca_8.
[34] Regional District of Kootenay Boundary (n.d.). Garbage, Compost & Recycle. Accessed at https://rdkb.com/Utilities-Waste/Garbage-Compost-Recycle/Landfill#mckelvey.

In 3.8 Residual Management, the need for understanding what remains in the waste will be highlighted but this information should feed back into systems change. Items that are not recyclable nor compostable need to be identified and this feedback needs to inform the federal and provincial directions for what materials may need to be phased out or regulated into an EPR program.

This plan can help to increase the local economy, through procurement policy and fostering local businesses that reduce waste. The plan could include actions to measure and promote this. For example, the Vancouver Economic Commission reports on the green local jobs created through the Greenest City Action Plan.[35] There could also be a specific working group to develop the Local Circular Economy that goes beyond Plan Monitoring Advisory Committee members and engages citizens, businesses, academia and others to develop Zero Waste businesses beyond what the CRD already has. The CRD is well-placed to do this given that there is a wealth of expertise (the University of Victoria and the Provincial Government is within its boundaries), there are numerous environmental non-governmental groups like One Planet Saanich, and that there are already a host of Zero Waste businesses in place.[36] It is key to get the mindset of citizens and businesses to change. This can come from education programs, bans on single use and commonly wasted items, and be part of solutions designed to encourage people to consume less.

Leading by example is another key strategy. Leadership can be demonstrated through in-house programs such as employee education; increased use of electronic documents; double-sided copying and printing and only when necessary; decreased use of non- recyclable paper; use of cloth towels or electric hand dryers in rest rooms; and where packaging is required in food operations, using only reusable and recyclable containers. Use of standard signage and bins in appropriate collection areas can also decrease the corporate waste.

Recommendations

- Increase tipping fees to align with neighbouring regional districts, ensure kitchen scraps are at a lower fee than the waste and add a mixed waste fee at double or more the regular waste tipping fee to encourage waste diversion.
- Work to address fees on rimmed tires.
- Add a fee for unsecured loads.
- Add an action to promote the local circular economy potential.
- Develop a program for the CRD corporate entity to model Zero Waste actions.
- Join the Canadian Collaboration for Sustainable Procurement.
- Have the CRD lead by example.
- Work with federal and provincial government on policies to reduce material throughput and waste.

3.3 Reduce

Strategy #1 Continue and Enhance Education Programs

Reduction is critical area for change and source reduction and the elimination of problematic materials should be the main focus. Reducing the materials at the source can then be supported by behaviour change components, not just incorporated but as the key driver for new and existing programs. The expansion of education to multifamily and ICI sectors is good as is expanding the K-12 programs to include the circular economy. While supporting

[35] Vancouver Economic Commission (2018). Green Economy. Accessed at https://www.vancouvereconomic.com/focus/green-economy/.
[36] Project Zero (2020). Accessed at https://www.project-zero.ca/resources.

environmental stewardship recognition is noted, it should include awards, labelling, accreditation and other forms of public recognition. In addition to the actions already listed, these could be added as well:

- Partner with other jurisdictions to share materials (for example, consider rolling out Think Thrice -Metro Vancouver's textiles campaign).
- Create targeted behaviour change campaigns based on the needs shown in the waste composition studies.
- Monitor results with ongoing waste audits and modify campaigns based on the feedback.
- Consider partnering with other organizations (not just product stewards): environmental groups, universities, the Ministry, and others to test out pilot programs. Share the results with other jurisdictions.
- Instead of just engaging residents on solid waste matters, work to promote the Zero Waste concept and increase avoidance of waste-generating materials and products, and diversion for all residents and businesses. Help citizens to understand the environmental footprint of their purchases and how to evaluate different options.
- Consider a waste or sustainability-focused newsletter like the Regional District of Nanaimo and City of Vancouver have.
- Foster and promote the refill, reuse, sharing, rental, and repair businesses in the region.
- Enhance and encourage more repair cafes such as those in Sooke, Fairfield and North Saanich.
- Conduct a toxics reduction campaign to reduce the amount of hazardous materials used.

Strategy #2 Encourage Waste Prevention

The actions in this strategy are also key for waste reduction and include promoting reduced consumption and consumer responsibility, supporting single-use item reduction efforts, promoting better packaging options and advocacy. These actions are sound but it is unclear how extensive they will be or not. Additional actions could include :

- Ensuring access to drinking water instead of bottled water by mapping it out as Metro Vancouver has done
- Developing a regional reusable cup share programs as the City of Freiburg has and use the same model for takeout containers.
- Working with local partners to develop and promote sharing services such as for reusable mug and takeout containers as well as other services.
- Work to reduce waste at the source and eliminate problematic materials including bans where possible.
- Collaborating with other local governments (and non-governmental organizations) to increase the efficacy of the advocacy to higher levels of government.
- Develop a plastic reduction strategy to reduce the use of plastics, plastic waste and microplastics. Collaborate with other governments as well as businesses. The next ten years will eb a critical time for this.
- Developing a program to encourage renovation of buildings over demolition.

Strategy #3 Support Reduction of Avoidable Food Waste

A strategy addressing food waste is sound and could be strengthened by setting a food waste reduction target. The actions to support residential and ICI food waste reduction, and food recovery organizations, as well as advocating for clarity and education on best before dates are suitable but the degree of action is unclear.

Given the large percentage of single family homes and the amount of kitchen scraps and yard waste generated, consideration should be given to:

- Continue with the Love Food Hate Waste program but strengthen its implementation.

- Work with partner organizations to decrease food waste.
- Develop a program to increase wildlife-friendly backyard composting. This is considered reduction as the material does not need to be collected nor transported and it can replenish the nutrients in the gardens.
- Grasscycling and xeriscaping can also be encouraged to reduce the amount of yard waste.

3.4 Reuse

Strategy # 4 Support Reuse Activities in the Region

This strategy has actions to continue support for reuse organizations; support of rental, reuse and sharing programs; and investigating free stores at facilities. Other actions should include:

- Develop a sharing economy strategy that identifies the top priorities[37] could result in the option to borrow a wide-range of items like York Region's Lendary. Support local sharing systems or set up ones to fill in the gaps (bikes, tools, cars, toys, kitchen gadgets).
- Hosting a ReBuild it Centre at Hartland.
- Mapping out local resources for sharing, rental, reuse, and repair. See Portland as an example.
- Hosting or supporting local repair cafes like in Metro Vancouver.
- Set reuse/refill targets across CRD buildings/spaces and invest in infrastructure for this.
- Support reusable diapers systems as household hygiene is a significant waste segment.
- Advocate for the Right to Repair, mandatory warranties, time frames for parts availability, requirements for online manuals, and plans for components
- Advocate for EPR programs to be responsible for supporting repair and reuse of their products (where suitable).
- Ask for federal and provincial investment in reuse, repair, refill, etc. and circular systems for scaling local initiatives.
- Incentivize house moving and construction material reuse through regulatory strategies, enforcing limits on waste generation and expanding environmental obligations. This should be done in partnership with member municipalities.

3.5 Recycle

Table A of the Waste Composition study[38] (which is a more detailed look at the data in Figure 4.2 of the draft plan) shows that over 50% of the waste is comprised of materials that are banned or could be recycled. This highlights the needs for more education and enforcement of the bans. Products and packaging covered under the Canadian Council of Ministers of the Environment Canada-wide Action Plan for Extended Producer Responsibility[39] represent 61% of the waste and highlights the need for the Ministry to follow through on its 2009 commitment to require producer responsibility systems for Institutional, Commercial and Industrial (ICI) Packaging and Printed Paper (PPP); textiles and carpet; furniture; and construction and demolition materials (though the target date was 2017). The Ministry took a step towards parts of this with its recent Discussion Paper but the CRD must continue to play a strong role in pushing for complete and speedy delivery of the Canada-wide Action Plan.

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[37] One Earth (2015). Local Governments and the Sharing Economy. Accessed at http://www.localgovsharingecon.com/uploads/2/1/3/3/21333498/localgovsharingecon_report_full_oct2015.pdf.
[38] Tetratech (2016). 2016 Solid Waste Stream Composition Study. Accessed at https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/WasteCompositionStudy2016.pdf?sfvrsn=baab36ca_4.
[39] Canadian Council of Ministers of the Environment (2009). Canada-wide Action Plan for Extended Producer Responsibility. Accessed at https://www.ccme.ca/files/current_priorities/waste/pn_1499_epr_cap_e.pdf.

Many of the strategies in the CRD draft plan relate to recycling for different waste generating sectors (residential - single family and multifamily; ICI; construction and demolition; and public spaces). They are noted here along with ways to enhance the plan.

Strategy #7 Increase Residential Diversion

Actions for this strategy include promoting diversion, working with service providers to support depot diversion, encouraging local processing and markets and developing tools for event recycling. Additions could include:

- For events, the CRD should work with member municipalities to require zero waste plans to be part of event permitting process.
- The grey box system for glass collection, such as the City of Vancouver uses, should be examined to see if this could increase diversion.
- Work with service providers to do more checks, education and enforcement of disposal bans at point of collection.

Strategy #8 Increase Multi Family Diversion

Actions include supporting diversion through education, working with partners to develop source separation requirements, developing a policy guide and collaborating with stakeholders to support recycling. These are all suitable and good examples exist elsewhere that can be used.

- A review should be done to make sure the Recycle BC program covers all the appropriate multifamily buildings in the CRD.

Strategy #9 Increase ICI Diversion

Actions include providing resources such as a business waste reduction liaison, advocating EPR for ICI packaging and paper, creating a toolkit, encouraging municipalities to require waste management plans with business licenses, developing policy for ICI space and access requirements, working with partners on source separation requirements and investigating disposal ban enforcement of generators. These are all suitable and good examples exist elsewhere that can be used.

Strategy #10 Support Existing and New EPR Programs

These actions are to advocate for expanded EPR programs, standardized programs and return-to-retail opportunities. It also looks to work with the stewards to increase consumer awareness of programs. Advocacy is the main element for this and the CRD can also:

- Work to ensure that the EPR programs are fully delivering on their obligations including doing more on the first levels of the hierarchy.
- Ask that the Province meet its commitments to the Canada-wide Action Plan for EPR in a timely fashion.
- Work with other local governments to ensure the programs are as effective as possible and that local governments have a voice in program delivery and plans.

Strategy 12# Increase Construction, Renovation and Demolition Material Diversion

The actions include a clean wood waste ban and looking at surcharges for mixed waste loads along with programs for hazardous materials. In addition to this, the CRD could:

- Develop a Construction and Demolition materials hub at Hartland (as the City of Vancouver is investigating).
- Form a Construction and Demolition working group to determine best practices
- Require deconstruction not demolition (building on Metro Vancouver's model bylaw).
- Charge a waste levy on materials to drive diversion and track data.
- Ask the provincial government to work towards a building code that incorporates future deconstruction needs and factors in embodied carbon and to create a deconstruction step code.
- Work with province to include design guidelines in Building Code to ensure adequate space for waste sorting in new developments (both in unit and in building). Whistler is an example of a jurisdiction that has worked with existing buildings.

Strategy #13 Encourage Proper Public Space Waste Management Activities

The actions include developing educational materials, promoting alternatives to illegal dumping, developing a regional approach to prevention and bylaws, work on reporting systems and investigate large bulky item disposal. Other actions should include:

- For bulky disposal, the CRD should advocate for the promised EPR programs for furniture, mattresses and carpet and ensure that programs for bulky items have a pickup component.
- The CRD asking that the Recycle BC program is required by the Ministry to deliver service in public spaces as noted in the Recycling Regulation.

Additional Recommendations:

- Developing common regional signage to assist in correct sorting of materials. This should be done in conjunction with member municipalities, businesses and EPR programs. An example of this has been done by the Squamish-Lillooet Regional District.
- Banning materials before EPR programs exist. For example, Metro Vancouver have banned mattresses from their facilities and this ensures materials for the mattress recycling businesses that have arisen.
- Working with service providers to provide biweekly service for curbside garbage collection and weekly service for organics pickup. This has proven to reduce waste in other regions.[40]
- Targeting funding towards recycling materials that are not currently recycled by encouraging non-profit and private sector innovation such as in the RDN's plan.
- Educate around and enforce the bans. Feedback at each step of the process (at collection, at transfer and at the landfill) is essential to help educate waste generators on how to reduce their waste. This will require partnership with other organizations that deliver these waste collection and management services. This could require friendly waste educators monitoring collection runs and cameras on waste trucks checking each tip.

3.6 Compost

The 2016 Waste Composition study[41] (Table A, page 2) shows that 10% of the total waste was avoidable food waste and another 1.6% was of donatable quality. Another 7% was the type of material that could have been composted in backyard composters. These components are 18.6% of the waste compared to all organics at 21.1% of the waste stream. This shows that a strong focus on food waste prevention and a program to encourage backyard composting could significantly reduce the amount of organics that need to be collected and processed.

[40] Clean 50 (n.d). City of Surrey -Rethink Waste!. Accessed at https://clean50.com/projects/city-of-surrey-rethink-waste/.
[41] Tetratech (2016). 2016 Solid Waste Stream Composition Study. Accessed at https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/WasteCompositionStudy2016.pdf?sfvrsn=baab36ca_4.

This could reduce the costs for that infrastructure. It also highlights the risk in relying on the energy from organic material if the infrastructure is not scaled appropriately. The goal of composting should be high grade compost to support regenerative agriculture. This not only reduces waste but can help to support food security and resilience.

Strategy #11 Increase Organics Diversion and Processing Capacity

This strategy addresses some of the present issues and has actions to promote diversion, develop a processing facility, support compost markets and to develop guidelines for use of compostable products and packaging.

Recommendations:

- Consider also decentralized composting for high generation areas.
- Processing for the rest scaled to consider the reduction through reduced food waste and backyard composting.
- Education and enforcement for bans.
- Identify and develop other end market.

3.7 Recovery

While no specific strategies were in the plan under recovery, further work to reduce the use of hazardous materials and increase the coverage of hazardous materials under EPR programs should be done.

3.8 Residual management

Two strategies were noted under residual management. The Zero Waste Hierarchy recommends using existing landfills and managing them well (using best practices for gas, leachate, monitoring, etc.). This plan follows these recommendations.

Strategy #14 Optimize Landfill Gas Management

Capturing landfill gas helps to reduce the impacts of past mistakes (putting organics in the waste) but no system captures all of the emissions and there is still a loss of nutrients from the soil. There is also a risk that the drive to capture landfill gas takes precedence over the more beneficial reduction of organic waste and composting what remains. Caveats on this strategy are to ensure that the need to fulfill the contract with Fortis does not conflict with organics reduction strategies and that food waste prevention, back yard composting, support of practices to decrease yard waste, and other strategies higher up the hierarchy take precedence over the production of landfill gas. Ensure the systems are scaled appropriately to the intended volume of organic materials, not the current level.

Strategy #15 Enhance Hartland Disposal Capacity

The actions include reviewing ban enforcement levels (subject to recycling market conditions), use best practices at the landfill, develop design options to maximize capacity and conduct research into emerging technologies. One of the key ways to preserve capacity is to increase ban enforcement levels (not just review them) and to add new bans. As much of the material could be diverted already, strengthening this system along the disposal chain will be key. The CRD is to be commended for planning ahead but given that this plan is for ten years with an effectiveness review at five years, it may be premature to be developing additional capacity, especially when capacity can last longer through more aggressive Zero Waste policies. Phase 2 is expected to last until 2045 but this can be greatly

extended it by adopting the recommendations above. The less waste produced and the longer the existing landfill space can last, the lower the impact on the surrounding area.

Consider the waste that remains as a key source of information on the effectiveness of the plan's actions. This information should be used to then add or adjust actions or continue what is effective. This information should be used to tweak these programs, develop new ones or to share with higher levels of government and other stakeholders so that they can make appropriate changes as well. It can also be used to provide feedback to other entities. For example, the Zero Waste Research Center in Capannori found that the coffee pods were a problematic material so they worked with the producer to find a biodegradable solution.[42] EPR programs also have an interest in understanding the effectiveness of their programs so partnerships should include their support for waste composition studies, for which the data should be made public. It is also important to understand, gather data on, and ensure the same standards are met for waste flowing to outside the region. Victoria's Zero Waste plan also notes the need for improved regional waste flow data disclosure.

Recommendations

- Conduct regular waste audits and biannual waste composition studies. Work with EPR programs to have them pay for their share of waste composition studies. Make the data public. Make changes based on results.
- Understand and restrict waste flows outside of the region.
- Delay work on landfill expansion and pursue Zero Waste actions instead.
- Mandate clear bags for waste a soon as possible.
- Ensure the public is aware of the progress (or not to date) through publishing the annual report along with advertising and creative means such as a waste thermometer at the landfill.

3.9 Unacceptable

The Zero Waste hierarchy does not promote burning of waste. Backyard burning is noted as a debris management option but an analysis should be done to see if this material is suited for the organics management facility as such facilities may be short of chipped wood.

The CRD is also to be commended for not pursuing thermal technologies for waste destruction in this plan however the plan does mention investigating emerging technologies. While it is unclear what the scope of these technologies may be, it is important to note some examples from other regional districts where they have been clearer in their opposition to waste-to-energy technologies. The Squamish-Lillooet Regional District Solid Waste and Resource Management Plan states that thermal treatment of mixed waste is excluded from consideration for future management of residual waste.[43] The Fraser Valley Regional District notes in its plan that it "does not support the use or inclusion of incineration as a method of "recovery" and goes on to outline that the rationale is because it still requires landfilling, produces toxic residuals and air emissions, produces GHGs, wastes energy and natural resources, creates a demand for waste, imposes long-term financial burdens on local government and there are safer, smarter ways to manage non-recyclable material.[44] The RDN notes it will "continue to review and

[42] Zero Waste Europe Cities state of ZW (2020). https://zerowastecities.eu/wp-content/uploads/2020/12/zwe_report_state-of-zero-waste-municipalities-2020_en.pdf.
[43] Squamish-Lillooet Regional District (2016). SLRD Solid Waste and Resource Management Plan. Accessed at https://www.slrd.bc.ca/sites/default/files/pdfs/UES/recycling-composting-solidwaste/SWRMP/SLRD%20SWRMP%202016-03-16.pdf.
[44] Fraser Valley Regional District (2015). Solid Waste Management Plan Update 2016-2026. Accessed at https://www.fvrd.ca/assets/Services/Documents/Garbage/SWMP.pdf.

consider alternative technologies that are consistent with the Zero Waste Hierarchy and goal."[45] The Sunshine Coast Regional District adopted the Zero Waste Definition and a report noted that waste incineration would be contrary to their SWMP.[46]

Recommendation:

- Include clear language to prevent the use of destructive thermal technologies for managing waste.

3.10 Supporting Systems

In addition to the hierarchy there are some strategies that provide supporting systems to achieving Zero Waste and for which there are two strategies that would fall under this category.

Strategy # 5 Support Local Governments in Working Towards Zero Waste

This strategy includes actions for developing model language for bylaws, best practices, OCPs and economic development strategies; identifying need and zoning for solid waste facilities; enabling local recycling infrastructure; use of PAYT; and the use of clear bags. The CRD could also:

- Encourage more local governments to follow Victoria's example and create their own Zero Waste plans, tackle different strategies, and share the results. Collaboratively, local governments working on Zero Waste could engage with senior levels of government to work on road blocks they encounter.
- Work with local governments to encourage or mandate waste audits in the ICI sector.

Strategy # 6 Continue and Enhance Policy Development

This strategy includes model procurement policies, expanding material bans, investigating waste management facility licensing, investigating regulatory mechanisms for material management and looking at options for debris.

There also need to be:

- An inclusion of a requirement to report data with the licensing of waste management service providers and facilities.
- Interregional cooperation -working with other regional districts to share best practices and collaborate on advocacy.
- Membership in the National Zero Waste Council and other entities to foster Zero Waste systems.

Overall there are many sound strategies in this plan but the big question is how far and how quickly will they go. Appendix E of the draft plan shows that many new strategies (such as supporting renting/sharing/reuse programs and increasing residential, multifamily and ICI diversion will not be implemented until after year 5. The effectiveness of the plan will come down to resources dedicated to implementation. The key will be adequate staff time, scope and financial resources dedicated to solid waste. Frequently, regional districts will develop sound plans and then consistently underfund or ignore them until the next crisis in disposal capacity results. Sound management of solid waste requires early, ample and consistent efforts to minimize waste to preserve the

[45] See footnote 28.
[46] Sunshine Coast Regional District (2019). Special Infrastructure Services Committee agenda. Accessed at https://www.scrd.ca/files/File/Administration/Agendas/2019/2019-JAN-25%20ISC%20Agenda%20Package%20-%20Special.pdf.

remaining disposal capacity as long as is possible. This remaining capacity should be highly valued and decisions should factor in the ever-increasing costs to replace such an asset. This valuation should drive spending now to delay or prevent those future expenses.

A comparison with the RDN plan shows the difference in costs per capita. The RDN notes the difference between the status quo at 68% diversion to its Zero Waste strategy of 90% diversion was $10.03. The additional costs for the CRD plan at $3,245,000 represent $7.76 per capita.

Other Recommendations:

- Outline what the five-year plan review will include like the RDN plan.
- The climate strategy also notes many outreach programs and campaigns with other partners -the same needs to happen for the SWMP.
- Value the remaining landfill space.
- Increase funding and staff time to support this plan to ensure it can achieve higher targets.

4 FUNDING

Funding the plan adequately is important. The source of funds can come from tipping fees, grants, revenue from landfill gas and payments from EPR programs. It can also be funded through utility fees and taxes as many utilities are.

It is important to understand the multiple roles of tipping fees. The first is to fund the solid waste services. A high tipping fee with lower fees for source separated materials like yard and garden waste, food scraps and recyclables (also known as variable tipping fees) can be a strong incentive to recycle and compost rather than waste. Consideration of tipping fees in nearby regions is also important to avoid waste migration. Setting tipping fees lower than neighbouring districts can result in waste coming into the region. There are also some concerns that a very high tipping fee may result in illegal dumping but there are many factors that contribute to illegal dumping and the fees are not always the key driver. Tipping fees also need to continually increase both to maintain the level of incentive and to fund the system. Appendix F includes estimates of future financial requirements and revenue but appears to assume the tipping fees would remain static for ten years.

There are other sources of revenue as well. As more products and packaging are covered by EPR programs, the CRD should ensure that it is fairly compensated for services it provides to these programs and should work in collaboration with other regional districts through the BC Product Stewardship Council to ensure that local governments are also compensated for the materials that end up in the waste stream despite the programs. There is mention in the plan of developing markets for the finished compost material which could also provide revenue. The RDN is proposing a disposal levy to offset the regional district's fixed costs of solid waste system (particularly for materials shipped out of the region) with a discounted tipping fee offered to licensed haulers. In some cases, there are grants available such as the ones recently offered for organics management facilities by the provincial and federal governments. Fines may be another revenue source but not one that should be relied upon.

When regions pursue Zero Waste in a system funded mainly through tipping fees, there can be concerns that success will mean that there is inadequate income to fund the fixed costs of the solid waste system. To avoid the conflict between a goal of Zero Waste and an adequately funded system it is important to include a mix of funding sources that is adjusted as the waste is reduced. Some funds should come from property taxes and utility fees to ensure that there is a source of stable funding. These can start at a low level and can increase as the amount of waste decreases but initially the tipping fees need to be similar to neighbouring regions and high enough to

encourage waste diversion. If the revenue is higher than expected due to more waste than intended, these additional funds should be put towards additional programs to address the problem areas.

Looking at Zero Waste more broadly, the CRD can also encourage grants from other funding parties to local organizations to support Zero Waste and create a hub in the region.

Recommendations:

- Fund part of the solid waste system through property taxes and utility fees.
- Raise tipping fees to match the CVRD rates.
- Adjust funding sources as waste levels change.
- Consider a levy and discount system similar to the RDNs.
- Ensure EPR programs pay their way.
- Apply for grants and support other local partners applications as well.
- Ensure fines are applied after education measures and that they are sufficient to change behaviour.

5 SUMMARY

In general, the plan has many good strategies but a lot of them are to "investigate" possible actions rather than a firm commitment to enact them by a certain date. The plan also relies on existing staff to a fair degree to enact them. A stronger plan would have Zero Waste as the strong consensual vision and more aggressive interim targets, a commitment to the strategies listed as well as others recommended above and significantly more funding directed to achieving this vision. Rather than a focus on the need to expand the landfill, the emphasis must be on engaging the whole CRD community with broad and engaging partnerships to preserve existing space as long as possible, with regular community updates on progress, public annual reports and using the five year plan effectiveness review intervals as critical decision points to galvanize further actions if the new targets are not achieved. The degree to which these strategies will be effective will depend on the resources put towards them and the commitment to achieving Zero Waste.

APPENDIX A ZERO WASTE HIERARCHY

Zero Waste Hierarchy of Highest and Best Use 7.1

Purpose

The Zero Waste Hierarchy describes a progression of policies and strategies to support the Zero Waste system, from highest and best to lowest use of materials. It is designed to be applicable to all audiences, from policy-makers to industry and the individual. It aims to provide more depth to the internationally recognized 3Rs (Reduce, Reuse, Recycle); to encourage policy, activity and investment at the top of the hierarchy; and to provide a guide for those who wish to develop systems or products that move us closer to Zero Waste. It enhances the Zero Waste definition by providing guidance for planning and a way to evaluate proposed solutions.

Zero Waste Definition

Zero Waste: The Conservation of all resources by means of responsible production, consumption, reuse, and recovery of all products, packaging, and materials without burning them and without discharges to land, water, or air that threaten the environment or human health.

Guiding Questions

Rethink/ Redesign	What has led us to our present linear use of materials and thus, what needs to evolve to move towards a closed loop model? How do we re- design systems to avoid needless and/or wasteful consumption?
Reduce	What supports the use of less material and less toxic material?
Reuse	What supports the better use of those products we already have in ways that retain the value, usefulness and function?
Recycle/ Compost	How do we ensure materials are put back in the materials cycle?
Material Recovery	What was salvaged from mixed waste?
Residuals Management	What is still left and why?
	What do we need to take out of the system that should not have been circulated in the first place? How do we manage what is left in a flexible manner that continues to encourage movement towards Zero Waste?
Unacceptable	What systems and policies encourage wasting and should not occur?

***Guiding Principles**

Closed Loop Systems	Design systems to be closed loop rather than linear in their use of resources
Close to Source	Processes to occur as close to the source as practical
Conservation of Energy	More energy can be saved, and global warming impacts decreased, by reducing waste, reusing products, recycling and composting than can be produced from burning discards or recovering landfill gases.[1]
Do Not Export Harm	Avoid the export of toxic or potentially toxic waste or materials, as well as materials with limited or undefined recycling markets that will be landfilled or incinerated in other regions.
Engage the Community	Promote changes and systems that work with communities to facilitate meaningful and sustained participation, increase understanding, and influence behaviour change and perceptions
Highest and Best Use	Creating and keeping materials and products for a use as high on the hierarchy as possible and in the useful loop as long as possible. Keeping materials from being downcycled where the number of future uses or options are limited. **Source separate items and materials to the extent necessary to ensure clean and marketable products and materials for reuse, recycling and composting streams.**
Information & Improvement	Collect information on systems and use as feedback for continuous improvement
Local Economies	Support the growth and expansion of local economies (production, repair, and processing) in order to reduce greenhouse gases from transportation, improve accountability, and increase repair and parts opportunities
Materials Are Resources	Preserve materials for continued use and use existing materials before harvesting virgin natural resources
Minimize Discharges	Minimize all discharges to land, water or air that threaten the environment, or human health, including climate changing gases
Opportunity Costs	Consider opportunity costs of investments and ensure investments occur as high as possible on the Hierarchy
Precautionary Principle	Ensure that a substance or activity which poses a threat to the environment is prevented from adversely affecting the environment, even if there is no conclusive scientific proof linking that particular substance or activity to environmental damage
Polluter Pays	Whoever causes environmental degradation or resource depletion should bear the "full cost" to encourage industries to internalize environmental cost and reflect them in the prices of the products
Sustainable Systems	Develop systems to be adaptable, flexible, scalable, resilient, and appropriate to local ecosystem limits

[1] Source: http://zwia.org/standards/zw-community-principles/,

Zero Waste Hierarchy

1	**Rethink/ Redesign**	De sign and purchase products from reused, recycled or sustainably-harvested renewable, non-toxic materials to be durable, repairable, reusable, fully recyclable or compostable, and easily disassembled
2		Shift funds and financial incentives to support a Circular Economy * * over the harvesting and use of virgin naturalresources
3		Enact new incentives for cyclical use of materials and disincentives for wasting
4		Facilitate change in how end users' needs are met from "ownership" of goods to "shared" goods and provision of services
5		Support and expand systems where product manufacturing considers the full life-cycle of their product in a way that follows the Zero Waste Hierarchy and moves towards more sustainable products and processes. Producers take back their products and packaging in a system that follows the Zero Waste Hierarchy.
6		Identify and phase out materials that cause problems for Closed Loop Systems*
7		Facilitate and implement policies and systems to encourage and support Local Economies*
8		Re-consider purchasing needs and look for alternatives to product ownership
9		Provide information to allow for informed decision-making
10		Eliminate or avoid systems that drive needless consumption
11	**Reduce**	Plan consumption and purchase of perishables to eliminate or avoid discards due to spoilage and non-consumption
12		Implement Sustainable Purchasing* * that supports social and environmental objectives as well as local markets
13		Minimize quantity and toxicity of materials used
14		Minimize ecological footprint required for product, product use, and service provision
15		Choose products that maximize the usable lifespan and opportunities for continuous reuse
16		Choose products that are made from materials that are easily and continuously recycled
17		Prioritize the use of edible food for people
18		Prioritize the use of edible food for animals
19	**Reuse**	Maximize reuse of materials and products
20		Maintain, repair or refurbish to retain Value* *, usefulness and function
21		Remanufacture with disassembled parts; dismantle and conserve "spare" parts for repairing and maintaining products still in use
22		Repurpose products for alternative uses
23	**Recycle/ Compost**	Support and expand systems to keep materials in their original product loop and to protect the full usefulness of the materials
24		Maintain diversion systems that allow for the highest and best use of materials, including organics
25		Recycle and use materials for as high a purpose as possible
26		Develop resilient local markets and uses for collected materials wherever possible
27		Provide incentives to create clean flows of compost and recycling feedstock
28		Support and expand composting as close to the generator as possible (prioritizing home, on site or local composting

29		Whenever home/ decentralized composting is not possible, consider industrial composting, or if local conditions require/ allow, anaerobic digestion
30	**Material Recovery**	Maximize material s recovery from mixed discards and research purposes after extensive source separation
31		Recover energy using only systems that operate at Biological Temperature and Pressure**
32	**Residuals Management**	Examine materials that remain and use this information to refine the systems to rethink, reduce, reuse, and recycle in order to prevent further discards
33		Ensure minimization of imp acts by means of biological stabilization of ferment able materials.
34		Encourage the preservation of resources and discourage their Destructive Disposal or dispersal
35		Plan systems and infrastructure to be adjusted as discards are reduced and its composition changes
36		Minimize Gas Production and Release** and maximize gas collection
37		Use existing landfill capacity and maximize its lifespan. Ensure it is Responsibly Managed.**
38		Contain and control toxic residuals for responsible management
39	**Unacceptable**	Don' t support policies and systems that encourage the Destructive Disposal of organics and/ or the destruct ion ofrecyclables
40		Don't support energy and Destructive Disposal systems that are dependent upon the continued production of discards
41		Don't allow the Incineration** of discards
42		Don't allow toxic residuals into consumer products or building materials

**Definitions:

Biological Temperature and Pressure	The ambient temperature and pressure that occurs naturally without the use of added energy, or in any case not above 100 degrees Celsius or 212 degrees Fahrenheit. [2]
Circular Economy	An industrial economy that is, by design or intention, restorative and in which material flows are of two types, biological nutrients, designed to re-enter the biosphere safely, and technical nutrients, which are designed to circulate at high quality without entering the biosphere. Materials are consistently reused rather than discharged as waste.
Closed Loop System	A system not relying on matter exchange outside of the system, as opposed to open loop where material may flow in and out of the system.
Destructive Disposal	Discarded materials placed in a landfill or in an Incineration** facility
Diversion	An activity that removes a material from Destructive Disposal.

[2] Unless higher temperatures are required, not to exceed 150 degrees Celsius, as a pretreatment (e.g. to control diseases or reduce pathogens) to be then subject to composting or Anaerobic Digestion; the pretreatment should never be used to destroy materials.

Incineration	Incineration is a form of Destructive Disposal via combustion or thermal conversion/ treatment of discarded materials into ash/slag, syngas, flu e gas, fuel, or heat. Incineration includes facilities and processes that may be stationary or mobile, may recover energy from heat or power and may use single or multiple stages. Some forms of incineration may be described as resource recovery, energy recovery, trash to steam, wast e to energy, energy from waste, fluidized bed, catalytic cracking, biomass, steam electric power plant (burning waste), pyrolysis, thermolysis, gasification, plasma arc, thermal depolymerization, refuse derived fuel, or chemical processing of plastics to fuel.
Minimize Gas Production and Release	Keeping out source-separated organics and biologically stabilizing the materials that go into landfill. For existing landfill cells that already contain unstabilized organics, the gas product ion should be minimized by keeping out rainwater and not recirculating leachate. Minimize methane release by permanently capping closed cells with permanent covers and installing gas collection systems within months of closure (not years). Maintain high suction on collection wells and do not damp down wells or rotate off the wells to stimulate methane production.Filter toxins in the gas into a solid medium that is containerized and stored on site. Note that this is not considered a renewable energy.
Problematic for a Closed Loop System	Materials that make it hard to recycle or compost the materials themselves or other materials. These may be contaminants for a material (like some forms of biodegradable plastics or stickers on fruit and vegetables) or materials that clog processing systems (like plastic bags)
Responsibly Managed Landfills	Manage landfills to minimize discharges to land, water or air that threaten the environment and human health. This must include plans for closure and financial liability.
Sustainable Purchasing	The purchase of goods and services that take into account the economic value (price, quality, availability and functionality) and the related environmental and social impacts of those goods and services at local, regional, and global levels.
Value	The importance, worth, or usefulness of something that may be economic, social, environmental, or sentimental.

Community Group Response Letter Example

Numerous inquiries and requests for information were fulfilled. Below is one example of one such correspondence.

Making a difference...together

Parks & Environmental Services
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December 1, 2020

File: 0620-20
Solid Waste Management Plan
Revision 3

Ms. Elaine Klimke
Mount Work Coalition
Via e-mail: esklimke@gmail.com

RE: CAPITAL REGIONAL DISTRICT'S SOLID WASTE MANAGEMENT PLAN

Dear Ms. Klimke:

Thank you for your November 27, 2020 letter following the Willis Point Community Association tour of Hartland Landfill, part of the Capital Regional District's (CRD) consultation process for the region's draft solid waste management plan (SWMP).

The provincial Solid Waste Management Planning Guide and "Waste to Energy and Solid Waste Management Plans" information sheet (Appendix A) indicate that any new Municipal Solid Waste (MSW) facility, like the facility being discussed by the Township of Esquimalt, would trigger a full SWMP amendment. In accordance with the Environmental Management Act and the SWMP guide, this amendment would require broad consultation across the regional district.

The CRD Board approves and determines the timing of any SWMP submissions to the Province. It is the CRD's understanding that any new MSW facility would have to be included in the region's SWMP before the Ministry could review an Operating Certificate submission by the owner of the new MSW facility. I have copied Ministry staff, Luc Lachance (Solid Waste Section Head, South Authorizations) on this letter, if you require further clarification regarding the CRD's role in MSW facility approvals.

The draft SWMP currently being considered by CRD residents, recommends using every tool available regionally to divert waste through reduction, reuse and recycling. While the CRD prioritizes waste reduction activities and funds numerous diversion programs to move our region closer to zero waste, it still must provide a disposal option and planning for this responsibility and is reflected in the draft SWMP.

Neglecting to plan for the future of Hartland Landfill will not compel residents to stop generating waste. Instead, our region's waste will simply be trucked elsewhere for disposal, as is currently the case for regions that don't plan for their own landfill. In addition to burdening other communities with our garbage, exporting all of our waste will produce significant transportation-based greenhouse gas emissions.

Extending the life of Hartland Landfill to 2100 does not preclude residents from changing their habits. The Hartland 2100 design concept allows for this flexibility and gives the CRD time to continue exploring and researching emerging technologies that may reduce the region's need to landfill, another priority that has been identified in the draft SWMP.

The Regional District of Nanaimo (RDN), of which your example of the City of Nanaimo is a major part, shares the CRD's commitment to responsibly managing its solid waste now and in the future. While the RDN aspires to zero waste, in 2004 it expanded the Cedar Landfill within its property boundary, as part of its SWMP update, much like the CRD is seeking to do with Hartland Landfill.

ENVS-1111098358-423

Despite its waste reduction achievements and aggressive goals, the RDN, like the CRD, is upholding its responsibility to provide a safe, secure and sustainable disposal option for future community needs.

Yours truly,

Larisa Hutcheson, P.Eng.
General Manager, Parks & Environmental Services, CRD

TW:ac

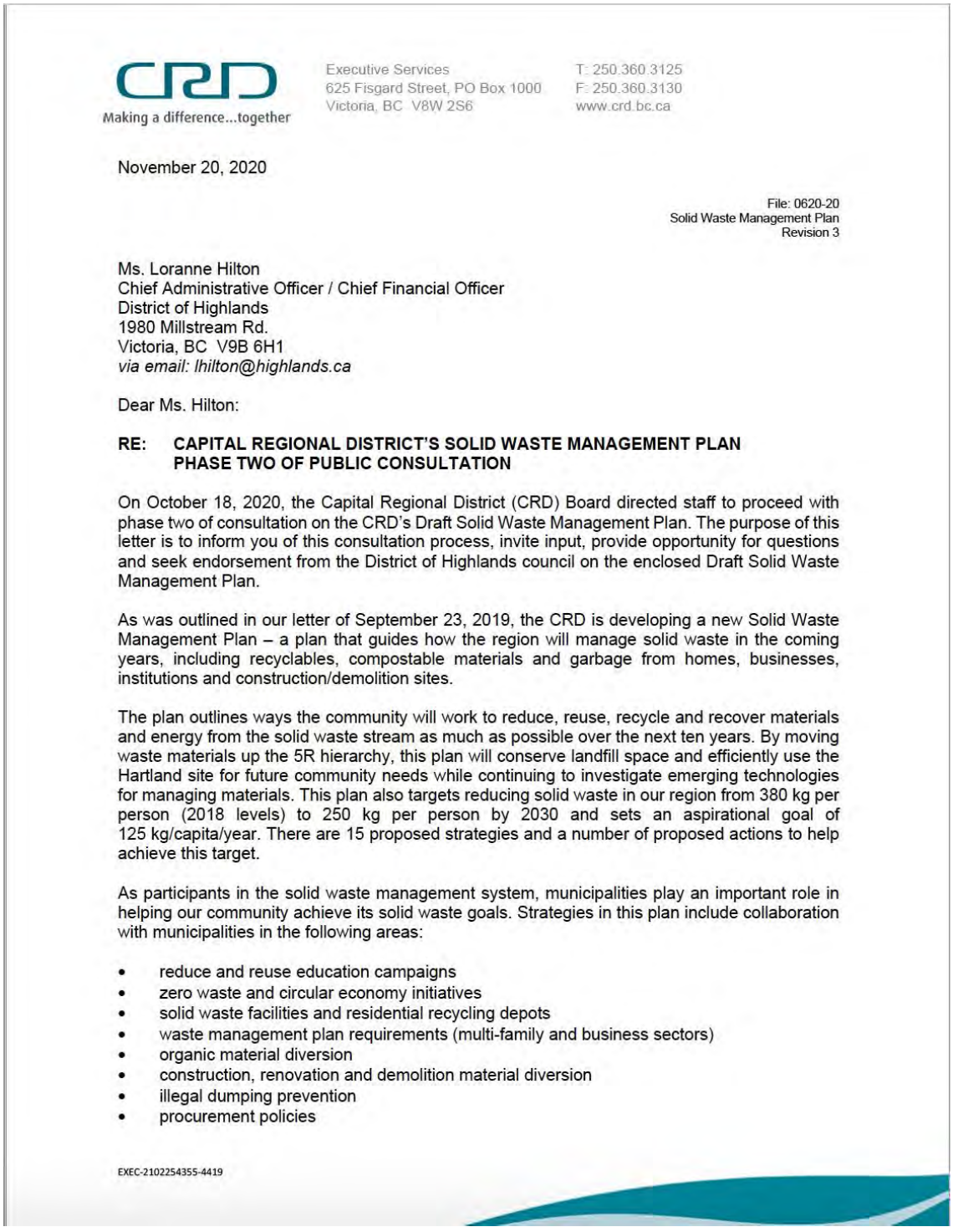
Attachment: Information Sheet – Waste-to-Energy and Solid Waste Management Plans – Ministry of Environment and Climate Change Strategy (November 2018)

cc: Luc Lachance, Solid Waste Section Head, Ministry of Environment and Climate Change Strategy South Authorizations – Luc.Lachance@gov.bc.ca
Robert Lapham, Chief Administrative Officer, CRD
Russ Smith, Senior Manager, Environmental Resource Management, CRD

ENVS-1111098358-423

Appendix F — Sample Letter: Request for Input

Communication similar to the letter below were sent to all CRD municipalities and local First Nation communities.



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November 20, 2020

File: 0620-20
Solid Waste Management Plan
Revision 3

Ms. Loranne Hilton
Chief Administrative Officer / Chief Financial Officer
District of Highlands
1980 Millstream Rd.
Victoria, BC V9B 6H1
via email: lhilton@highlands.ca

Dear Ms. Hilton:

RE: CAPITAL REGIONAL DISTRICT'S SOLID WASTE MANAGEMENT PLAN PHASE TWO OF PUBLIC CONSULTATION

On October 18, 2020, the Capital Regional District (CRD) Board directed staff to proceed with phase two of consultation on the CRD's Draft Solid Waste Management Plan. The purpose of this letter is to inform you of this consultation process, invite input, provide opportunity for questions and seek endorsement from the District of Highlands council on the enclosed Draft Solid Waste Management Plan.

As was outlined in our letter of September 23, 2019, the CRD is developing a new Solid Waste Management Plan – a plan that guides how the region will manage solid waste in the coming years, including recyclables, compostable materials and garbage from homes, businesses, institutions and construction/demolition sites.

The plan outlines ways the community will work to reduce, reuse, recycle and recover materials and energy from the solid waste stream as much as possible over the next ten years. By moving waste materials up the 5R hierarchy, this plan will conserve landfill space and efficiently use the Hartland site for future community needs while continuing to investigate emerging technologies for managing materials. This plan also targets reducing solid waste in our region from 380 kg per person (2018 levels) to 250 kg per person by 2030 and sets an aspirational goal of 125 kg/capita/year. There are 15 proposed strategies and a number of proposed actions to help achieve this target.

As participants in the solid waste management system, municipalities play an important role in helping our community achieve its solid waste goals. Strategies in this plan include collaboration with municipalities in the following areas:

- reduce and reuse education campaigns
- zero waste and circular economy initiatives
- solid waste facilities and residential recycling depots
- waste management plan requirements (multi-family and business sectors)
- organic material diversion
- construction, renovation and demolition material diversion
- illegal dumping prevention
- procurement policies

EXEC-2102254355-4419

In 2019, the CRD conducted its first phase of consultation on this plan. The information gathered during this phase provided important input that was considered during the development of this Draft Solid Waste Management Plan. The Draft Plan, along with feedback received during the phase one consultation, including the Public Engagement Summary Report, can be found on the CRD's website at www.crd.bc.ca/rethinkwaste.

The CRD is now undertaking a second phase of consultation, where we are inviting further comment, providing an opportunity for questions and seeking endorsement from the District of Highlands and other municipalities in the region.

The proceedings and outcomes from phase two consultation will be documented into a phase two consultation summary report and reported back to the Solid Waste Advisory Committee and CRD Board. Following this consultation, the CRD will incorporate the results into the final plan, which will be submitted to the CRD Board for adoption and the Ministry of Environment and Climate Change for review and approval.

In order to give your municipality an opportunity to ask questions and provide feedback, our staff would be pleased to meet with you, your staff and/or council to share information and listen to how this plan can be used to address your community's needs.

For more information, please contact Russ Smith, Senior Manager, Environmental Resource Management, at 250.360.3080 or rsmith@crd.bc.ca.

Sincerely,

Robert Lapham, MCIP, RPP
Chief Administrative Officer

cc. Larisa Hutcheson, General Manager, Parks & Environment Services, CRD
Russ Smith, Senior Manager, Environmental Resource Management, CRD

EXEC-2102254355-4419

Appendix G — Public Consultation Verbatim

Draft Solid Waste Management Plan Feedback / Please provide your feedback on the CRD's draft solid waste management plan.

Please provide your feedback on the CRD's draft solid waste management plan.
A great deal of the material delivered to Hartland is flammable, so it can be used for power plant fuel. (Wood that isn't suitable for composting, paper, plastics outside the recycle stream, food oil that's too thick for use as vehicle fuel such as bacon fat, cheese-covered pizza boxes, etc.) Waste fueled power plants are used at several landfill sites, including Greater Vancouver. With filters and static precipitators, there shouldn't be serious air quality issues. The greater Vancouver waste fueled power plant also makes money recovering metals from the ash. This, of course, is not the same as Hartland's existing methane fueled power plant. [redacted]
This plan seems very well thought out and provides benefits to the greater community. Sincerely, Paul Fedrigo
(Using the term 'sustainable 'seems meaningless.....there will always be 'garbage '.....it is a question of how we reuse the material we call garbage .) Plastics and wood based products should be removed from the landfill . Plastics are overwhelmingly petroleum based ,so there is every reason for government sponsored research into broad based plastic s recycling ,especially given the broad based aversion to petroleum exploration and infrastructure . Ultimately these products can also be incinerated for power and heat production,much as it has been done for decades in Europe . If the sewage sludge were added into the incineration stream rather than being shipped to Vancouver ,that would make even more sense .It seems to be more a question of political will than money . If organics are removed from the waste stream,the waste stream would be more than cut in half . Why must we always reinvent the wheel when other jurisdictions have been dealing with these issues for years??
The CRD and partnering municipalities should explore gasification as a means of generating energy and reducing deposits to the landfill. This is a technology proven worldwide with relatively low entry costs and great potential for large and small scale systems to contribute to the electricity grid or power district energy systems.
I am writing as a resident of Hartland Avenue. When my husband and I bought our house on Hartland Avenue, we were told that the dump access for trucks would soon be moving to a different location on Willis Point Road. I was further told that trucks did not work on holidays. 4 years later and COVID 19 hit and not only have trucks been working on holidays which has disrupted the peaceful enjoyment of our home, but there have now been several occasions where I have been blocked access to my driveway for over 15 minutes as I waited in line behind trucks! I have also had trades and Company complaining that they got stuck in a line-up to get to my house! This is simply unacceptable when there is a simple solution to this problem by moving the commercial access to Willis Point Road! Willis Point Road could easily handle the commercial traffic and it would not impact residents as there are no residential driveways that can be blocked on that route! I would appreciate my grievances be addressed. Respectfully, [redacted]
The appropriate way to handle much waste is to incinerate it, as Metro Vancouver and several large Scandinavian cities do. Use the heat to generate electricity to run the landfill operation and Saanich government offices. PS: As for NIMBYs, I do not know the layout of things in the neighbourhood but do say that in general NIMBYs are characterised by an ethic of trying to control others at no cost to themselves.
-Offer CRD drop-off sites or pickup for household compost and organic yard waste -Provide incentives for organizations to alter/minimize packaging and take responsibility for the waste they produce -Increase incentives for reusing products/provide education on how to do this -Support organizations that create a sharing economy (i.e. promote opportunities for people to rent or borrow goods rather than buy and own them).
No more land, forest should be taken for this project. Instead, spend the money on ways to reduce the household use of plastics and other non-recyclable items, and help educate people on alternatives.
Although some of the plan is rather naive with respect to human nature (i.e. people say one thing and do what they like), the plan is fair. The one thing that should be emphasised is that improvements need to be made at Wallace and West Saanich Road in order to support the additional traffic leaving or turning onto West Saanich Road. The plan has done an excellent job at ensuring that Mount Work Park is protected. Perhaps moving the mountain bike trails now to the Western Communities would be a good idea. No doubt the residents living a long Hartland will welcome the reduced traffic.
Please DO NOT cut down the Douglas firs. There are alternatives. Google them.
I sincerely hope that the region is able to significantly reduce the volume of waste being landfilled or find new technology for solid waste management. I am against the removal trees to accommodate garbage. Isn't there a facility on the mainland that incinerates garbage? Can we adopt that method?
We need to save as much of our old growth trees as possible, they are so essential to our better climate, we just can't destroying our natural environment and expect cleaner air.
I am alarmed at the possibility that several acres of Douglas Fir could be wiped out to make room for a landfill. This seems so wrong headed. When you travel around the lower Island there is so much housing development that is taking place which involves clearing the land of the forest. Is there not another way to deal with our solid waste? Could the CRD not build processing plants which would allow people to recycle more of our waste. I find I am putting so much in our bin that in other cities would be going to a recycling facility.
As a lifetime resident of Victoria (69 years), I support the expansion of Hartland waste facility and the adoption of a waste treatment plan based on rational analysis considering costs and not on dogma.
Why does CRD allow foreign cruise ships to unload all their waste, none of which is originated from Canada, to be processed in Victoria? Does this waste from over 1,000,000 visitors not impact our landfill?
We must preserve trees, especially old trees with solid roots, both to prevent flooding and to distribute oxygen. their replacement with more fragile shoots has proven to be disastrous. We have already destroyed too many trees and endangered the health of our planet. Please think of the greater good and the greater consequences. Thank you.
Oil bottles, once emptied of oil except for some that always remains in the bottle continue to go to the landfill. Although there is an environment fee added, retailers simply toss the bottles into their waste containers. Could there be a way to recycle the containers?
I am against widespread tree removal in the area currently used as a mountain bike park.
I understand the plan as it stands calls for elimination of seventy plus fir trees...I say no to this plan Thank you
I am against the destruction of more natural habitat and instead i propose that strategies for the reduction of waste get more attention and funding. Instead of wasting all this money only to run into the same problem a couple of decades from now we have to become smarter. Enough places on this planet have implemented forward looking technologies to not only deal with waste but to eliminate its generation at its source. An absolute 'no' to cutting down trees. They are the planets life blood and if you still haven't figured that out then I ask you to educate yourselves. I am happy to provide you with information material should your google search not give you enough information. Sincerely, [redacted]

More onus and incentives are needed to be put on makers of products that have a high packaging to product ratio to significantly reduce packaging waste. No one, including consumers, taxpayers and the environment, likes to pay for packaging. All metal waste should be recycled. All avenues to reduce, reuse and recycle should be taken before the landfill is expanded and trees removed. Why not try some RFPs for innovative and creative solutions? What jurisdiction on the planet is doing the best job with ideas we can adopt or adapt?
What..?. Another mass murder on trees? aren't You tired of killing.?..
Dear Natural Custodian Partners. I know that we in CRD need a solid waste management plan, a responsibility we all share. Given our scientific knowledge of the positive impact of trees on climate change, we need to find creative ways to maintain the 73 acres of trees at risk in your plan. Please, I urge you to find another way to implement your plans without destroying trees. Every one of them is a gift to our air. Hugs with gratitude for serving our community with highest integrity, Maureen Matthew in Royal Oak.
I believe the CRD should work primarily to educate residents to reduce waste. They should also work with the provincial and federal governments to push manufacturers and other suppliers to reduce non-recyclable packaging. If our solution to more waste is always to simply expand the landfill, we will never reach a solution of the solid waste issue. Expansion of the landfill is a short-term solution and will only lead to more problems in the future. I do NOT agree with expansion of the landfill site. V[redacted]
I am absolutely, 100% OPPOSED to the removal of 73 acres of trees for the purpose of a waste management site. How could you even entertain this option? 73 acres of trees! What on EARTH are you thinking, this is so absurd I almost could not believe it. This is completely irresposible on the part of the CRD and I am APPALLED and disgusted with this proposed plan.
Do not remove 73 acres of Douglas-fir trees.
Please leave the area intact and raise waste collection fees instead if you have to. Our nature is more than its weight in gold.
Deforestation of 73 acres of beautiful second growth forest in this time of climate change and loss of our forests and wildlife habitat to development isn't acceptable. One way or another, that area needs to be preserved and ways should be found to stay within existing boundaries. If that results in higher disposal costs, that should be passed on to the users. There is a cost to disposing of waste and the full cost should be paid by those who create it.
After experiencing the waste management tour at Heartland Dump , i am curious about a few things . #1 : Why are we still putting SO MUCH recyclable material into the land fill ? I was shocked to see what was still being dumped at the landfill face . Why not start using the people already working there to check each load and start a fine system .The amount of wood , plastic and metal was astounding ! #2 : Why aren't we maximizing the fuel plants already in place ? Why is only one of the two plants operational , for so long ? # 3 : Why isn't Victoria leading the way , as we could be , in converting ALL our waste into viable fuel sources , as other regions around the world are ? #4 : Why is it taking so long to affect worthwhile change ? I have been using Heartland dump for over 40 years and appreciate the development put in place for recycling . But i'm disappointed to see the soil production area discontinued .What gives?
I am disappointed with t he CRD's proposed plan. It seems to still focus on burying garbage, rather than looking to new and innovative ways to reduce, reuse, and recycle. Blasting the mountain, and taking down forest to bury more garbage is not the answer. The municipalities need to implement ways to encourage proper recycling of items, and also introduce plastic bans in their districts. There should be no non-compostable take away containers on Vancouver Island. There should be no plastic bags issued. The Nations should be supported in their garbage, recycling initiatives and composting initiatives after all the Hartland Landfill is on their land. This plan has many faults on so many levels that do not address concerns of local First Nations, nor the other surrounding communities that will be impacted by these proposed changes.
How will this solid waste strategy impact the liquid waste disposal approach from Salt Spring Island, which I hear has been problematic and under funded?
We need a system to dispose of soft plastics currently not accepted in the regular recycling system. Some rural communities do not have access to locations where soft plastics can be recycled.
I agree wholeheartedly with the Mount Work Coalition's concern regarding the solid waste management plan because it means the removal of 73 acres of Douglas-fir trees. We are increasingly becoming aware of the value of trees to ecosystems and to mitigating climate change. In Greater Victoria, I continually see properties cleared of every tree on the site in order to build housing or shopping areas and then little stick trees planted to replace them. I'm sure there are ways to build while leaving mature trees on these sites (including yours). To clear 73 acres of forest makes a mockery of the name "Ministry of Environment & Climate Change Strategy." Hurrah for the Mount Work Coalition.
Is it possible to use only half of the 76 Acres of Douglas Fir forest for landfill? Allowing increased capacity for more solid waste while keeping recreational use.
Save the trees! Find a way!
Hello and thank you for the opportunity to provide feedback on the draft solid waste mgmt plan. "The Hartland 2100 design concept will require the removal of second-growth trees from this strip of land, excluding tree and fire buffers required by the Provincial government." I am extremely alarmed and concerned with the Plan about the need for the removal of these second growth fir trees. With the exponential amount of residential growth and development occurring in the CRD, trees, and forests, are at a premium. Replanting of trees does not make a forest, and the diversity and animal species that have evolved and developed, and are housed in these spaces cannot just be displaced into a 'recreated' landscape and be expected to thrive and survive. Animals and the natural environment are already under threat, and the very thing that makes CRD and the Island unique is being cut down, bulldozed, developed and eliminated at an alarming rate already. We have already lost so many songbirds, mammals, larger birds, bees, amphibians, reptiles that will not come back. All of this does not even account for the loss of recreational areas and access to nature required by residents for their mental health. Every opportunity available to save a forest from destruction must be explored. A forest is not just trees - it is the very heart of a healthy community. PLEASE reconsider this decision.
How can you possibly justify removal of all these trees when we are in a climate emergency?? You are being very short sighted as usual. Please find a different solution than taking trees down.
Here is a link to a CRD document on at risk Coastal Douglas fir ecosystem. http://www.env.gov.bc.ca/wld/documents/douglasfir.pdf Need I say more - find an alternative.
I object strongly to the removal of 75 trees!! The object of the new sewage system etc. was to reduce pollution. Trees do this naturally! In so doing the removal is counter productive.
would really appreciate it if this large section of trees wasn't cut down!
WHAT....??? So many acres ...= how many trees is that? Surely NOT a real solution....
I've scanned the plan and am satisfied that the CRD is taking a well thought out multi-pronged approach to educate, offer recycling and reuse options and minimize impact to the public. The plan appears to be set out for maximized efficiency and reduced per capita disposal rates and greenhouse gas emissions. It is very unfortunate that Hartland land currently used for public access trails will be lost in the expansion process. I am heartened by the knowledge that reforestation on closed areas of Hartland Landfill are ongoing

alternative technology that utilizes the residuals or the last 5R without creating pollution should be adopted. 3. Section 5 - Enhance Hartland Disposal Capacity - I disagree with this strategy as I mentioned because it leads to more methane intentionally produced. Throwing garbage in a hole and producing methane is not sustainable and leads to climate warming. Capturing this methane by RNG only leads to more deforestation and the need to continuously expand a landfill. 4. Goal - Ensuring CRD's solid waste services is financially sustainable. While I agree this is a desired goal, it doesn't trump climate change. Actions to reduce methane should take priority - balancing the budget should take second priority - we are in a climate crisis. 5. Goal - Extending the life of Hartland to 2100 - I disagree with this goal. While forward thinking Esquimalt is showing leadership in waste to energy, the CRD should be encouraging other municipalities to join them. Municipalities could parter together and purchase the infrastructure to reduce costs and deploy a combination of Reduce, Reuse, Recycle plus waste to energy technology, to ensure that Hartland is never expanded - methane is life limiting and landfills must be closed. 6. FAQ - I disagree with the spreading of biosolids on land that contain a chemical stew of 400 pollutants, dried and marketed as fertilizer. These toxins will be absorbed in wildlife, waterways, rivers and lakes and end up in our bodies through the hydrologic cycle that could lead to increased risks associated with cancer. The potential risk to public health and the environment is not a risk worth taking over the value the CRD feels would be obtained by spreading the biosolids. It's a no-brainer - would we rather have a safe environment and public health or a fertilized tree? 7. FAQ states: Hartland Landfill is highly regulated, controlled and monitored to ensure Provincial standards are met under the Environmental Management Act. The fact that the landfill has to be severely regulated, controlled and monitored speaks to the extreme hazards and high risk of contamination the area is subject to from 1. older landfills are prone to leaking, 2. spreading of biosolids and 3. leachates that dump toxins into the ground waters. Landfilling is old technology that creates global warming and should be abolished.
Overall an excellent plan! However, on the Hartland compost facility timeline, you say "future" re: the facility's construction. Why are you so vague? Why can you not create a plan with specific targets and deadlines? I found this part of your plan disappointing. The CRD is infamous for putting off and dragging out projects over decades that would be planned and built anywhere else within a reasonable time. The CRD put off collecting organics for decades. Now it seems that you also intend to do the same old CRD waffling of putting off the compost facility as long as possible. Therefore, I feel that the CRD should broaden its definition of waste to include the waste of energy and resources used to haul and ship solid waste such as organics and wastewater biosolids to other regions in the province. When you calculate waste per capita, I suggest that you include the additional waste created (CO2, $ of shipping, etc) in these figures to show the real cost and impact.
Comprehensive, professional. Super stoked that non-profit second-hand stores are highlighted. I think grants for these sites as part of waste reduction would be appropriate. I sincerely hope the budget needed is approved and that the leadership and hardworking employees continue to implement the plans as designed. Anne
I strongly believe this land should be protected for ecological and recreation value. This land provides endless recreation opportunities (mountain biking, hiking) and is incredibly valuable left intact. I would strongly protest and oppose the clear-cutting of 73 acres of Douglas-fir trees.
I am sorry, I do not have time to read this whole plan. Is there any way that we can have soft plastics picked up with our recycling? If a different colour plastic bag was provided for plastic, I believe this would reduce the garbage by at least 50%.
I am 100% in favour of moving the commercial access to Willis Point Road and think it is logical and supported by facts as per the traffic study. I also support the guiding principles and goals outlined in the plan.
The plan is a well done, comprehensive and wholistic document. Page 1 and 2 list the goals of the plan. The 1st goal is to achieve 125Kg/capita/year. Page 33 and 34 list the targets of the plan as achieving 340Kg/capita in 3 years, 285Kg in 5 years and 250Kg in 10+ years. Is the goal congruous with the targets? Page 12 shows the Kg/capita hovering around 400Kg for the last 24 years. 125Kg would be a 69% reduction. Page 13 shows the 2016 % Composition of landfilled material, specifically: Organics = 21%, Paper = 15%, Wood 17%, & Plastic 14.3% by weight. These materials add up to 67% of the materials landfilled. Page 26 lists Bylaw 3881 as the primary landfill diversion tool. This bylaw lists acceptable and non-acceptable materials. Schedule F of the bylaw lists organics and paper as non-acceptable for landfill, mandatory recyclable materials (36% of what is being landfilled). It also lists wood and plastic as voluntary recyclable materials (31% of what is being landfilled). How does the landfill accept 36% of the material it receives when doing so goes against Hartland's mandate? Is there alternate mechanism to deal with non-conforming loads? For example are fines levied for these non-acceptable deliveries with recyclable contamination? At what level of contamination does a load become non-acceptable? The document talks about education throughout. School children are specified as a primary target and I agree with this. But the actual generators need to be identified and collaborated with to establish a diversion system that works for all. And this should be elicited in detail to whom and how this will happen in the Plan. I.e.: the food waste generators, Construction, Reno & Demo wood waste producers. Scheduling a deadline to issue an RFP for a compost operator at Hartland as soon as possible would also be beneficial. In short, the general stuff and theory is well covered in this document. It needs further specific action items with deadlines elucidating how the Goals and Targets are going to be achieved. The 5R Strategy Actions are a good start, but need further development to be able to be acted upon and result in tangible deliverables. Completed tasks should be chronologically documented in their own section with updates as to their success. I commend the contributors of this document for doing a good job.
I have recycled anything possible since recycling became possible with the first bins for paper in the shopping malls. What we have now is a confusing patchwork. Recyclebc has been uninformative, or sometimes inaccurate when I have tried to use it. I can, because I have a car, go to the trouble of taking things I believe can be recycled to the multitude of reception points for batteries, light bulbs, electronics, styrofoam, plastic bags etc. Covid has made some of these things more difficult as grocery stores no longer take juice boxes/bottles and plastic bags. So many people without cars can't recycle much of the recyclables and yet we have so many shopping malls with large often underused parking lots that could make it more possible for more people. The plastic bag ban is illogical as it is only a tiny portion of the plastic that comes in, and those bags take the place of bags that I would have to buy. I am still trying to find a way to recycle books that no organization wants. And no-one answers their phone to tell me if they still take them for what I understand is a more complicated shredding and recycling process. There should be a more easy use, accessible process for one stop, or better still additional curbside recycling. Yes it will cost more for all of us communally to have it done more accessibly for more things, but it would be much more environmentally sane and in the long term, against more landfilling, probably less costly.
I agree with and fully support the four main goals of the plan, and am glad to see a commitment to achieving a 125 kg/capita solid waste disposal rate! Continued development of an in region option at Hartland for organics and other materials if possible is important. The strategies and actions are well thought out. The anticipating funding level would likely need to increase to fully support the action beyond the estimated $350k/yr, and more consideration should be given to other funding mechanisms for the solid waste plan beyond simply replying upon landfill tipping fees to fund the entire system.
As a resident of Saanich, I am strongly opposed to the CRD's plans to expand Hartland landfill and remove 73 acres of forest when other alternative, waste management technologies exist including the proposed gasification technology that Esquimalt is exploring or Nanaimo's Solid Waste Management Plan that seeks to divert 90% of municipal waste from the landfill. The CRD's status quo approach to digging a deeper hole, producing more methane emissions, is a move that is strikingly at odds with the declaration by the same board of a climate emergency! While I understand that our region is growing, it's time to stop burying garbage and waste and look at moving towards more bolder incentives to recycle and embrace some of the suggestions put forward to enhance recycling at the community level whether it's moving towards clear use garbage bags, or starting to look at charging people who do not recycle and just dump their recyclables into the clear garbage bags. I would also invite the CRD Board of Directors to halt the draft Solid Waste Management Plan until Esquimalt's business case and feasibility study for the proposed gasifier is publicly available and to look at what other jurisdictions are doing in Europe to divert waste from landfills and the use of alternate technologies. I realize the the CRD's Advisory Task Force only looked at what was available back in 2018 but we are now almost into 2021 and technology and waste solutions have advanced sine that time. Please re-think this plan that will just continue to emit methane into the atmosphere.
This plan is completely inadequate and needs to be comprehensively revised before adoption. 1. The CRD proposes a zero waste strategy and yet falls far short of this in its concrete goals. 2. The proposal to expand the landfill and remove 73 acres of endangered Douglas-fir forest is deplorable and should not happen. Douglas-fir ecosystems are currently at 1% of their former range on the island. As climate change worsens, they will become more imperilled. There is absolutely no justification for clearcutting 73 acres of

forest for garbage dumping. This is not "making a difference...together." 3. Biosolids should not be spread on the landfill site, at all, ever. 4. Landfilling is not the solution. There should be more support for comprehensive recycling (including soft plastics pickup in the region) to reduce waste at the consumer level. Subsequent bans (alongside the plastic bag ban) should be pursued to reduce waste at the producer level. This plan is not worthy of the beautiful, biodiverse region we live in. Please do better to ensure the protection of our natural environment.
I applaud the CRD's efforts to reduce/reuse/recycle/salvage. I would urge that there be some convenient way for apartment dwellers to recycle glass containers. Also that some recycling/salvaging effort be made for hardcover & softcover books. I understand there are businesses on the Island that use them as fuel, and perhaps big bins could be located at the various municipal works yards.
I have several concerns about the draft solid waste management plan & the FAQ documents provided. First, I would like to see an up-to-date audit of what is going into the landfill and where it is coming from. What do sections like "bulky objects" (1.3%) and "other" (2.7%) actually mean? Seeing the massive amount of construction and development going on around the CRD leads one to believe the numbers in your report may not accurately reflect current activities. Is impact on the landfill taken into account before building permits are issued? Why are we allowing garbage from cruise ships to be left on the Island? As a nearby resident, I also have concerns with moving Heartland access to Willis Point Rd. In the spring/summer this stretch of road becomes VERY busy with people enjoying trails and Durrance Lake. Wallace Rd is a rural route that attracts a ton of cyclists and other outdoor enthusiasts. Adding heavy truck traffic, turning left off of West Saanich Rd. seems irresponsible & possibly dangerous. Not to mention the impact on the natural environment and surrounding wetlands. I cannot support Hartland Landfill expansion. We need to move to a zero waste model more quickly and make developers & manufacturers take on more responsibility for their projects & products. Please let me know what I can do to help make this a reality. Thank you for allowing me to share my thoughts (and questions).
I object to more land being cleared to expand the Hartland Rd Waste Site. It is time for the Western Communities to develop their own Waste Site. Why are we trucking waste from Sooke all the way to Saanich, along with waste from the Gulf Islands too ? The Western Communities are a rapidly growing area and need to take responsibility for waste produced in their area. The removal of trees to expand the Hartland Rd site is a retrograde idea when the municipalities are trying hard to protect trees to reduce greenhouse gases.
Just look at the high percentages of demolition and wood waste. This is greater problem than plastic straws or cardboard cups. Steps must be taken to reduce the waste created through building demolition. This can best be accomplished through the building design process, i.e., building components are designed to be re-used for future developments and buildings can be deconstrcuted to facilitate reuse of materials. Buildings must enter into a circular enconomy. Burning the wood waste is unsustainable and contributes to gobal warming.
What is presently being done to ensure that the runoff coming from the recycle and kitchen waste recycle area, which is outside the original constructed berm area is not leaking, flowing into the Prospect Lake watershed?
We need to preserve the forest & re-cycle & re-create new products from our waste.
Please allow for the green bins to be used for yard waste as well as kitchen scraps. The fact that green bins do not take yard waste is a huge burden for victoria residents who do not have access to vehicles to take yard waste to the drop off. People end up putting yard waste in the black bins which goes against the aims of the plan to reduce the impact on the landfill. If Saanich can do it (with bigger properties and most likely lots more green waste), why can't Victoria? Please work this into the plan.
Well, I certainly do not support an expansion of Hartland landfill. We certainly need to manage our waste. However, more attention to source would be most beneficial (but maybe the CRD can't do much about packaging at this point), but we can do more around recycling and food waste. More needs to be diverted from the landfill. I produce just a tiny bit of garbage each month - and I patronize Pacific Mobile Depots and diligently recycle hard and soft plastic and foil (as well as everything else I can). PMD is a once-a-month process and one probably needs a vehicle to get to the locations. Instead, how about working with them (and others) for curbside pickup? Maybe some incentives to recycle - tax breaks, other? - and disincentives for not (e.g. paying more for trash pick up...). And while there are more colourful bins around - you could certainly increase their visibility and locations. Oh, and an educational campaign about how to recycle/repurpose almost everything (maybe some humorous YouTube videos). Well, that's probably enough to read!
The first two steps of the plan are "Promote". I assume this means "educate people about the impact of garbage, and teach them how they should shop differently and recycle better." This approach has been and will continue to be a failure, as it is not built on behaviour science. You should contact Ruben Anderson, who researched pro-environmental behaviour for Metro Vancouver, and ask him to help ground your work in science.
I support extending the lifetime of the landfill provided the CRD continue to look for alternative energy recovery and reduction strategies. Clearly the facility's future needs to be planned given its current 2045 capacity deadline. However if Esquimalt can show the CRD that an alternative process can work then it should do whatever it can to remain the location for energy recovery, especially with options to deal with biosolids and compost/kitchen scraps. An integrated approach looking at reducing and recovering should be pursued. One last point. While zero waste is an admirable intellectual concept, in a region where construction waste is a significant part of the waste stream and that the region is growing it is actually inconceivably naive. Plan for the worst, be prepared for the evolution in waste management and integrated resource management.
I just read Jon O'Riordon's recent article, "Strive for zero waste, not expanding landfill" (Times-Colonist Dec. 17, 2020), and have also read portions of the CRD draft solid waste management plan. I feel that the zero waste target that the CR has set (250 kilograms/person by 2030) is not nearly ambitious enough. I believe that the citizens of the CRD are ready to embrace change in order to a) combat climate change and b) avoid the expansion of the Hartland Landfill, with all the negative consequences that would entail. I was also interested in Mr. O'Riordon's suggestion that garbage collection could be charged on a per-pickup basis, thus giving added incentive to people to reduce their volume of waste. If Nanaimo Regional District can set a target of 109 kilograms/person by 2027, surely we can match this goal!
I believe that the SWMP is supposed to address management of closed landfills, specifically the site of the former Blackburn Landfill on Salt Spring Island. I don't see this in the draft SWMP. Potential contamination from this landfill of drinking water in Cusheon Lake should be investigated. Please respond to this comment to the email from which it was sent.
Please consider options that limit the size of the landfill I note that our neighbour contract out with a private firm and there seems to be no reccycling initiatives going on there. Can we "encourage" folks to take more responsibility for limiting waste? Rob Gage
My feedback is very simple - the CRD should be looking at alternatives rather than cutting down a forest. Forests are critical for the survival of all living creatures on this planet. The methane gas created by a landfill is contributing to the warming of the planet and this warming as scientists and the IIPCC reports have been telling us now for decades is going to result in extinction if we don't make different decisions. We cannot keep doing the same - cutting down forests, over consuming and being a throw away society. Please look at alternatives rather than expanding the landfill by cutting down a forest. I'm not an expert and cannot tell you which alternatives are the best, what I can say with confidence is that an alternative will be better than cutting down a forest.
I am very concerned about several aspects of the Solid Waste Mgmt Plan. Given this is the first update in 25 years (I believe I heard that correctly at the mtg), if there is a risk of waiting another 25 years for the next update, this needs to be a very forward looking plan. It needs to consider the Climate Emergency that is upon us. A comment from the presenter at the mtg indicated "the build out is as it was always contemplated". Of course if this plan is 25 years old, that would be the case, but we need to get ahead of the times. I also heard at the meeting that the plan is not at "the bleeding / leading edge". I think that's what we should be striving for. One other comment by the presenter was "I don't completely understand the carbon balancing piece" - I would suggest the leaders of our CRD waste system SHOULD DEFINITELY understand this. Cutting down 73 acres of trees has a significant impact on our sequestration and other biodiversity issues. Please go back to the drawing board and create a plan that charges appropriately for waste created, that ensures waste reduction levels in keeping with a climate emergency, and that considers new technologies so that our landfill does not continue to create 5% of the CRD's emissions.
The draft SWMP shouldn't be approved until Township of Esquimalt has completed their IRM/gasification business plans, and if successful, the references to a landfill expansion (Hartland 2100) should be removed and plans for future IRM/gasification should

be included in the SWMP. Also Zero waste initiatives should be strengthened in the SWMP, including more robust solutions, financial incentives for entrepreneurs, revisions to relying on tipping fees as revenue streams, elimination of cruise ship waste that is not recycled, and the formation of partnerships with the City of Victoria's Zero Waste plans. Other Greater Victoria municipalities should be asked to do their part and move to IRM/gasification. Hartland Landfill should not be expanded at the expense of our planet. Expanding this landfill means destroying carbon absorbing trees. Note that McGill University released its forecast for climate change "Threshold for dangerous climate warming will likely be crossed between 2027–2042". The CRD needs to take this seriously and respect the total elimination of carbon and methane pollution. There is no time to waste on deploying ineffective plans that continue to increase GHGs and rely on expanding a methane filled landfill.
The CRD cannot reasonably ask or expect residents or businesses to commit to the ambitious targets of net-zero carbon while inviting floating resorts into the city. While "embarrassed by the wastewater" delays, the CRD often spoke of pressure form Seattle/Washington. Yet, the CRD has not taken a stand against receiving American garbage and recycling.
I study the Plan and understand that it sets "focused on reducing the amount of waste landfilled on a per capita basis" (8. Plan targets, p. 33) as target and uses reduce, reuse, and recycle (3R) as the core strategy in waste management. I believe 3R is an efficient and effective strategy in many aspects, especially in overall cost. However, I wonder whether there is, or will be, a specific plan for "carrying out resource recovery from recyclable material" (4.2.14 Bylaws, p. 26) and "Maximize beneficial use of waste materials and manage residuals appropriately" (1.1 Guiding principles, p. 1), for example, adopting anaerobic digestion plants and facilities to recover and upgrade methane gas? Thank you for your time.
I'm appreciative that food scraps have been banned from the landfill. It would be great if construction waste were more expensive to get rid of. Also if bylaws were in place so that salvage companies like Nickel Bros could get permits faster and cheaper than disposal companies. If they had priority in accessing tear downs and reclaiming them or salvaging usable material from them then beautiful and otherwise reusable material would be worth reusing. Thanks for all you do! The CRD seems very progressive and caring of the environment.
The CRD needs to be proactive about stopping the trends it notes that are guiding this plan. More incentives to reduce waste generation per person. Incentives to reduce waste such as charging only for the times when residents use their waste bins. Research Esquimalt's business case study of thermal conversion of residual waste after recycling into a renewable gas used for heating buildings to see if it can be applied at Hartland. It's counterintuitive to remove 73 acres of forest when we need to be increasing carbon storage. Promote recycling and resource recovery in a truly circular economy. Work with the City of Victoria on its Zero Waste Plan.
I do not support the proposed expansion of the Hartland Landfill beyond 2045 because I believe that before that date we should shift to zero waste disposal. Zero Waste The CRD Board supports the principle of zero waste and encourages a circular economy by mid-Century. This goal can be achieved by reducing personal consumption in keeping with achieving carbon neutrality by 2050; requiring producers to be responsible for the full life cycle of packaging; levying user fees on packages that produce waste and encouraging comprehensive recycling in both single family and multi family homes. Resource Recovery - Waste to Energy Solutions The Solid Waste Management Plan must rigorously pursue the 5 R waste hierarchy with top emphasis on reduction, reuse and recycling. The 4th R of resource recovery requires use of waste to energy technology. I support the Township of Esquimalt proposal to complete a detailed analysis of a demonstration waste to energy facility as soon as possible. The CRD should support the operation of this facility if it is technically feasible. Then resource recovery must be implemented throughout the regional municipalities before expansion of the Hartland landfill is considered. Circular Economy Expanding the Hartland landfill is completely inconsistent with achieving a carbon neutral economy by 2050. Removal of 73 acres of public forest that sequesters local carbon, is inconsistent with the CRD and other municipalities' declaration of a climate emergency and the critical need for the Greater Victoria region to become carbon neutral by 2050. Carbon neutrality requires full implementation of a circular economy where there is no waste. All excess carbon produced is captured by restoring the health of our ecosystems to store carbon.
The time has come to take true responsibility for our impact on the earth. We can't continue to produce waste with the expectation that the earth will somehow deal with it at no cost to the planet, or to us. The old ways of disposing of our waste must change. It is not right to increase the size of the Hartland Landfill at the expense of our forest. But what is right is to find alternative ways of dealing with waste. One alternative is to stop producing so much of it in the first place! There are many creative solutions to the food waste, building waste, packaging waste that we produce. Let us put our imagination to work, as well as our dollar, to deal with a problem that could become an asset through innovative thinking. Let's truly recycle, reuse and rethink.
1. My primary concern is that the expansion proposal (which should not be done) is due to the failure to reduce plastic waste. My experience is that retailers are permitted to force consumers to accept unnecessary packaging if they wish to buy almost anything. It is nearly impossible to buy needed items without accepting unnecessary packaging. There are many things that could be done at the local level to pressure or require retailers to reduce unnecessary packaging in grocery stores, for example. 2. Secondly, it is very concerning that the contractors who pick up waste have no apparent incentive to "call out" or penalize homowners or businesses for throwing forbidden materials into the garbage. I read the current procedures and they are unacceptable. Recyclables and organics that are improperly placed in the garbage should be noticed by contractors and reported. Bylaw officers should issue warnings and fines. This may seem expensive and onerous but it is less so than the plan to expand the landfill. 3. Third, I submit that recycling is entirely inadequate. Only 10% or so of recyclables are sent for recycling. I observe that garbage cans in CRD parks are often full of aluminum cans and plastic beverage bottles, or else the people who have disposed of them put them on top or on the edge, in hopes that someone may pick them up and take them to the recycle depot. I request that all parks, arenas, recreational sites and other places where garbage is collected should be given proper recycle bins. I believe that would help somewhat. 4. I attended an open house for the CRD waste management plan and discussed the huge, relatively new problem of dog food bags. Not so long ago, these were made of heavy paper. Now, they are all made of very heavy-duty plastic coated with metal and plastic, which are impossible to recycle. I asked the CRD how they deal with that. They told me that the manufacturers of these and similar problem packaging materials pay a fee for the privilege of forcing consumers to buy them. To add insult to injury, they merely pass on the cost of the fee to the consumer in the form of higher prices. This is unacceptable. The companies have a very easy ride indeed! I demand that the CRD find ways to reduce the garbage produced by the citizens, rather than expanding the landfill. Be creative. You CAN DO IT.
Thank you for the opportunity to provide feedback on your Solid Waste Management Plan. As a local resident and business owner, we are facing higher than market pricing for all classes of waste disposal. We recognize that we are on an island, however the involvement of the CRD in the processing of waste seems to be an overreach. There is very little evidence that active government involvement in the waste disposal business - particularly where it is already established as a private enterprise - leads to cost savings for consumers. Ultimately the CRD faces competition or worse - Competition Bureau challenges - for such activities and these will ultimately set a higher bar for consumer pricing. One can look no further than Seaspan/BC Ferries to see the results that predatory government pricing can have on market conditions. Further, private enterprise is already heavily invested in the development of additional assets for the processing of organics and the diversion of solid garbage. By removing these competitors through investment in taxpayer funded infrastructure, the CRD is sending a clear message that they believe they are better managed, more innovative, and more cost efficient. This is simply not a fair reflection of the time and effort put forth by all levels of waste collectors, waste diversion and recycling facilities and haulers. In closing, I would suggest that the CRD spends the efforts to work with independent contractors to increase their capacity - both at the landfill in district and out of district - in order to meet the needs of tomorrow's waste generators. Anything other than this approach reeks of politics..... a smell much worse than a giant compost pile on Hartland Road.
Moving the access point to Willis Point Road from Hartland Road makes good sense. Willis Point Road is better suited to truck traffic, and the overall safer option. I also understand this change would facilitate maximizing the efficient use of landfill space which I support whole heartedly. the 2030 waste generation reduction target of 250kg/person/year is very ambitious, as a citizen I look forward to the actions CRD pursues to realize this goal.
As a regular user of Hartland Road to access the landfill, I think transitioning the access point to Willis Point Road is a good idea as it will be safer and more convenient for large trucks.
As approved by the CRD Board, we are in a climate emergency. I do not support the expansion of the filling area of the Hartland

Landfill, including the removal of trees. Reviewing the guiding principles in the document, I think more can be done to focus on these principles before removal of trees and expansion of the filling area within the landfill property. Just because the property is approved to be used as a landfill does not mean we should go ahead and use it without first exhausting other means to reduce waste going to the landfill and recover energy/materials from waste. Please see more feedback below for each of the guiding principles. I also request that future documents meant for the public contain executive summaries. It is too cumbersome to be expected to read a 60+ page document to find what is actually being proposed. I believe the proposals start on page 28. 1. Promote zero waste approaches and influence others in support of a circular economy; --> the waste prevention actions are vague and not specific; please indicate which products and producers you would target first. If that is somewhere in the document, I can't find it. 2. Promote the first 3Rs (Reduce, Reuse and Recycle); --> I would like to see the CRD actively work to reduce packaging, particularly single use items. I would like to see curbside recycling of soft plastics. There are so many plastics in packaging that need to go into the garbage. I tried to bring our soft plastics to London Drugs and they were at capacity so I couldn't. We shouldn't have to rely on London Drugs to organize recycling of soft plastics, and realistically most people will put things in the garbage if it's more convenient. 3. Maximize beneficial use of waste materials and manage residuals appropriately; --> I would like the CRD to be a leader to reviewing and implementing technologies that recover energy/material from plastics. 4. Support polluter-pay and user-pay approaches and manage incentives to maximize positive behaviour outcomes; --> increase fees associated with larger garbage bins. People could apply for exemptions/discounts (eg. families with babies requiring disposal diapers) 5. Prevent organics, recyclables and hazardous household waste from going into the garbage wherever practical; --> I sometimes see people with only a garbage bin out on pick up days. These people should be flagged and fined because it is practically impossible to only have garbage and to not have any kitchen scraps/organics.
4.2.2.1.6 Estimated Lifespan I support the extension of the landfill site. The Landfill is an important asset to the community and its growth must grow with the community. I am surprised that the gravel extraction that is currently on going at Hartland landfill was not addressed. The plan should address a plan for the gravel to leave the landfill for a secondary use instead of just burying it into the garbage. This volume of gravel is a waste of valuable air space, $$, a huge % of the landfill volume that is not shown in any of your graphs and not a green environmentally friendly use of this material when this whole thing is about reusing not burying??? 5.1 Reduction and Reuse strategy #6 C-Licensing facilities is a waste of tax payers money. This is not needed in the CRD as local facilities are well operated here. The CVRD and RDN use this to try and monopolize over private companies and control the flow of garbage which means money. The only problem locations in the CRD is First Nations land were illegal dumping occurs daily. CVRD also has this problem and cannot do anything about it even with the licensing process in place. Licensing will bog down CRD staff and burn them out with the constant pressure and negativity that comes with managing licensed facilities and the general public. This does not promote the solid waste industry it removes the solid waste industry. D- this is flow control and monopolizing. This should be taken out of this plan as it is a tool so CRD can direct the flow of recycling and waste to where they want it to go only. This is not in the best interest of the tax payer and business community as it creates a monopoly for the CRD. With flow control, rates will only go up and tax payers will pay more instead of a free market place. This does not promote the solid waste industry it removes the solid waste industry. Strategy #11- Processing facility is not needed at Hartland Landfill. There are three composting facility's that can handle the food waste from the CRD. The Nanaimo facility is expanding their processing capacity to 60,000 tonne annually in 2021, the Chemainus compost facility is switching from biosolids composting to food waste composting and Fisher Road composting will be expanding their composting capacity. This material will be divided amongst the three processing facilities and the CRD will not need to waste tax payers money on building a composting facility that will be redundant. The landfill air space is too valuable and the operation of this facility will be to costly compared to privately owned facility's.
Thank you for the opportunity to provide feedback on the draft Solid Waste Management Plan for the Capital Regional District. In response I would like to raise the following concerns: 1. Waste Composition Looking at the Hartland Landfill Waste Stream Analysis it would appear that a high proportion of the materials that are being landfilled could be diverted e.g. organic waste, wood, paper, metals, textiles and plastics. This strikes me as a significant missed opportunity and calls into question how effective the CRD has been in communicating with its citizens regarding waste. 2. Communication and Public Engagement I appreciate and value the strategies identified for increasing diversion. I also note the repeat references to continuing public education and awareness raising which I agree should be a key part of the CRD's SWMP. But, further to the point above, I think more is needed than a commitment to continue these programs, rather communication around waste in the CRD needs to be significantly expanded and strengthened, such that everyone understands the role they have and/or can play. A first step would be to reorder the goals retaining the 125kg target as #1 followed by having informed citizens (and businesses) that participate effectively. Then #3 extend the life of the landfill to 100 years plus but with the explicit statement of how this should be achieved i.e. through prevention, reduction, diversion and, as necessary, expansion. And lastly, Goal 4, ensure that CRD's waste services are financially sustainable. As a resident who has lived in a number of different rental properties and areas of the CRD over the past 7 years, I have never seen or received any communication from the CRD regarding the waste goals and per capita target. If this is reflective of the typical experience of (private) tenants in the CRD, which make up a significant portion of citizens in the region, then it is likely to significantly undermine efforts to reduce waste in the CRD. As highlighted in the plan raising awareness among ALL citizens is key, this could be achieved by including the target on stickers on our curbside bins, for example. While for property owners an update on average performance (kg/capita) could be included with annual property tax letters. Communication of the target, and performance, at the Landfill itself could also be improved through signage and potentially a handout or similar after payment/use of the scale. Lastly, given that 40% of waste arises from ICI sources, and private waste haulers have a vested interest in not promoting prevention or reduction. I feel it crucial that the CRD expands the scope of its education activities to actively engage business in addition to building managers and strata across the region. 3. Level of Ambition I would like to encourage the CRD to be truly ambitious in its plan. The Regional District of Nanaimo (RDN) is targeting a 90% reduction in waste to landfill by 2027, equal to 109kg per person. While the proposed SWMP for the CRD seems to only hope to achieve a per capita disposal rate of less than 250kg in 10 years time. According to the draft plans it will take the CRD three years to surpass the RDN current disposal rate of 347kg per capita, by which point they will be well on their way to their 109kg target. I am curious as to why the CRD SWMP is not more ambitious, when it is already lagging behind the RDN/other jurisdictions on the Island are already achieving higher levels of diversion. I welcome the suggestion of some kind of on site free-store and would encourage the CRD to look at the highly successful Re-Use it Centre in the Resort Municipality of Whistler, which actually provides goods for donation (not only helping to cover overhead but I believe in doing so, helps to add value to items that may otherwise be considered and treated as disposable). The other important note with respect to this facility is its proximity to the population centre/popular grocery store/transit links. Hence, I ask that the CRD considers going beyond the free-store in the current plan and consider establishing a green business hub or quarter. One of the biggest challenges to a green lifestyle is arguably time and (in)convenience - especially when compared to the ease of, say, shopping at a mall, relying heavily on disposable products and using a car for most journeys. If the CRD is truly seeking to promote less consumption, and foster the circular economy, it could consider establishing a green business quarter through favourable business rates etc. whereby a whole range of green/waste conscious businesses (e.g. CRD reuse store, bulk stores, refill stores, local food markets, repair cafe, bike repair etc.) are co-located in one area that can be accessed easily by transit, bike etc. as opposed to adding a facility at the dump itself, which is only accessible by car. I would also, in relation to the CRD's level of ambition, reiterate my point above (under Communication and Public Engagement) regarding reordering/prioritization of the goals in the SWMP. I hope that you will take the above into consideration as you continue to develop the Plan and thank you for your time.
Landlords of apartment buildings/multifamily housing NEED to be held accountable for the waste services they provide to tenants. I live in a building where the landlord has straight out refused to provide a kitchen scraps program over alleged concern for rats, and has recently stopped glass recycling (my experience is by no means unique). If it is illegal to dump organics at Hartland, how can landlords force tenants into a position where they have no choice but to put kitchen waste and recyclables in the garbage? "Education" of individual citizens doesn't go very far if the landlords managing our rental buildings refuse to provide the necessary services.
I would like to add my support of moving the truck delivery entrance to Willis point rd. as keeping it on Hartland would require a total rebuild of the bridge at start of the road as the heavy trucks keep damaging the road over the bridge sending asphalt into the Tod Creek. As a matter if interest which houses are you supplying with electricity, of the 1,100 houses how much do you charge?

Will CRD be invoking the Precautionary Principle with plastic? Thank you, Larry Wartels, freeusall1@gmail.com
Instead of expanding the landfill, let's figure out new methods of recycling and promoting a more circular economy to reduce solid waste at its source. As an avid hiker and longtime Victoria resident, I like many others place great value in our urban forests. Please reconsider this development action and instead plan for better sorting, recycling, and perhaps municipal bans on certain disposable items.
Do not expand the land area for the Hartland Landfill until all possible alternative solutions and technologies have been thoroughly evaluated. Site expansion must be the last option to be considered.
I am aware that solid waste (biosolids) are being used in various ways around the world but this is no solution either since dangerous heavy metals etc. remain wherever they are used. The only long term solution is to eliminate waste at the delivery end and increase awareness of consumers around this problem. It is necessary to imagine that the consumer must think of the waste stream with every purchase and this can be accomplished if more emphasis is put on both them and manufacturers with the costs associated. Expanding landfill sites and distributing biosolids into the natural world is simply not a lasting solution. Long term thinking must occur.
Halt the expansion of the Hartland landfill!
At this time in history we have the technology to turn solid waste and garbage into resources. Would you take a moment to watch the possibilities in this 2 minute clip: https://www.youtube.com/watch?v=fpDrUwd1uq4 In my opinion it is no longer acceptable to destroy forest land and turn it into a dump! We can do so much better. While forest lands capture carbon dioxide, dumps create CO2 and methane, a greenhouse gas many times more potent than carbon dioxide. Please be climate leaders and public officials who work for a livable future. Vote against expanding the Hartland Dump.
Expanding the garbage tip only helps for a little time. Educate people. ei. Sooke has a disposal company that most Sookies do not know about, lack of knowledge is the main cause of misuse of non disposable items. cutting down trees which among other things prevents run off of water otherwise stored in the ground is a very short sighted way of coping with our lack of resources.
Educating people on their mismanagement of waste would be vastly more productive. There is a wonderful company in Sooke who recycles waste that our blue boxes does not accept. I speak to people and they say good idea but do nothing about it. Please expand the contents of blue box collections. Please do not cut down the trees. They hold water in the ground apart from many other useful things to help stop global warming, with such vast areas of this planet burning out of control we need to keep water underground,
Hi I object to the proposed large expansion to the Hartland dump. I know that good actions are already in place to use and reduce waste. Let's have more. We need the beautiful forest that would be destroyed for carbon sequestration and much more. Thank you
CRD, I urge you to rethink your decision to expand the Hartland landfill. We need to find better solutions to disposing of our waste and increasing the size of landfill will only promote the same behaviour that put us in the crisis we are in. People will continue to consume, purchase and dispose as they have always done if they aren't forced to change. We need leaders who will put limits on our behaviour and not fear the political repercussions, leaders who will tell us that we have to be more responsible for our choices and less self centred. As Einstein said. "Doing things the same way and expecting a different outcome is the definition of insanity." Sincerely, [redacted]
In my opinion it is no longer acceptable to destroy forest land and turn it into a dump! We can do so much better. At this time in history, we have the technology to turn solid waste and garbage into resources. While forest lands capture carbon dioxide, landfills create CO2 and methane, a greenhouse gas many times more potent than carbon dioxide. It is time to be climate leaders and public officials who work for a livable future. Vote against expanding the Hartland Landfill.
I am heartened by your look to the future and input in a plan to manage waste. I am very much against chopping trees down to fill the landfill with waste, despite plans to replant trees. The trees are doing a great service on their own, especially as they are mature. More needs to be done with solid waste management and ridding of toxins. This has always been a known need but we opted for only the basic tertiary steps to treat human waste. Further work needs to be done before we get rid of environmentally sound trees on the property. Planting of trees does not give us back the same level of help by the mature trees. Other options should be explored and planned.
The solution to the garbage problem is not to cut down forests but to educate people in reduce, reuse and recycle. We need our trees.
Why are we tearing out trees to make room for more irresponsible garbage? This is 2021 and we haven't the sense to manage our own rapacious consumption? The population and garbage is only increasing while we look at further degradation as a solution? There must be something more intelligent.
You should be putting resources into Gasification IRM not cutting down trees.
Destroying another 73 acres of forest will achieve nothing. This is a finger in the dyke approach as a tsunami of solid waste overwhelms Victoria and other towns in BC. We must think bigger. Solid waste needs a Province wide solution, where all single use products are banned, all plastic and glass is recycled, all paper and cardboard is recycled and all larger items are returned to the manufacturers or reused under a circular economy model. We need to pay deposits and recycling charges as part of the cost of using/owning these products. Creating bigger and ever more holes in the ground, while destroying carbon sink working forests gets us nowhere except to increase GHG emissions and accelerate climate change.
By digging a bigger hole at Hartland we are simply digging ourselves into a bigger hole environmentally. The current plans for expansion are regressive and newer, sustainable solutions must be considered. Thank you.
Hartland provides valuable recreational opportunities that must not be compromised. We need to move towards zero waste, including restrictions and construction and demolition, and the requirement to unbuild houses. We must find better solutions than landfill expansions
Trees are precious and take hundreds of years to grow into an irreplaceable forest. Please do not sacrifice a precious forest for garbage. I enjoy hiking in the area thanks to the legacy left by my mother who campaigned for years to save places such as Todd Inlet from destruction. Thank you.
I am a primary school student and I want to see this plan use other land (without trees and other life in there). I love the park and I don't want to loose it, my life will be ruined. People can do much more than this, they are just lazy and don't know what to do. If you can encourage more and more people do to their part, I believe this landfill plan will be just a dream. Please consider multiple times before you make the final decision. I love life and I hate people who waste.
It is time to inform the public through various media regarding how they can reduce what goes to our landfill. I have noted in my area that the large dumpsters at apartment buildings do not include a place to recycle clean glass. Also, expanding the Hartland Dump is not a solution with which I can agree. Don't re-invent the wheel. Look at what other more progressive examples from other cities. Sincerely, [redacted]
While the guiding principles of this draft solid waste management plan are laudable, I am appalled that the CRD, after declaring a climate emergency, is planning to destroy a 73 acre forest in order to expand the Hartland landfill. Other regional districts, including Nanaimo, have established progressive policies to achieve significant reductions in waste, and that is exactly what the CRD needs to do. Our communities can meet this challenge and save the economic and ecological costs related to this ill-conceived proposal for Harland. It is simply not acceptable to destroy a forest in order to dump more garbage. Active promotion of campaigns to encourage residents to Rethink, Refuse, Reduce, Reuse, Repair, and Recycle, combined with policies to eliminate single use plastics and other packaging will save this forest and its important roles as a carbon sink, wildlife habitat and recreation area. As a concerned resident of the CRD I call on you to live up to the stated goals of the plan and reject the Hartland expansion.
Thank you for the opportunity to provide feedback on the CRD's draft solid waste management plan. It is time to rethink waste! The CRD continues to operate in an archaic business-as-usual manner that is not in alignment with the climate crisis and future generations. The CRD needs to walk its talk. Expanding landfills is NOT in alignment with the climate emergency and the principles supporting a One Planet Region. The CRD needs to show leadership and make bold moves NOW that include the following

progressive solutions: 1) Make waste socially unacceptable through education, with emphasis on the 6 R's (rethink, refuse, reduce, repair, reuse, recycle); 2) Encourage a circular economy through Repurpose and Repair Centers and Repair Cafes; 3) Change the current business model so tipping fees encourage DIVERSION of waste FROM the landfill vs into the landfill; 4) Use the Township of Esquimalt Waste to Energy proposal as a demonstration waste-to-energy project and make it a leading example of moving towards carbon neutrality; 5) Adopt the City of Victoria's plan to reduce waste by 50% by 2040 and adopt this as a minimum target for diverting waste throughout the region by 2040, and accelerate this to 90% by 2050 at the latest; 6) Recognize that carbon neutrality and zero waste are mandatory pre-requisites if we intend to be carbon neutral and address climate change, one of the greatest global threats to the survival of mankind; 7) Enforce mandatory fully compostable packaging; 8) Legislate that manufacturers are responsible for the full life cycle of their products and enforce this so that products can not be shipped or sold unless manufacturers are certified to do so and are actively regulated, inspected and licensed with mandatory accountability and transparency. Fees collected would be used to support local zero waste initiatives; 9) Create mandatory source separation for single and multi-family dwellings, as well as institutional, commercial and industrial (ICI) use; 10) Delay requesting the expansion of the landfill under the Solid Waste Management Plan until the CRD can publicly demonstrate progress on the following 3 key initiatives: 1) achieving zero waste and a circular economy; 2) operating a waste to energy project, like Esquimalt, to demonstrate its effectiveness in achieving zero waste and lowering carbon emissions; and 3) developing a new business model based on maximizing diversion from the landfill as proposed by the Regional District of Nanaimo. This is possible. Real leadership can make this happen! Frances Litman, on behalf of the Creatively United for the Planet Society
We are in the 21st century, and we have declared a climate crisis. Our solid waste treatment should thus not cut down forest to extend Hartland, maintain Hartland by counterproductive 'tipping fees', transfer trucks to Willis point road thus impairing recreational use of the road itself (by runners, hikers and cyclists), the Mount Work park and Durance Lake and Mckenzie Bite - all this increasingly valuable to increasingly densely housed Victorians. The CRD plan runs counter to its responsibilities to care for our piece of the planet and our inhabitants. What you are risking can never be reclaimed - and it is totally unnecessary. Switch to modern alternative solid waste management systems, like gasification, for example - just as operates in much of Europe. Also, given what we now know about viral particles surviving through current biosolid production, and have suffered with Covid, it is lunatic to land -spread biosolids ever, anywhere. This proposal must be changed: it can't be reversed. Once on land, whatever pollutants are there seep into our aquifers, our wells and are wind-dispersed. Stand up for what is right CRD, think again, follow the evidence and the public interest. We depend on you to change course. With thanks.
The Plan, "Rethinking Waste", is presented as a "plan to reduce how much material is sent to Hartland Landfill and guide how the region's waste is managed in a safe, secure and sustainable way now and in the future." In fact, as presently conceived and presented, it is a plan of insufficient ambition that avoids any serious decisions or commitments to rethinking waste and is instead designed to take the course of least resistance. The current Plan leads inevitably to the enlargement and expansion of the Hartland Landfill. Instead of being called the "Solid Waste Management Plan", it could more accurately be called the "Hartland Landfill Expansion Plan" because that is the inevitable, pre-determined outcome of the current plan. Current Plan is not sufficiently Ambitious The entire plan is premised on the target of reducing per person annual waste amounts from the current 380kg per person per year to 250 kg by 2030, with an undefined "aspirational target" of 125kg. This aspirational target was tacked on at the end of the planning process as a sop to the recommendation of the Solid Waste Advisory Committee, without any plan or commitment to achieving it. Assuming the 250kg target is met, according to the current plan, beginning in 2030 73 acres of forest will be removed in order to begin expansion of Hartland's filling footprint by approximately 50% so that the expanded Landfill will be ready to continue receiving waste beyond 2045. (All this without the benefit of an environmental assessment which CRD staff claims is not required). Expansion is the chosen strategy to extend the life of the Landfill to 2100 and the entire plan is predicated on this outcome. All the assumptions in the plan, including a financial model that relies primarily on continued tipping fees, is based on the expectation of expansion. It is the wrong strategy for a number of reasons, and must be rejected. Instead of the presumption that Hartland must be expanded, with work beginning in 2030, the Plan should start from the goal of avoiding further expansion, and set waste reduction targets and strategies accordingly, based on this goal. Deferral of Approval of Design Concept for Expansion is Required Rather than approve the current plan, the CRD Board should amend the plan by deferring any decision on expansion of Hartland until an effectiveness review is conducted, as required by the Province, in 2025. In the meantime, the CRD should maintain flexibility in the plan allowing for the potential incorporation of current initiatives being pursued within the CRD, such as Esquimalt's evaluation of the business case for Integrated Resource Management and the City of Victoria Zero Waste strategy, and other developments between now and 2025. In 2025 a full evaluation should be undertaken of progress toward waste reduction targets, including the aspirational target of 125kg per person annually (note that the Regional District of Nanaimo has adopted an annual waste reduction target of 109kg per person by 2027, with measures being put in place to achieve that goal). This review could lead to a further modification of the Plan to incorporate new strategies including waste to energy initiatives if they prove practical. In the meantime, CRD Board should not approve the design concept of Hartland expansion that is scheduled to begin in 2030 under the current plan. Environmental Assessment Needed if Expansion Plans Approved The Plan argues unconvincingly that the removal of the trees and the quarrying of the 73 acres is not an "expansion" but merely "maximizing the use of land currently within the property boundary". This ignores the fact that the expansion will remove a significant buffer area that until 2019 was a de facto part of Mount Work Park. It will push the area being used for landfilling operations to the very boundary of the property. The Plan's language also dismisses the fact that the actual filling footprint will expand significantly, both in terms of surface area and removal of rock to create airspace. In fact the expanded filling space will be well in excess of the 30% increase that triggers an environmental review under the Environmental Assessment Act, despite the CRD statement that it does not believe that an environmental assessment is required. This expansion will have a number of significant negative impacts. First removal of forest cover is inconsistent with climate action goals. The statement that new trees will be planted elsewhere is insufficient as replacement of mature trees with seedlings is a suboptimal outcome when the removal of the mature trees can be avoided. Expansion of the Landfill will further put at risk the 16 endangered species in Mount Work Park. It will remove 73 acres from recreational use and create noise, air and water pollution for the adjacent areas, all of which is unnecessary. It will redirect traffic to a busy commuter, residential and recreational road from the current access route that terminates at the Landfill. Most important, expansion will ensure that the CRD continues to dispose of waste through landfilling, creating significant methane emissions in the process to the detriment of federal, provincial and regional greenhouse gas reduction commitments, instead of seriously examining alternatives to continued landfilling. Despite vague language in the Plan that new technology and waste reduction methods might change the planned expansion, there is no commitment or concrete planning to move beyond the goal of 250 kg of waste per person annually. The notation of an "aspirational goal" of reaching 125 kg per person annually by 2030 has no concrete action plan or funding behind it. In fact, CRD staff recommended rejection of the proposal of the Solid Waste Advisory Committee to adopt a target more aggressive than 250 kg because it would cause delay and undermine the current financial model. Most of the strategies in the Plan designed to achieve the relatively modest goal of a reduction of per capita waste production to 250kg per year by 2030 are vague and without any measurable outcomes. The strategies are full of unquantifiable terms such as "continue to", "explore" and "advocate for". Funds allocated to strategies to achieve important reduction goals are modest in the extreme, amounting to only 1% of annual expenditures, or about $300,000 per year for all initiatives. Dependence on Tipping Fee Financial Model is Fundamentally at Odds with Waste Reduction It is true that a waste generation target of 125 kg would upend the financial model of depending primarily on tipping fees to fund Hartland's operating expenses. Staff have confirmed that when waste per person drops below 200 kg per year, tipping fees will no longer cover expenses, and alternative sources of income will have to be found. As it stands now, the Plan has a built-in bias ensuring that waste continues to be brought to the Landfill for disposal. The plan needs to consider a mix of funding models, including the possibility of tax revenues, to avoid the current tipping fee funding model from working against the objectives of zero waste. Primary reliance on tipping fees to fund Hartland's operation is in fundamental contradiction to the expressed goal of reduce, recycle and re-use. Instead, tipping fees should be used to incentivize waste reduction behaviour, as is being done in the new tipping fee and funding model being adopted by the Regional District of Nanaimo. Alternatives to Hartland Expansion There are a number of alternatives. Nanaimo's aggressive waste reduction strategy breaks with the tipping fee financial model. The City of Victoria has embarked on a comprehensive zero-waste initiative and has set a target of 50% waste reduction by 2040 that should result in significantly less waste being sent to Hartland. Saanich is developing a One Planet Saanich strategy that embraces zero waste and

carbon neutrality. Other regional municipalities could do the same. The Township of Esquimalt is undertaking a business study of small-scale waste-to-energy (Integrated Resource Management) processes that will obviate the need to send waste to Hartland. Yet the SWMP makes only passing reference to "new technologies" with no concrete plan to embrace them. Instead, the default setting is "reduce to 250 kg and then begin expansion of Hartland". According to the draft plan, almost 70% of waste deposited at Hartland falls into four categories (organics 21.1%; wood products 17%; paper 15.4% and plastics 14.3%). All of these are highly amenable to reduce, reuse and recycle. Moreover 56% of waste comes from ICI (institutional, commercial and industrial) sources and construction and demolition, yet most of the initiatives in the plan to reduce waste are directed at consumers and households through education rather than dealing with the heavy ICI users and construction industry. Cruise ship waste is another issue that needs addressing. Bans that are in place on kitchen scraps, gardens waste and paper fibres are clearly not being implemented and effectively enforced. The current focus is to accept just about whatever shows up at the gate. The current operation of Hartland is hooked like a drug user on tipping fees. This needs to change. CRD Director Responsibility Directors need to be aware that if they approve the Plan as currently presented, they will be giving the green light to expansion of the Hartland Landfill beginning in 2030. The argument that this is just a "design concept" belies the fact that all planning and financial modelling is premised on reducing per capita waste to just 250 kg per year within a decade, an outcome that feeds directly into the start of construction for expansion. The current plan ignores new commitments to carbon neutrality made by various levels of government, takes no account of zero waste initiatives, and ignores the full potential of the circular economy. It makes only passing reference to the impact of new technologies with no actions in the plan designed to examine or harness such technologies. In effect, this is a plan for the status quo, more suited for a world of the late 20th century, not the first or second quarters of the 21st century. Directors should reject the Plan as currently constructed. Staff should be instructed to go back to the drawing board and revise the plan based on public input to present a plan that is more in sync with the realities of climate change, aggressive waste reduction, innovative financial mechanisms, government commitments and public expectations. A revised plan should defer any decision on Hartland expansion or approval in principle of an expansion design concept at least until the next scheduled review in 2025 and should adopt a more aggressive per person waste reduction target in order to avoid the necessity for expansion in future years. In the meantime, staff should be instructed to develop strategies, proposed actions and financial modelling building on zero waste strategies, new technologies and financial incentives and disincentives, to produce a plan that will extend Hartland's usable life without expansion, avoiding the negative environmental and social impacts that will come with that expansion.
Farmers are interested in compost for the regional farm community, and how a program can be established with you to nurture and build soils, protect our fields and the environment and contribute positively to climate change and soil carbon sequestration or 'carbon sinks'. We would like to discuss approaches to collaborative partnerships within the CRD to achieve regional targets; and can align to your principals by building soils with compost, growing crops and providing nutritious food to the region. If citizens of the region see and know their compost is going onto fields, providing local landscapes of vegetables fruits and berries, grains and forage fields – they will be enthused about recycling organic matter and have more faith in sustainability and climate mitigation practices. The continued application of compost to fields will increase the organic matter and soil structure, increase the nutrient holding capacity and improve the soil biology. This provides less use of fertilizers and water, less runoff and leachate, better crop growth and less GHG emissions.
In order to truly Rethink Waste, the CRD needs to: 1. Make waste socially unacceptable through education, with emphasis on the 6 R's (rethink, refuse, reduce, repair, reuse, recycle); 2. Encourage a circular economy through repurpose and repair centers and repair cafes; 3. Change the current business model so tipping fees encourage DIVERSION of waste FROM the landfill vs into the landfill; 4. Use the Township of Esquimalt Waste to Energy proposal as a demonstration waste-to-energy project and make it a leading example of moving towards carbon neutrality; 5. Adopt the City of Victoria's plan to reduce waste by 50% by 2040 and adopt this as a minimum target for diverting waste throughout the region by 2040, and accelerate this to 90% by 2050 at the latest; 6. Recognize that carbon neutrality and zero waste are mandatory pre-requisites if we intend to be carbon neutral and address climate change, one of the greatest global threats to the survival of mankind; 7. Enforce mandatory fully compostable packaging; 8. Encourage the provincial government to legislate that manufacturers are responsible for the full life cycle of their products and enforce this so that products can not be shipped or sold unless manufacturers are certified to do so and are actively regulated, inspected and licensed with mandatory accountability and transparency. Fees collected would be used to support local zero waste initiatives; 9. Create mandatory source separation for single and multi-family dwellings, as well as institutional, commercial and industrial (ICI) use; 10. Delay requesting the expansion of the landfill under the Solid Waste Management Plan until the CRD can publicly demonstrate progress on the following 3 key initiatives: A) achieving zero waste and a circular economy; B) operating a waste to energy project, like Esquimalt, to demonstrate its effectiveness in achieving zero waste and lowering carbon emissions; and C) developing a new business model based on maximizing diversion from the landfill as proposed by the Regional District of Nanaimo. This is possible and your leadership can make this happen!
This plan sounds ambitious with respect to reducing waste and pushing the 3 Rs but in fact there are no concrete commitments or measurables. Most of the "actions" are simply "to continue to", "to explore", "to work with". There are no measurable outcomes for the strategies so it is impossible to hold the CRD accountable for this plan. When the targets are missed because of weak implementation, it will be impossible to analyze why. Most disappointing is the lack of any significant budget commitment to make this plan work. The budget allocated to support all the initiatives outlined in the plan amounts to only one percent of the annual budget for solid waste management at Hartland. If you are really serious about reducing waste in this region--thereby avoiding the need to expand the Landfill, which is a backward step at a time of a climate emergency--put some meaningful budget behind the 3 R initiatives. Right now, it is mostly empty rhetoric and window-dressing.
Please advocate for less packaging in consumer products! For example, even fresh produce that needs NO packaging at all is now overly packaged. I tried to buy tomatoes the other day and one store I went in to had at least half a dozen varieties of fresh tomatoes, but every single one came only in either bags or clamshell plastic packaging. Other non food items are often worse for unnecessary packaging that cannot be reused or recycled. Consumers will make the right choice if they actually have it to make. Thank you.
I would like to see more details regarding strategy 15 on enhancing capacity. I see the new landfill footprint but if the goal is for circular economy or zero waste why is such a big expansion being planned? Also where are the details to how many trees will be removed/ how long blasting will take place? (Years/months) / how much rock will be removed/The number of trucks going in and out to deal with expansion? I think putting this big item at the end of the draft plan makes it look like there is something to hide also it has so few facts when compared to the other strategies it's hard to provide informed comments or meaningful feedback.
When it comes to solid waste, a key principle should be "polluter-pay" by fully accounting for several factors such as volume, mass and while it would be difficult to measure, environmental impact (1 kg of batteries has a larger impact that 1 kg of dog hair). The user pay cost curve should be exponential to encourage a zero-waste target. These cost factors should should be measured from a low floor threshold. For example, the cost curve should start at the first gram of waste when considering the mass factor and not some higher threshold (such as one garbage can per household that is typical now). Right now, most users have no economic incentive to get to a zero-waste target. To complement the exponential cost curve, users should have a variety of no/low cost and convenient options to recycle their waste and divert it from the solid waste stream. A good example is polystyrene which is very inconvenient to recycle right now and depending on where the user goes in the CRD, can have an associated cost as well. I would want to see something like retailers that are selling products containing polystyrene taking it back as well.
Within your Solid Waste Management Plan there are plans for the expansion of the Hartland Landfill which I feel is counter-intuitive to addressing the Climate Emergency that the CRD declared almost 2 years ago. We need to be finding solutions to stop, not increase the methane emissions coming from the landfill and lower the GHGs coming from all that trucking of garbage and aggregate. We feel that selling the methane to Fortis to produce RNG is definitely not helping us tackle climate change. It is only helping to prop up the continued use of fracked gas. In order for the landfill to provide enough methane we would need to continue dumping more garbage. Where is the logic and the "greenness" in that when we should be working towards zero waste and carbon neutrality? Another one of my concerns regarding the expansion of the landfill would be the worsening of our air quality through the unconscionable destruction of 73 acres of our priceless urban forest coupled with the expanded trucking of garbage. We are losing millions of trees every year so

every tree saved now is critical to our health and survival. CAPE, the Canadian Association of Physicians for the Environment have been sounding the alarm bells on air pollution and how it is taking its toll on our health care system. And as we destroy more nature, they are saying we are giving rise to more zoonotics such as the likes of covid-19. We just cannot afford to lose the 73 acres of forest in order to accommodate garbage! Our planet is losing its biodiversity at breath-taking speed. Did you know that within this forested area are 16 at risk species? Our urban forests are an incredible natural asset for filtering our air and for carbon sequestration. The trees planted today will take decades if not generations to absorb as much carbon as these mature trees currently do. Our trees are worth millions of dollars for all the services they provide. I feel the Hartland Landfill business model really needs to be revised and brought into the 21st century. As it currently stands, the survival of the landfill appears to be dependent on the tipping fees and that does not jive well at all with what we are trying to achieve with zero-waste and a circular economy. The City of Victoria recently set out it's Zero Waste Strategy for a 50% reduction by 2040. If other municipalities start getting on board with this there should be no need to for the expansion of the landfill. And if Nanaimo can shoot for a 90% reduction by 2027 why can't we? If we don't aim for the moon we won't even get off the ground. There are other technologies too like wte that could greatly help reduce the amount of waste going to the landfill. I would like the CRD to support and consider the IRM system that the Township of Esquimalt is currently working on. This is totally different from the Enerkem system proposed for Edmonton that is definitely not what we would want. So, before the CRD makes plans to expand the landfill I would like you to hit the pause button. I understand that you can always amend the SWMP once it is approved but do you truly believe that will ever happen? How many years has it already been since it was last looked at? Too often we citizens have seen our governments kick the can down the road. If all governments had heeded the warnings of the scientists and experts back in the 70's and took the issues head on, we wouldn't be facing these monumental challenges we have now. In your Regional Growth Strategy Indicator Report 2020 under Community GHGs it says, "The current trend suggests we will not meet the target by 2038 unless greater effort is taken." I sincerely hope that the current CRD Board of Directors and staff will take greater effort and will finally be the government that we wish to see and take profound, rapid and real climate action. I hope you will take immediate action to reduce our GHGs before the clock runs out on us. Let's roll up our sleeves together to get this done. I know the people would be willing to do what it takes if we have strong leadership we can trust to get us there.
The CRD needs to focus more on the ICI sector. The educational image of the per person garbage cans is misleading. It makes me think that it is individuals that are generating too much waste, but really ICI generates 40% of the waste. The ICI sector should be fined if they don't recycle or compost. A friend of mine worked at a local Royal Bank branch. There were recycling bins inside, but none outside so the custodian emptied the recycling bins into the dumpster with the trash. Royal bank can afford to recycle and should be held accountable. The Plan's idea of requiring a waste plan with a business licence is great. The CRD could also give awards to companies that are leaders in reducing waste. There could be a competition to see who can reduce the most waste in a year. The media could draw attention to the businesses that don't recycle or compost. My family tries to reduce our waste, but it is hard in a society with so much packaging. Stop blaming the individual and make businesses take responsibility for their products.
Our CRD should be all over this great idea: <https://www.byfusion.com/byblock/>. -- wmj
The regional district on Nanaimo is using tipping fees as a way of incentivizing waste diversion. The CRD SWM plan actually encourages more waste delivery to Hartland by basing financial sustainability (one of the four key principles) on maintaining revenue from tipping fees. The plan needs to recognize the fundamental contradiction between trying to reduce waste while funding the operation on tipping fees. It is time to look at a ne financial model.
The plan to divert commercial traffic to Willis Point Road fails to take adequate account of congestion and safety concerns that will occur because of the poor design on the intersection of West Saanich Road and Wallace Drive. Trucks turning north onto West Saanich will block traffic coming from Hartland trying to turn south. Southbound traffic will find it difficult to merge into traffic on West Saanich streaming southbound downhill. Cyclist exiting the Interurban bike trail will find Wallace Drive clogged with trucks. Compounding these problems are the post boxes on that corner. The move is poorly planned and the remedies are out of CRD's hands as Saanich is responsible for this intersection. A fully costed design is necessary if this move of traffic is to take place, for everyone's safety and for the efficient movement of traffic, and work needs to be completed before the move takes place.
We need to go to zero waste - see city of Nanaimo's strategy. To expand the CRD Hartland Rd. landfill means the loss of 73 acres of forested land, according to an article on the Times Colonist. We cannot afford to sacrifice forests, our best bet for sequestering carbon, in a life-changing climate crisis for wasteful landfill.
Too lengthy Cannot find specific info. Please publish a condensed, stick to specific facts.
As a resident of Hartland Avenue, I am in full support of the plan to move the commercial access of the Hatland Landfill to Willis Point Road as proposed . It is a crucial step to the future of the solid waste management of the CRD.
I am a resident of Hartland Avenue and fully support moving the commercial access of the Hartland Landfill to Willis Point Road. The commercial truck traffic has become very busy and has outgrown the safety of Hartland Road.
Totally ridiculous short-sighted solution. Area surrounded by multiple parkland preserves, Gowland-Todd, Durance Lake, Mt. Work, fragile ecosystem, community on well-water, limited road access.... Bio-solids, sewage treatment plant, truck diversion to Willis Point Road, none of this makes sense and will be fought.
I do not support the proposed expansion of the Hartland Landfill beyond 2045 because I believe that before that date we should shift to zero waste disposal. Zero Waste The CRD Board supports the principle of zero waste and encourages a circular economy by mid-Century. This goal can be achieved by reducing personal consumption in keeping with achieving carbon neutrality by 2050; requiring producers to be responsible for the full life cycle of packaging; levying user fees on packages that produce waste and encouraging comprehensive recycling in both single family and multi family homes. Resource Recovery - Waste to Energy Solutions The Solid Waste Management Plan must rigorously pursue the 5 R waste hierarchy with top emphasis on reduction, reuse and recycling. The 4th R of resource recovery requires use of waste to energy technology. I support the Township of Esquimalt proposal to complete a detailed analysis of a demonstration waste to energy facility as soon as possible. The CRD should support the operation of this facility if it is technically feasible. Then resource recovery must be implemented throughout the regional municipalities before expansion of the Hartland landfill is considered. Expanding the Hartland landfill is completely inconsistent with achieving a carbon neutral economy by 2050. Removal of 73 acres of public forest that sequesters local carbon, is inconsistent with the CRD and other municipalities' declaration of a climate emergency and the critical need for the Greater Victoria region to become carbon neutral by 2050. Carbon neutrality requires full implementation of a circular economy where there is no waste. All excess carbon produced is captured by restoring the health of our ecosystems to store carbon.
We live here and pay property taxes and refuse to let this short-sighted expansion move forward at the expense of Willis Point and Highlands residents and our fragile ecosystem. No!
I don't see how it's going to work when recycling has gotten more and more restrictive. In my own life, here's what I've experienced in the last few years: - Private recycling companies (like the one my apartment building uses) stopped accepting glass - Most bottle depots stopped accepting glass, plastic wrap, styrofoam - Hartland stopped accepting hard plastics - My building (Devon Properties) has no organics cart and is not interested in providing one We throw away literally 8x more garbage now than we did 5 years ago (when we lived somewhere with organics and glass recycling, and other items were easier to recycle). I measured it -- we used to throw out a 1/4 full Costco kitchen bag every 2 weeks, whereas now we throw out a full bag once a week. I can't always take everything to Hartland, and have zero options for composting. If you want to reduce waste, recycling needs to be easier and you need to enforce the food scraps rule (I tried emailing the City of Victoria about it -- they didn't care and told me "my building was probably paying a fine").
The public consultation on traffic changes coming as a result of shifting primary truck access to Willis Point Road revealed a major loophole in the SWMP strategy. The shift in traffic will result in a number of safety issues for regular commuters, cyclists and pedestrians ranging from winter maintenance to the need to redesign and reconstruct the intersection of West Saanich Road and Wallace Drive where the combination of trucks, commuters, cyclists and pedestrians will result in major congestion and safety issues. Trucks turning north from Wallace Drive will impede southbound traffic coming off Wallace Drive. Traffic turning south will have sight lines blocked by trucks turning north and traffic streaming south down West Saanich on the downhill slope leading to the intersection

with Wallace will not be able to see traffic turning south. Plus the Interurban bike lane ends at precisely this point, spilling onto Wallace Drive that is narrow, bordered by deep ditches and has no sidewalk or bike path. These concerns were all raised and acknowledged in the traffic consultation but the response in the FAQ's is that this is all the responsibility of Saanich. Saanich should not be required to bear the full cost of these necessary road changes, and it is unlikely to do so. It will give low priority to these changes as very few Saanich residents will be affected. The increased danger and inconvenience will be borne by commuters from the West Shore, Highlands and Willis Point as well as users of Mount Work and Gowlland Tod Parks. While Willis Point Road will not be at capacity, a huge bottleneck will be created at the confluence of West Saanich Road and Wallace Drive. It doesn't matter how much capacity a road has if traffic cannot enter or exit smoothly. The only solution is for the CRD to fund these necessary safety and traffic flow improvements. Residents are understandably skeptical when given "assurances" by CRD officials that this will be looked at. Residents of Hartland Avenue pointed out that the CRD and Saanich have done nothing over the past half century to improve that road, construct bike lanes or sidewalks, despite it being the primary entry for the landfill. Why should users of Willis Point Road be reassured? The CRD could construct internal roads to access the new tipping faces in the north west corner of the Landfill but is unwilling to commit the funding and engineering resources to do so, arguing that it is not feasible. By shifting the truck traffic to Willis Point Road, the CRD and Hartland will be saving hundreds of thousands of dollars if not more from not having to construct internal roads. Instead of downloading the additional costs off on to Saanich taxpayers, the CRD should take a portion of these savings, and provide them to Saanich on the condition that they are used to fund the necessary safety and traffic flow needs arising from the shift of access to Willis Point Road.
1. Hartland Road at the head of one of the larger watersheds (Tod Creek/Saanich Inlet) in the CRD is not well-situated in the first place. It is finite in its capacity with Phase 1 closure scheduled for 2021. 2. This "plan" focuses solely on Hartland. There is absolutely no mention of seeking an additional site. CRD directors have been remiss not seeking a site, probably in the rapidly developing Western Communities (Esquimalt, Langford, Colwood, View Royal, Sooke). By CRD's own figures over 26% of Hartland refuse now comes from the Western Communities and is trucked from as far away as a transfer site at Port Renfrew. An additional site should be selected. This site could serve the Western Communities - unorganized territories could use the nearest site. It could become the site for the region's fibreglass recycling since Hartland handles the region's sewer sludge. Errors have been made and much has been learned at Hartland in waste management. An additional site could be cutting edge. An additional localized site is preferable to expansion at Hartland and would better reflect the cost of the development in the Western Communities. Thousands of acres were removed from the tree farm licenses in the Western Communities. Surely a suitable site could be found. 3. The carbon footprint must be huge and the trucking of the treated biosolid product to the Lafarge Plant on the mainland increases traffic considerably. 4. The cleanup and disposal of derelict vessels and marine equipment is becoming a major issue. Federal and provincial funds have been made available to clean up the marine environment. The only place for disposal of boats, particularly fibreglass boats is Hartland (no mention is made in the draft plan). Many fibreglass boats, large and small, are reaching the end of basically a 40 year lifespan. Note all the fibreglass boats deteriorating in backyards and the amount of material could be quite huge. There is no capacity to recycle fibreglass. This is not a plan the CRD should support.
This is my response to the Solid Waste Management Plan's request for public consultation. I am completely disheartened by the report which presents platitudes and no real change. It seems that the staff which deals with Hartland Landfill are determined to continue to dig large holes and fill them with garbage. The plan to cut down 72 acres of mature forest directly adjacent to Mount Work Regional Park to make space for that large hole is not well considered. There is a plan for some reforestation in the future but knowing that a single mature tree sequesters a thousand times more carbon than a sapling which will take many decades to mature, it is a very long-term solution at best. In addition, the present forest provides a habitat for endangered species such as the screech owl and other animals, Where is there a real commitment to reduce, reuse and recycle? The plans are so vague and couched in such general terms that there is plenty of wiggle room for not meeting even their low-ball targets. Hartland Landfill is part of Saanich which has recently initiated two programmes to encourage better use of its area, environmentally and ecologically. I think that the CRD should be supporting Resilient Saanich and One Planet Saanich by committing to increasing their waste reduction targets so that by 2030 there will be no need to deforest the 72 acres. The very least they could agree on is not to finalize the SWMP as it is, in the hope that the reduction in waste will be enough to not require expanding Hartland Landfill. The budget provided for reducing the amount of garbage currently coming to Hartland is pathetic at 1% of the total budget and so their plans will inevitably fail due to a severe lack of funding coupled with no real interest in changing the status quo. This inadequate budget needs to be increased so that programmes to reduce waste can actually be funded. Now is the time to really apply strategies that will succeed in eliminating the need for the expansion of Hartland. More and more people and companies are realizing that we have to act now, if we are to save our planet. For example, Loblaws Ltd., one of our largest supermarket chains in the country, is implementing an aggressive programme to greatly reduce the use of plastics. I feel that others will follow this lead. In general, many more people are concerned about our excessive waste and are banding together to make everyone aware of the problem. Victoria's Zero Waste initiative is a good example. Saanich and the CRD need to be attuned to these campaigns and present their own plans for a zero waste target. As well, The CRD has not made much progress, if any, on reducing their greenhouse gas emissions as they continue to spew more and more carbon into the air. Changing their way of operating by using a waste to energy solution would go a long way to purifying the air that we breathe. Please consider rethinking the draft SWMP to better reflect the importance of doing something concrete about the challenges of solid waste reduction in a society that no longer sees burying their garbage as an acceptable practice for the area or the health and safety of the planet. Sent from my iPhone
I wish to congratulate the CRD in setting ambitious goals to reduce per capita waste generation, and ensure the utility of our collective regional landfill site is maximized for many years to come. All levels of government, business, and consumers must work together to reduce the amount of waste generated, which could extend the life of the landfill well beyond 2100.
February 11, 2021 RE: Vehicle Access to the Hartland Landfill To: CRD In 2020 two items related to the Hartland Landfill were reported upon and discussed in local newspapers, television and social media. These two items are 1) Expansion of the Hartland Landfill, and 2) Changing Road Access to the Hartland Landfill. As a 30 plus year resident of 151 Hartland Ave, both of these items directly affect me. I will begin with the Hartland Landfill expansion. To be clear, I am certain no one in the CRD wants to see the landfill expanded - least of all the residents of Prospect Lake, Hartland, Highlands or Willis Point. However, unless a more feasible alternative is readily available, I believe, at this point some form of expansion is most likely inevitable. While I don't like the idea of the landfill expanding, the result of that expansion will more or less affect all local neighbours equally. No one stakeholder will be more adversely affected than another. Which leads me to – "Changing Road Access to the Hartland Landfill". To start, I must confess to procrastinating about writing to voice my opinion on this matter. Why? Simply, I was of the belief that the decision to move all commercial vehicle access from Hartland Ave to Willis Point Rd had already been made – that it was a done deal. A logical conclusion when one considers all information available from and to the CRD. In fact, taking into account all available information, it appears that Willis Point Rd is a far more appropriate choice for all landfill traffic – not just commercial. I have attached a copy of the "Hartland Landfill Alternate Access Transportation Impact Analysis" study for your reference. Since this expensive and comprehensive study was commissioned by the CRD I am sure you are well aware of the report's conclusions and recommendations. Recommendations, that clearly and overwhelmingly support the movement of all primary vehicle access from Hartland Ave to Willis Point Rd. Also important is the fact, that Willis Point Rd's grade and construction were engineered with the intent that it would someday be used as the primary access point for the Hartland Landfill. In any event, the report is 36 pages long and does a far better job of advocating for a change of access from Hartland Ave to Willis Point Rd, than I ever could, so I will let it speak for itself. Instead, I will give you the realistic observations of someone who lives on Hartland Ave and is also a very frequent user of Willis Point Rd. To support my observations, I offer a proposal to any CRD director or Willis Point resident. I invite you to spend an hour sitting with me at the end of my driveway at 151 Hartland Ave - while the Landfill is open. During that time you will get to enjoy the following: Non-stop traffic for the entire hour – literally. Large commercial trucks labouring under the excessive grade of the hill, making so much noise it will be impossible to hold a conversation while they pass. Any vehicle that is able to travel faster uphill than the posted 40 km/h doing so, as to keep up their momentum on the hill. All vehicles coming downhill exceeding the 40 km/h posted limit as the steep grade simply entices them to do so – travelling so fast that you do not feel safe while standing on the shoulder of the road – ever. It is actually uncomfortable being a pedestrian on Hartland Rd. So much so, that whenever my wife and I venture out for a walk we are forced to drive to the bottom of Hartland Rd, park and then

walk from there. Mountain Bike vehicle traffic exceeding the 40 km/h posted limit both up and downhill. In 30 years I have never once seen a traffic enforcement officer on Hartland Ave. Which is logical, since the road is so narrow and winding with inadequate shoulders –they could never safely pull a vehicle over? Understandable, given the volume of dead branches and tree debris that litters the shoulders. My wife has written several letters addressing this issue – to date no action has been taken. Then you have the mountain bikers themselves, on bike, racing downhill at neck-braking speed. I am quite surprised there hasn't been a fatality yet. Throw a little snow in the mix and you really have some entertainment. The steep grade of Hartland makes for many mishaps. The latest snowfall resulted in the Landfill having to close for two days – something that would be avoided by the gentler grade of Willis Point Rd. Finally, though I could go on, the non-stop accumulation of garbage along the side of the road, waste that flies out of the backs of vehicles with unsecured loads – another bylaw infraction that I have yet to see enforced. Except for the mountain bike traffic, moving the landfill access to Willis Point Rd will alleviate all of these problems, for not only me but all residents of Hartland Ave. Hartland residents also acknowledge, that logically the mountain bike traffic must stay on Hartland given the fact that the parking lots and trail access is located at the top of the road. Just think of the increased safety for the mountain bikers that actually ride their bikes up the hill, now being able to do so without dodging the landfill traffic. More importantly, moving the Landfill access to Willis Point Rd doesn't off-load these problems to the residents of Willis Point, because, there are no residential dwellings and not a single driveway on the proposed route. In fact, the residents of Willis Point have never experienced any of the problems listed above and never will, as again, the access point to the Landfill is literally kilometers away from where they live. Unfortunately, their concerns are completely emotional rather than logical. By moving access to Willis Point road, the CRD has the ability to significantly improve the safety and quality of life for 200 Hartland residents. A move that would have virtually zero impact on the quality of life of the residents of Willis Point – even though they would like you to believe otherwise. As I stated before, their arguments, while impassioned and emotional are not logical, and most importantly not supported by the "Hartland Landfill Alternate Access Transportation Impact Analysis" commissioned by the CRD. One has to ask "what was the point and expense of this study if the CRD is simply going to ignore the conclusions and advice of the experts?" Additionally, the access point to the landfill from Willis Point Rd is well before Durance Lake and Mt. Work Park. All of the mountain bikers that park their vehicles on the side of Willis Point Rd do so well beyond the new access point to the landfill. Consequently, the traffic to the landfill will have no impact on any of them. Not so on Hartland Rd, where you regularly see vehicles parked on the side of the road when the mountain bike parking lots are full. This has created a congested and unsafe area directly at the access point to the landfill, a point that all landfill traffic must pass through. One has to know that the commercial truck drivers would welcome the new access route. A route that is easier on their trucks, has better visibility, no adjacent roads or driveways and is far safer. Also, the property on the north side of the proposed route is unlikely to experience future development as it is owned by DND, posted no trespassing, fenced, gated and locked with zero access. Finally, if the landfill traffic is the dangerous burden that the residents of Willis Point espouse, surely that is reason enough to move it from the residential neighbourhood of Hartland to the vacancy of Willis Point Rd. For your convenient reference, in addition to the "Hartland Landfill Alternate Access Transportation Impact Analysis" I have also attached, "Hartland Landfill Access – Frequently Asked Questions" as further support of my argument. Lastly, I have attached a photo of the latest road sign to appear in rural Saanich. These signs are obvious on Goward, Spartan and Prospect Lake Roads but are conspicuously absent from Hartland. Which I find perplexing, as I have walked all four of the roads and in my opinion, Hartland is, by far, the most dangerous. Sincerely, Douglas Carter 151 Hartland Ave Victoria B.C. V9E 1L7
What a bunch of sleazy bastards that put all that together. It needs an independent consultant to say NO
The target to reduce our waste by 1/3 to 250kg/year is not enough. We need to do better. All private contractors serving apartment buildings must be required to separate out organics and recyclables. Wood should be salvaged if possible, or mulched and burned. Takeout containers should be banned. Soft plastics should be collected through the Blue Box program and converted back to fuel. And the CRD should demand that the province expand its EPR programs and increase their fees. If not us, who? If not now, when?
I actually found myself getting excited, reading this draft report. The proposed strategies and actions (p. 27 passim) are great (as always, assuming sufficient political will behind them). 5.1 #4, #5, and #6 align closely with what Zero Waste Sooke is already doing. They already run Repair Cafés, are working at developing a tool library, and run region-wide clean-up days. They are also building political pressure on the District to create a local recycling yard and associated business development park. The long-term waste goals are very good; they are ambitious, have measurable benchmarks, and are politically sell-able. But the most important two words actually appear in this draft report: circular economy. I swear, I welled up when I read that. This is the first time I've seen that phrase in a government document. The most aspirational goal, and one that is driven by the other proposed directions in the report. In short, I can wholeheartedly support the goals in this draft report, and the directions it wants us all to move. (As an aside, have you any idea how long it has been since I could say that? Thank you all for the work that went into this!)
FROM THE DESK OF MOUNT WORK COALITION February 14, 2021 Colin Plant, Chair CRD Board, and CRD Board Directors Feedback to the CRD on the draft Solid Waste Management Plan Please find feedback to the draft Solid Waste Management Plan (the Plan) from the Mount Work Coalition, a non-profit society that formed as a group of concerned citizens with a mission to provide voice and support for the protection and responsible stewardship of the Mount Work Park area through education, advocacy and research. 1. Expanding the landfill The Plan includes a proposal to extend the Hartland landfill site and earmarks 73 forested acres of carbon sequestering trees to be removed to prepare the area for blasting and excavating the side of a mountain. This is not a 21st century solution to waste management. The Plan was written through the lens of a business as usual mindset predicting the landfill will reach capacity and therefore need to be expanded no later than 2045 - rather than through a lens of retaining the size of the existing landfill without expansion by rolling out new aggressive programs to reduce the waste over the next two decades. With less waste being dumped in the landfill, there will be less leachate into the rivers and lakes in the area. The Plan requires concrete waste management actions such as dedicated funding for a public educational campaign and financial incentives to encourage startups and incentivize waste management businesses that reuse waste, such as scrap businesses and plastic and rubber recycling. This biodiverse forest of 73 acres should be kept intact to provide a natural buffer between the park and landfill, to protect species at risk, to protect the lakes and streams and to protect the human health of those using/living next to Mount Work Park directly beside the landfill. The existing trails should remain for the enjoyment of mountain bikers. The Coalition is pleased to see that the Board at its February 10, 2021, meeting reiterated that it was prepared to consider a more aggressive approach to waste reduction a year following the submission of the SWMP this summer. We strongly urge the Board not to trigger the expansion of the current footprint of the landfill until the amended plan is completed by 2025. The much more aggressive best practice solutions including Zero Waste, Circular Economy and emerging waste to energy technologies will reduce methane emissions to net zero through a complete transformation. We firmly believe that the CRD can attain its aspirational target of 125 kg per person per year by 2040 with waste reduction strategies already being contemplated such as Zero Waste Victoria; the proposed waste to energy IRM project in Esquimalt and a change in tipping fees application as we will explain later. This new target should be included in the amended SWMP by 2025. The current plan does not address the climate emergency and the commitment of the CRD and a number of municipalities to become carbon neutral by 2050, continues dumping of over a fifth of total waste in the form of organic matter though banned in law creates more methane and is in direct conflict with the Province's stated Climate Action goals and will not enable us to meet our 2030 greenhouse gas emissions targets. According to the World Meteorological Organization's bulletin, "Carbon dioxide levels continue at record levels, despite COVID-19 lockdown", approximately 40 per cent of methane comes from natural sources, such as wetlands and termites, but 60 per cent comes from human activities, including cattle breeding, paddyfields, mines, landfills and biomass burning. Nature is now sending us a message, through wind storms and wildfires, and we must act now to do our part, as we have the ability to curb harmful methane emissions from a landfill. 2. What alternatives to landfilling has the CRD considered? Landfills are a 19th-century solution to waste disposal. Today there are significant alternative technologies that can generate value from waste products. Furthermore, it is clear that without taking a hard look at how we consume and create waste, we will not be able to address the climate challenge that threatens our environment. Governments across the globe, supported by their citizens have been installing multi-pronged strategies to reduce waste through promoting circular economies, changing consumer behaviour such as banning single use plastics, and investigating alternative uses for waste to energy projects such as gasification now under consideration in Esquimalt. This multi-pronged approach should be a cornerstone to the region's solid waste management plan. It can eliminate the need to build a bigger landfill, instead moving us in the appropriate direction of zero waste. The CRD staff must work in partnership with other leaders using best practices: Esquimalt is looking to be an early adopter of IRM/gasification technology that would see their waste converted to

energy. **The Regional District of Nanaimo is promoting the 4Rs by cultivating a circular economy; uses tipping fees to encourage waste diversion rather that waste dumping and plans to divert 90% of its waste by 2027. If RDN can achieve a target of 109 kg/person/year, so should the CRD. **San Francisco is a global leader in waste reduction, has an effective pricing strategy that uses cost incentives/disincentives between waste and recycling. **Switzerland has 100% waste recovery where they use a combination of material recovery and incineration for energy. **Sweden recovers 99% of its waste, converting it into heat that warms homes, power buses and taxis. **The City of Victoria released its Zero Waste Victoria Plan to reduce current waste to Hartland by 50% by 2040. 3. Traffic Diversion to Willis Point Road The planned relocation of commercial dump traffic to Willis Point Road is part of the draft SWMP. This decision is premature, given the opposition to expanding a landfill in the 21st century, the movement to Zero Waste, a circular economy, and waste-to-energy technologies. The CRD staff should revisit this decision based on the premise that the landfill will not be expanded and that other regional municipalities will be implementing new technologies to manage their own waste. With less waste being trucked to the landfill, there will be less traffic, no expansion and no reason to reroute traffic. The CRD should be able to construct internal roads and fill alternate cells closer to the existing entrance off Hartland Avenue. 4. Biosolids The CRD Board reversed its longstanding ban on the spreading of biosolids on land and will be spreading toxic biosolids within the Hartland perimeter for up to 6-8 weeks a year while the Lower Mainland facility undergoes maintenance. CRD communication describes this as a temporary solution, which is absurd since once spread, biosolid toxins remain in the ground, waterways and air - they are not temporary. CRD characterizes the area around the dump as a rural area, which is incorrect - it is a semi-rural with local residential communities and schools very close to the dump area, and the regional tourist attraction of Butchart Gardens, concerned as they are downstream of the dump and use the water in Todd Creek. The area is also home to many organic farmers in close proximity. The primary challenge with the decision to spread biosolids at the Hartland dump is the lack of scientific evidence to demonstrate that it is safe for the human and wildlife populations in the area. Biosolids, even treated to Class A standards, contain microplastics. The scientific community is now researching the effects of microplastics in our lakes, rivers and streams. As the basic tenet of good environmental governance is the precautionary principle – given the lack of scientific certainty, the decision should be not to spread the biosolids. Biosolids contain over 300 chemicals. Some will survive the drying process, and any trace of toxic chemical even at the lowest risk is unacceptable and will do significant damage to the 16 species that are endangered or threatened in the area, including the Western Painted Turtle and the Western Screech-Owl. Biosolids soak into the ground water and the wetlands and the 16 at risk species will digest or absorb the chemicals from the biosolids, destroying these endangered wildlife. 5. End Reliance on Tipping Fees as the Primary Source of Funding for Hartland Reliance on tipping fees to fund Hartland's operations is counter-intuitive to zero waste. The tipping fee model provides no material incentive to reduce waste; indeed it is a disincentive as is demonstrated by concerns to keep all waste disposal in the region. Tipping fees must be used to incentivize waste diversion as is being done in the Nanaimo Regional District and if alternate sources of funding are required to maintain the Landfill operation, a general tax levy may be required. This is a small price to pay to meet climate change goals. 6. Strategy to Optimize Landfill Gas Management The Hartland landfill signed an agreement with FortisBC to collect methane from the landfill. We disagree with this strategy as it relies on a steady stream of decomposing waste being dumped into a landfill to feed the FortisBC system for a small amount of RNG. Expanding the landfill and relying on a small fraction of the resulting methane gas collection is contrary to the mandate for the region to reduce GHGs. The landfill must be sustainable into the future without relying on outdated expansions. In Summary Our mission is to protect the Mount Work Park region and ensure science-based decisions are made concerning the Hartland landfill activities that impact the parks. As the CRD has declared a state of climate emergency and a goal for carbon neutrality, we believe that expanding a landfill by removing a biodiverse carbon sequestering forest, moving dump traffic and spreading biosolids is contrary to this goal and will lead to an overall increase in carbon. There are opportunities for emissions reductions using new technologies, zero waste initiatives, and increasing carbon sequestration by not expanding the landfill as trees absorb CO2. Minimizing GHG emissions are critical for meeting the CRD's goals. Our Recommendations: 1. Delay any approval for landfill expansion until an updated and amended plan is adopted in 2025. 2. The amended SWMP submitted in 2025 must establish a target of 125kg/person/year by 2040. 3. Notify the Ministry of Environment that the CRD intends to submit an amendment to the plan by 2025 with strategies for attaining this target including an aggressive Zero Waste program, and an independent analysis and testing of alternative technologies such as IRM/gasification/Waste to Energy. 4. The Plan submitted in 2021 should contain a placeholder for the Esquimalt waste to energy project subject to a business case being completed. 5. Conduct an independent environmental assessment prior to any plans to expand or alter the design of the landfill, including the spread of biosolids, to protect the natural ecosystem, wildlife, community health and the recreational users of the area. 6. Strengthen the plan's Zero waste initiatives by adding concrete plans such as dedicated funding to create business incentives for entrepreneurs; create a public education campaign to draw awareness to Zero Waste, and use tipping fees to incentivize waste reduction instead of encouraging continued use of landfilling as a source of revenue. 7. Ensure protection of species at risk in Mount Work Park, we are requesting the BC Ministry of Environment reinstate its longstanding ban (2011 and 2013) on the spreading of biosolids, planned to begin in February 2021. 8. Delay the decision to reroute landfill traffic to Willis Point Road until decisions are made to have regional municipalities manage their own waste with Zero waste and new waste to energy technologies. 9. The Amended Plan by 2025 would be subject to full public consultation during its development to ensure the public has ample opportunity to engage in accordance with Ministry policy. Elaine Klimke, Chair on behalf of Mount Work Coalition cc: Russ Smith, Senior Manager Environmental Resource Management Larisa Hutcheson, General Manager of Parks & Environmental Services - Barb Dejardins, Chair CRD Environmental Services Committee Sources: https://public.wmo.int/en/media/press-release/carbon-dioxide-levels-continue-record-levels-despite-covid-19-lockdown
In Nov. 2019 Coexisting with Carnivores Alliance (CWCA) communicated by letter to the CRD in the first round of public consultations. We chose to engage with the CRD on the SWMP material to that date being the Strategy Dev. Summary Report & the Proposed Strategies and Targets which did not speak to the issue of solid waste as an attractant to wildlife. Our letter requested of the CRD that this issue be addressed in the draft SWMP as a means of educating residents and the industries and providing options of ways to reduce human/wildlife conflicts. And we offered specific comments, suggestions and recommendation for consideration and potential inclusion into the version of the draft which is now Nov. 2020. I am very disappointed that it appears that none of our input has been incorporated into the draft SWMP. Our letter also provided information and links to other Regional Districts in BC where their SWMP's to reduce conflicts for potential bear-human conflicts IS in their Plans. If Okanagan-Similkameen and Squamish-Lillooet Regional Districts can do this why can't the CRD? Our letter also spoke to education and solid waste collection equipment modifications and standards for wildlife resistant garbage bins & collection containers in an effort to reduce conflicts with wildlife such as bears and racoons and take measures to address section 33.1 (2) Attracting Dangerous Wildlife of the Provincial Wildlife Act, where by the way "compost" is listed as an attractant to dangerous wildlife. Again, I am very disappointed that SWAC or CRD staff chose not to address this important educational and awareness issue in the draft SWMP. The opportunity is NOW! The CRD should be helping to increase people's responsibilities, increasing understandings of this issue and enhancing positive behavior outcomes for humans and wildlife. This is also a public safety matter. But, the CRD has chosen for some reason to ignore an issue that is not going to just go away and it is an issue that is directly linked to solid waste. Please review our letter again, look at the other Regional Districts that we provided links to and used this opportunity to do something positive towards the issue! For your information the collective authors of that letter were a sub-committee of CWCA (although the final version was approved by the Alliance) myself, the chair of CWCA Nitya Harris, Mike Badry Ministry of Environment Wildlife Biologist and Provincial Wildlife Conflict Manager, and (former now retired) CRD Parks staff person Todd Golumbia ecologist and Environmental Conservation Specialist. This CWCA is composed of mostly professional experts in the field of wildlife conflicts in BC. We would be happy to work more closely with the CRD on this important issue. [redacted]
Has anyone studied the areas which will receive the run off from the bio solid sites.? It would be great to know the species / population numbers .
Please don't kill wildlife. There's hardly any left.
Please don't dump biosolids where animals, fish, plants will be destroyed. There has to be another safer solution. Yes, it may cost more, but this is our planet's future we're talking about - and that includes your/our grandchildren and all future generations. Can't you see that?
Please Rethink an alternative to this plan as. The toxins will enter our waterways and harm our wildlife who are a precious part of our

progressive solutions: 1) Make waste socially unacceptable through education, with emphasis on the 6 R's (rethink, refuse, reduce, repair, reuse, recycle); 2) Encourage a circular economy through Repurpose and Repair Centers and Repair Cafes; 3) Change the current business model so tipping fees encourage DIVERSION of waste FROM the landfill vs into the landfill; 4) Use the Township of Esquimalt Waste to Energy proposal as a demonstration waste-to-energy project and make it a leading example of moving towards carbon neutrality; 5) Adopt the City of Victoria's plan to reduce waste by 50% by 2040 and adopt this as a minimum target for diverting waste throughout the region by 2040, and accelerate this to 90% by 2050 at the latest; 6) Recognize that carbon neutrality and zero waste are mandatory pre-requisites if we intend to be carbon neutral and address climate change, one of the greatest global threats to the survival of mankind; 7) Enforce mandatory fully compostable packaging; 8) Legislate that manufacturers are responsible for the full life cycle of their products and enforce this so that products can not be shipped or sold unless manufacturers are certified to do so and are actively regulated, inspected and licensed with mandatory accountability and transparency. Fees collected would be used to support local zero waste initiatives; 9) Create mandatory source separation for single and multi-family dwellings, as well as institutional, commercial and industrial (ICI) use; 10) Delay requesting the expansion of the landfill under the Solid Waste Management Plan until the CRD can publicly demonstrate progress on the following 3 key initiatives: 1) achieving zero waste and a circular economy; 2) operating a waste to energy project, like Esquimalt, to demonstrate its effectiveness in achieving zero waste and lowering carbon emissions; and 3) developing a new business model based on maximizing diversion from the landfill as proposed by the Regional District of Nanaimo. This is possible. Real leadership can make this happen! Frances Litman, on behalf of the Creatively United for the Planet Society
We are in the 21st century, and we have declared a climate crisis. Our solid waste treatment should thus not cut down forest to extend Hartland, maintain Hartland by counterproductive 'tipping fees', transfer trucks to Willis point road thus impairing recreational use of the road itself (by runners, hikers and cyclists), the Mount Work park and Durance Lake and Mckenzie Bite - all this increasingly valuable to increasingly densely housed Victorians. The CRD plan runs counter to its responsibilities to care for our piece of the planet and our inhabitants. What you are risking can never be reclaimed - and it is totally unnecessary. Switch to modern alternative solid waste management systems, like gasification, for example - just as operates in much of Europe. Also, given what we now know about viral particles surviving through current biosolid production, and have suffered with Covid, it is lunatic to land -spread biosolids ever, anywhere. This proposal must be changed: it can't be reversed. Once on land, whatever pollutants are there seep into our aquifers, our wells and are wind-dispersed. Stand up for what is right CRD, think again, follow the evidence and the public interest. We depend on you to change course. With thanks.
The Plan, "Rethinking Waste", is presented as a "plan to reduce how much material is sent to Hartland Landfill and guide how the region's waste is managed in a safe, secure and sustainable way now and in the future." In fact, as presently conceived and presented, it is a plan of insufficient ambition that avoids any serious decisions or commitments to rethinking waste and is instead designed to take the course of least resistance. The current Plan leads inevitably to the enlargement and expansion of the Hartland Landfill. Instead of being called the "Solid Waste Management Plan", it could more accurately be called the "Hartland Landfill Expansion Plan" because that is the inevitable, pre-determined outcome of the current plan. Current Plan is not sufficiently Ambitious The entire plan is premised on the target of reducing per person annual waste amounts from the current 380kg per person per year to 250 kg by 2030, with an undefined "aspirational target" of 125kg. This aspirational target was tacked on at the end of the planning process as a sop to the recommendation of the Solid Waste Advisory Committee, without any plan or commitment to achieving it. Assuming the 250kg target is met, according to the current plan, beginning in 2030 73 acres of forest will be removed in order to begin expansion of Hartland's filling footprint by approximately 50% so that the expanded Landfill will be ready to continue receiving waste beyond 2045. (All this without the benefit of an environmental assessment which CRD staff claims is not required). Expansion is the chosen strategy to extend the life of the Landfill to 2100 and the entire plan is predicated on this outcome. All the assumptions in the plan, including a financial model that relies primarily on continued tipping fees, is based on the expectation of expansion. It is the wrong strategy for a number of reasons, and must be rejected. Instead of the presumption that Hartland must be expanded, with work beginning in 2030, the Plan should start from the goal of avoiding further expansion, and set waste reduction targets and strategies accordingly, based on this goal. Deferral of Approval of Design Concept for Expansion is Required Rather than approve the current plan, the CRD Board should amend the plan by deferring any decision on expansion of Hartland until an effectiveness review is conducted, as required by the Province, in 2025. In the meantime, the CRD should maintain flexibility in the plan allowing for the potential incorporation of current initiatives being pursued within the CRD, such as Esquimalt's evaluation of the business case for Integrated Resource Management and the City of Victoria Zero Waste strategy, and other developments between now and 2025. In 2025 a full evaluation should be undertaken of progress toward waste reduction targets, including the aspirational target of 125kg per person annually (note that the Regional District of Nanaimo has adopted an annual waste reduction target of 109kg per person by 2027, with measures being put in place to achieve that goal). This review could lead to a further modification of the Plan to incorporate new strategies including waste to energy initiatives if they prove practical. In the meantime, CRD Board should not approve the design concept of Hartland expansion that is scheduled to begin in 2030 under the current plan. Environmental Assessment Needed if Expansion Plans Approved The Plan argues unconvincingly that the removal of the trees and the quarrying of the 73 acres is not an "expansion" but merely "maximizing the use of land currently within the property boundary". This ignores the fact that the expansion will remove a significant buffer area that until 2019 was a de facto part of Mount Work Park. It will push the area being used for landfilling operations to the very boundary of the property. The Plan's language also dismisses the fact that the actual filling footprint will expand significantly, both in terms of surface area and removal of rock to create airspace. In fact the expanded filling space will be well in excess of the 30% increase that triggers an environmental review under the Environmental Assessment Act, despite the CRD statement that it does not believe that an environmental assessment is required. This expansion will have a number of significant negative impacts. First removal of forest cover is inconsistent with climate action goals. The statement that new trees will be planted elsewhere is insufficient as replacement of mature trees with seedlings is a suboptimal outcome when the removal of the mature trees can be avoided. Expansion of the Landfill will further put at risk the 16 endangered species in Mount Work Park. It will remove 73 acres from recreational use and create noise, air and water pollution for the adjacent areas, all of which is unnecessary. It will redirect traffic to a busy commuter, residential and recreational road from the current access route that terminates at the Landfill. Most important, expansion will ensure that the CRD continues to dispose of waste through landfilling, creating significant methane emissions in the process to the detriment of federal, provincial and regional greenhouse gas reduction commitments, instead of seriously examining alternatives to continued landfilling. Despite vague language in the Plan that new technology and waste reduction methods might change the planned expansion, there is no commitment or concrete planning to move beyond the goal of 250 kg of waste per person annually. The notation of an "aspirational goal" of reaching 125 kg per person annually by 2030 has no concrete action plan or funding behind it. In fact, CRD staff recommended rejection of the proposal of the Solid Waste Advisory Committee to adopt a target more aggressive than 250 kg because it would cause delay and undermine the current financial model. Most of the strategies in the Plan designed to achieve the relatively modest goal of a reduction of per capita waste production to 250kg per year by 2030 are vague and without any measurable outcomes. The strategies are full of unquantifiable terms such as "continue to", "explore" and "advocate for". Funds allocated to strategies to achieve important reduction goals are modest in the extreme, amounting to only 1% of annual expenditures, or about $300,000 per year for all initiatives. Dependence on Tipping Fee Financial Model is Fundamentally at Odds with Waste Reduction It is true that a waste generation target of 125 kg would upend the financial model of depending primarily on tipping fees to fund Hartland's operating expenses. Staff have confirmed that when waste per person drops below 200 kg per year, tipping fees will no longer cover expenses, and alternative sources of income will have to be found. As it stands now, the Plan has a built-in bias ensuring that waste continues to be brought to the Landfill for disposal. The plan needs to consider a mix of funding models, including the possibility of tax revenues, to avoid the current tipping fee funding model from working against the objectives of zero waste. Primary reliance on tipping fees to fund Hartland's operation is in fundamental contradiction to the expressed goal of reduce, recycle and re-use. Instead, tipping fees should be used to incentivize waste reduction behaviour, as is being done in the new tipping fee and funding model being adopted by the Regional District of Nanaimo. Alternatives to Hartland Expansion There are a number of alternatives. Nanaimo's aggressive waste reduction strategy breaks with the tipping fee financial model. The City of Victoria has embarked on a comprehensive zero-waste initiative and has set a target of 50% waste reduction by 2040 that should result in significantly less waste being sent to Hartland. Saanich is developing a One Planet Saanich strategy that embraces zero waste and

ecosystem!
Care needs to be taken to avoid putting toxic substances where they do not belong and where they will adversely affect living organisms
Please care for the animals and environment. We only get one world. And our children need to be able to thrive.
I am concerned about the impact that extending the Landfill will have on mountain bike trail access. A growing number of bike trail users are having to make do with an ever-shrinking area of sanctioned trails. Some of the best trails are slated for demolition with the expansion of the landfill, and if this must happen, we need more area opened up for riding. There is already a shortage of advanced/challenging trails at Hartland, and the growth of the sport has seen the already paltry technical terrain tamed down for newer riders. I understand that our city needs a place to put and process our waste, but expanding the landfill at the expense of recreation will not leave a legacy to be proud of. A solution that I propose is to extend the mountain bike park to include more of the east face of Mt. Work, extending closer towards the hiking trail. Another action that would benefit the growing number of mountain bikers in our community would be to sanction trails on Partridge hills, and instal signage to designate best routes for walking/horseback so as to avoid trail conflict between user groups.
I don't understand how "toxic" biosolids-as per the CRD original plan can suddenly become safe fertilizer!! You guys are insane! You threaten our water, lakes and wildlife by proceeding with the "new" plan. Give your heads a shake.
Please reconsider your plan in order to protect the vulnerable marine ecosystems in the area. We treat the earth terribly as it is and for a city that aims to be greener, this is a step in the wrong direction. There has to be a better option than this one
Bio- solids, aka human shit, should never be spread on fields. It is a very dangerous practice, This means that all the medications, and all the different varieties of pesticides we ingest that find their way into the bio-fuel, after passing in the human intestinal tract,, will be ingested again in food, lettuce, milk when cows grazed the field, etc. Bio-waste should be buried, in a dumpsite area.
As a current Willis Point resident and long time Peninsula resident and active member of the community, this is highly concerning. Every time we now drive by the dump we need to hold our breath to prevent vomiting from the reek of the sewage treatment facility, which is obviously leaking despite the CRD saying otherwise. This is in fact illegal. As for biosolids, this was rejected in the past and numerous studies have clearly concluded it is simply not feasible. Yet here we go again, without adequate consultation.
So many reasons this is impractical, irresponsible, and outright criminal: massive increase in heavy truck traffic though single-access corridor, increased vehicle emissions, increased surface pollution, increased aerial pollution, increased noise pollution, water table contamination, pollution run-off, heavy metal and antibiotic leeching, ground water pollution, ~75 acres of pristine pacific Northwest rainforest decimation, animal habitat destruction, negative ecosystem impact...
Why would this even be considered in an area surrounded by farmland, regional, provincial, and marine parks, pristine watershed, endangered habitats, and delicate ecosystem. This idea has already been rejected. But now, with last minute "consultation", it is being forced through. Discussions of blockades to Willis Point point have already begun, which will cause further disruption.
I do not support the proposed expansion of the Hartland Landfill beyond 2045 because I believe that before that date we should shift to zero waste disposal. Paragraph 1. Zero Waste The CRD Board supports the principle of zero waste and encourages a circular economy by mid-Century. This goal can be achieved by reducing personal consumption in keeping with achieving carbon neutrality by 2050; requiring producers to be responsible for the full life cycle of packaging; levying user fees on packages that produce waste and encouraging comprehensive recycling in both single family and multi family homes. Paragraph 2. Resource Recovery - Waste to Energy Solutions The Solid Waste Management Plan must rigorously pursue the 5 R waste hierarchy with top emphasis on reduction, reuse and recycling. The 4th R of resource recovery requires use of waste to energy technology. I support the Township of Esquimalt proposal to complete a detailed analysis of a demonstration waste to energy facility as soon as possible. The CRD should support the operation of this facility if it is technically feasible. Then resource recovery must be implemented throughout the regional municipalities before expansion of the Hartland landfill is considered. Paragraph 3. Circular Economy Expanding the Hartland landfill is completely inconsistent with achieving a carbon neutral economy by 2050. Removal of 73 acres of public forest that sequesters local carbon, is inconsistent with the CRD and other municipalities' declaration of a climate emergency and the critical need for the Greater Victoria region to become carbon neutral by 2050. Carbon neutrality requires full implementation of a circular economy where there is no waste. All excess carbon produced is captured by restoring the health of our ecosystems to store carbon.
I have been a resident of Hartland Avenue for 15 years, and plan to be here for another 30-50. I have several concerns about the future plans for the landfill. To my mind, we should be working towards eliminating the landfill entirely, so I'm surprised that such an extensive expansion is in the works. We all know that we need a zero-waste future and it's disappointing that this plan seems to support quite the opposite of this goal. It is also disturbing that several acres of forest with be destroyed to do this. Again, we understand that forests are precious, especially the severely degraded Douglas Fir ecosystem that will be destroyed. I also continue to strongly disagree with the spreading of biosolids in the "cultivated" land at the landfill and threat to the waterways. I do support the moving of the landfill entrance to Willis Point Road. Hartland is entirely inappropriate for heavy industrial traffic. I live on a blind corner and have a close call at least once a week. My family drives a truck with trailer, requiring plenty of time to turn, and I ride a motorcycle. I truly believe my life is endangered each time I turn onto my driveway, and there are several folks on our street in a similar situation. I have already been in one serious accident on our road, and I request that if the entrance is not moved, that serious safety improvements are made to slow down vehicles and improve sight lines.
This is an important issue for everyone in the Greater Victoria region because alternatives do exist to better manage and reduce waste, live more sustainably and be more climate accountable, but the CRD draft SWMP fails to seriously consider these alternatives and to swiftly adopt measures that address the climate emergency. What does CRD have planned for Hartland landfill? Expanding the landfill far over its operational capacity and blasting against the slope of Mount Work. Removal of 73 acres of forest and destroying biodiverse habitat. Increasing greenhouse gas emissions, as landfills create deadly methane. Creating more leachate that pollutes the aquifers to the north of Hartland landfill. Risking the safety of recreational users by turning Willis Point Rd into an industrial corridor. CRD has declared a climate emergency - but are doing business as usual. Expanding landfills is an outdated response to the region's waste problems. We need twenty-first century solutions - which other municipalities are adopting successfully. Better solutions exist such as gasification and the CRD should explore and adopt them.
The following item is from your Draft Solid Waste Management Plan: (quotation marks mine) 4.2.2.1.7 Community Benefits and Engagement Some of the undeveloped landfill property is currently used for recreation by users of the adjacent park lands, such as walkers and mountain bike enthusiasts. As the landfill develops and this land is needed, these recreational users of those portions of the landfill property "may be impacted". Additionally, there are residences who share the use of the route to the landfill that "feel impacted" by the landfill's location. The CRD "endeavours" to operate and develop the landfill in a manner that recognizes the interests of the community (recreational and residential) while continuing to provide an essential regional service. The CRD has "engaged" and will continue to engage with these communities to ensure that their perspectives continue to be understood and that the ongoing development the Hartland site is done with these interests in mind. Your deceitful wording of this item alone has many recreational users of the park and residents tearing their hair out!! You say they MAY be impacted and they FEEL impacted when in fact you know they WILL BE MAJORILY IMPACTED by the loss of recreational trails and bike paths, the loss of 73 acres of forest and their creatures as well as the loss of peacefulness and quiet caused by the removal of the dump buffer zone. They WILL ALSO BE MAJORLY IMPACTED by the noise and air pollution caused by the addition of 200 to 300 heavy truck trips a day on Willis Point Road which WILL create a severe traffic safety threat to motorists, school buses, cyclists, wildlife and pedestrians, particularly on the hills and at the intersection of Wallace Drive and the intersection of West Saanich Road. This relocating of the dump entrance to Willis Point Road will also cause Western Community dump customers to shortcut through the Highlands road, most of which is a very dangerous single lane road. In short, this relocation of the dump entrance is irresponsible insanity that is going to result in traffic accidents, injuries and perhaps fatalities. Unfortunately, your idea of "engaging" with the affected communities is to simply TELL them PART of what is planned or already happening and to completely ignore their inputs and concerns instead of undertaking to actually do something concrete about them. Sadly, your process has come across to most of us as disingenuous and condescending. Clearly it is the CRD staff and not the Directors who are making the decisions and who seem to have a vested interest in expanding their

empire with little regard for the welfare of the public they are supposed to serve. It is time for the CRD Directors to take charge of this process and to direct staff to halt landfill expansion and to look into and pursue proven landfill alternatives which are successfully practiced world wide. Even the Municipality of Esquimalt is examining gasification of their waste which will provide an estimated 91% landfill diversion, generate clean energy to displace fossil fuels along with many other specified benefits and will save their taxpayers major dollars in the process. reference link: Microsoft Word - Esquimalt_IRM_Summary.doc If the CRD had properly investigated and pursued landfill and sewage alternatives such as gasification in their decision making process both the landfill expansion and the costly sewage pipeline would have been shown to be unnecessary... sorry taxpayers.
I didn't have time to read the entire plan. Just a few observations about solid waste. (1) Encourage back yard composting and digestors or community composting in a responsible manner to get green waste out of the system. The current system of saving scraps in the fridge is too labour intensive for most people. This would involve education and outreach. (2) Fund and enhance return it centres. The one in Sidney is terrible - too small a facility for the population it serves. Allow capturing and upcycling of some materials - like a store to give working electronics a second life before being shipped to the great graveyard in China or India. (3) Support a municipal pick up of big items once or twice a year. Couches by the side of the road are ridiculous. And this would cut down on illegal dumping and help elderly people that can't get out to the landfill. (4) Pay the people that collect and handle our garbage a decent wage. One person per truck (Emterra) is inhuman. (5) Have a partnership with a local business to recycle hard plastics for things like composite wood. Sponsor and foster these types of businesses. (6) And it would be great if the CRD responded to email inquiries. (7)Check out what they have done in Taiwan.
Please do not spread toxic bio-solids in areas where wildlife will be adversely affected like Mt. Work, these solids seep into ground water, creeks, and streams and end up in the ocean in areas like MacKenzie Bight. Thank you.
Please don't use biosolids. If anything please give a look to the growing health issues caused by biosolids... there are many studies showing how it can cause cancers, thyroid issues, nausea, vomiting, boils and rashes, MRSA etc etc. Eventually something is going to go wrong using this stuff. The waste management industry is just making money off of it. Please consider the community and waterways instead, they're more important. Thanks.
1. "As the landfill develops and this land is needed, these recreational users of those portions of the landfill property may [WILL] be impacted." It is really sad that CRD continues to increase industrial operations in a park area. Recreational space so close to town can never be replaced once destroyed. The plan has a significant impact on the park users with additional traffic, noise from trucks and the operations, garbage stuck in trees, smell, and the unsightliness of it all. That the operations are not "in" the park is immaterial, the proximity makes the adjacent areas of the park unusable. CRD must add to the park significant area away from the landfill interference to make up for what has been done to date. What is the point of going for a hike next to garbage and the rumbling of trucks? 2. It is incredible in this age that CRD is considering cutting down more trees for the landfill. There is no rush, alternative technology is available and needs to be considered and implemented. We cannot keep proceeding as if we are not impacting the environment. 3. Apart from the recreational park destruction, waste to energy alternatives can help reduce our impact on wildlife and the screech owl and other species that live here. I was so thrilled to hear of the progressive efforts of Esquimalt investigating IRM, and that Barb Desjardins and Rory Tooke are leading the SWAC. CRD needs to listen to this committee and to people who make the effort to find the best possible solution, rather than the easiest. 4. More research needs to be done on the biosolids, am VERY concerned about this, especially with proximity to Durrance Lake and farms. It's not necessary, find another solution that is guaranteed safe, not a "hope for the best" path. You cannot un-do contamination. 5. It is extremely difficult in a region with such an incredibly high cost of living to continually force the cost of recycling and waste onto the users. People with lower incomes have to buy cheaper goods, these goods are of low quality, break, and end up in landfill. They can't afford to dump and so things are left by the side of the road. I would like to see more strategy at discouraging the sale of goods that just break and/or have too much packaging. I am always distressed in the dollar store, racks of items that I know will break in a short span of time, encased in plastic packaging. I don't know how you can address this. Strategy always seems to include user pay, but often, it's not our fault. Why is buying in bulk or using low packaging stores more expensive? I do appreciate the attention in the plan to help reuse, upcycle and recycle. It seems though, we need to pressure manufacturers to just stop with the packaging. 6. Lastly, the CRD does not have a good track record of respecting/compensating the residents and communities that bear the impact of landfill and other unpleasant industry. I heard Hartland Rd residents say are afraid to walk on their road and in fact choose not to do so. The Willis Point Rd commuters are rightfully afraid for the hazards they will face, I myself have careened off the road on the flats due to black ice, thankfully there were no trucks. Even that on the other side, the Highlands community has been fighting for years to preserve their aquifers from a strip mine. This is incredible to me that the CRD has so little respect for the land and the residents. Out of sight, out of mind. While I don't live there, I go there often, and I feel for these people that have to fight for safety and the assurance of clean water. Do no more harm.
The island is in desperate need for a proper filtration plant to keeo the environment and its occupants, including us healthy. No more biosolids please.
Make our climate change a priority. We, at Willis Point, care about our inlet. We don't want toxins in our waterway. There is diverse and abundant marine life in our front yard. Don't ruin it with runoff into our waters.
https://www.epa.gov/biosolids/basic-information-about-biosolids?fbclid=IwAR2GRVNADLw2vTTp2WlsrDzqbH3dtSXHSO044BswbnRm7Ca9xLtCoiM_3Jo
Please don't spread biosolids out in the wild! Either burn, or landfill them, please [redacted]
We are extremely disappointed that the CRD's Draft Solid Waste Management Plan did not address or even mention in the Draft Solid Waste Management Plan -the Blackburn Road Landfill site on Salt Spring Island. The environmental concerns and risk to the water quality have been brought to the attention of the CRD staff since 2007 that is over 13 years. In 2007 the Cusheon Watershed Management Plan was completed and sent to all levels of gov't after input from all sources. We have been continuously told to be patient, as this would be addressed in the new SWMP. I guess the CRD, by not mentioning this site in the SWMP, hoped the concerns and risks would magically disappear (out of site out of mind). In case you are not familiar with the site. Please read the Blackburn Road Landfill Closure Plan for details. The letter dated 18 July1991 was sent to the CRD by MoE . Other History of site: -Operated under MoE Waste Management Permit# PR-1839. Waste Management Permit was issued in joint names i.e. owner and CRD. -site accepted municipal solid waste from1966-1991 CRD provided approx. $20,000 from 1984 until 1987towards the cost of daily cover. -disposal site was unsupervised and unmonitored for content being deposited. -no on-going ground water monitoring program was ever completed. -tests on site and off site of surface water courses and existing water supply wells done by MoE showed elevated levels with respect to background data found at the landfill site CRD in a Aug.16, 1988 letter to the Minister asked to have their name removed from the Waste Management Permit PR-1839. This was not granted by the Minister in a Jan 24,1989 response letter. Blackburn Road Landfill Site was ordered by the Ministry of Environment to be closed on Dec.31, 1991 due to environmental concerns that may be affecting water quality. Landfill site was closed at midnight on Dec 31, 1991 Operator/ owner and the CRD were required to submit a Closure Plan for the Blackburn landfill site Closure plan states that Leachate Monitoring will be carried out twice per year using existing surface water courses and water supply wells. Records show Leachate Monitoring was last done in 2000. Why has no monitoring been done in the last 20 years. One of the indicators for leachate contamination is manganese. The Beddis Water Services Treatment Plant operators have noticed an increase in manganese levels Leachate Monitoring of the Blackburn landfill site should be included in the Draft Solid Waste Management Plan. Please allow us to recommend that laboratory assessed water quality parameters included the following need to be done ASAP. • • T otal Alkalinity (total as CaCO3); • • Hardness (dissolved, as CaCO3); • • T otal dissolved solids (TDS); • • pH and electrical conductivity; • • Anions (bromide, chloride, fluoride, and sulphate); • • Nutrients: (nitrate (as N), nitrite (as N), ammonia (as N), dissolved potassium, and dissolved phosphorus); • • Dissolved organic carbon (DOC); • • Total organic carbon(TOC); • • Volatile organic compounds (VOC's – once per year); • • Polycyclic aromatic hydrocarbons (PAH's – once per year); and • • Dissolved Metals (total metals for domestic wells and surface water). This uncontrolled landfill site has no liner and only a final cover of 600 mm of soil. Please note even in the Landfill Criteria forMunicipal Solid Waste(Last Revised June 1993 required the following. 6.2 Water (M) 6.3 Final Cover (M) The disposal of municipal solid waste into water is unacceptable. Surface water diversion to restrict storm water runoff from contacting the wastes is required. Final cover for landfill sites is to consist of a minimum of 1 metre of low permeability (<1 x 10 - 5 cm/s) compacted soil plus a minimum of 0.15 metre of topsoil with approved

vegetation established. The depth of the topsoil layer should be related to the type of vegetation proposed (i.e. rooting depth). Soils of higher permeability may be approved based on leachate generation potential at the landfill site. Final cover is to be constructed with slopes between 4% and 33% with appropriate run- on/run-off drainage controls and erosion controls. It is unfortunate that attachments can not be sent as part of the feedback.
I offer the following comments on the draft Solid Waste Management Plan: 1. Provide evidence (preferably in the form of quantitative estimates) that the 15 Strategies and 69 Associated Actions will achieve the desired annual landfill target of 250 kg per capita. 2. Provide a basis for the expectation that the CRD staff can, with its current and projected (small) increases in resources, manage 15 Strategies and 69 Associated Actions. 3. Indicate the origin and provide an estimate of the solid wastes that are generated in the CRD. 4. Provide evidence that the commercial waste processing capacities exist or can be developed in the CRD to help meet the annual landfill target of 250 kg per capita. Views of the commercial waste processors should be given in summary form. 5. Provide a table that shows the total wastes that need to be processed as the CRD population grows and the annual landfill target of 250 kg per capita is approached by about 2030. Projections beyond 2030 should also be given since they affect decisions on the Hartland Landfill site. 6. Provide qualitative and quantitative information on how composted materials will likely be used as volumes increase. 7. Provide information on the recipients of wastes that are diverted from the Hartland Landfill site. It is presently unclear that these recipients will continue to receive CRD wastes and have the capacity to process them in accordance with CRD expectations. 8. Provide comprehensive information, including major options, regarding the Hartland Landfill site and its future. This information must also include information on the area surrounding the site since it is heavily impacted by current and future operations. 9. Highlight and add innovative ideas pertinent to the future of solid waste management in the CRD. The present draft contains few innovative ideas. 10. Edit the draft Solid Waste Management Plan document with the objective of making it more succinct and readable. In conclusion and for the reasons stated above, I consider the current draft Solid Waste Management Plan to be deficient. These deficiencies can be corrected without great difficulties, time, and staff resources. I hope that this submission provides encouragement to make the corrections.
1. In Strategy 1 (pg. 28), you mention expanding education on reduce/reuse to ICI sectors. This is good, but I believe that there need to be more emphasis on this. If ICI's & Construction & Demo groups are responsible for half of the CRD's waste, then an equal amount of attention to education should be given to them. 2. In your documents, it says there are currently no facilities under the "Bylaw to Regulate the operation of composting facilities in the CRD". I would reach out further and offer a tenure to a group(s) to divert more organics from the waste stream & into compost. This group could then sell/distribute the compost to local markets and agricultural businesses to create a circular economy. (ex. Compost Education Center) 3. I would push companies & ICI's (local and non-local) to reduce the amount of waste and packaging that comes from their products. A lot of packaging that I notice feels unnecessary and wasteful which puts more pressure on your capacity to deal with more waste. There are local companies starting up that limit or eliminate their waste and promote refilling and reusing concepts (ex. Westcoast Refill, Zero Waste Emporium) 4. Looking at the map you provide of Solid Waste Management Facilities (pg. 15), there are none that specifically manage textiles (not just clothing). I would recommend doing researching on how much textile waste is entering the waste stream & then finding new inventive ways to divert it from the landfill. (ex. FABSCRAP)(ex. "Recycling fashion: The town turning waste into clothes- BBC News")(ex. Victoria Eco Fashion Week) 5. The biggest recommendation I can make is to take serious look at the cost-benefit analysis of a "Landfill Waste Reclamation Project". If the Hartland Landfill became responsible for waste in 1973 and major recycling initiatives didn't begin until 1987, then that's about 14 years of potentially recyclable materials sitting in the ground. Furthermore, because the material has been buried and compacted, most, if not all, the organics buried will not have composted due to the lack of oxygen. By taking reclaiming materials out of the landfill, you can make more room for materials that can't be recycled or diverted, thus extending the lifespan of the landfill. An expansion would not be necessary. However, I'm not a economist and I don't have the exact numbers so you will need to see if this could be economically feasible. However there are cities that have started utilizing these concepts (ex. Johnny Poore TED Talk). 6. Be more outspoken and transparent about these things. Maybe I'm wrong, but I'm unsure about how much of the community you are actually reaching. Honestly I don't even think that many people are aware that you are even planning the expand the landfill. I ask that you look into expanding your communication and social media horizons to be more inclusive and get more community participation. 7. Look into the CRD's "urban metabolism"!
We need to stop the spread of toxic biosolids in the region - we don't want them spread in our community. Biosolids are absorbed into the groundwater and enter our streams, rivers and lakes and end up in the ocean. Come on government! Start thinking about the long game and the impact of these dangerous human decisions! I want a protected ecosystem my children can witness!!! So do you! So get with the program and ban use of dangerous chemicals!
This plan starts from the premise that Hartland needs to stay in operation for the next 80 years and in order to do so (1) waste disposal needs to be reduced in the CRD and (2) preparations need to begin for the expansion of the Landfill. While waste reduction certainly has to be part of the Plan, the premise of the current SWMP (The Plan) is wrong. The Plan should start from the premise that Hartland will NOT be expanded, and from there develop a strategy, including actions to be taken between now and 2045 (when Hartland will be full at current waste disposal rates) to avoid expansion of the landfill. With that as the baseline, a strategy can be devised to adopt aggressive waste reduction targets, such as the "aspirational" target of 125kg per person. If the aspirational target was the real target, there would be no need to expand Hartland. Unfortunately the aspirational reduction target has been inserted into the plan SWMP with no concrete actions or budget attached to it, making it certain that it will not be achieved. Instead the default will be to expand Hartland, beginning with the destruction of 73 acres of forest on the eastern slope of Mount Work. Revise the Plan to start from the premise that Hartland will not be expanded, and work from there.
Work more at conservation and limiting the amount of garbage people throw out. Make stores limit the amount of packaging they use which ends up in the landfill. Let's try and reduce as much as possible before recycling and throwing into the garbage. We don't want to use good farm land to expand the landfill or take away forest if we can avoid it. Accessing the landfill from a different direction will definitely impact local rural areas which would be a shame. Keep things small and simple which we all need to be doing these days!
Greetings to the CRD administrators, managers, and other related CRD leadership: As a private citizen residing within the CRD's administration region, I applaud the collective effort to move Victoria forward, especially related to the accomplishment of the completion of the sewage processing facility. However, we are still faced with other significant environmental challenges. On this topic, I appreciate the CRD's openness to invite outside input regarding their long-term plan to create a sensible approach to handling the legacy of waste management. The proposal to reduce the per capita annual waste foot-print from 380kg to 250kg by 2030 is a step in the right direction. Along with this target proposal is the natural outcome of the extension of the life expectancy of the Hartland landfill until 2100. In addition to these goals are the advancements in peripheral processing technologies to handle the methane production from the current landfill and the solid sludge output from the sewage processing facility. Since the governing body of the CRD's board is composed of elected officials, it is of primary importance to keep these leaders accountable regarding the choices they make on behalf of the greater CRD residents. This accountability includes decisions affecting both financial and environmental outcomes. I consider it part of my personal responsibility to maintain a conduit of open communication regarding this topic of accountability. It is with this spirit that I have decided to submit my own personal input on the CRD's long-term solid waste management plan. Given the current serious public conscientiousness regarding sensitive environmental issues, I will cite the importance of how our society deals with the legacy of our archaic landfill philosophy – bury it and forget it. Most of the talk these days focuses on the carbon footprint problem, but then the potentially greater issue of the plastics legacy gets lost in the noise. Combined with the dilemma that the world's waterways and oceans become the living-landfill destination, we must collectively strike at the heart of this monumental issue with gusto. My personal outlook on these topics have been formulated throughout my life. I often think of my maternal grandmother who began her own recycling efforts in a small northern Minnesota town in the mid-80s. Also having had direct exposure to the impact of solid waste mis-management in the suburbs of greater Manila. In addition, consider the affluence of our western society regarding making each of us garbage-producing entities, by default. It is well past time to make a serious effort to create change to this depressing legacy issue. My family legacy also includes the element of technological innovation since my great grandfather was an inventor and industrialist within the US economy. His innovations made life easier for many serving in the railway maintenance industry. I have been made aware of the existence of a particular waste-processing technology that will go a long way to solving this solid-waste

legacy dilemma. And I will do my best to lend credence and offer maximum exposure in order to promote the legitimacy of this significant stride forward in offering hope to humanity. I hope that the CRD leadership will heed my input on this matter and take notice. Qualitatively, the outcome of this new technology would render Victoria a net-zero entity within 3 years of implementation, conservatively. This would make Victoria the world leader and would not only meet the Paris Accord goals, but would put to rest the modest internal 2030 waste-reduction goal referenced at the start of my input statement. Why would the CRD leadership not entertain training their attention to this matter? It most certainly is my intention to make them stand-up and pay attention at this critical decision-making juncture. If not now, when? Why delay on such a critical matter when acting now is most certainly in the best interest of each resident of the CRD – let alone each citizen of the world? It is with sincere intent and of greatest hope that I make my thoughts known to those involved in the overall considerations that will be included in any and all assessment for this purpose of the solid waste management plan. I look forward to further engagement on a personal and professional level in the near future. Sincere regards and all the best for 202[redacted]
Dear crd You have heard all the logical, scientific and emotional responses to the Hartland expansion. It is within your power to change this path. It would be an enormous example of government doing their part to contribute to climate change soulutions.
Waste to energy is a standard to be sought, rather than digging holes to accommodate garbage. How can you support the destruction of paradise to meet the rapacious appetite of Man to operate on the head-in-the -sand principle? Rethink your plan!!
Stop the spread of toxic biosolids in the CRD..... we don't want them spread in our community. Biosolids are absorbed into the groundwater and enter our streams, rivers and lakes and end up in the ocean.
I believe the free store idea to be invaluable to our communities. We need to be reimagining economies and impacts and the ramifications of a free store are far reaching and hugely positive. I also feel that there is now as much as ever, a need for more recycling education. With the plastics ban in 2018, there is even more waste entering our landfills. People often don't know what's recyclable and are even more unaware of the full process of recycling or disposal, cradle to grave. With regards to a free store, what exactly is the hold up? There could be nothing that makes more logical sense. From the consumer's standpoint, there are plenty of things we could be spending our savings on other than overpriced goods that could be relatively easily be transacted, traded and donated through a free store and or a sliding scale store, operated by the CRD, or a non profit, or co operative organization. And of course it is very easy to see the huge potential environmental benefits and pollution reduction of a free store. A recycling education center adjacent to or incorporated into the Free Store, would be brilliant. The mystery of recycling and waste is important - not just for occasional tours or school visits. With the new wastewater treatment plant, continually changing recycling protocols (i.e. plastics ban 2018), an increasingly interested public, and hopefully with a Free Store, further education and involvement of the public should certainly be sought. My hope is you could initiate your investigative review as soon as possible, prior to 2022, and that you would set an implementation date immediately. There is overwhelming support from the public for a free store and the potential is incredible. Also there has never been more need for a more thorough recycling education program. The public cares, and what better place to interact and educate than adjacent to a pollution and cost saving Free Store. Thank you for reading.
The draft plan was informative and I learned a lot about the current situation (projections of CRD population, % of waste from different sources , trends in waste per capita etc.). Although the overall goal of 250kg/capita in 10 years is a significant target, I would like to see some additional information and targets for diversion from each source. It is not clear to me how much waste is currently being diverted from the landfill for each source and what a diversion target would be for each source. The plan does not appear to be bold enough given the increases in population that are expected. I would also like to know the impact of the proposed plan on greenhouse gas emissions, particularly emissions of methane. I think waste accounts for 9% of the current regional emissions. There should be a target for greenhouse gas emissions included in the plan. My apologies if I missed it.
Thank you for the opportunity to comment on the draft solid waste management plan. The existing CRD solid waste management plan was originally created in 1995; the revision process began in 2012 and included a two-year period to investigate integrated resource management opportunities (2015-2017) before resuming. The draft plan mainly seems to address how to extend the life of Hartland landfill from 2045 to possibly 2100. CRD solid waste management mainly consists of diverting and composting organic wastes, diverting and recovering raw materials from recyclable materials, and landfilling the remainder. Sanitary landfilling, although considered an acceptable and mainstream practice since the 1950s, effectively involves burying non-recycled waste in a hole which is lined to prevent the loss of toxic leachate to surrounding surface and ground water, capped when full, and eventually "restored" to useable, if unnatural, space. The waste stays put and breaks down very slowly, but releases greenhouse gases (GHG), of which methane (CH4) is the most potent and of primary concern. In order to conserve useable space at Hartland landfill, CRD has banned an increasing variety of materials from Hartland landfill, and invests in education and outreach programs intended to encourage waste reduction and reuse, maximize diversion and minimize contamination of recyclable and compostable wastes, and educate the community about landfill operations. Landfilling is becoming increasingly problematic for the CRD, given population growth in the region, and a finite (and increasingly expensive) land base and competing demands for land. Minimizing CH4 emissions is increasingly and critically important, given its role as a GHG and as the effects of climate change have become apparent; some of the CH4 is captured and used to generate electricity for on-site use or fed into the regional natural gas network as renewable natural gas (RNG). CRD is obligated to maintain the landfill site after the landfill is full. Current operations (with significant fixed costs) are funded largely by tipping fees; hence, CRD requires inflows of solid waste and tipping fees to cover its costs even while trying to convince the public of the need to reduce its solid waste generation. Under the current business model, CRD's need to reduce solid waste inflow and extend the life of the landfill seems to conflict with its need to maintain sufficient income from tipping fees; decreased waste inflow may, over time, need to be accompanied by steep increases in tipping fees and costs to the public. Clearly, CRD must plan far in advance when considering options for managing the region's future solid waste. It must make appropriate assumptions about population growth, solid waste generation, deployment of alternative technologies for resource and energy recovery, and development of policies by senior levels of government to incentivize reuse and recycling of wastes. In addition, solid waste management options must strongly address now the critical need to minimize net atmospheric emissions of carbon as CH4 or carbon dioxide (CO2). I have read this draft plan several times and read CRD-supplied supporting material. I'm disappointed. I don't feel the plan adequately addresses our future solid waste management issues. The approach seems to be "business-as-usual" with little underlying urgency when more dramatic action is required. The draft plan does not provide a basis for many of its optimistic assumptions and downplays impacts of landfill expansion. Some specific concerns: 1. CRD population projections 10, 20, or more years in the future may be way off. For example, estimates done for the 2008 RGS projected a CRD population of ca. 400,000 in 2019, but the actual CRD population was ca. 412,000. The draft solid waste plan assumes a 2038 population of 475,000, whereas the 2018 RGS assumes a 2038 population of 442,000, but BC Stats (2019) projects a 2038 population of 494,000. It might be prudent to revisit the assumptions of different projections and consider the possibility that southern Vancouver Island may become even more desirable to live in as climate change makes other areas less habitable. This is certainly at least as reasonable as suggesting the current landfill may fill before 2045 "in the event of a major earthquake" (Appendix C, page 54). If there was a major earthquake, how would this affect population, per-capita solid waste generation types and amounts, and ability to even transport waste to the landfill? Reference to earthquakes in this context is absurd and meaningless without additional analyses and discussion. 2. The draft plan has a goal to reduce per capita waste generation from the recent 382 kg/year (2019) to the provincial goal of 350 kg/year, possibly to 250 kg/year by 2030, and then, at some undetermined point, to 125 kg/year. What analyses and assumptions underly those targets? Is that an adequate decrease if population growth is underestimated and "in the event of a major earthquake"? How does CRD propose to decrease per-capita waste generation by 35% by 2030 and (eventually) by 67% from 2019 rates? While the plan states that 2019 per-capita waste generation rates are 43% less than in 1989, that is misleading; effectively, per capita rates have not changed meaningfully since 1995. Table B-2 provides qualitative assessments of strategies to increase diversion rates from landfilling, but the wording suggests few if any strategies will significantly reduce the amount of waste to be landfilled. How can those assumed decreases in per-capita landfill waste happen without significant changes in policies by senior governments, markets for recycled feedstock, or alternative technologies to process non-recyclable waste? 3. The draft plan glosses over the significance of destroying (according to one source) 73 acres of a mature second-growth coastal Douglas-fir-dominated forest in order to expand the current landfill. The plan provides no detail on the number, size, species, and condition of trees which would be removed, nor impacts on other components of that ecosystem. This is a

forest type limited to the most heavily - populated area of Vancouver Island and is considered imperiled (Biodiversity BC). This mature forest not only provides critical habitat in abutting Mount Work Regional Park, but likely sequesters significant amounts of atmospheric carbon. Protection and enhancement of intact mature forest is increasingly recognized as one of many necessary steps to mitigate climate change. However, the draft plan and associated "engagement" materials refers to the impacted area of forest merely as a "strip of land" and do not indicate the area to be impacted or the number, size, species, and condition of trees which could be removed. The materials also claim the landfill is not being expanded, but that the expansion is "not an expansion of the landfill's existing boundaries, it's a filling plan". That is technically correct and clever, but verges on insulting. The plan should clearly describe how much forest will be impacted and how. The plan states that "the development of this land will be offset by the reforestation program already in place for all closed areas of the landfill" and "These trees reduce the greenhouse gas emissions generated by the landfill through carbon sequestration." Please recognize (1) that replanting trees into manufactured soil is not the same as replacing a mature second-growth Douglas-fir ecosystem with respect to biodiversity and resilience to effects of climate change and (2) planted seedlings will not replace the carbon sequestration capacity provided by the mature Douglas-fir they replace for decades; assuming that these forests grow as they did before climate change took hold. 4. Given the uncertainty of how CRD can reduce solid waste inflows to Hartland and the importance of minimizing greenhouse gas emissions from landfill operations, why is integrated resource management (IRM) not discussed more? IRM, presumably referring to a gasification process, has the potential to greatly reduce the volume of material requiring landfilling while recovering more energy than do current landfill practices; and, if a pyrolytic process, could produce biochar with a variety of uses, market value, and potential for long-term sequestration of carbon. Operational-scale advanced gasification / pyrolysis plants to process suitable municipal solid waste are being deployed around the world. The plan refers to IRM only once (page 6), noting that the planning process for expanding Hartland was paused for two years "to investigate integrated resource management opportunities." Well, what happened during that two-year period? What did the CRD learn? I assume this was part of the CRD exploration into IRM for processing sewage sludge (or biosolids), a process that arguably was a bit of a mess. Fortunately, the Township of Esquimalt is investigating the feasibility of IRM / gasification / pyrolysis for processing appropriate wastes. The draft solid waste plan should discuss in greater detail the advantages and disadvantages of IRM as it relates to lengthening the lifespan of Hartland and acknowledge what Esquimalt is doing.
On Section - 1 Guiding Principles Observation: multiple uses of limiting phrase "wherever practical". This is inappropriate for a principle; suggest replacing that posterior qualifier with the prefix "Maximize". This could produce the following re-write of some principles: 5. _Maximize_ upstream handling of all waste categories to minimize their entry into the waste stream going into the landfill. 6. _Maximize_ collaborate across all jurisdictions.
On Section 11 – Plan Monitoring and Measurement Observe that reporting to all stakeholders is, at most, on an annual basis, and some updated after three (3) or five (5) years. Further, observe in Section 5 Strategies and Actions that one Plan goals includes "Have informed citizens who participate effectively in proper waste management practices". Suggest that this SWMP could seek to _maximize_ production of data, such as some form of open data capability, and production of possibly daily, weekly month waste dashboards, broken down by type and source. And with constant inclusion of target versus actual.
Feedback on CRD draft Solid Waste Management Plan Thank you for opportunity to comment and provide feedback on the SWMP. Introduction: Where the plan succeeds: Focusing on the 4 Rs Where the plan fails: In true innovation and community-based planning: • No real strategies or budget for actually reducing waste and ensuring there is no need for landfill expansion. • Failure to specify and adopt technologies and strategies that will significantly reduce waste-to-landfill, reduce waste per person and adopt zero-waste goals. • Failure to hold municipalities responsible (e.g. Langford) for massive increases in waste production. • Failure to investigate ALL alternatives to dumping waste in a landfill, including emerging technologies relevant for this region (and stop looking at Edmonton Enerkem example!). • Rushing to expand the landfill with no real plan to avoid doing so. • SWMP has a heavy focus on profiting from waste, rather than a focus on responsible climate accountability and reduction in GHG emissions from landfilling, blasting, forest destruction. • Declaring a climate emergency and then proposing a Solid Waste Management Plan that ensures significant increases in waste disposal and GHG emissions and environmental degradation. • Failure to allow citizens and the CRD Solid Waste Advisory Committee any real impact towards a better SWMP. Re: RETHINK/RECONSIDER: There is a terrific opportunity for CRD to lead by example, or at least come into alignment with what other progressive municipalities and regions are doing. The CRD draft SWM plan includes what look to be some good measures, but they are vague and do not go far enough and should include: • Implementing a purchasing policy that encourages production of products made from reused, recycled or sustainably-harvested renewable, non-toxic materials and products that are durable, repairable, reusable, fully recyclable or compostable, and easily disassembled. • Develop this in partnerships with member municipalities and regional districts, universities, the provincial government, and institutions to maximize the impact. Join the Canadian Collaboration for Sustainable Procurement to maximize the impact and reduce the work involved in research. • Incentives to reduce waste to landfill - higher tipping fees • Match the CVRD fees to prevent waste migration and provide stronger disincentive to wasting. • Charging significantly higher tipping fees for banned materials and recyclables. • CRD should work with member municipalities to have PAYT at the curb and elsewhere that makes it progressively more expensive by weight or volume to waste. • Adopting similar fee structure to District of Nanaimo: Regional District of Nanaimo (2018). Regional District of Nanaimo: Solid Waste Management Plan -Planning for the Future of Our Waste -Road to 90% Waste Diversion. Accessed at: https://www.rdn.bc.ca/sites/default/files/inline-files/2018%20SWMP%20Amendment_1.pdf. • The plan should included actions and measures to increase the local economy, through procurement policy and fostering local businesses that reduce waste. For example, the Vancouver Economic Commission reports on the green local jobs created through the Greenest City Action Plan. • Initiating a specific working group to develop the Local Circular Economy that goes beyond Plan Monitoring Advisory Committee members and engages citizens, businesses, academia and others to develop Zero Waste businesses beyond what the CRD already has. Ensure this working group has authority. • Investing in education programs, bans on single use and commonly wasted items, and developing more solutions designed to encourage people to consume less. • Leading by example in-house at CRD. • Charging municipalities a surcharge for exceeding per person waste generation, or charge for overdevelopment without waste mitigation strategies (i.e. Langford) – encourage municipalities (like Langford) to take stronger measures towards waste reduction within their communities. • Vancouver Economic Commission (2018). Green Economy. Accessed at: https://www.vancouvereconomic.com/focus/green-economy/ . • Project Zero (2020). Accessed at https://www.project-zero.ca/resources . SUMMARY of RETHINK: Actually rethink – make the primary goal of the SWMP to reduce the footprint of Hartland landfill to actually be consistent with 1.4 of the plan – to make climate action and environmental stewardship a priority. Re: REDUCE Recommendations: • Work to reduce waste at the source and eliminate problematic materials including bans where possible - I don't see enough specifics on this in the SWMP - give it some teeth. • Collaborating with other local governments (and non-governmental organizations) to increase the efficacy of the advocacy to higher levels of government. • Develop a plastic reduction strategy to reduce the use of plastics, plastic waste and microplastics. And ban spread of microplastics (biosolids) on the land including at Hartland. • Collaborate with other governments as well as businesses. The next ten years will be a critical time for this. • Developing a program to encourage renovation of buildings over demolition. • Strengthen the vague strategies to reduce food waste • SWMP should include reducing environmental degradation of Mount Work region by undertaking a regular assessment of the impact of the Hartland facility on the surrounding ecosystem. • In Figure 1-2 it notes that the growth strategy must not exceed the capacity of the natural environment, but I do not see how and where the CRD is assessing and reporting out on the capacity of the Mount Work area to absorb the cumulative impact of all the current and planned industrial activity at the Hartland facility. • Proposed future activity includes the spreading of biosolids at the facility, a natural gas conversion plant, an organics facility, the blasting and expansion of the landfill into 73 hectares of Mount Work, and the transfer of commercial truck traffic to the Willis Point Road (the access route into the Mount Work, Gowlland Tod and Durrance Lake areas) – all are inconsistent with reducing waste and reducing environmental impact on ecosystems and humans. RE: REUSE There is so much more CRD could do – here are a few recommendations I would like to see included in the SWMP: • Hosting a ReBuild it Centre at Hartland. • Mapping out local resources for sharing, rental, reuse, and repair. See Portland as an example. • Hosting or supporting local repair cafes like in Metro Vancouver. • Set reuse/refill targets across CRD buildings/spaces and invest in infrastructure for this. • Support reusable diapers systems. • Advocate for the Right to Repair, mandatory warranties, time frames for parts availability, requirements for online manuals, and plans for components. • Advocate for EPR programs to be responsible for supporting repair and reuse of their products. • Ask for federal and provincial investment in reuse, repair, refill, etc. and circular systems for scaling local initiatives. • Incentivize

house moving and construction material reuse through regulatory strategies, enforcing limits on waste generation and expanding environmental obligations. This should be done in partnership with member municipalities RE: RECYCLE Table A of the Waste Composition study (which is a more detailed look at the data in Figure 4.2 of the draft plan) shows that over 50% of the waste is comprised of materials that are banned or could be recycled. This highlights the needs for more education and enforcement of the bans. Recommendations to add to the Recycle section of SWMP: • CRD should work with member municipalities to require zero waste plans to be part of event permitting process. • The grey box system for glass collection (e.g. City of Vancouver) should be examined to see if this could increase diversion. • Work with service providers to do more checks, education and enforcement of disposal bans at point of collection. • Work to ensure that the EPR programs are fully delivering on their obligations including doing more on the first levels of the hierarchy. • Ask that the Province meet its commitments to the Canada-wide Action Plan for EPR in a timely fashion. • Work with other local governments to ensure the programs are as effective as possible and that local governments have a voice in program delivery and plans. • Develop a Construction and Demolition materials hub at Hartland (as the City of Vancouver is investigating). • Require deconstruction not demolition (building on Metro Vancouver's model bylaw). • Charge a waste levy on materials to drive diversion and track data. • Ask the provincial government to work towards a building code that incorporates future deconstruction needs and factors in embodied carbon and to create a deconstruction step code. • Work with province to include design guidelines in Building Code to ensure adequate space for waste sorting in new developments - both in unit and in building (e.g. Whistler's example). RE: COMPOSTING It would be terrible for CRD to go down the road of other regions in which composting was poorly research and implemented with the result of making regions into unliveable. Recommendations: • Fully research the options – both successes and failures. • Consider also decentralized composting for high generation areas. • Ensure processing is scaled to consider the reduction through reduced food waste and backyard composting. • Add specifics to the SWMP on education and enforcement of bans. RE: RECOVERY There are no specific strategies in the plan under recovery - further work to reduce the use of hazardous materials and increase the coverage of hazardous materials under EPR programs should be done and specifics included in the SWMP. A Final Suggestion: The vibe from the CRD is that the region is not important enough to consider the community and ecosystem impacts of actions undertaken by the CRD; that the CRD is only interested in profiting from waste, rather than truly planning to ensure a healthy and livable region. In the SWMP and in how the CRD staff have approached producing and manipulating this plan into adoption, I do not see priority placed on community – the true sense of community. Nor do I see any real consideration for making this region more climate accountable. There is a missed opportunity here – one of true stewardship innovation and through the lens of values-based leadership. The CRD could really lead the way for the rest of Canada and it is disappointing to see CRD staff and Board be laggards. Thank you.

February 15, 2021 Re: CRD Solid Waste Management Plan: Hartland 2100 Design Concept I am writing to you with grave concern over "the (approximately 28.9 hectares) within the existing property boundary" of Hartland Landfill from which trees are to be removed for future expansion. Specifically, I note that you say, "this work needs to start now to ensure the most effective design." I am a climate change expert and have provided advice to several NGOs, appeared in the media and developed the first major museum exhibit on climate change in Canada at the Royal BC Museum. I regularly lecture on climate change impacts and adaptation. Please see this video (https://www.youtube.com/watch?v=0E2vG8wt2Ck). I also live in the Tod Creek Valley. One of your guiding points from the draft plan is as follows: "In 2019 the CRD Board identified Climate Action & Environmental Stewardship as a priority for the region and approved a motion to declare a climate emergency." Your climate initiatives focus on GHGs from the landfill. Are you aware that conversion and destruction of forest cover is a major contributor to GHG emissions? Maintaining extant forest cover is a vital tool in mitigating climate change and furthermore it helps in adaptation through the preservation of biodiversity (see most recent IPCC assessment report 5) (https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter11.pdf). Recent province of BC and Sierra Club reports emphasize the vital role forest cover has as we progress into a future shaped by anthropogenic climate change. Taking unnecessary action now through the removal of forest cover and conversion to non-forest land use, when forest will be even more valuable in the future is a poor strategy and reflects inappropriate and short-sighted planning. Why does this action need to be undertaken now "to ensure the most effective design"? In the interest of local and global environmental and climatic sustainability, we need every tree that we can keep into the future. This is especially true for second growth and older trees, which have experienced widespread removal for timber. Furthermore, we need to keep naturally-developed soils and organic matter in place and limit its disturbance. Conversion through clearing rapidly releases CO2 and prevents its future removal by living trees just when we need our forests to do so. Forest clearing further exposes our landscape to the risk of increased catastrophic flooding events as we experience intensifying extreme weather. I praise the CRD for the proposed actions to reduce waste and landfill-related GHG emissions. However, we should not be sacrificing the ability of the natural forested landscape to help us mitigate and adapt to our ongoing climatic emergency. In the coming decades, our advancing knowledge and understanding of impacts of climate change will advance by leaps and bounds. Many studies have already demonstrated the importance of forest cover as a key carbon sink (for example, this Sierra Club report) (https://sierraclub.bc.ca/wp-content/uploads/2019-Clearcut-Carbon-report.pdf), and I guarantee that forested landscapes will be recognized to have even greater importance than today. Conceptual and technological advances will offer other mechanisms to meet regional landfill requirements. Please leave the forests alone, focus on the current footprint and fight climate change in the area already in use. Who knows what options the future may bring us? Respectfully submitted; R [redacted]

Please notice - Maura Walker & Associates Environmental Consultants Existing Solid Waste Management System Reports of May 7 2018 and July 27 2012 states the following: May 7 2018 11.5.1 Blackburn Road Landfill pg.51 "The Blackburn Road landfill site is located on Salt Spring Island on approximately 0.7 hectares of privately owned land. The landfill began operation in 1966 under the provincial discharge permit # PR-1839 and was ordered closed by the Province on July 18, 1991 for environmental reasons." July 27 2012 Integrated Solid Waste Management & Resource Management Plan 10.7.1 Blackburn Road Landfill pg.10-11 "The Blackburn Road landfill site is located on Salt Spring Island on approximately 0.7 hectares of private land owned by ..... . The landfill began operation in 1966 under the provincial discharge permit #PR-1839 and was ordered closed by the Province on July 18, 1991 for environmental reasons." As a condition of closure, the permittees owner operator and the Capital Regional District were required to submit a closure plan for the Blackburn Road Landfill. The closure plan submitted can be found at the website address below. https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/appendix-e.pdf?sfvrsn=e84e8fc9_2 The Blackburn Road Landfill site was open to the general public and operated as an unsupervised, uncontrolled waste site for 25 years. This means that the closed site probably contains or releasing hazardous waste, heavy metals, PCB's insecticides, pesticides, fungicides herbicides, petroleum products such as used oil, filters and other automotive fluids. Many of these manufactured products were readily available under many trade names to the general public. They were used widely and some of these products are now totally banned or have restricted use provincially and or federally. It is unknown what was dumped into this landfill site and being SSI it could be anything. According to the University of Toronto Environmental Health and Safety the Definition of a Polychlorinated biphenyls (PCB). A PCB material is legally defined as any monochlorinated or polychlorinated biphenyl or any mixture that contains one or more of them. This includes equipment, solids [including empty containers] and contaminated liquids. PCBs were used in a variety of applications including additives in lubricants, heat transfer dielectric fluids, adhesives etc. All these uses were banned in Canada in 1977. Hydraulic equipment, oil-filled electromagnets, circuit breakers, voltage regulators, cables and vacuum pumps may contain PCB liquid. Fluorescent light fixtures may contain several ballasts. The small capacitors inside the ballasts are contaminated with high levels of PCB liquid if they were manufactured prior to 1980. Since the Blackburn Land fill site was used from 1966 to 1977 it likely has PCB material buried in it. The stream locally referred to as Hitchcock Creek with tributaries and wetland flows from the closed landfill and current recycling depot should be tested . No monitoring (lab tests) of surface or groundwater for leachate contaminant from this landfill site have not been done since 2000. 2014-2016 Ecology of Blackburn and Cusheon Lake Study, monitoring lake inflows and outflows (hourly to weekly) states the following: •" PO4, TP, NO3, and DOC exports per unit area from Hitchcock Creek catchment that is the site of the garbage transfer station (former garbage dump) were the highest among the nine study catchments. It can take decades for anthropogenic nutrients accumulated in soils to return to normal after inputs stop (Bennett et al. 1990); " The BC Provincial government shut down this landfill site for environmental reasons. There was and is a great risk of leachate contaminating the ground or surface water in the Cusheon Drinking Watershed. Therefore, as co-permitee, the CRD should have addressed these issues in their draft SWMP. Why have they not done this? Thanks for the opportunity to comment and submit information to the draft

SWMP
Change of entrance to Hartland Landfill Hartland Rd has been the entrance for over 50 years and it should remain the entrance. There are many safety concerns changing to Willis Point Rd., Ice conditions in the winter, 2 school buses daily, the intersection of Wallace Dr. and West Saanich and Wallace and Willis Point Rd.not adequate and dangerous. Also, the Interurban Trail entrance and end is just a few feet from the turn at West Saanich and Wallace. It is dangerous now and will be even worse with dump trucks lined up turning there. Many bikes on the road now, proper bike lanes will e needed. The CRD says all these issues are Saanich's concern not theirs. How will the tax payers of Saanich feel about paying for upgrades to this intersection when it affects only a very small number of Saanich residents. The last of 2 Zoom meeting I attended concerning this matter we were told this is a done deal, what kind of consultation is that? One sided from the CRD. Landfill Expansion; The proposed removal of 73 acres of mature second growth forest, destroying the biodiverse habitat and blasting against the slope of Mount Work is unacceptable. This is the 21st Century! Continued expansion of the landfill will increase greenhouse gas emissions, as landfills create deadly methane.This will also create more leachate that pollutes the aquifers. The CRD needs to adopt a more aggressive waste reduction strategy so the volumes of waste going to the landfill are reduced. Other municipalities have now committed to plans to do just this and they will make a difference to the volume of waste coming to the landfill. Also Nanaimo has a plan that is working. The CRD must remove this expansion from their SWMP to be revisited, no approval for expansion need take place before 2030. Report their progress in examining other alternatives annually to the CRD Board. Expanding Landfills is an outdated response to the regions waste problems. Spreading Biosolids at Hartland; Very concerned about the spread of Biosolids at Hartland, as this could affect human, plant, animal life and waterways in areas adjacent to the landfill. There is no scientific evidence to support this plan.
The draft plan does not consider operations at the land fill. You can not make a future plan with out considering operations and how it effects the community. There has been a lack of proper and meaningful consultations with the local residents. The process is more about informing the residents than consulting with them. The SWMP does not take future growth of the CRD into consideration. Talking about reducing waste per person is pointless if you dont consider population growth? Why has there been no consideration for changing the tipping fees? Relocation of the Dump access has not been properly considered. Staff have overlooked many other options and are only presenting one solution. Proper public consultation on dump access has not happened Should the access relocation go ahead, a full passing lane could be feasible, if planned properly taking into the consideration of the need for new natural gas infrastructure. (natural gas pipeline) on Willis Point Rd. Hartland has surplus rock, and a new gas line and passing lane could be installed beside the existing roadway at little additional cost, mediating most concerns with the road usage, and safety concerns. The newer section of Willis Point Rd, from Wallace to Ross Durrance lake Road should be renamed to something else in an effort to limit land value loss in Willis Point.
This is a good draft plan. I appreciate the thoroughness and thought that the CRD puts into managing and maintaining Hartland to ensure that its lifespan is as long as possible so we don't need to create a landfill at another location. Having lived in other municipalities where less effort is put into environmental monitoring and reforestation of the closed parts of the landfill, I am proud to live somewhere where these things are done well and a lot effort and expertise goes into managing all aspects, including moving the access to Willis Point Road. Ultimately, the lifespan of the landfill will depend on the actions of individual residents in the region they are the ones who are truly responsible. Initiatives that I would like the CRD to consider as part of the plan implementation include higher fees for garbage and landfill services and incentives and breaks for those who make the effort not to buy things that will need to end up in the landfill in the first place.
During the initial consultation regarding the Solid Waste Management Plan, I attended an information session at Willis Point, and asked the CRD representative what the plan was for biosolids, and whether this would affect the landfill use. The answer that was provided was that CRD had banned land application of biosolids, and so they would have no impact on the facility since they would all be shipped off-site. In a more recent consultation, I asked the same individual about this, commenting that the position of CRD had changed with respect to land application of biosolids not long after the consultation, and that this led to concern about how I can trust commitments that are made during public consultation, if they can subsequently be changed months later? The answer that was provided by the CRD staff-member was that biosolids are part of the liquid waste plan, and they didn't know much about them. This response is concerning on two levels. First, the concern that was raised about how the public can trust a process in which a direction is changed in the span of months was ignored. And second, biosolids are indeed a solid, and they should be considered in the context of the Solid Waste Management Plan. In particular, given the current uncertainty regarding when biosolids will be produced, where they will be shipped, and how much material will be retained on site, it appears highly appropriate that these matters be addressed in the Solid Waste Management Plan. They are indeed a solid, and they are waste. Unless they are all being shipped away, they should be addressed clearly in the Management Plan.
Please accept this as my feedback on the draft Solid Waste Management Plan February 15, 2021 I have three main suggestions that I feel should be included in the SWMP: 1. The draft Solid Waste Management Plan needs more aggressive measures towards Zero Waste: The CRD Board states that it supports the principle of zero waste and encourages the achievement of a circular economy by mid-Century in accordance with Provincial guidelines. This goal can only be achieved with: -more aggressive measures to reuse, recycle and reduce personal consumption in keeping with achieving carbon neutrality by 2050, following the lead of the City of Victoria's zero waste strategy: by requiring producers to be responsible for the full life cycle of packaging; -levying user fees on packages that produce waste, offering financial incentives for entrepreneurs to reuse materials and encouraging comprehensive recycling in both single family and multi-family homes, -Enforcement of existing bans on dumping of organics and garden waste is also essential. 2. The draft SWMP should rigorously pursue alternative resource recovery options such as waste-to-energy solutions: The Solid Waste Management Plan must rigorously pursue the 5 R waste hierarchy with top emphasis on reduction, reuse and recycling. The CRD must defer increasing the landfill until an independent evaluation and a business plan is conducted on alternative technologies (such as thermal, gasification and waste to energy technology and any emerging technologies). If feasible, alternative resource recovery options must be implemented throughout all regional municipalities to avoid expanding the Hartland Landfill. If not feasible, the CRD must conduct an Environmental Assessment prior to implementing plans that increase the landfill. The BC Ministry of Environment also has the responsibility to ensure that this is carried out. A minimum five year deferral is required to fully evaluate emerging technologies. 3. The draft SWMP should include specific plans to support a Circular Economy towards Carbon Neutrality: Expanding the Hartland landfill is counter-productive to achieving a carbon neutral economy by 2050. Removing 73 acres of public forest that sequesters local carbon emissions is inconsistent with the CRD and other municipalities' declaration of a climate emergency and the critical need for the Greater Victoria region to become carbon neutral by 2050. THE SWMP should specify action towards full implementation of a circular economy and means in which excess carbon produced is captured to restore the health of our ecosystems which, in turn, naturally store carbon. The Minister of Environment should not approve any CRD plan without first requiring the CRD adopt aggressive waste reduction measures that would avoid an unnecessary expansion of the Hartland landfill and be in conformity with the climate change policies adopted by the Province of British Columbia. Thank you.
Submitting feedback on CRD draft solid waste management plan: While there are some good points in the plan, they are vague and the plan is too focused on continuing to dump garbage in the ground. I want to see more aggressive and specific strategies in the solid waste management plan: 1. The draft Solid Waste Management Plan needs more aggressive measures towards Zero Waste: The CRD Board states that it supports the principle of zero waste and encourages the achievement of a circular economy by mid-Century in accordance with Provincial guidelines. This goal can only be achieved with more aggressive measures to reuse, recycle and reduce personal consumption in keeping with achieving carbon neutrality by 2050, following the lead of the City of Victoria's zero waste strategy: by requiring producers to be responsible for the full life cycle of packaging; levying user fees on packages that produce waste, offering financial incentives for entrepreneurs to reuse materials and encouraging comprehensive recycling in both single family and multi-family homes. Enforcement of existing bans on dumping of organics and garden waste is also essential. 2. The draft SWMP should rigorously pursue alternative resource recovery options such as waste-to-energy solutions: -Rigorously pursue the 5 R waste hierarchy with top emphasis on reduction, reuse and recycling. -The CRD must defer increasing the landfill until an independent evaluation and business plan is conducted that studies alternative technologies (such as thermal, gasification and waste to energy technology). -If feasible, alternative resource recovery options must be implemented throughout all regional municipalities to avoid

expanding the Hartland Landfill. -If not feasible, the CRD must conduct an Environmental Assessment prior to implementing plans that increase the landfill. The BC Ministry of Environment also has the responsibility to ensure that this is carried out. A minimum five year deferral is required to fully evaluate emerging technologies. 3. The draft SWMP should include specific plans supporting a Circular Economy towards Carbon Neutrality: Expanding the Hartland landfill is counter-productive to achieving a carbon neutral economy by 2050. Removal of 73 acres of forest (that sequesters local carbon emissions) and blasting holes in the ground to dump garbage into is inconsistent with the CRD and other municipalities' declaration of a climate emergency and the critical need for the Greater Victoria region to become carbon neutral by 2050. Carbon neutrality requires full implementation of a circular economy in which excess carbon produced is captured by restoring the health of our ecosystems which naturally store carbon. The CRD needs to take the climate crisis seriously and this draft SWMP does not come close. The Minister of Environment must require the CRD to adopt aggressive waste reduction measures and not approve any plan that unnecessarily expands Hartland landfill. CRD should be in conformity with the climate change policies adopted by the Province of British Columbia. The CRD has a chance to be leaders and this SWMP falls short. Thank you.

Solid Waste Management Planning — PHASE II FEEDBACK – *Local Governments*

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Provide information regarding solid waste management to Tsartlip, Tsawout and Tseycum community members through W̱SÁNEĆ Leadership Council (WLC) portals	W̱SÁNEĆ Leadership Council	No	Revised (Action 1E)	Action 1E was revised to specify First Nations community groups as a stakeholder
Create a WLC/CRD negotiation table and related meeting schedule to continue conversations regarding Hartland Landfill	W̱SÁNEĆ Leadership Council	No	No	This recommendation is being brought to the CRD Board for focused consideration
Include a section regarding integrated resource management/gasification	Township of Esquimalt	Yes (Action 15D)	Revised (Action 15D)	Action 15D was revised to specify integrated resource management and gasification as alternatives to landfilling
Accelerate the creation of requirements for source separation in multi-family and commercial businesses, including through a model bylaw	City of Victoria	Yes (Action 6D, 8B, 9F)	N/A	These actions would enable the creation of regulations such as a model bylaw.
Accelerate the development of guidelines for the use/acceptance of compostable and bio-based food service ware	City of Victoria	Yes (Action 11D)	N/A	These actions will be considered for implementation in the short term action plan.
Establish a waste stream management licensing bylaw for private solid waste transfer stations and recycling facilities operating in the region	City of Victoria	Yes (Action 6C, 6D)	N/A	This will be investigated as part of these actions.
Work with local governments to advocate for flow control to regulate the export of solid waste	City of Victoria			
Prioritize implementing bans and/or surcharges for clean wood waste and mixed construction waste at Hartland	City of Victoria	Yes (12E/F)	N/A	These actions will be considered for implementation in the short term action plan.
Prioritize work with municipalities to develop requirements and guidelines for construction waste diversion, including measures to grow the regional market for salvaged materials	City of Victoria	Yes (12A/B/D)	N/A	These actions will be considered for implementation in the short term action plan.

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Lead regional collaboration and leverage municipal authority with regards to zero waste and building a circular economy	City of Victoria	Yes (5A)	N/A	
Provide bold leadership and accelerate regional collaboration on actions that achieve waste disposal targets	District of Saanich	Yes (Strategies 1-5	N/A	This is the broad intent of the Solid Waste Management Plan.
Maximize the use of municipal authorities to reduce waste, including the development of additional bans, surcharges, CRD bylaws, model bylaws, processing facilities, requirements and guidelines that support actions such as waste stream management licensing, construction waste diversion, source separation in multi-family residences, use and acceptance of compostable items	District of Saanich	Yes (Strategies 5-12)	N/A	These will be investigated as part of these strategies.
Reference additional benefits of a regional organics processing facility associated with greenhouse gas emissions savings from reduced transportation outside the region	District of Saanich	Yes (Section 6)	Revised (Section 6)	Section 6 of the plan has been revised to reflect current on-island processing capacity, and to reference transportation-related greenhouse gas benefits associated with a facility at Hartland.

Solid Waste Management Planning — PHASE II FEEDBACK – *Community Associations*

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Implement illegal dumping prevention education campaigns	Prospect Lake District Community Association	Yes (Action 13A/B)	N/A	
Implement illegal dumping reporting education campaigns	Prospect Lake District Community Association	Yes (Action 13E)	N/A	
Install 'No Dumping' signage in problem areas	Prospect Lake District Community Association	No	No	This is the responsibility of the jurisdictional authority of the location.
Clean up illegal dumping quicker	Prospect Lake District Community Association	No	No	This is part of the landfill operating plan and is reviewed regularly.
Open Hartland Landfill on Sundays so that residents don't dump illegally when they drive up and find the landfill closed	Prospect Lake District Community Association	No	No	Details such as operating hours are part of the landfill operating plan and are reviewed regularly.
Increase bylaw enforcement of dumping and unsecured loads	Prospect Lake District Community Association	No	No	Unsecured/uncovered loads arriving at Hartland are already subject to fines. Illegal dumping is regulated by municipalities and the CRD in Electoral Areas.
Build a transfer station in the West Shore	Prospect Lake District Community Association	Yes (Action 5B, 7B)	N/A	*Note: private facilities already exist in Langford and Sooke.*
Continue to enhance mountain biking trails in Mount Work Regional Park	Prospect Lake District Community Association	No	Revised (Section 4.2.2.1.7)	Revised this section to discuss actions related to mitigating trail loss.

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Secure Mountain Road Forest as parkland if the Habitat Acquisition Trust (HAT) fundraising campaign is unsuccessful; support of HAT's fundraising project in the interim	Prospect Lake District Community Association	No	No	This project is a partnership between Regional Parks and HAT. HAT anticipates having sufficient funding however, staff will continue to monitor unmet need.
Overhaul the playground at Hamsterly Beach in Elk/Beaver Lake Regional Park	Prospect Lake District Community Association	No	No	This Regional Parks project is underway, with construction set to start in fall 2021.
Do not remove trees to extend the use of Hartland Landfill to 2100 and beyond	Willis Point Community Association	No	Revised (Section 4.2.2.1.6)	Revised this section to clarify rationale for and potential impact and decision making process for Hartland 2100
Delay approval of the Hartland 2100 design concept	Willis Point Community Association	No	Revised (Section 4.2.2.1.6)	Revised this section to clarify rationale for and potential impact and decision making process for Hartland 2100
Adopt a more aggressive waste reduction target	Willis Point Community Association	Yes (Plan Goals)	N/A	An aspirational goal to reduce per capita waste volume to 125kg/year was included in the draft plan based on public feedback
Align the regional plan's targets with the City of Victoria's Zero Waste strategy	Willis Point Community Association	Yes (Plan Target)	N/A	The City of Victoria's Zero Waste strategy target is aligned with the CRD's target. With both following the same trajectory.
Consider Esquimalt's waste-to-energy plan in the Solid Waste Management Plan	Willis Point Community Association	No	Revised (Action 15D)	Revised action to clarify investigation of landfilling alternatives.
Do not landfill Class A biosolids	Willis Point Community Association	No	No	Management of biosolids is within the scope of the CRD's Liquid Waste Management Plan.

Solid Waste Management Planning — PHASE II FEEDBACK – *Public Feedback*

**Orange shading indicates a comment that appeared 3+ times*

FEEDBACK	IN DRAFT?	ADDED TO PLAN?	RATIONALE
STRATEGY 1: Continue and Enhance Education Programs			
Educate people about reduce, reuse and recycle	Yes (Action 1A/E)	N/A	
Apply behavioural science to education programs	Yes (Action 1B)	N/A	
Make waste socially unacceptable by funding education campaigns promoting zero waste	Yes (1D)	Revised (1D)	Action revised to include specific reference to zero waste
STRATEGY 2: Encourage Waste Prevention			
Provide funding for start-up businesses aimed at reducing waste	Yes (2B)	N/A	
Ban single-use items	Yes (Action 2C/E, 5A)	N/A	The CRD will continue its advocacy and education role to support others that have authority to regulate in this area.
Ban/work with government to ensure manufacturers reduce non-recyclable packaging	Yes (Action 2F)	N/A	
Enforce mandatory fully compostable packaging	Yes (Action 2E/F)	N/A	
Legislate that manufacturers are responsible for the full life cycle of their products	Yes (Action 2E/F and 10A/C/D)	N/A	
Allow green bins to be used for yard waste as well as kitchen scraps	No	No	These items are banned from garbage disposal at Hartland. Organics drop-off and collection services are provided by the private sector and some municipalities. The CRD provides drop-off and transfer services for kitchen scraps and yard waste material at Hartland.
Fund drop-off points or curbside pick-up of organic materials, including yard waste	No	No	
Introduce tax breaks for people who recycle properly/do not put banned items in the garbage	No	No	Curbside recycling services are not funded by taxpayer requisition.
STRATEGY 3: Support Reduction of Avoidable Food Waste			
Encourage backyard composting	Yes (Action 3A)	Revised (Action 3A)	Action revised to include reference to backyard composting.
STRATEGY 4: Support Reuse Activities in Region			
Support organizations that create a sharing economy	Yes (Action 2B, 4B/C)	N/A	

FEEDBACK	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Encourage a circular economy through Repurpose and Repair Centers and Repair Cafes	Yes (Action 2B & 4C)	Revised (Action 4C)	Action revised to include reference to repair centres.
Explore ways to divert textile waste from the landfill, including building a processing facility	Yes (Action 4A, 4B)		Programs are in place to support existing textile collection and reuse industry in the region.
Support a book recycling program	Yes (Action 4A, 4B)	N/A	
Consider attaching a recycling education centre to the potential free store at Hartland Landfill	Yes (4D)	N/A	This option can be considered in the free store research project under Action 4D.
Consider attaching a build-it centre to the potential free store at Hartland Landfill	Yes (4D)	N/A	
Go beyond the free store at Harland and consider establishing a green business hub in the region	Yes (4D)	N/A	
Create a map of local resources for sharing, rental, reuse, and repair	Yes (4C)	N/A	The CRD's MyRecyclopedia (Section 4.2.7) provides this function.
STRATEGY 5: Support Local Governments in Working Towards Zero Waste and Circular Economy			
Require municipalities to incorporate zero waste plans as part of their community event permitting process	Yes (Action 5A, 13A)	N/A	Although the CRD cannot require municipalities to do this, the creation of a model policy for zero waste event planning could be included in this action.
Implement user-pay/pay by weight model for garbage collection	Yes (Action 5D)	N/A	The user-pay model for garbage collection services provided by the private sector and municipalities supports the intent of these ideas.
Hold specific municipalities accountable for massive increases in waste disposal (e.g. charge municipalities a fine per resident for exceeding waste per capita targets)	No	No	
Create a multi-disciplinary working group to develop the local circular economy	No	No	CRD staff participate in already established working groups focused in this area.
STRATEGY 6: Continue and Enhance Policy Development			
Implement a purchasing policy with other public organizations that encourages products made from reused, recycled or sustainably harvested materials and products that are durable, repairable, reusable, recyclable or compostable	Yes (Action 6A)	N/A	
Set reuse/refill targets across CRD buildings and invest in infrastructure for this	Yes (Action 6A)	N/A	These targets will be considered in the model procurement policies.

FEEDBACK	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Ensure municipal and private waste collectors fine banned materials and contaminated loads at the household level to enforce source separation	Yes (Action 6D, 9G)	N/A	Although the CRD doesn't have the authority to issue generator fines, landfill bans are enforced by the CRD when materials are delivered to the landfill.
Do not explore licensing for waste management facilities	No	No	Licensing programs provide a level playing field, support diversion activity and subsequently reduce garbage disposal. Review of this option is included in Action 6D.
STRATEGY 7: Increase Residential Diversion			
Build a transfer station in the West Shore	Yes (Action 5B, 7B)	N/A	*Note: private facilities already exist in Langford and Sooke.*
Fund return-it centres across the region	Yes (Action 2B, 7B)	N/A	The CRD has an advocacy role in this area.
Build processing plants to ensure more material is recycled	Yes (Action 7C)	N/A	The CRD will encourage local processing of recyclable material
STRATEGY 8: Increase Multi-Family Diversion			
Engage businesses in addition to building managers and strata across the region with waste prevention education	Yes (Action 8A, 9A)	N/A	
Hold landlords, building managers and stratas accountable for organics diversion and glass recycling	Yes (Action 8B)		Municipalities have the authority to regulate activities in multi-family buildings. Licensing programs identified for exploration in the plan have the potential to regulate this activity through the service provider.
Hold waste haulers accountable for organics diversion and glass recycling in multi-family residences	Yes (Action 6D, 8B)		
Enforce mandatory source separation for multi-family residences through fines	Yes (Action 8B)		
Find a solution for multi-family residents to recycle glass	Yes (Action 8B)		
Work with the Province on building code guidelines that ensure adequate space for waste sorting in new developments	Yes (Action 8C)	Revised (8C)	Revised action to note policy recommendations in this area
STRATEGY 9: Increase Industrial, Commercial and Institutional Diversion			
Prioritize 3R education funding for Industrial, Commercial and Institutional sector	Yes (1C, 9A)	N/A	
Give awards to companies who are waste prevention leaders	Yes (1F)	N/A	

FEEDBACK	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Enforce mandatory source separation for the Industrial, Commercial and Institutional sector through fines	Yes (9F, 9G)	N/A	Municipalities have the authority to regulate activities in multi-family buildings. Licensing programs identified for exploration in the plan have the potential to regulate this activity through the service provider.
STRATEGY 10: Support Existing and New Extended Producer Responsibility Programs			
Demand that Extended Producer Responsibility programs be expanded and fees be raised	Yes (10A/D)	N/A	Point-of-sale recycling fees are province-wide and established by the obligated producers and their stewardship agencies.
Advocate for the Right to Repair, mandatory warranties, time frames for parts availability, requirements for online manuals and plans	Yes (10 A/D)	N/A	The CRD can advocate for this when commenting on Extended Producer Responsibility program plan reviews.
Reduce the amount of plastic being landfilled, including microplastics	No	No	Production and distribution of plastic products and packaging are regulated by Federal and Provincial governments.
Fund curbside pick-up of recyclable materials not included in the current recycling program	No	No	Packaging and printed paper materials collected in curbside vs depot programs is determined by Recycle BC.
Fund curbside pick-up of soft plastics	No	No	
Enhance access to soft plastic recycling options, especially for rural communities	No	No	
STRATEGY 11: Increase Organics Diversion and Processing Capacity			
Do not build an organics processing facility at Hartland Landfill	No	No	Enabling language in the Solid Waste Management Plan (11B) is there to allow for exploration in this area.
Partner with local farmers to supply compost from organic processing	Yes (Action 11C)	N/A	
STRATEGY 12: Increase Construction, Renovation and Demolition Material Diversion			
Include a section in the plan for the recycling of fibreglass from marine debris	Yes (Action 12A)	N/A	Construction, Renovation & Demolition material pilots will consider the inclusion of types of structures, including boats
Ask the Province for a building code that incorporates future deconstruction needs and factors in embodied carbon and to create a deconstruction step code	Yes (12C/D)	N/A	The CRD has an advocacy role in this area.
Develop a program that encourages the renovation of buildings over demolition	Yes (Action 12 B/C/D)	N/A	

FEEDBACK	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Support building design and demolition regulations that require re-use/recycling	Yes (12D)	N/A	
Prioritize demolition permits for companies doing deconstruction/salvage work vs. straight disposal	No	No	Municipalities are responsible for building/demolition permits.
Consider attaching a build-it centre to the potential free store at Hartland Landfill	Yes (Section 4.2.6)	No	CRD support for existing organizations/facilities that encourage reuse of building materials is outlined in Section 4.2.6
Develop a construction and demolition materials hub at Hartland	Yes (Section 4.2.6)	No	
STRATEGY 13: Encourage Proper Public Space Waste Management Activities			
Support municipal big/bulky item pick-up day programs	Yes (Action 13F)	N/A	
Ensure all parks and recreational areas in the region have recycling bins	No	No	While the CRD has limited authority in this area, Strategy #13 broadly supports responsible waste management in public spaces
STRATEGY 14: Optimize Landfill Gas Management			
Develop a strategy to optimize landfill gas at Hartland that doesn't require input from new organic material	Yes (Strategies 2, 3, and 14)	N/A	The approach to landfill gas utilization was developed in alignment with Solid Waste Management Plan waste diversion targets and goals — including organic material diversion strategies.
STRATEGY 15: Enhance Hartland Disposal Capacity			
Implement/increase the CRD's fine system for banned materials	Yes (Action 15A)	N/A	
Increase tipping fees to incentivize waste prevention	No	Revised (Action 15A)	Revised action to capture regular review of tipping fee structure.
Incinerate garbage instead of landfilling it	Yes (Action 15D)	Revised (Action 15D)	Revised action to clarify investigation of landfilling alternatives.
Explore gasification options to create energy from solid waste	Yes (Action 15D)	Revised (Action 15D)	
Explore disposal options that integrate organic, solid and liquid waste (integrated resource management)	Yes (Action 15D)	Revised (Action 15D)	
Consider Esquimalt's waste-to-energy plan in the Solid Waste Management Plan	No	Revised (Action 15D)	
Report progress on exploring alternatives to landfilling to the CRD Board annually	Yes (Action 15D)	Revised (Action 15D)	Revised action to include a reporting component.
Mine Hartland Landfill for recyclable materials	Yes (15D)	No	Investigation of emerging technologies may include this activity in the future

FEEDBACK	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Include an action that addresses mountain bike trail loss due to the Hartland 2100 design	No	Revised (Section 4.2.2.1.7)	Revised this section to discuss actions related to trail loss.
Do not design options to extend the use of Hartland Landfill to 2100 and beyond	No	Revised (Section 4.2.2.1.6)	Revised this section to clarify rationale for and potential impact and decision making process for Hartland 2100
Do not remove trees to extend the use of Hartland Landfill to 2100 and beyond	No	Revised (Section 4.2.2.1.6)	
Delay approval of the Hartland 2100 design concept	No	Revised (Section 4.2.2.1.6)	
Conduct an Environmental Impact Assessment before extending the life of Hartland Landfill	No	No	The CRD will adhere to all applicable regulatory requirements. Based on current provincial feedback, the Hartland 2100 design concept does not require an Environmental Impact Assessment.
Build a new landfill in the Western Communities	No	No	Siting and building a new landfill facility has a much higher environmental impact than using the existing landfill and transfer station infrastructure network as efficiently as possible.
Explore how the CRD will move past its reliance on tipping fees for funding, including potential future taxation	No	Maybe require adjusting wording in plan	Revenue received each year currently exceeds expenditures and the remaining funds are placed in a sustainability reserve for future needs when garbage volumes significantly decrease. Alternative funding methods will need to be explored as reserve fund depletes.
Do not accept cruise ship waste at Hartland Landfill	No	No	In Canada, solid waste from cruise ships is managed according to the International Waste Directive under the authority of the Canada Border Service Agency and the Canadian Food Inspection Agency. At Hartland, international waste is received at a higher rate than general refuse.
FEEDBACK UNRELATED TO SPECIFIC STRATEGIES OR ACTIONS IN THE DRAFT PLAN			
Include a regional greenhouse gas emissions calculation in the Solid Waste Management Plan	No	Yes	*Added language to talk about fugitive emissions/portion of regional greenhouse gases that solid waste management and/or the landfill contributes?

FEEDBACK	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Adopt a more aggressive waste reduction target (e.g. the Regional District of Nanaimo's plan)	Yes (Goal 1)	N/A	An aspirational goal to reduce per capita waste volume to 125kg/year was included in the draft plan based on public feedback
Align the regional plan's targets with the City of Victoria's Zero Waste strategy	Yes (plan targets)	N/A	The City of Victoria's Zero Waste strategy target is aligned with the CRD's target. With both following the same trajectory.
Include population growth considerations in the Solid Waste Management Plan	Yes	N/A	Population growth projections are included in Section 3.1.
Do not landfill Class A biosolids	No	No	Management of biosolids is within the scope of the CRD's Liquid Waste Management Plan.
Move commercial access to Hartland Landfill from Hartland Avenue to Willis Point Road	No	No	This is an operational decision and is not part of the formal plan.
Do not move commercial access to Hartland Landfill from Hartland Avenue to Willis Point Road	No	No	
Include a section in the plan on the management of closed contaminated sites (e.g. Blackburn Landfill on Salt Spring Island)	No	No	Closed landfills are not within this Solid Waste Management Plan based on advice from the Province.
Include specific plans to support a circular economy toward carbon neutrality	No	No	As identified by the Province, solid waste management plan's should be guided by the 5R hierarchy. In doing so, plans support reuse, recycling and, ultimately, a circular economy.
Include a section in the plan for the beneficial use of gravel extracted from Hartland Landfill	No	No	Use of aggregate at Hartland is addressed in the Operating Plan
Include an action to reduce wildlife/human conflict by educating the public about solid waste as a wildlife attractant	No	No	Educational information related to this issue exists on the CRD website
Ensure residents are aware of the region's per capita waste rate on an annual basis	Yes (Section 11)	N/A	
This plan should rigorously pursue the 5R waste hierarchy with top emphasis on reduction, reuse and recycling.	Yes	N/A	The strategies and actions in the plan have been designed to emphasize the first 3Rs of the pollution prevention hierarchy

Solid Waste Management Planning — PHASE II FEEDBACK – *Advocacy Groups*

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Plan Direction				
Adopt zero waste as a the goal and engage all sectors of society in pursuing this	Zero Waste BC	Yes (Guiding Principle 1)	Revised (Glossary)	A zero waste definition has been added to the plan
Adopt the zero waste hierarchy as a guide	Zero Waste BC	No	No	The existing pollution prevention hierarchy in the plan aligns with the Ministry guide.
Adopt stronger targets (similar to the Regional District of Nanaimo)	Zero Waste BC	Yes (Goal 3)	No	The Ministry requires regional districts set targets that are achievable, time-bound and demonstrate continuous improvement. The adjustment to the plan's goals provides opportunity to work towards 125kg/yr while implementing the actions identified in the plan over the 10-year time frame.
Amend the Solid Waste Management Plan and submit in 2025 with a target of 125kg/person/year by 2040.	Mount Work Coalition	No	No	
Gather information and add targets for reduced waste generation and waste diversion that at least match the C40 Zero Waste Declaration	Zero Waste BC	Yes (Goal 3)	No	The aspirational goal in the CRD plan exceeds that in the C40 plan. Numerous waste reduction actions have been incorporated into the plan.
Reduce (Rethink/Reconsider)				
Increase tipping fees to align with neighbouring regional districts, ensure kitchen scraps are at a lower fee than the waste and add a mixed waste fee at	Zero Waste BC	No	Revised (Action 15A)	Fees and fines associated with garbage disposal and kitchen scraps processing will be reviewed as part of the implementation of

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
double or more the regular waste tipping fee to encourage waste diversion				the plan's actions to maximize waste diversion.
Work to address fees on rimmed tires	Zero Waste BC	No	No	The Extended Producer Responsibility program in place in BC for tires excludes tires on rims. The fee associated with the drop off of rimmed tires at the Hartland depot limits quantities and directly reflects the cost of preparing them for management through the program.
Add a fee for unsecured loads	Zero Waste BC	No	No	Unsecured loads arriving at Hartland Landfill are already subject to a double charge.
Add an action to promote the local circular economy potential	Zero Waste BC	Yes	No	Many of the actions in the plan are intended to promote a circular economy. The grant money identified in Action 2B would be available to support local circular economy initiatives.
Develop a program for the CRD corporate entity to model zero waste actions	Zero Waste BC	Yes (5A,6A)	No	Could be considered as part of the corporate climate action plan.
Join the Canadian Collaboration for Sustainable Procurement	Zero Waste BC	No	No	Could be investigated with implementation of 6A.
Have the CRD lead by example	Zero Waste BC	Yes (5A,6A)	No	
Work with federal and provincial government on policies to reduce material throughput and waste.	Zero Waste BC	Yes (2E,2F,10A, 10D)	No	
Strengthen the plan's zero waste initiatives by adding concrete plans such as dedicated funding to create business incentives for entrepreneurs; create a public education campaign to draw awareness to Zero Waste, and use tipping fees to incentivize waste reduction instead of encouraging continued use of landfilling as a source of revenue	Mount Work Coalition	Yes (Action 1 A/B/D/E; 2B)	No	
Reduce				

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Developing common regional signage to assist in correct sorting of materials. This should be done in conjunction with member municipalities, businesses and Extended Producer Responsibility programs. An example of this has been done by the Squamish-Lillooet Regional District.	Zero Waste BC	Yes (1A,B,E,7A, 7D,8A,9A)	No	Standardized signage opportunities could be explored with implementation of the plan.
Banning materials before Extended Producer Responsibility programs exist. For example, Metro Vancouver have banned mattresses from their facilities and this ensures materials for the mattress recycling businesses that have arisen.	Zero Waste BC	Yes (5C, 15A)	No	This is a long-standing ongoing practice, landfill bans are implemented when viable alternatives are in place regardless of whether a product is regulated under EPR.
Working with service providers to provide bi-weekly service for curbside garbage collection and weekly service for organics pickup. This has proven to reduce waste in other regions.	Zero Waste BC	No	No	CRD does not have authority to regulate collector's frequency of services.
Targeting funding towards recycling materials that are not currently recycled by encouraging non-profit and private sector innovation such as in the Regional District of Nanaimo's plan.	Zero Waste BC	Yes (2B, 5C)	No	
Educate around and enforce the bans. Feedback at each step of the process (at collection, at transfer and at the landfill) is essential to help educate waste generators on how to reduce their waste. This will require partnership with other organizations that deliver these waste collection and management services. This could require friendly waste educators monitoring collection runs and cameras on waste trucks checking each tip.	Zero Waste BC	Yes (15A)	No	Approaches for executing actions associated with landfill ban education and enforcement will be further explored as plan implementation develops.
Organics				
Consider decentralized composting for high generation areas.	Zero Waste BC	No	No	See revised Section 6. Existing on island processing capacity to be

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Processing scaled to consider the reduction in volumes through reduced food waste generation and backyard composting activity	Zero Waste BC	No	No	utilized and the need for a facility at Hartland will be monitored.
Education and enforcement for bans.	Zero Waste BC	Yes (9G,11A, 15A)	No	
Identify and develop other end market.	Zero Waste BC	Yes (11C)	No	
Hartland Capacity				
Conduct regular waste audits and bi-annual waste composition studies. Work with Extended Producer Responsibility programs to have them pay for their share of waste composition studies. Make the data public. Make changes based on results.	Zero Waste BC	No	No	The next audit is scheduled for 2022. As in the past, Extended Producer Responsibility program stewards will be approached, study's results will be public and initiatives (actions) will be prioritized based on findings.
Understand and restrict waste flows outside of the region.	Zero Waste BC	No	No	While waste flow management is not a specified action in the plan, licensing and policy actions will provide an opportunity to explore opportunities to manage waste material within the region.
Delay any approval for landfill expansion until an updated and amended plan is adopted in 2025.	Mount Work Coalition	No	Revised (Section 4.2.2.1.6)	Revised this section to clarify rationale for and potential impact and decision making process for Hartland 2100
Delay work on landfill expansion and pursue Zero Waste actions instead.	Zero Waste BC	No	No	Provincial legislation requires the CRD to provide disposal needs for the community into the future. While planning for the future is an ongoing item, the work to build out the remaining landfill area wouldn't begin until approximately 2030, a time when this plan's actions are scheduled to have been implemented.
Mandate clear bags for waste as soon as possible.	Zero Waste BC	Yes (5E)	No	Could be considered as a priority when developing a more detailed plan implementation schedule
Ensure the public is aware of the progress (or not to date) through publishing the	Zero Waste BC	Yes (Strategy 1)	No	Annual progress and plan monitoring reports are public

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
annual report along with advertising and creative means such as a waste thermometer at the landfill.				documents. New public engagement opportunities will be reviewed as part of implementation of the plan's actions.
Notify the Ministry of Environment & Climate Change Strategy that the CRD intends to submit an amendment to the plan by 2025 with strategies for attaining this target including an aggressive Zero Waste program, and an independent analysis and testing of alternative technologies such as integrated resource management/gasification/Waste to Energy.	Mount Work Coalition	No	Revised (Action 15D)	Revised action to clarify investigation of landfilling alternatives.
The amended plan by 2025 would be subject to full public consultation during its development to ensure the public has ample opportunity to engage in accordance with Ministry policy.	Mount Work Coalition	No	No	Any future plan amendments would be subject to full public consultation according to Ministry guidelines for solid waste management planning
The Plan submitted in 2021 should contain a placeholder for the Esquimalt waste-to-energy project, subject to a business case being completed.	Mount Work Coalition	Yes	Revised (Action 15D)	Revised action to clarify investigation of landfilling alternatives.
Conduct an independent environmental assessment prior to any plans to expand or alter the design of the landfill, including the spread of biosolids, to protect the natural ecosystem, wildlife, community health and the recreational users of the area.	Mount Work Coalition	No	No	The CRD will adhere to all applicable regulatory requirements. Based on current provincial feedback, the Hartland 2100 design concept does not require an Environmental Impact Assessment.
Burning of Waste				
Include clear language to prevent the use of destructive thermal technologies for managing waste.	Zero Waste BC	No	No	Investigation of emerging technologies will be explored as they relate to the 5R hierarchy.
Supporting Systems				
Outline what the five-year plan review will include like the Regional District of Nanaimo plan.	Zero Waste BC	No	No	Plan monitoring will be reported annually.

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
The climate strategy also notes many outreach programs and campaigns with other partners - the same needs to happen for the Solid Waste Management Plan.	Zero Waste BC	No	No	Roles and partnerships will be further explored through implementation of the plan's actions.
Value the remaining landfill space.	Zero Waste BC	No	No	There is no standardized methodology for valuing landfill space.
Increase funding and staff time to support this plan to ensure it can achieve higher targets.	Zero Waste BC	No	No	There is a $5.8 million annual budget already in place to divert materials from disposal. An additional $360,000 in new funding will also be added to the budget with the approval of the plan and resource requirements will be monitored and adjusted as plan implementation unfolds.
Funding				
Fund part of the solid waste system through property taxes and utility fees.	Zero Waste BC	No	No	As outlined in Section 9, the plan's investments including associated garbage reductions can be funded from existing sources. Future funding needs will continue to be monitored and will take into account new funding opportunities and reduced garbage volumes and associated revenue.
Raise tipping fees to match the Cowichan Valley Regional District rates.	Zero Waste BC	No	No	
Adjust funding sources as waste levels change.	Zero Waste BC	No	No	
Consider a levy and discount system similar to the Regional District of Nanaimo's.	Zero Waste BC	Yes (5C,6C,6D,12F)	No	
Ensure Extended Producer Responsibility programs pay their way.	Zero Waste BC	No	No	The CRD has a long history of developing waste diversion programs in advance of products being added to Extended Producer Responsibility. Transition to fully producer funded programs has historically lead to a reduction in service for the community.

FEEDBACK	STAKEHOLDER	IN DRAFT?	ADDED TO PLAN?	RATIONALE
Apply for grants and support other local partners applications as well.	Zero Waste BC	No	No	This is an ongoing item and there is further opportunity for this built into existing actions.
Ensure fines are applied after education measures and that they are sufficient to change behaviour.	Zero Waste BC	No	Yes (15A)	Education is conducted with warnings issued in advance of fines. Action 15A has been expanded to include a review of the Hartland tipping fee structure in addition to ban enforcement levels.
OTHER FEEDBACK				
Ensure protection of species at risk in Mount Work Park, we are requesting the BC Ministry of Environment & Climate Change Strategy reinstate its longstanding ban (2011 and 2013) on the spreading of biosolids, planned to begin in February 2021.	Mount Work Coalition	No	No	Management of biosolids is within the scope of the CRD's Liquid Waste Management Plan.
Delay the decision to reroute landfill traffic to Willis Point Road until decisions are made to have regional municipalities manage their own waste with Zero waste and new waste to energy technologies.	Mount Work Coalition	No	No	This is an operational decision and is not part of the formal plan.

Note:

- Zero Waste British Columbia's report included a significant number of suggestions for implementation of each action, review of feedback focused on the report's recommendations.

COMMERCIAL ACCESS TO HARTLAND LANDFILL

Consultation Results — March 2021

Operational Context

The Capital Regional District (CRD) is required to move Hartland Landfill's commercial vehicle access point from Hartland Avenue to Willis Point Road for a number of operational reasons, including safety considerations for landfill staff, commercial vehicles and residents accessing Mount Work Regional Park.

The eventual need for this vehicle access change was identified in the CRD's first solid waste management plan in 1987. Although this entrance has always been a secondary access point to the site, this permanent change for all commercial vehicle access will be triggered by the location of the active face in approximately 2023.

The internal roads from the south will eventually be buried in waste, and constructing a wide, two-way roadway from the south is not feasible due to both the internal topography of the site and the location of critical underground gas, lagoon and leachate infrastructure. The cost to move this infrastructure and to build an internal perimeter road is exorbitant and would not meaningfully address the safety issues for staff, contractors and patrons. For these reasons, the only viable route for trucks to safely access future filling areas at Hartland Landfill will be from the north off Willis Point Road.

Two independent traffic studies were conducted to understand the implications of these requirements, including both road safety and greenhouse gas emission considerations.

Following these studies, some area residents expressed strong concerns about how this change will impact commute times and safety for a range of Willis Point Road users. As a result, the CRD Board directed staff to consult directly with Hartland neighbours to answer questions, understand concerns and discuss ideas for risk mitigation.

Consultation with Area Residents

CRD staff published information related to this operational change, including the Bunt & Associates traffic study and a list of questions received from the public, to the CRD website when phase two of the broader solid waste management planning consultation process began on November 18, 2020.

Staff then invited input from Highlands District Community Association, Prospect Lake District Community Association and Willis Point Community Association members on this issue through a number of opportunities, including:

- Emails to each community association outlining available materials and feedback opportunities when consultation began in November 2020
- Hartland Landfill tours for area residents (group tours in November 2020 and individual tours by request following public health orders from December 2020 to February 2021)
- Two focused public meetings via Zoom with area residents about Hartland Landfill road access in January 2021

Seven residents participated in tours and 65 residents participated in one or both of the virtual meetings dedicated to this topic.

During these conversations, CRD staff gave a short presentation explaining the rationale for this operational change and invited participants to share their concerns, questions and ideas for potential safety improvements and community benefits.

These conversations generated the following ideas for Board consideration:

Potential Traffic Infrastructure Improvements

- Construction of a passing lane on the uphill portion of Willis Point Road between Wallace Drive and the landfill entrance
- Construction of pull-outs on the uphill portion of Willis Point Road between Wallace Drive and the landfill entrance
- Construction of bicycle lanes on Willis Point Road between Wallace Drive and Ross Durrance Road
- Design and construction of intersection improvements where Wallace Drive meets West Saanich Road
- Design and construction of intersection improvements where Wallace Drive meets Willis Point Road
- Design and construction of trailhead improvements where the Interurban Rail Trail crosses Wallace Drive
- Implementation of electronic signalling to control commercial vehicle flow on Willis Point Road
- Enhanced winter weather condition road maintenance (de-icing, plowing, etc.) on Willis Point Road
- Ongoing communication with commercial customers to ensure they are using designated truck routes to access Hartland Landfill

Potential Community Benefits

- Expansion of parking facilities for Durrance Lake users
- Expansion of parking facilities on Ross Durrance Road for Mount Work Regional Park
- Improvement of parking facilities on Hartland Avenue for Mount Work Regional Park
- Installation of sound barriers between Hartland Landfill, Willis Point Road and Mount Work Regional Park
- Signage and infrastructure improvements near the Mount Work Regional Park trailhead on Meadowbrook Road
- Siting and construction of a community transfer station for West Shore based residents
- Renaming the portion of Willis Point Road between Wallace Drive and Ross Durrance Road
- Additional police enforcement for speeding, illegal dumping and unsecured loads
- Enhanced illegal dumping education for the region and signage in problem areas near Hartland Landfill
- Securing Mountain Road Forest as parkland if the Habitat Acquisition Trust (HAT) fundraising campaign is unsuccessful; support of HAT's fundraising project in the interim

Area residents also requested that the impacts of this operational change be monitored closely following implementation, and that the Prospect Lake District, Highlands District and Willis Point community associations be invited to participate in conversations about area traffic on an ongoing basis.

In addition to generating a number of risk mitigation and community benefit ideas, these conversations presented an opportunity to clarify a number of questions related to this operational change that were also published to the CRD website. These frequently asked questions have been included for reference as Attachment 3.

Additional Feedback

Both the Prospect Lake District Community Association and Willis Point Community Association submitted additional risk mitigation and community benefit ideas following the public meetings on this topic. These letters have been included for reference as Attachment 1 and 2.

A number of comments related to this operational change, both supporting the shift in commercial access from Hartland Avenue to Willis Point Road and opposing it, were received through the solid waste management planning process and have been included verbatim in Appendix A of this summary's covering staff report ('Finalizing the Solid Waste Management Plan'). Several letters on this issue, both in support of and in opposition to this change, were also submitted to the Board for consideration during the consultation period.

Conclusion

Although moving commercial access to Hartland Landfill from Hartland Avenue to Willis Point Road in 2023 has raised both opposition and support from area residents, this operational change utilizing an existing truck route has the potential to generate a number of traffic safety improvements and community amenities that could benefit both road and recreational users in the area of Mount Work Regional Park and Hartland Landfill.

While the CRD's jurisdiction over some of the ideas presented by area residents is limited, the CRD could provide a funding package to the District of Saanich to support priority road safety improvements from this list.

The perspectives and ideas shared by Hartland neighbours during this targeted consultation process will continue to benefit CRD planning in this area as a package of specific options for Committee and Board consideration is prepared.

Attachments

Attachment 1: Prospect Lake District Community Association Letter – February 4, 2021
Attachment 2: Willis Point District Community Association Letter – February 14, 2021
Attachment 3: Hartland Landfill Access FAQs

Prospect Lake District
COMMUNITY ASSOCIATION

February 4, 2021
RE: Commercial vehicle access to Hartland

To: Mr. Russ Smith
Senior Manager, Environmental Resource Management
Capital Regional District (CRD)

Thank-you for hosting the community conversations about commercial vehicle access to Hartland Landfill last month. As previously discussed, we have canvassed our members and compiled a list of concerns and mitigation suggestions for the CRD to consider as this project progresses.

On behalf of our members, we submit the following list of concerns, both directly related to the operational change, and additional concerns the CRD can support within our community:

1. Vehicle, cyclist, and pedestrian safety, specifically at the following locations:
    a. The intersection of West Saanich Road and Wallace Drive
    b. The intersection of Wallace Drive and Willis Point Road
    c. Rural roads in the area that often have illegal truck traffic (Wallace Drive, Prospect Lake Road)
2. Meadowbrook Road concerns:
    a. Increased use of the trail at the end of Meadowbrook Road has led to concerns including dog poop, traffic, parking, speeding, and litter
3. Illegal dumping
    a. Some notable locations include the BC Hydro right-of-way on Prospect Lake Road and several mailbox pull outs on Prospect Lake Road.
4. Roadside litter from poorly secured loads travelling to the landfill
5. The loss of peaceful parkland in our community due to noise and traffic near Durrance Lake

Further to these concerns, we offer the following mitigation ideas for your consideration:

1. The first, and most urgent way the CRD can help our community is to secure the Mountain Road Forest as parkland. While we are grateful the CRD has committed great deal of money from the Land Acquisition Fund, there is still risk the sale will fall through without enough funding. No amount of sidewalks, parking, infrastructure, or litter pick up can replace a natural forest. With the loss of forest in Mount Work Park and the detrimental effects of the construction at Hartland on the Durrance Lake area, we are

losing greenspace. The single most effective thing the CRD can do for our community is to ensure the Mountain Road Forest fundraising goal is reached.

   a. The CRD should spread awareness of the fundraiser on social media and other available outlets to encourage community fundraising support.
   b. The CRD should commit any outstanding money at the culmination of the fundraising efforts. This land is not going to be for sale again; we cannot miss this opportunity. It would be a tragedy if we missed the target by a narrow margin. We need to add greenspace, not remove it.

2. Meadowbrook Road
   a. Speed limit and/or "respect the neighbours" sign on Meadowbrook Road
   b. Signage at the trailhead indicating "pack in, pack out" for trash
   c. Signage reminding dog owners to pick up poop and control their dogs
   d. Garbage receptacle installed and maintained at trailhead
   e. "No parking" signage along right-hand side of Wildview Crescent, or an assessment of parking issues in the area
3. Illegal dumping
   a. Campaign educating people about illegal dumping, something to make them think of how it affects us all. The average mattress or couch is not an expensive as many think it is to dispose of at the landfill; education goes a long way.
   b. Install no dumping signage with threats of fines in problem areas.
   c. Educate people on how to report illegal dumping.
   d. Clean up illegal dumping quicker.
   e. Expand landfill hours to include Sunday, possibly for residents only.
      i. Many people do their clean-ups and junk removal on weekends. This leads to people wanting to take their loads to the landfill on Sunday, finding the landfill closed, and then dumping illegally in our neighbourhoods.
4. Better road cycling infrastructure
   a. Bike lane along Wallace Drive to connect to Interurban Rail Trail
   b. Safe crossing for cyclists at the termination of the Interurban Rail Trail to cross or continue onto Wallace.
   c. A bike repair station in the area (many cyclists experience flat tires due to debris on the road in the area). Either the intersection of Wallace and West Saanich or Sparton and West Saanich would be excellent choices, as they would capture casual riders on the trail as well as road biking enthusiasts who ride along West Saanich Road.
5. Many residents live here for the access to mountain biking. It would serve a great deal of our community to continue to better the mountain biking trails on Mount Work, specifically ensuring a sustainable multi-use trail network throughout the entire park.

Prospect Lake District
COMMUNITY ASSOCIATION

6. Ensuring the safety of the parking situation for Durrance Lake. Residents do not want a huge parking lot encouraging more visitors than the natural space can handle, but they do want to be sure those parking are doing so safely.
7. Increased by-law enforcement for dumping, illegal truck traffic, and unsecured loads.
8. Increased police enforcement for speeding and other unsafe driving.
9. A transfer station serving the continuously growing Westshore community would have positive impacts for GHG emissions, road safety, and general traffic volume in our community. If it is unreasonable to have the landfill open to residents on Sundays, having a transfer station open could serve weekend users, in addition to these other benefits.
10. As the number of young families in the area is increasing, there is always desire for more playgrounds and other outdoor play areas for children. One idea is that the playground at Hamsterly Beach is in need of an overhaul, with plenty of space available.

As a Community Association Board, we are aware that we are not experts on implementing these changes, but we hope to inspire the CRD to help our community in a tangible way. Thank-you for considering these issues.

Sincerely,

Zoe Hole,

Secretary, Prospect Lake District Community Association

The Willis Point Community Association, 6933 Willis Point Road, Victoria BC, V9E 2A1

February 14, 2021

Colin Plant
Chair, Capital Regional District
625 Fisgard Street
Victoria, BC, V8W 1R7

Copies to:

All CRD Board Members
Hon. George Heyman, Minister of the Environment and Climate Change
Hon. Lana Popham, MLA
Adam Olsen, MLA
Russell Smith, CRD Staff
Larisa Hutcheson, CRD Staff

Dear Mr. Plant,

I am writing on behalf of the Willis Point Community Association in response to the invitation for public comment on the CRD's Solid Waste Management Plan (SWMP).

The CRD is to be commended for looking ahead at the waste disposal requirements of the region up to the year 2045 and beyond. This plan needs to take into account a number of variable factors; population growth in the region, particularly on the West Shore, new technologies and strategies targeting zero waste and the climate emergency facing the region, the province, the nation and the globe. Unfortunately, we find the SWMP wanting in several respects with regard to these factors.

Landfill Expansion-Destruction of Natural Habitat

As the community association representing the Willis Point area, we are particularly concerned about the impact that the current plan will have on the Hartland Landfill, particularly the Plan's goal (based on the current waste reduction targets and strategy) to expand the waste disposal cells to the full perimeter of the property, in the process removing 73 acres of forest and engaging in extensive blasting and quarrying. These 73 acres are immediately adjacent to Mount Work regional park, and indeed have been a de facto part of the park for a number of years. They provide recreational opportunities for the community, particularly the mountain bike community, and are home to a number of endangered plant and animal species. Moreover, destruction of 73 acres of mature second-growth trees undermines the CRD's commitments to address climate change by removing a significant area of carbon sequestration. Continued expansion of the Landfill will also create more methane emissions, notwithstanding the intention to capture a portion of the increased emissions as renewable natural gas.

Explore More Aggressive Waste Reduction Alternatives

The alternative to Landfill expansion is to adopt more aggressive waste reduction strategies so that volumes of waste going to Hartland are significantly reduced, thus extending the life of the Landfill without expanding it and destroying part of Mount Work. There are several such initiatives underway in the region, such as the City of Victoria's Zero Waste Strategy, the waste-to-energy project being

explored by Esquimalt and Saanich's ***One Planet Saanich***. The current SWMP takes no account of these initiatives, and instead relies on a series of underfunded "best efforts" campaigns to reduce waste targets to 250kg per person in the region by 2030, in the process continuing to rely of a steady flow of waste in order to generate tipping fees to fund Hartland's operation. The Plan needs to go much further, as has been recommended by your own Solid Waste Advisory Committee.

Postpone Decision on Hartland Expansion

Given these developments, it would be irresponsible in our view for the CRD Board to approve any planned expansion of Hartland at this time. Instead, new more aggressive waste reduction targets and strategies should be explored and adopted. In the meantime, approval of any expansion of Hartland should be put on hold until progress in reducing waste is assessed.

In specific terms, the WPCA would like approval of any expansion of Harland to be Stage-Gated so that both actual waste reduction achieved in the CRD, and the effectiveness of alternative methods of dealing with MSW be reviewed by Hartland staff and the CRD board in 2028 prior to any approval of plans to expand the landfill.

Beyond planning for a Phase or Stage Gated review in 2028 to verify that there is a need for expansion, it would seem **no approval of expansion plans needs to be part of the current SWMP**.

Since no expansion implementation needs to take place before 2030, that allows time to consider expansion if necessary, and the Board and public will have had ample opportunity to apply new waste reduction strategies. We urge you to amend the SMWP accordingly, before it is submitted to the Ministry of the Environment for approval.

Moving Hartland Traffic to Willis Point Road

In addition to opposing the expansion of Hartland Landfill, we have grave concerns over the plan to redirect commercial truck traffic accessing the Landfill from Hartland Avenue to Willis Point Road, beginning in 2023, and diverting all Landfill-bound traffic in 2040. Despite earlier assurances in 2019 received from CRD staff that there were no plans to divert traffic, it would seem that a decision has already been made to do so. Our Association was offered two public consultation sessions to discuss this "proposed" change and was told that the decision was a "fait accompli", with the only thing left to discuss being mitigation efforts. While earlier discussion had argued for a road change based on "safety considerations" (despite the fact that Hartland Avenue has served quite adequately as the point of entry for the past half century), the rationale now put forward is "operational requirements". We have been told that there is "no viable alternative" to changing the access owing to the configuration of the Landfill which makes construction of internal access roads too expensive and challenging.

Safety Concerns

Unfortunately, the process of dealing with the traffic question has been less than transparent. That said, if this change is going to happen regardless of community opposition, then it is important that the CRD address a number of safety, traffic circulation and perception issues that will inevitably arise. The transfer of heavy truck traffic on to Willis Point Road will lead to several safety concerns, notably icy surfaces in winter on the straight 9 percent grade, and the impact of heavy traffic on the numerous

mountain bikers, recreational and competitive cyclists that regularly use the road. A proper bike lane should be constructed up to the point where trucks will enter the Landfill.

Willis Point Road is also heavily used by recreational users of Durrance Lake in Mount Work Park and McKenzie Bight in Gowland Tod Park, by commuters using the route through the Highlands to the West Shore and by residents of Willis Point. Willis Point Road is our only secure means of reaching the rest of the region. While the Bunt traffic study argues that Willis Point Road is designed for a heavier traffic load than Hartland Avenue, it ignores that fact that unless there is smooth traffic flow on to and off Willis Point Road, there will be traffic congestion and safety issues affecting residents, school bus operations, casual users and indeed the trucks accessing the Landfill. The biggest problem is the intersection at the junction of Wallace Drive and West Saanich Road.

Intersection of Wallace Drive and West Saanich Road

This intersection was not designed with heavy traffic loads in mind. It has a pull off area for residential mail collection and is also where the Interurban bike trail terminates. At the same time, it will be where heavy trucks collect to turn either north (left) on to West Saanich Road or south (right). In either case, trucks turning north will block sight lines and vehicles turning right. Wallace Drive joins West Saanich Road at the bottom of a hill where south bound traffic tends to pick up speed. Unless this intersection is redesigned, there will be serious safety and traffic concerns. The response from CRD staff during the traffic consultation was not encouraging. They noted the problems raised but indicated that the responsibility for addressing them lay with the District of Saanich. We are concerned that funding the necessary redesign and reconstruction will not be a priority for Saanich as relatively few Saanich residents will be directly affected. Therefore, it is important that the CRD recognize its responsibility to allocate funding for this work. If internal roads were constructed within Hartland to avoid shifting access to Willis Point Road, this would be feasible but costly. As the CRD will be saving considerable funds by using the public infrastructure of Willis Point Road, provided and funded by Saanich, it should allocate some of these savings to address the imminent real traffic and safety concerns of regular users of Willis Point Road.

Truck Bypass on Willis Point Road Northbound

Given the regular use of this road by Willis Point residents and the likely delays that will occur when traffic is stuck behind a slow moving heavily-loaded truck going uphill, we believe it is essential that a couple of truck pull-offs be created, with appropriate signage to ensure that trucks moving below 40 kph comply. The road speed limit is 60 kmph (although it is constructed for higher speed) and if traffic is impeded, there is a risk that drivers will take chances to pass despite only limited areas to do so. The traffic report, which argued against the construction of a passing lane, claims that traffic will be held up by less than a minute but that assumes that all trucks will maintain a speed of 60 kmph on the uphill grade, which is most unlikely. The provision of pullouts would be a compromise between doing nothing and risking impeding traffic and inviting unsafe driving, and constructing a full passing lane, which has apparently already been ruled out.

Renaming Lower Part of Willis Point Road

In addition to addressing concrete congestion and safety concerns on Willis Point Road and at the intersection of Wallace Drive and West Saanich Road, there is an additional, low-cost measure that the CRD can take to address concerns of Willis Point residents. In the minds of many, there will be an

unfortunate association of Willis Point with the Landfill once the new access point becomes the primary entry for trucks. This could have an impact on public perceptions, ultimately affecting property values, leaving the impression that Willis Point Road is the "access to the dump". We have discussed and support re-naming the lower part of Willis Point Road, the section running from Wallace Drive to Ross Durrance Road. Willis Point Road would begin at Ross Durrance Road and run north to connect Willis Point residences with the southern section of the road. We propose that the new name be connected to the prime function of this section of the road, which is to access Mount Work Park. The name "Mount Work Parkway" has been suggested.

Fortunately there are no residences on the part of the road to be re-named, and only one street sign (at Wallace Drive) to be changed. The new Residuals Treatment Plant is designated as "280 Willis Point Road". It has already been sign-posted so one small address change would be required but otherwise a change of road name would have no postal or property registration implications. While a cosmetic change, this would decouple the name "Willis Point" from the Landfill and is something that the Willis Point Community Association strongly endorses and advocates. We hope the CRD will work with Saanich to effect this name change.

Biosolids

We are one of the communities most affected by changes to the use of Hartland. Our community suffered through two years of construction as the new sewage pipeline was constructed and there continue to be occasional road interruptions. We have been subjected to odour problems arising from the commissioning of the Residuals Treatment Plant (RTP), which are ongoing. We are also concerned about the plan to spread biosolids at Hartland, once the RTP begins to produce them, as this could affect human, plant and animal life in areas adjacent to the Landfill. Given these and other concerns, we are hopeful that the CRD Board will review our input carefully and take action where possible.

Summary and Thank you

The CRD SWMP is important to the WPCA because of both proximity and general love of nature and concern for the environment among Willis Point residents. I believe that the general environmental and climate concerns expressed affect the greater community of the CRD well beyond Willis Point.

I thank you for the opportunity to provide the views of the Willis Point Community Association on the current draft of the Solid Waste Management Plan and related traffic issues.

Yours sincerely,

Daniel J. Kenway, P.Eng
President

Hartland Landfill Access

Frequently Asked Questions

Capital Regional District | January 2021

1. Why will commercial vehicle access to Hartland Landfill be moved to Willis Point Road?

The CRD is required to move the commercial access for Hartland Landfill to Willis Point Road by 2023 for a number of operational reasons, including safety considerations for landfill staff, commercial vehicles and residents accessing Mount Work Regional Park.

Willis Point Road has a single, large hill with a max grade of 8% while current transportation routes to and within Hartland Landfill have grades of up to 15%. BC's Landfill Criteria suggests a maximum grade of 10% for large vehicles in this environment as the probability for trucks to rollover and cause accidents increases when loaded commercial vehicles are travelling excessively steep grades.

Due to its internal topography, the only viable route for trucks to safely access future filling areas at Hartland Landfill will be from Willis Point Road to the north of the landfill. An independent traffic study was conducted to understand the implications of these requirements, including both road safety and greenhouse gas emission considerations.

2. How will road traffic be impacted by this change?

The findings of the independent Hartland Traffic Study suggest that moving commercial access to Willis Point Road will improve overall traffic safety in the area. As a rural collector street, Willis Point Road is designed for higher vehicle use than Hartland Avenue. Willis Point Road's current use is less than half of what it was designed for (up to 5,000 vehicles per day) and this capacity is forecast to remain at least 20% below the typical threshold for this kind of road when landfill access is relocated to Willis Point Road. Landfill-related trucks will account for less than 15% of traffic on Willis Point Road and West Saanich Road when access to the landfill is moved from Hartland Avenue.

Starting in 2023, a daily average of 120 commercial trucks (80-90 large load trucks and 30-40 small load trucks) will access Hartland Landfill via Willis Point Road instead of Hartland Avenue. Starting in 2040, a daily average of 350 vehicles including both commercial haulers (120 per day) and residents (230 per day) will access Hartland Landfill from Willis Point Road when all access is relocated to the north in the future.

3. How has the Willis Point entrance been used in the past?

Originally built to provide access to a composting operation for yard and garden material, this entrance was constructed in the early 1990s. The composting facility operated for approximately 10 years and at its peak served 100 vehicles/day.

Hartland Landfill Access

Frequently Asked Questions

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4. How will GHG emissions be impacted by the relocation of commercial access to Hartland?

The findings of the independent Hartland Traffic Study suggest that moving commercial access to Willis Point Road will reduce greenhouse gas emissions by 2-3% as a result of lessening the steepness and total climb of trucking routes along internal and external roads.

5. How will parks users be impacted by the relocation of commercial access to Hartland?

Commercial vehicles are currently required to access Hartland Landfill through the Mount Work Regional Park trailhead and mountain biking parking lot. Relocating commercial access to Willis Point Road will create the opportunity of a safer, more inviting Hartland Avenue trailhead through the Mount Work management planning process.

6. How long has the CRD known that it would be required to access Hartland Landfill from Willis Point Road?

Future landfilling in the northwest corner of the landfill site was first described in the regional solid waste management plan that was approved by the CRD Board in 1987.

7. When was the need to access Hartland Landfill from Willis Point Road disclosed?

The first solid waste management plan to reference this eventual operational need was made public in 1989 following Provincial approval of the plan. Constructed in the early 1990s, the Willis Point Road entrance has always been a secondary access to the Hartland site yet the requirement to make it the primary access point for commercial vehicles will be triggered by the location of the new active face starting in 2023.

8. Why can't the future filling areas be accessed from the existing road within the landfill that allows access to the new Residuals Treatment Facility?

The Residuals Treatment Facility, part of the region's wastewater treatment infrastructure, is located in the northwest corner of the landfill site and is currently accessed from the Willis Point Road entrance due to the same safety and efficiency reasons being considered for all commercial vehicle access to this part of the Hartland property.

Hartland Landfill Access

Frequently Asked Questions

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9. What would be the cost of ensuring access to the new fill cells from the existing access at Hartland Avenue?

The internal roads from the south will eventually be buried in garbage and constructing a wide, two-way roadway from the south is not feasible due to both the internal topography of the site and the location of critical underground gas, lagoon and leachate infrastructure. The cost to move this infrastructure and to build an internal perimeter road is exorbitant and would not meaningfully address the safety issues for staff, contractors and patrons. For these reasons, the only viable route for trucks to safely access future filling areas at Hartland Landfill will be from the north off Willis Point Road.

10. Since it is planned that non-commercial traffic will continue to access the landfill from Hartland Avenue for the next 20 years, how will this waste reach new filling areas?

Non-commercial vehicles do not access the active face directly—they deposit waste into bins in the residential drop-off area. If bound for the active face, waste collected here is transported in a transfer bin weighing less than 10 tonnes (much smaller than a typical commercial truck that weigh up to 30 tonnes). The daily volume received at Hartland amounts to approximately 8-10 loads per day that will continue to be transported to the active face using internal roads until approximately 2040 when these roads will be buried in garbage. Smaller commercial vehicles that may pose safety concerns will also access the new filling area via Willis Point Road starting in 2023.

11. What additional provisions will be made for the safety of vehicles and cyclists when trucks are diverted to Willis Point Road?

This portion of Willis Point Road is already a designated truck route and, as such, is designed and maintained to a higher standard. Any safety recommendations—for example, the opportunity to reduce the speed of vehicles turning right from Wallace Drive to West Saanich Road—will be submitted to the District of Saanich for consideration by the Traffic Engineer. The CRD currently works with Saanich to increase the level of deicing on Hartland Avenue and a similar program could be explored for Willis Point Road.

12. Will the CRD consider widening and constructing bike lanes on either side of Willis Point Road as far as the turnoff to Hartland?

This suggestion can be included in the mitigation opportunities that will be considered by the CRD Board in spring 2021.

13. What mitigating factors will be undertaken to ensure that vehicles that regularly use Willis Point Road for access to their community are not impeded by this truck traffic?

The current design of this road does not cause commercial trucks to travel below the speed limit. Two passing lane options were analyzed and it was found that their maximum impact would be reducing travel times westbound on Willis Point Road by 15 and four seconds respectively. Even with this operational change in place, landfill traffic will account for less than 15% of all traffic on Willis Point Road.

14. Although a passing lane has been rejected, would consideration be given to one or to pull-outs on the uphill with signage requiring trucks travelling below 50 km/hour to pull over?

This suggestion can be included in the mitigation opportunities that will be considered by the CRD Board in spring 2021.

15. How will the CRD ensure that trucks turning off or on to West Saanich Road from Wallace Drive can do so safely while not impeding through traffic?

The traffic study recommended that Saanich consider options to reduce vehicle turning speed by reducing the turning radius while still providing sufficient space for large vehicles at this location.

16. Will the CRD provide assurance that the entry and exit point to the landfill from Willis Point will not provide priority right of way to trucks, and that through traffic (north or south bound) will not be impeded or forced to yield to turning truck traffic?

The CRD has no plans to provide priority right-of-way to trucks turning on to Willis Point Road from the landfill site. There is a turn lane for trucks turning off of Willis Point Road into the landfill site.

17. What measures or amenities is the CRD considering to mitigate the impact of this change on residents of Willis Point?

The CRD is currently seeking public feedback on this operational change to understand concerns and potential mitigation opportunities. Suggested measures from residents will be considered by the CRD Board in spring 2021.

18. What are your safety plans for the start and end of Interurban trail as there is no safe way to cross Wallace Drive?

Wallace Drive and the Interurban Trail are owned and managed by the District of Saanich. The CRD does not have any authority to make changes to these roads and trails. The traffic study for the landfill identified the opportunity to create a

Wallace Drive crossing either at the West Saanich Road intersection or at a safe location further from West Saanich Road than the existing trail entrance.

19. How do you conclude that Willis Point Road has more capacity than Hartland Avenue?

Willis Point Road has been designated as a truck route by the District of Saanich and is designed to accommodate more vehicles than Hartland Avenue since it has milder grades, paved shoulders, wider curves and fewer driveways.

20. What is the time of day that you measured the number of vehicles on each road for the traffic study?

Vehicle use on Willis Point Road was measured for nine full days. Vehicle use on Hartland Avenue and West Saanich Road was measured for three full weekdays. Additional data was collected at the study intersections on weekdays from 7:30 - 9:30 am and 3:30 - 5:30 pm as well as on Saturdays from 1:00 - 3:00 pm.

21. If the Hartland 2100 design concept isn't needed, will traffic access still need to move to Willis Point Road?

Yes, the Willis Point Road entrance for Hartland Landfill will need to become the primary access point for commercial vehicles by approximately 2023 to ensure safe access to existing filling areas in the northwest corner of the landfill.

22. Willis Point Road was never designed to accommodate 300 cars on the side of the road for parking—how was this traffic accounted for in the independent study?

The transportation study accounted for all vehicles travelling on Willis Point Road between Wallace Drive and the existing landfill entrance. All cars that travelled along this road section were measured including those that parked on the side of Willis Point Road to access the nearby regional parks. Managing parking at nearby regional parks is not included in the scope of the Solid Waste Management Plan but can be addressed as part the ongoing Mount Work Park Management Plan.

23. Who has the overall traffic and design information for both Willis Point Road and Hartland Avenue?

Both roadways are managed and maintained by the District of Saanich.

Hartland Landfill Access

Frequently Asked Questions

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24. There is a much higher frequency of accidents on Willis Point Road than Hartland Avenue. Why was this not considered in the traffic study and how do you consider what is safer without doing so?

The traffic study considered the frequency of collisions and identified potential safety improvements for the District of Saanich to consider. A variety of factors was considered to evaluate the vehicle access routes including collision frequency, a street design and safety review, vehicle capacity, street grades, active transportation, vehicle emissions and vehicle circulation on the landfill property. Design changes to the intersection of Willis Point Road and Wallace Drive can be discussed with the District of Saanich to ensure drivers are making safe decisions as they move through that area.

25. Why is it not possible to build a new internal road to access future landfilling areas? Could CRD staff please confirm whether or not it is possible to engineer a road on site from Hartland Rd that meets the grade requirements?

The internal roads from the south will eventually be buried in garage and constructing an alternate wide, two-way roadway from the south is not feasible due to both the internal topography of the site and the location of critical underground gas, lagoon and leachate infrastructure. Landfill sites produce significant volumes of landfill gas and leachate and any damage to the required buried infrastructure will pose significant risk to road users as well as the environment. The cost to move this infrastructure and to build an internal perimeter road is exorbitant and would not meaningfully address the safety issues for staff, contractors and other users. Significant roads are not typically constructed on top of waste and hence the only viable route for trucks to safely access future filling areas at Hartland landfill will be from the north side off Willis Point Road.

26. Given the traffic levels and safety concerns on Hartland are already high, why wait until 2023 to move the access to the safer route?

Moving commercial access to the north right now would make it difficult to access the current active face of the landfill which is closer to the south end of the property. Implementing use of the north access in 2023 aligns with our timeline for landfilling of the new cells along the northwest portion of the site.

27. Given the bins are currently sitting outside of the Landfill's berm, are they not technically sitting exposed to the Prospect Lake watershed?

The CRD will move the bins from their current location to a new space within the landfill footprint in summer 2021.

28. Will CRD commit to ensuring excellent winter road safety on Willis Point Road?

The CRD currently works with the District of Saanich to increase the level of de-icing on Hartland Avenue and a similar program could be explored for Willis Point Road.

29. Would it be reasonable to consider the other road users, number of residential driveways and side roads as factors in assessing the safety of Willis Point Road?

Additional provisions will be made for the safety of other road users when trucks are diverted to Willis Point Road.

30. What measures will be taken to decrease the risk to bike park users as they cross Hartland Avenue in front of the public access to Hartland Landfill?

Significant safety improvements were made at this intersection near the Hartland Landfill entrance in 2018 and 2019, including a new stop sign for downhill traffic leaving the landfill and additional parking to alleviate congestion. Staff will continue to monitor the safety and performance of this intersection.

31. Is there any possibility that a change of name for the lower part of Willis Point Road might be considered?

This suggestion can be included in the mitigation opportunities that will be considered by the CRD Board in spring 2021.

32. Why can't a road to Hartland Landfill be built from the Western communities?

The construction of a new road to Hartland Landfill from the Western communities would be very challenging to build, both from a land availability perspective and due to the extremely high cost of this type of project—particularly when access to the landfill is already available via a designated trucking route along Willis Point Road.

33. If Willis Point Road didn't exist what would your plan be?

CRD staff would consider the needs of all potential road users, study alternate route options and build a trucking route similar to Willis Point Road..

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ERM 21-14

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, APRIL 21, 2021

SUBJECT **Organics Processing Next Steps**

ISSUE SUMMARY

To provide a recommendation on next steps regarding an in-region organics processing facility.

BACKGROUND

At its meeting of March 13, 2019, the Capital Regional District (CRD) Board directed staff to proceed with the next steps in establishing an organics processing facility (either composting or anaerobic digestion (AD)) at Hartland Landfill. In response to this direction, staff have undertaken stakeholder consultation with municipalities and private haulers to better understand feedstock availability, have conducted a market sounding with respondents to the 2018 Request for Expressions of Interest (RFEOI) on in-region organics processing alternatives and completed a financial and environmental screening on RFEOI results.

ALTERNATIVES

Alternative 1

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

That the Capital Regional District continue with the status quo of hauling and processing organics to private sector facilities on lower/mid-island, and signal to the market, through this resolution, that should the private sector establish an in-region facility, the Capital Regional District would consider working with municipalities to commit feedstock, pending pricing, greenhouse gas reductions, odour, location, and other environmental considerations.

Alternative 2

That staff continue working towards developing a Capital Regional District led small scale organics processing facility located at Hartland Landfill, and return to the Environmental Services Committee for a decision on technology selection (composting vs anaerobic digestion) and municipal funding before initiating next steps on procurement.

IMPLICATIONS

Intergovernmental Implications

Consultation was undertaken with staff in the six municipalities that currently provide curbside collection services, along with private haulers currently using the Hartland transfer station, to determine feedstock availability and interest in participating in a CRD-led in-region organics processing facility. Key findings of this consultation include:

- Esquimalt, Oak Bay, Sidney, View Royal, Saanich and Victoria have organics collection programs. The majority of municipal controlled feedstock (approximately 88%) comes from the District of Saanich and City of Victoria.
- Of the municipal feedstock available for an in-region organics facility, the majority (approximately 65%) is yard and garden waste. The remaining is kitchen scraps.
- The District of Saanich currently co-collects kitchen scraps with yard and garden waste, and the City of Victoria is actively exploring the co-collection option. It would be challenging and costly to shift operations to separated streams, and doing so could result in potentially higher greenhouse gas (GHG) emissions and decreased service levels for residents. Therefore, it would be advantageous for any CRD-led processing option to be able to process mixed feedstock.
- Private haulers currently haul approximately 13,000 tonnes of organic material to the Hartland transfer station annually. Private haulers confirmed that they are not in a position to make long-term feedstock commitments to a Hartland project, and will haul feedstock to whatever transfer station provides the most cost effective option. The current tipping fee at Hartland is $120/tonne. The Board has approved raising this to $140/tonne beginning January 2022, which staff anticipate will reduce the volume of private sector material being received at Hartland.

Table 1: Approximate Feedstock Collection in 2019

Feedstock Source	Tonnes per year
Municipal Kitchen Scraps	4,000
Municipal Yard and Garden Waste	10,800
Municipal Mixed Organic Waste (50/50 Kitchen scraps and Yard Waste)	9,000

Through the consultation, municipal staff indicated they would be interested in learning the results of a non-binding procurement, including understanding the cost per tonne of processing organics material, before municipalities make commitments on tonnages of kitchen scraps, yard and garden waste, or both substrates. Municipal staff also indicated that potential reduction in GHG emissions should be considered when evaluating technology alternatives and procurement outcomes.

Financial Implications

The CRD retained Deloitte to conduct a market sounding with RFEOI respondents to better understand market conditions for constructing a facility at the Hartland Landfill and clarify results of the RFEOI submissions. Results of the market sounding, coupled with RFEOI results, were then used by Reshape Strategies to evaluate potential costs and environmental benefits of an organics processing facility located at Hartland (either composting or AD), against the status quo alternative of operating a transfer station at Hartland and processing materials out of region. Results of Reshape's analysis are included in this report as Appendix A.

The Reshape analysis considered two feedstock scenarios intended to 'bookend' the range of feedstock availability, both assumed feedstock ratio of 70% kitchen scraps, 30% yard and garden waste:

- Scenario 1: A Small Plant with capacity for a flat volume of 10,000 tonnes per year (i.e. no change over time).
- Scenario 2: A Large Plant with starting capacity volume of 24,700 tonnes per year in 2024, increasing at 1% per year.

The CRD's 2018 RFEOI provided Scenario 1 as a guaranteed, baseline volume, and Scenario 2 as a potential volume. The CRD's consultation identified that municipalities currently collect much higher volumes of yard waste to kitchen scraps and currently control approximately 8,500 tonnes of kitchen scraps, making the Small Plant scenario most closely aligned with currently available feedstock blend. Both composting and AD facilities can conceivably take different blends of feedstock, and further analysis would be required to understand how feedstock blends would impact the overall business case.

The Reshape analysis then evaluated the RFEOI results to identify a levelized net processing cost ($/tonne) for three processing alternatives:

- **Status Quo:** organic material received at Hartland is trucked to third party composting facilities out of region under a contract to the CRD. The analysis assumes that current per tonne processing costs (including transportation) continue into the future, with an annual escalation.
- **Composting:** organic material received at Hartland is processed in a new dedicated in-vessel composting facility located at Hartland. Expected revenues from compost sales are included in the calculation of net processing cost to the CRD.
- **Anaerobic Digestion:** organic material is processed in a new AD facility located at Hartland. The AD facility does not include a biogas upgrader. Instead, biogas from the AD facility is sent to the landfill gas upgrader and renewable natural gas (RNG) is sold to FortisBC under the same terms and prices as RNG from landfill gas.

All alternatives consider a 20-year project life. Results of Reshape's Analysis are summarized in the table below.

Table 2: Levelized Net Processing Costs ($/tonne)

Annual Volume	**Small Plant** (10,000 tonnes fixed)	**Large Plant** (24,000 tonnes increasing 1%/year)
Processing Capacity	10,000 tonnes	30,000 tonnes
Levelized Net Processing Costs ($/tonne)		
Status Quo (composting out of region)	$168	$168
Composting (at Hartland)	$240	$150
Anaerobic Digestion (at Hartland)	$276	$148

This analysis found that a smaller-sized composting facility located at Hartland, utilizing only the feedstock currently available from municipalities, would not be cost competitive against the status quo option of hauling kitchen scraps to a large out of region facility for composting ($240/tonne vs $168/tonne). However, a small Hartland AD plant with a $108/tonne cost premium ($276/tonne vs $168/tonne or $1.08million/year) could be economic if enough value was placed on the GHG benefits associated with an AD facility.

At larger scales, either composting or AD at Hartland could be cost competitive, or even result in cost savings when compared to the status quo option. As there isn't sufficient municipal tonnage to fully supply a larger facility (assuming a 70% kitchen scraps, 30% yard and garden waste ratio), a CRD/Hartland facility would require feedstock from other sources.

Environmental & Climate Implications

The Reshape analysis also considered the GHG implications of each of the three processing scenarios. Results of this evaluation are included in Table 2, below.

Table 3: Operating GHG Emissions (kg/Co2-e/tonne feedstock/year)

	Status Quo	**Composting** (at Hartland)	**Anaerobic Digestion** (at Hartland)
Transport emissions	10.7	-	-
Composting	90.0	90.0	9.0
Shipping Compost	9.7	9.7	1.0
Other Operations	45.8	45.8	48.0
RNG- pipeline fugitive	-	-	0.2
Net Avoided Natural Gas	-	-	(49.5)
Total	156.1	145.5	8.7

This analysis found that building a new dedicated composting facility at Hartland would result in a very small decrease in cumulative emissions compared to status quo, however building a new dedicated AD facility at Hartland would result in significantly higher GHG emission reductions. This is because biogas produced by the AD facility would result in net avoidance of natural gas. As organics are already kept out of the landfill, the Reshape analysis excludes emissions reductions from avoiding landfilling in all scenarios. There are substantial differences in GHG (CO2-e) emissions among the alternatives. In particular, AD alternatives result in net reductions of 40,000 – 100,000 tonnes of GHG (CO2-e) over 20 years compared to composting.

Based on the Reshape analysis, reducing GHG emissions by building a small scale AD facility at Hartland results in a cost premium of $1,080,000/year or a $515 per tonne of CO2-e value of carbon. For comparison, the current BC carbon tax is $45/tonne and Metro Vancouver recently adopted an internal price of carbon policy of $150/tonne.

Social Implications

Staff also evaluated the current and future planned processing capacity for organic materials on Southern/Mid Vancouver Island. There is currently excess private sector compost processing capacity on Southern/Mid Vancouver Island with three on-island facilities that have the ability to receive and process CRD combined kitchen scraps and yard waste, with an approved annual capacity of 71,500 tonnes, and an additional 44,000 tonnes of capacity currently under construction at the Circular Waste BC facility in Nanaimo, bringing the total annual capacity up to 115,500 when complete. Additionally, there are well-established alternatives for processing yard and garden waste within the capital region. There are no AD facilities on Vancouver Island with

capacity for the CRD organic material. If the CRD were to construct a Hartland facility, this facility would compete for feedstock with out of region composting facilities, and in-region yard waste processing facilities.

Solid Waste Management Plan Implications

The Solid Waste Management Plan Phase two consultation identified both support and opposition for siting an organics processing facility at Hartland Landfill. In their formal response, District of Saanich requested that the draft Solid Waste Management Plan reference the additional benefits a regional organics processing facility would have associated with the GHG emissions savings from the reduced transportation of organics outside of the region. City of Victoria identified organics diversion as a priority strategy to support the City's Zero Waste strategy.

The final draft Solid Waste Management Plan indicates that the CRD intends to continue to provide the community with receiving and transport services for kitchen scraps through the transfer facility at Hartland while monitoring in-region and on island organics processing capacity. In response to a need to secure additional processing capacity for the community, the plan also indicates that a facility at Hartland may also be pursued in an effort to reduce the GHG emissions associated with the current transportation and processing model.

CONCLUSION

Staff have undertaken stakeholder consultation with municipalities and private haulers to better understand feedstock availability, have conducted a market sounding with respondents to the 2018 RFEOI on in-region organics processing alternatives and completed a financial and environmental screening on RFEOI results. This evaluation found that there are economies of scale when considering organics processing alternatives against the status quo, that municipalities control limited feedstock, and that an organics processing facility would need to compete for feedstock with the Private Sector, however that building an AD facility at Hartland would result in GHG emissions reductions.

RECOMMENDATION

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

That the Capital Regional District continue with the status quo of hauling and processing organics to private sector facilities on lower/mid-island, and signal to the market, through this resolution, that should the private sector establish an in-region facility, the Capital Regional District would consider working with municipalities to commit feedstock, pending pricing, greenhouse gas reductions, odour, location, and other environmental considerations.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Larisa Hutcheson, P. Eng., General Manager, Parks & Environmental Services
Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

ATTACHMENT

Appendix A: Organics Processing Options: Screening Report (Reshape)

Organics Processing Options: Screening Report

Prepared for:
The Capital Regional District

FINAL
March 25, 2021

RNG Pricing Redacted

RESHAPE STRATEGIES

EXECUTIVE SUMMARY

This report presents a screening-level analysis of a dedicated composting or anaerobic digestion (AD) facility for CRD organics located at Hartland Landfill. Alternatives are compared to the CRD's status quo costs for organics disposal.

Alternatives and scenarios are compared based on levelized net processing cost. This is calculated as the present value of expected project costs less any revenues from byproducts of the process (e.g., biogas and/or compost) divided by the present value of processed volumes.

The net processing cost reflects expected capital and operating costs. These are derived from information provided to CRD by technology providers in response to CRD's 2018 RFEOI. We note the indicative capital costs from the 2018 RFEOI are higher than others we have seen in recent literature and other processes, particularly for AD. The results of this study are very sensitive to capital cost assumptions.

Capital costs are amortized based on an indicative private sector model. There is very little information on hurdle rates for private proponents, which can vary with technology, market conditions, and specific contract terms. Actual capital and financing costs can have a large impact on net processing costs and also the ranking among different options. These will need to be confirmed through a competitive bidding process and detailed negotiations.

There is some evidence that AD projects tend to require higher hurdle rates, reflecting the higher capital intensity and technical complexity of AD, as well as the added risks and uncertainties surrounding the value of raw biogas or upgraded renewable natural gas (RNG). However, these risks can also be mitigated by contract terms and conditions. For example, B.C. is one of the few jurisdictions that currently offers long-term fixed price contracts for biogas / RNG sales.

The report includes sensitivity and scenario analyses on these and other key assumptions.

This study also includes a comparison of GHG (CO2-e) emissions for various options. These are derived from a recent lifecycle GHG (CO2-e) analysis prepared by Stantec (adjusted for alternate volumes and sizing scenarios in this study).

This screening study is to support strategic decisions and procurement design for organics processing, including technology specification and sizing targets. Some important findings of this screening analysis include the following:

- There are economies of scale for both composting and AD.
- The estimated net processing cost for a dedicated composting or AD facility is higher than status quo at small facility scales. However, at larger scales both composting and AD at Hartland could result in cost savings relative to the status quo, even if the facility is initially oversized to accommodate further growth of organics volumes. Filling spare capacity in early years with volumes from third parties could provide additional cost savings for both options.
- Composting appears to be much cheaper than a stand-alone AD plant at small scales. However, the cost difference is reduced at larger scales (and any differences at larger scales are within the range of uncertainty around inputs to the analysis).
- The proposed LFG upgrader and FortisBC Energy Inc. (FEI) interconnection have sufficient capacity to handle extra biogas volumes from organics, even under high LFG volume scenarios. Co-processing biogas from AD would not affect the expected returns on the LFG upgrader (which are based on LFG volumes only), but could reduce the risks posed by low LFG volumes as well as lower costs for processing organics.

- There may be additional savings from AD if spare digester capacity in the Residuals Treatment Facility can also be used on an interim basis for processing organics to defer some of the capital for new food waste digesters. This would not necessarily require any co-digestion of food waste and biosolids.
- Results are not very sensitive to the value of compost. However, the results are very sensitive to the price of RNG.
- There are substantial differences in GHG (CO2-e) emissions among the alternatives. In particular, AD results in net reductions of 40,000 – 100,000 tonnes of GHG (CO2-e) over 20 years compared to composting.
- The Small Plant AD scenario has a levelized net processing cost that is $108 per tonne higher than the Status Quo. However, The Small Plant AD scenario also results in significant additional GHG emissions reductions. A shadow value of carbon set at $515 per tonne GHG (CO2-e) would make the AD project equivalent in cost to the Status Quo operation. For the Large Plant scenario, because the AD project is already lower cost than the Status Quo, it has a negative shadow value of carbon, meaning a Large Plant AD project achieves GHG reductions and cost savings.

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STATEMENT OF LIMITATIONS

This report has been prepared by Reshape Infrastructure Strategies ("Reshape") for the exclusive use and benefit of the Capital Regional District ("Client"). This report represents the best professional judgment of Reshape, based on the information available at the time of its completion and as appropriate for the scope of work. Services were performed according to normal professional standards in a similar context and for a similar scope of work.

ABBREVIATIONS

AD	Anaerobic Digestion
CRD	Capital Regional District
DR	Discount Rate
FEI	FortisBC Energy Inc (gas utility)
GHG (CO2-e)	Greenhouse Gas (CO2 Equivalent)
GJ	Gigajoules
IRR	Internal Rate of Return (Unlevered)
kWh/MWh	Kilowatt-hour/Megawatt-hour
LFG	Landfill Gas
MFA	Municipal Finance Authority
PV	Present Value
RFEOI	Request for Expressions of Interest
RNG	Renewable Natural Gas

1. INTRODUCTION

Capital Regional District (CRD) receives organics from member municipalities at Hartland Landfill ("Hartland"). These organics are currently transported to 3rd-party composting facilities for processing. CRD is exploring the development of a dedicated facility to process organics at Hartland.

In 2018, CRD issued a request for expressions of interest (RFEOI) to suppliers of organic processing technologies, asking them to provide information on possible technical solutions. The RFEOI process included suppliers of both composting and anaerobic digestion (AD) facilities.

This study estimates the potential costs and environmental benefits of a dedicated composting or AD facility located at Hartland. These are compared to status quo disposal. The analysis relies largely on information obtained from the RFEOI, with some adjustments to the AD option to reflect the opportunity to use spare capacity in the proposed landfill gas (LFG) to renewable natural gas (RNG) upgrader.

The intent of this study is to inform strategic decisions on organics processing and the design of any procurement of a dedicated facility. The analysis is based on indicative costs and financing assumptions, which will need to be confirmed through procurement and negotiation. The analysis is based on volumes not controlled by CRD so the project is also contingent on volume commitments from member municipalities or the private sector.

2. METHODOLOGY

This is a screening-level study to compare status quo disposal costs for CRD organics with a dedicated composting or AD facility. The key metric used for all comparisons is the net processing cost, which takes into account expected capital costs, operating costs, financing costs, and any revenues from the sale of compost, biogas, and/or RNG. Financing costs are based on a private sector financing model, with different financing benchmarks applied to composting and AD. The analysis is intended to approximate the expected outcome of a competitive procurement process and contract negotiation. Actual costs will depend on the final procurement model and detailed contract design.

A levelized net processing cost is calculated for each option. This is calculated as the present value of annual costs less revenues divided by the present value of processed volumes over 20 years (beginning in 2024). The cashflows reflect a private sector financing model. Present values are calculated using the CRD discount rate (assumed to be equivalent to CRD's long-term borrowing rate).

For capital and operating costs we have relied on information from the RFEOI process, as summarized by Morrison Hershfield.[1] We have made some adjustments to capital and operating costs to reflect alternate sizing and project configurations as discussed later in this report. We note the costs derived from the RFEOI appear relatively high, particularly for AD.

[1] "Kitchen Scraps, Yard and Garden Waste Processing – RFP Scoping Document". Morrison Hershfield, June 1, 2018.

The greenhouse gas (GHG) emissions for different options are derived from a lifecycle GHG (CO2-e) analysis prepared for CRD by Stantec.[2] Stantec's estimates have been adjusted to reflect different volumes scenarios in this study.

This report also includes additional sensitivity and scenario analyses for net processing costs under alternate input assumptions.

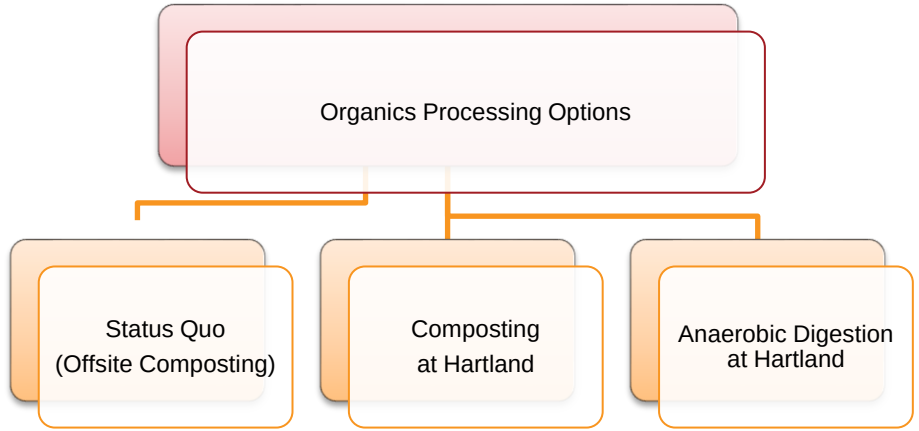
3. PROCESSING OPTIONS

We consider three options for organics processing (Figure 1):

1. **Status Quo (Offsite Composting)**. Organic material received at Hartland is trucked to 3rd-party composting facilities under a contract to CRD. We assume current per-tonne processing costs (including transportation) continue into the future, with annual escalation.
2. **Composting at Hartland**. Organic material received at Hartland is processed in a new dedicated in-vessel composting facility located at Hartland. Expected revenues from compost sales are included in the calculation of net processing cost to the CRD.
3. **Anaerobic Digestion (AD) at Hartland**. Organic material is processed in a new AD facility located at Hartland. The AD facility does not include an upgrader. Instead, biogas from the AD facility is sent to the LFG upgrader at Hartland. RNG is then sold to FortisBC Energy Inc. (FEI) under the same terms and prices as RNG from LFG. Revenues from the sale of compost and RNG are included in the calculation of net processing costs to the CRD.

There is also the potential to integrate an AD facility with the spare digester capacity associated with the new Residuals Treatment Facility at Hartland. We have not assessed the technical or economic viability of this option but the costs and benefits of this approach may be considered as part of the procurement process.

Figure 1: Organics Processing Options



[2] "Life Cycle Greenhouse Gas Analysis of Organic Waste Processing Scenarios at the Hartland Landfill". Stantec Consulting Ltd, August 12, 2020.

4. KEY ASSUMPTIONS

4.1 Organic Volumes and Processing Capacity

Our analysis uses two bookends for organics volumes:

1. A flat volume of 10,000 tonnes per year (i.e. no change over time).
2. A starting volume of 24,700 tonnes per year in 2024, increasing at 1% per year.

The CRD's 2018 RFEOI provided Scenario 1 as a guaranteed, baseline volume, and Scenario 2 as a potential volume. The CRD does not control significant volumes directly, but available volumes from member municipalities are likely closer to Scenario 2.

Based on discussions with CRD, we assume an average composition of 30% yard and garden waste, and 70% kitchen scraps. The share of yard and garden waste vs kitchen scraps affects the expected biogas production from AD, as kitchen scraps have a greater potential for energy production. A greater share of yard and garden waste and correspondingly lower share of kitchen scraps will result in less biogas production from AD. In sensitivity analysis we test the impact of reduced biogas production.

Because of the wide range in volumes, each volume scenario is paired with a different processing capacity as shown in Table 1. Under the Large Plant scenario, the facility has sufficient capacity to process all organics throughout the analysis period. By year 20, annual volumes will have grown to 29,840 tonnes, or just below the facility's capacity.

While there is a wide range of uncertainty around organics volumes, CRD could potentially play a strong role in securing organics volumes for this project.

Table 1: Volume and Processing Capacity Scenarios

	Small Plant at Hartland	Large Plant at Hartland
Annual Volume	10,000 tonnes, fixed	24,700 tonnes, Increasing 1%/year.
Processing Capacity	10,000 tonnes	30,000 tonnes

4.2 Capital Costs

Table 2 summarizes capital cost assumptions for composting and AD. The assumptions are based on the RFEOI responses (escalated to 2024). Respondents to the RFEOI did not provide disaggregated cost information. For AD, we made an assumption of the cost savings from not constructing a separate upgrader, based on estimates of upgrader costs from previous studies for CRD's LFG upgrader project with conservative adjustments for losses in economies of scale for a much smaller upgrader.

We note that the capital costs received by CRD through the RFEOI are higher than we have seen from other projects. For example, from a 2017 RFI on AD, the City of London Ontario reported costs of $680 to $990 per tonne for a 25,000 tonne per year AD facility, including a biogas upgrader and land acquisition. It is possible that pricing declined significantly after the CRD's RFEOI.

It should be noted that capital costs sourced from RFEOI responses apply to commercial scale operations that must comply with strict operational specifications,

including stringent odor control, leachate management, and other regulatory requirements.

This analysis has not considered the availability of grant funding to offset capital costs. There may be grant funding available - particularly for the AD facility which would reduce GHG (CO2-e) emissions relative to the Status Quo option – however we have not incorporated this into our capital cost estimates.

Table 2: Capital Cost (Unit Capital Costs), 2024$

	Small Plant at Hartland	Large Plant at Hartland
Processing Capacity	10,000 tonnes	30,000 tonnes
Composting	$11.3 M ($1,130 / tonne of capacity)	$20.3 M ($680 / tonne of capacity)
Anaerobic Digestion	$26.0 M ($2,600 / tonne of capacity)	$34.8 M ($1,160 / tonne of capacity)

4.3 Financing Costs

The financial analysis assumes that all capital costs are amortized over the expected life of the asset. A new composting facility is assumed to have a 15-year asset life. A new AD facility is assumed to have a 20-year asset life. Because we have used a 20-year analysis period, the composting option includes annualized costs for a replacement facility in years 16-20 to allow an apples-to-apples comparison of net processing costs. In reality, a contract for composting would likely be shorter than for AD, or alternatively include some buy-out for unamortized capital at the end of 20 years (assuming the proponent is required to reinvest in the project).

Capital costs are amortized using an indicative private sector financing model. It is different to obtain credible information on hurdle rates for private sector proponents. Hurdle rates require assumptions about leverage (portion of debt financing), private borrowing costs (prevailing interest rates and credit spreads), corporate taxes, and levered return on equity. These variables can vary with technology, market conditions, and the specific contract terms (length, risk transfer, etc.).

A brief review of the literature suggests higher hurdle rates for AD than composting. This likely reflects higher complexity and also higher perceived risk. The difference in perceived risk is likely a function of the capital intensity and pricing model for each technology. The bulk of revenues for a composting facility are derived from tipping fees, which tend to be fixed for a specified term. AD facilities are more capital intensive, and a larger portion of their revenues would be derived from the sale of biogas or RNG. We note in many markets these revenues are riskier because of term-limited contracts and/or pricing that is tied to natural gas or other volatile benchmarks such as renewable energy credits. The risk profile of AD is probably lower in B.C. given the availability of longer, fixed-price contracts for RNG from FEI. To be conservative we have assumed a higher hurdle rate for AD options.

Our base case assumes a hurdle rate for AD of 7.5%. This is roughly equivalent to a financing model with 70% leverage, a long-term debt rate of 4.6%, a pre-tax levered return on equity of 18% and a corporate tax rate of 26%. We assume a lower hurdle rate for composting of 6%. For comparison, FEI's regulated after-tax weighted average cost of capital (WACC) is currently ~5.6% after tax, equivalent to ~6.5% on a before tax basis.

These are indicative rates to estimate possible prices under a competitive procurement. The level and differences in hurdle rates are uncertain, and would also be affected by specific contract terms.

Table 3: Indicative Asset Life and Financing Cost

	Asset Life	Financing Cost
Composting	15 years	6.00%
Anaerobic Digestion	20 years	7.50%

4.4 Operating Costs

Key operating cost assumptions are as follows:

- **Status Quo disposal costs** were provided by CRD staff. Pricing of $138/tonne was received in 2020. We assume continued escalation at 1.5%/year, which results in a cost of $194/tonne by 2043. We note that this pricing is for a short-term contract and may not be indicative of long-term pricing. It is unclear if this reflects existing spare capacity or if it includes costs for incremental expansion.

- **Land rent** assumes a facility sited at Hartland. Rent is based on the relative space requirements of different options from the RFEOI responses. Leases rates are derived from land value obtained from a recent 3rd party project at Hartland.

- CRD has fixed costs to operate the transfer station at Hartland where organics materials are received. Because these costs are the same for all options, including the Status Quo, they have been excluded from our analysis.

- **Processing costs** were derived from the RFEOI responses, with additional adjustments as described below, and are shown in Table 4.

The RFEOI responses provided AD processing costs for a complete facility, including an upgrader. The upgrader share of these costs can be deducted. However, there would be incremental operating expenses incurred at the LFG upgrader. In this analysis, we assigned incremental LFG upgrading costs to the AD project. We have not included any contribution to the fixed costs of the LFG upgrader. The LFG upgrader is already oversized so this capacity is available regardless. This methodology means that the IRRs for the LFG project (presented in a previous business case to the Board) will not be affected by the addition of biogas from AD.

The AD processing costs identified as part of the RFEOI (and which include the cost of an upgrader) are $59 per tonne, which is in line with the results received by London ON from their 2017 RFI.

Our analysis assumes that this AD project would incur processing costs of $39 per tonne in 2024, plus pay a fee to the LFG upgrader of $6.50 per GJ of biogas processed.

Under these assumptions, total operating expenses for the AD option (including direct processing costs as well as the upgrading fee paid to the LFG upgrader) are equivalent to the processing cost information received through the RFEOI process, for a new AD facility with its own upgrader. This analysis is likely conservative (i.e. it

has likely under-estimated the cost advantage of AD Integrated with LFG due to economies of scale in upgrading costs).

We assume these costs escalate at 2%/year.

Table 4: Operating Costs per Tonne Feedstock, 2024$

	Small Plant at Hartland	Large Plant at Hartland
Composting	$91 / tonne	$51 / tonne
Anaerobic Digestion	$39 per tonne plus $6.50 per GJ of biogas	$39 per tonne plus $6.50 per GJ of biogas

Figure 2: Available Capacity in LFG Upgrader

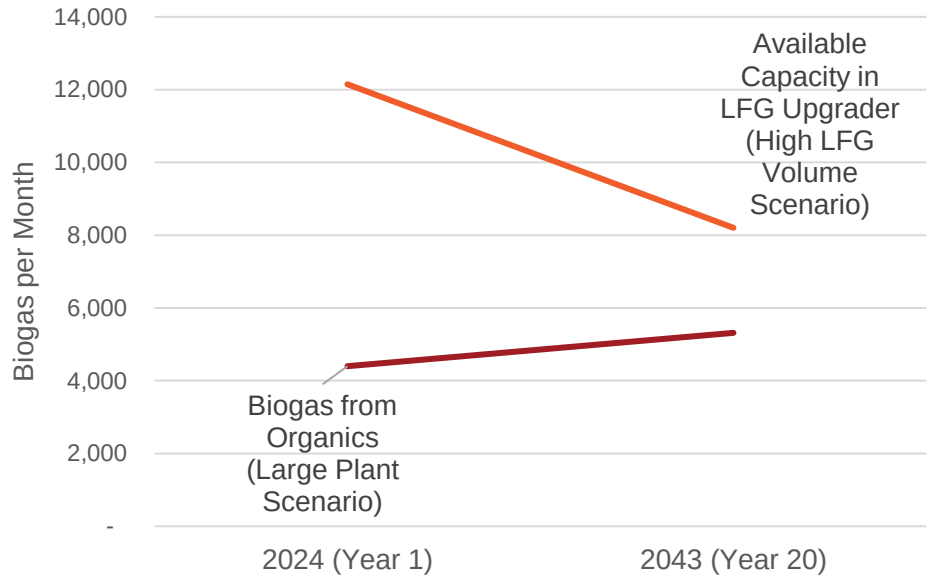


Figure 2 shows the available capacity in the LFG upgrader. Even under high LFG volumes, there is still significant available capacity in 2043 relative to the expected biogas from a large AD facility.

4.5 Revenues

There are two potential revenue streams to reduce the net cost of processing organics: the sale of compost and the sale of RNG.

Both composting and AD produce compost. However, composting produces higher volumes of compost than AD. For this analysis, we assume compost volumes equivalent to 60% and 28% of processed organics volumes for composting and AD, respectively. Our base case assumption for the value of compost is $3 / tonne (net of costs to bag, market and distribute compost). We test this assumption in sensitivity analysis.

An AD facility will also produce biogas which can be upgraded to RNG for sale to FEI. RNG production is dependent on the mix of feedstocks to the facility (yard and garden vs kitchen scraps) and recovery rates in production and upgrading. Table 5 shows the biogas production potential per tonne of feedstock under the base case assumption of 30% yard and garden waste, and 70% kitchen scraps[3].

Table 6 shows net RNG production after losses in the upgrade process, which occur during the upgrading process to produce RNG. Losses reflect expected upgrader downtime, internal energy use, and methane slip. Losses are predominantly in the form of methane converted to CO2 through combustion. We assume losses in upgrading of 10%, in line with the assumption used in the LFG upgrader analysis.

Under all AD options, RNG is assumed to have a value of [redacted] per GJ of RNG with no escalation, in line with CRD's contract for RNG from LFG. We test the effect of different biogas production factors and RNG prices in sensitivity analysis.

Table 5: Gross Biogas Production Factors

	Yard / Garden (30%)	Kitchen (70%)	Blended Average
Biogas Potential	1.5 GJ / tonne	2.75 GJ / tonne	2.38 GJ / tonne

Table 6: Net RNG Production, 2025

	Small Plant	Large Plant
Annual Volume	10,000 tonnes	24,700 tonnes, 1% growth p.a.
2025 Net RNG Production (AD only)	21,400 GJ	53,300 GJ

[3] Biogas factors were taken from Environment Canada, "Technical Document on Municipal Solid Waste Organics Processing", PWGSC 2013.

4.6 GHG Emissions

GHG emissions have been calculated for each scenario based on a lifecycle GHG (CO2-e) analysis conducted by Stantec. Sources of emissions include:

- Construction: one-time emissions related to the construction of the organics processing facility.
- Operations: emissions from the operation of the facility, including emissions from composting, from on-site fuel consumption, and from shipping compost off-site.
- Avoided Natural Gas: avoided emissions due to the production of RNG and injection into the natural gas grid.

GHG emissions factors (CO_2-equivalents) for construction are shown in Table 7. Emissions factors from ongoing operations (including direct operations and avoided natural gas) are shown in Table 8.

The Stantec analysis also included the impact of avoided landfilling. Organics are already kept out of the landfill and our analysis compares dedicated processing options to the status quo option. We have therefore excluded emissions from landfilling in all scenarios.

Table 7: Construction GHG Emissions (kg GHG CO2-e / tonne capacity)

	Status Quo	Composting	AD Standalone	AD Integrated w LFG
Construction	-	70.6	68.9	48.2

Table 8: Operating GHG Emissions (kg GHG CO2-e / tonne feedstock / year)

	Status Quo	Composting	AD Integrated w LFG
Feedstock Transport	10.7	-	-
Composting	90.0	90.0	9.0
Shipping Compost	9.7	9.7	1.0
Other Operations	45.8	45.8	48.0
RNG – Pipeline Fugitive	-	-	0.2
Net Avoided Natural Gas	-	-	(49.5)
Total	156.1	145.5	8.7

5. RESULTS

5.1 Net Processing Costs

Table 9 summarizes results for large and small project scales. Present values and levelized net processing costs are calculated using a discount rate of 2.6%, which is intended to represent the CRD's approximate cost of borrowing. Recently, indicative long-term borrowing rates published by the Municipal Financing Authority of B.C. have dropped much lower than usual, with 20-year rates at roughly 2.25% as of the date of this report. To be conservative, we have assumed that this decline in borrowing rates is temporary and 20-year rates will increase before the project

proceeds. The sensitivity analysis section of this report includes the impact of different discount rates.

At small scales, a dedicated facility is more costly than Status Quo disposal costs under our base assumptions. This also assumes current disposal costs continue to escalate at only 1.5% per year. At larger scales, a dedicated facility appears to be cheaper than Status Quo disposal costs, and AD becomes the lowest-cost option (though the cost difference between AD and composting is relatively small and within the margin of error for this analysis).

Table 9: Key Results

	Small Plant at Hartland	Large Plant at Hartland
Annual Volume	10,000 tonnes, fixed	24,700 tonnes Increasing 1%/year
Processing Capacity	10,000 tonnes	30,000 tonnes
Levelized Net Processing Costs ($ / tonne)		
Status Quo	$168	$168
Composting at Hartland	$240	$150
Anaerobic Digestion at Hartland	$276	$148
Present Value Costs ($ millions)		
Status Quo	$24.5 M	$66.5 M
Composting at Hartland	$35.1 M	$59.5 M
Anaerobic Digestion at Hartland	$40.4 M	$58.5 M

5.2 GHG Emissions

Table 10 shows the increase or decrease in cumulative GHG (CO2-e) emissions from a change from the status quo (offsite composting) to composting or AD at the Hartland Landfill Facility. Building a new dedicated composting facility at Hartland would result in a very small decrease in cumulative emissions. There would be additional emissions from constructing the facility, but these would be mitigated by a reductoin in transportation emissions. There are substantial differences in cumulative GHG (CO2-e) emissions between composting and AD.

Table 10: Cumulative Change in GHG (CO2-e) Emissions Relative to Status Quo (20 Year Analysis)

	Small Plant	Large Plant
Composting at Hartland	(1,400 tonnes)	(3,700 tonnes)
Anaerobic Digestion at Hartland	(40,100 tonnes)	(109,000 tonnes)

There are some minor GHG (CO2-e) savings compared to status quo for a dedicated compositing facility at Hartland. However, a dedicated AD facility would deliver significant GHG (CO2-e) benefits relative to status quo or a dedicated composting facility. For the AD option, we have also calculated a shadow value per tonne of GHG (CO2-e) reductions that would need to be assigned to the project to make AD cost-competitive with composting (Table 11).

Table 11: Required Shadow Value of GHG (CO2-e) Reductions from AD ($ per tonne) compared against Status Quo

	Anaerobic Digestion
Small Plant at Hartland	$515 per tonne GHG (CO2-e)
Large Plant at Hartland	($100) per tonne GHG (CO2-e)

For the Small Plant scenario, the AD at Hartland project would result in a cost premium of roughly $15.9 M relative to the Status Quo, as shown in Table 9. However, the Small Plant AD project would deliver significant GHG reductions relative to the Status Quo. Based on the cost premium and GHG reductions, the Small Plant AD project would require a shadow value of GHG reductions of $515 per tonne GHG (CO2-e). Stated differently, the Small Plant AD scenario can achieve GHG reductions at an abatement cost of $515 per tonne of GHG (CO2-e).

For the Large Plant AD scenario, because the AD project is already lower cost than the Status Quo, it has a negative shadow value of carbon, meaning that the project achieves GHG (CO2-e) reductions at negative cost (i.e. savings).

For comparison, Metro Vancouver (MV) recently adopted an internal carbon price policy of $150 / tonne GHG (CO2-e). This means that for potential projects with GHG (CO2-e) implications, MV will include a total price of $150 / tonne on all emissions. The City of Vancouver adopted a similar policy with a comparable total carbon price in late 2018.

5.3 Sensitivity & Scenario Analyses

We conducted sensitivity and scenario analyses on key inputs. Some of these are summarized in Table 13. We selected the Large Plant scenario for all sensitivity and scenario analyses because of the narrow range around net processing costs of different options at this scale. For reference, the levelized cost of Status Quo disposal is $168 per tonne.

We note the following:

- We conducted two sensitivity analyses on organics volumes. The first assumes a 20% reduction in volumes in all years, with no change in the facility size. The second scenario assumes full utilization of the facility from Year 1. This would require supplemental volumes to fill the facility as municipal volumes grow.
- Higher Compost Revenue illustrates the impact of assuming that net revenue from compost sales is $10 per tonne of compost, as opposed to the base case assumption of $3 per tonne of compost.
- There is uncertainty regarding both the mix of organics feedstocks (kitchen vs yard and garden), and the actual biogas production rates from each type of feedstock. The biogas production sensitivity analyses are intended to capture the overall uncertainty around biogas production volumes. This sensitivity does not impact the Composting option.

Table 12: Sensitivity Analysis, Large Plant Scenario (Levelized Net Processing Cost per Tonne)

	Composting	Anaerobic Digestion
Base (Large Plant at Hartland)	$150	$148
Organics Volume -20%	$171	$180
Flat 30k Volume	$141	$134
Higher Compost Revenue	$145	$145
Biogas Production +10%	$150	$144
Biogas Production -10%	$150	$151
Biogas Production -20%	$150	$155

The “Biogas Production -10%” scenario shown above corresponds to the expected biogas production rates from a feedstock mix of 50% kitchen scraps, and 50% yard and garden waste, based on the assumptions detailed in Table 5. The “Biogas Production -20%” scenario corresponds to the expected biogas production rates from a feedstock mix of 35% kitchen scraps, and 65% yard and garden waste.

In addition to the sensitivity analyses above, we conducted more detailed analysis on several other inputs. These results are summarized below.

Status Quo Costs

Status Quo disposal costs are built up from the 2020 per-tonne cost, and a future escalation rate. As of 2020, processing costs for the Status Quo option are $138 per tonne. Assuming escalation at 1.5% per year, this would increase to $194 per tonne by 2043. Under these assumptions – which are used for the base case Status Quo costs - the levelized processing cost is $168 per tonne over the 2024-2043 analysis period.

Table 13 shows status quo levelized net processing costs per tonne based on a range of starting per-tonne costs and escalation rates. The escalation rate would have to be as low as 0.5% for the duration of the analysis period for status quo costs to be lower than the cost of both composting and AD.

Table 13: Status Quo Cost Sensitivity (Levelized Net Processing Cost per Tonne)

	Status Quo
Base ($138/tonne, 1.5% p.a.)	$168
$138/tonne, 1% p.a.	$157
$138/tonne, 0.5% p.a.	$147
$138/tonne, 2% p.a.	$180
$148/tonne, 1.5% p.a.	$180

Discount Rates

The discount rate is used to calculate levelized net processing costs and the PV of net processing costs of each alternative from the perspective of the CRD. The effect of alternate discount rates on the PV of net processing costs of each alternative is shown in Table 14. The selection of discount rate affects absolute results but does not fundamentally alter the relative ranking of different alternatives.

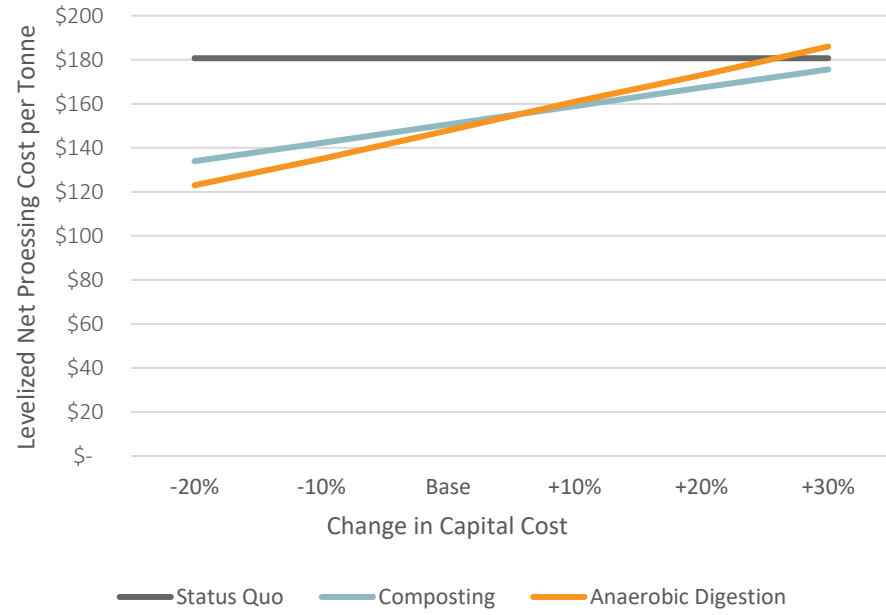
Table 14: Discount Rate Sensitivity ($ millions, PV of net processing costs), Large Plant at Hartland

	Status Quo	Composting	Anaerobic Digestion
Base (2.6%)	$66.5	$59.5	$58.5
1%	$81.2	$72.6	$71.0
4%	$56.3	$50.4	$49.9
6%	$45.0	$40.4	$40.2

Capital Costs

As noted, there is considerable uncertainty in the capital costs of alternatives. These will need to be confirmed through the procurement process. See Figure 3.

Figure 3: Capital Cost Sensitivity, Large Plant at Hartland



Upgrader transfer price

There is uncertainty in the incremental operating costs for the LFG upgrader. These will be confirmed in the procurement and detailed design phase. The base case assumption is $6.50 per GJ of biogas processed. Figure 4 shows the effect of a +/- 30% difference in incremental upgrading costs.

Figure 4: Sensitivity to Varying Upgrader Transfer Price, Large Plant at Hartland

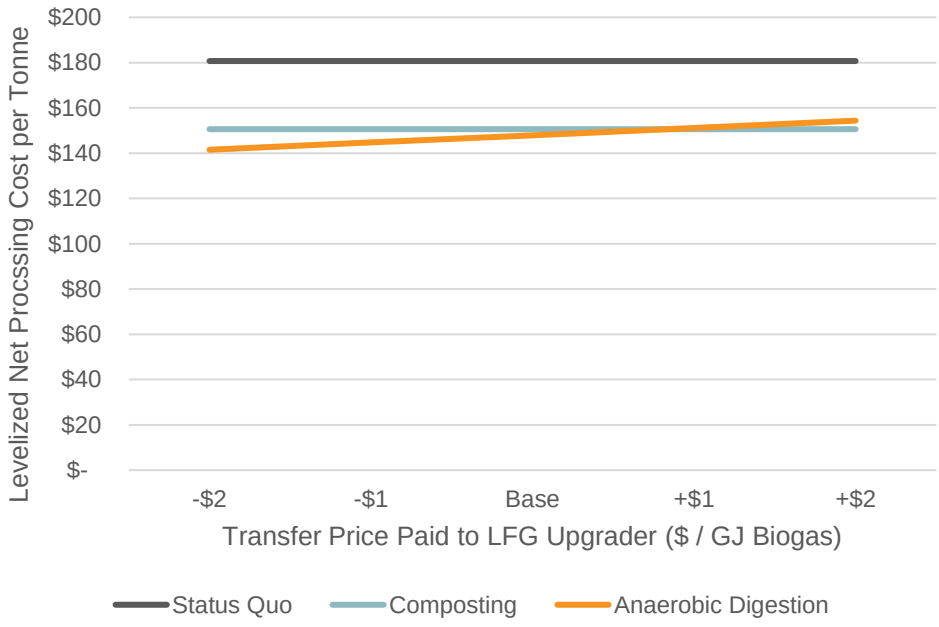
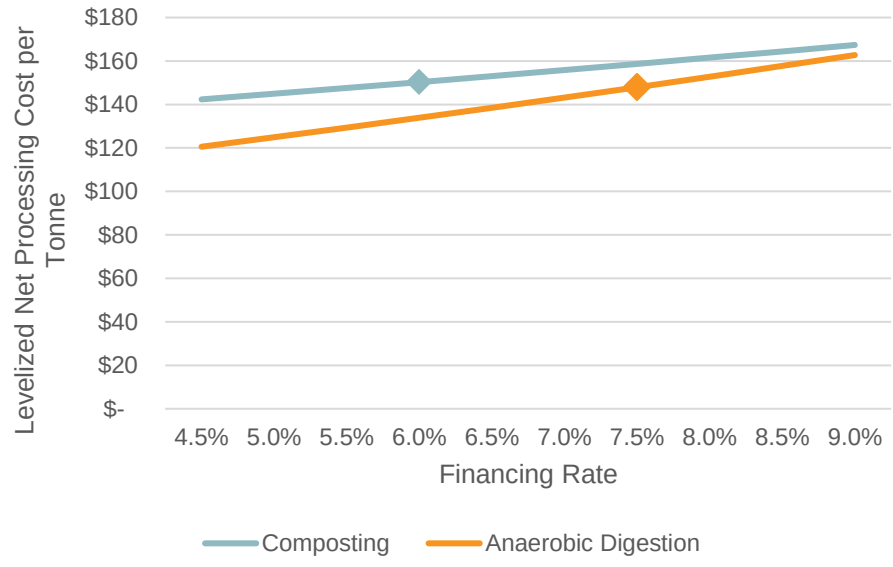


Figure 5: Sensitivity to Financing Rate, Large Plant at Hartland



The net processing cost of both options declines with lower hurdle rates. However, AD is more capital intensive and therefore more sensitive to assumptions about hurdle rates.

Financing Rates

Hurdle rates for private sector proponents are unknown. Our base case also assumes a higher hurdle rate for AD. Figure 5 shows the sensitivity of each technical solution to varying financing rates, under the Large Plant configuration. For each option, the base case assumption is marked with a diamond.

RNG Price

The base case results assume all RNG from AD is sold at the same price obtained by CRD in recent negotiations with FEI for upgraded LFG. CRD would be able to sell incremental RNG under its existing contract. However, CRD is not obligated to sell incremental RNG from other sources of biogas (beyond LFG) under the same terms and conditions as the existing purchase contract. There are no incremental costs to FEI from additional volumes of RNG (the proposed interconnection appears to have sufficient capacity). As a result, FEI may be able to pay a higher price for incremental volumes, if that is required to incent AD. Results are shown below.

Table 15: Sensitivity to RNG Prices, Large Plant at Hartland

	Anaerobic Digestion
Base (Large Plant at Hartland) RNG @ [redacted] / GJ	$148
RNG @ [redacted] / GJ	$143
RNG @ [redacted] / GJ	$137

Volumes of Organics Received at Hartland

Depending on how CRD is able to contract for organics volumes, there may be volume-related risks associated with building the Large Plant AD option. Figure 6 and Figure 7 show the impacts on present value costs and on levelized net processing costs, respectively, for this option as compared against the Status Quo. With an AD project, reductions in organics volumes only lead to modest reductions in total costs, so unit processing costs will increase if volumes decline.

Figure 6: Anaerobic Digestion, Large Plant at Hartland, Sensitivity to Reduced Organics Volumes (Present Value Cost)

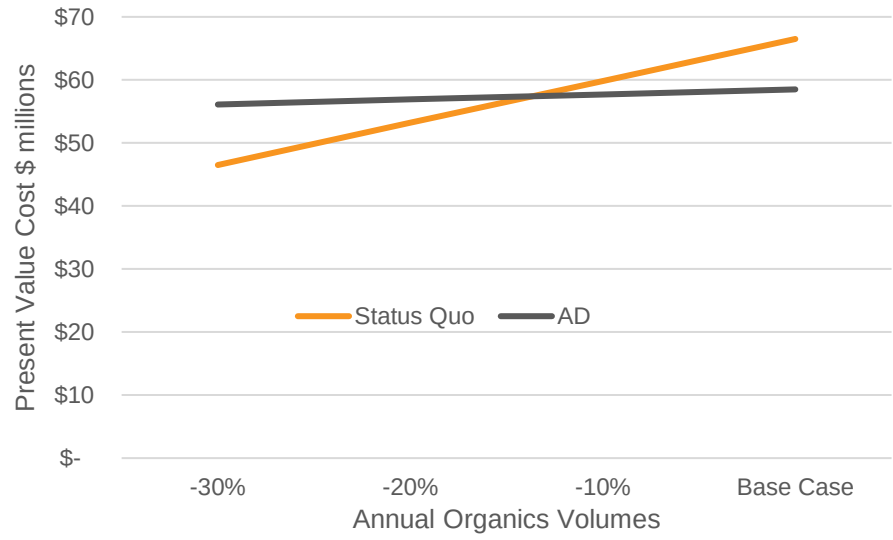
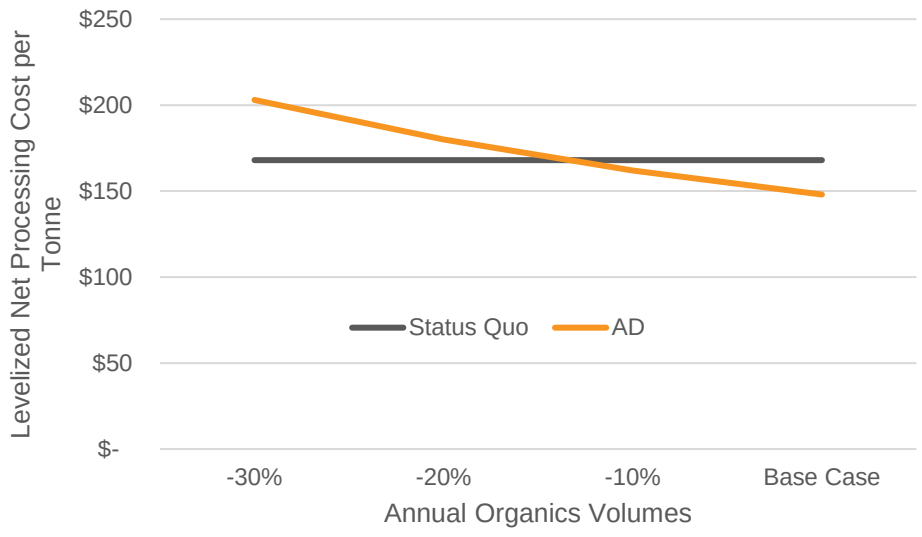


Figure 7: Anaerobic Digestion, Large Plant at Hartland, Sensitivity to Reduced Organics Volumes (Processing Cost per Tonne)



6. NEXT STEPS

Based on our analysis, the large scale AD at Hartland option has the potential to offer both financial and GHG benefits. CRD could lead its own further due diligence of the technical and economic viability of AD at Hartland, or could pursue an alternate approach where CRD focuses on securing feedstock commitments, and seeks private sector partners to conduct further due diligence and potentially develop a project at Hartland.