Capital Regional District

625 Fisgard St.
Victoria, BC V8W 1R7

Meeting Minutes

Solid Waste Advisory Committee

Friday, October 2, 2020	**12:30 PM**	**6th Floor Boardroom** **625 Fisgard St.** **Victoria, BC V8W 1R7**

PRESENT:
M. Coburn, S. Gose, J. Hillis, L. Jenson (EP), M. Kurschner, E. Latta, A. Meisen, D. Monsour, J. Oakley (EP), J. Olsen, J. Shaw, J. Smith (EP), R. Speller (EP), N. Taylor (Chair), R. Tooke, S. Wiebe

Staff: A. Chambers, Senior Administrative Secretary, Environmental Resource Management (ERM) (Recorder); E.Kelch, First Nations Engagement Assistant, First Nations Relations (EP); M. Lagoa, Deputy Corporate Officer & Manager of Legislative Services; R. Smith, Senior Manager, Environmental Resource Management, T. Watkins, Manager, Policy & Planning, Environmental Resource Management

Guests: J. Cullington (Judith Cullington & Associates) (EP), J. Rintoul, Waste Management (EP), K. Seifried, Compost Education Centre (EP)

Regrets: K. King, C. Tuggle, S. Young Jr. (Vice Chair)

EP - Electronic Participation

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

1. Territorial Acknowledgement

2. Approval of Agenda

Agenda for the October 2, 2020 Solid Waste Advisory Committee meeting.

MOVED by J. Shaw, SECONDED by D. Monsour
That the agenda be approved as circulated with two additions to Other Business, SWAC meeting format and City of Victoria Key Performance Indicators.
CARRIED

3. Adoption of Minutes

Minutes from the August 7, 2020 Solid Waste Advisory Committee meeting. Amend Item 5, Solid Waste Management Plan by adding:

- Pros and cons of a more aggressive waste reduction target were discussed, including:
  - Pros: reducing climate and environmental impacts, reducing the need for landfill expansion
  - Cons: potential financial, consultation and timing implications

MOVED by D. Monsour, SECONDED by S. Gose
That the minutes of the August 7, 2020 Solid Waste Advisory Committee meeting be adopted as amended.
CARRIED

4. Chair's Remarks

Cara Gibson of the Compost Education Centre has resigned. Kayla Seifried will take her place and will be appointed by the CRD Board at their October 14, 2020 meeting.

Staff have put forward recommendations for two vacancies (*Private Sector Industry Collection Service Provider* and *Environmental Organization*) on the committee based on the six applications received. A final decision will be made at the October 14, 2020 meeting.

Reminder that the Coast Waste Management Association (CWMA) conference is October 7 and 8, 2020, there are five SWAC members registered.

5. SWAC Terms of Reference

N. Taylor welcomed M. Lagoa who provided an overview of the Terms of Reference for the Solid Waste Advisory Committee. The Terms of Reference (Appendix A) outlines the purpose of this committee. M. Lagoa highlighted that SWAC's liaison with ESC is N. Taylor.

A question was raised regarding committee members requesting certain topics be discussed and whether or not this was permitted in the CRD Procedures Bylaw. M. Lagoa clarified that a Notice of Motion is required (in writing) and this is a two-step process, at the first meeting the Notice of Motion is brought forward, the second meeting the topic is discussed (as long as it falls within the Terms of Reference), and if there is a recommendation then it can go to the Environmental Services Committee. A Notice of Motion is listed at the end of the agenda.

6. Proposed Self-Assessment/Effectiveness Review Discussion

A sample assessment was circulated which was previously done with the CRD Corporation Board. The scope will need to be determined, is this internal – how does this committee work together, or external – how does this committee work with the Environmental Services Committee. A discussion ensued on:

- What questions should be asked and who would draft the questions?
- What is the goal/purpose of this assessment?
- Possible special meeting with committee to discuss questions and format of evaluation

MOVED by J. Hillis, SECONDED A. Meisen
That the Solid Waste Advisory Committee request support and direction from the Environmental Services Committee for the opportunity for the Solid Waste Advisory Committee to do a self-assessment survey.
CARRIED

7. Update on September 16, 2020 Environmental Services Committee Staff Report: Solid Waste Management Plan – Next Steps (verbal update)

R. Smith provided an update on the staff report titled *Solid Waste Management Plan – Next Steps* that went to the September 16, 2020 Environmental Services Committee. The report will go to the October 14, 2020 CRD Board meeting. At the next SWAC meeting, staff will provide a timeline/chronology regarding development of consultation plan,

who reviews it, the consultation time, and the process to finalizing the plan. The staff report can be found as Appendix B.

8. Other Business

SWAC Meeting Format: suggestion was made for committee members who are participating electronically to have the option of calling in via video instead of a phone call. Staff will explore what options are available.

City of Victoria Key Performance Indicators (KPI) for Zero Waste: A. Meisen mentioned the City of Victoria is currently "requesting offers from qualified candidates to provide support for the development of Key Performance indicators and Targets for Zero Waste Victoria". The response date is October 6, 2020 and he wondered about coordination with CRD thinking. R. Tooke provided a brief update on the City's solid waste reduction strategy and once the KPI's are approved by council, R. Tooke will provide an update electronically to A. Chambers for distribution to the Solid Waste Advisory Committee.

9. Next Meeting

The next Solid Waste Advisory Committee meeting is November 6, 2020.

10. Closing Comments

There were no closing comments.

11. Adjournment

The meeting was adjourned at 16:20 pm.

MOVED by A. Meisen, SECONDED by R. Tooke
That the Solid Waste Advisory Committee be adjourned.
CARRIED

Terms of Reference

SOLID WASTE ADVISORY COMMITTEE

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

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.

Approved by CRD Board on April 8, 2020

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ERM 20-40

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 16, 2020

SUBJECT **Solid Waste Management Plan – Next Steps**

ISSUE SUMMARY

To seek direction on next steps for the Solid Waste Management Plan.

BACKGROUND

The Capital Regional District's (CRD) current solid waste management plan was last revised in 1995. Per the Province of BC's *Guide to Solid Waste Management Planning*, Regional Districts should complete a full plan renewal every 10-year plan cycle. There have been many changes to the solid waste system since 2005, and the current plan is out of date.

In February 2011, the CRD substantially initiated planning on Revision 3 of the Solid Waste Management Plan, and completed Steps 1 and 2 of the *Guide to Solid Waste Management Planning* (Table 1). At the direction of the Environmental Services Committee (ESC) and CRD Board, work was put on hold between 2014 and 2018 to investigate opportunities for integrated resource management. Between 2018 and present, work has proceeded and the CRD is now in Step 4 of preparing the draft Solid Waste Management Plan. A detailed chronology of work completed on solid waste management planning between 2011 and 2020 is included in Appendix A.

Table 1: Status of Solid Waste Management Planning (2018 to present)

Guide to Solid Waste Management Planning Steps (Province of BC)	Status
Step 1: Initiate the Process: • Initiate the update • Establish planning teams and committees • Design the consultation process • Develop the budget	complete
Step 2: Set the Plan Direction • Identify principles, goals and targets • Prepare background Information • Assess the current solid waste management system • Consider trends affecting solid waste management • Consult the public	complete
Step 3: Evaluate Options • Develop potential strategies • Assess the financial and administrative implications • Consult the public and interested parties on the options	complete
Step 4: Prepare and Adopt the Plan • Prepare draft plan* • Consult the public on the draft plan • Prepare final draft for submission • Ministry of Environment and Climate Change Strategy review and approval • Final adoption	*we are here

The Solid Waste Advisory Committee (SWAC) was established by the ESC to provide input on solid waste management matters and meet the requirements of the *Guide to Solid Waste Management Planning* for an advisory committee on the development and implementation of the Solid Waste Management Plan.

In 2018, through SWAC recommendation, the ESC and CRD Board endorsed proposed guiding principles, objectives, goals and a consultation plan for Revision 3 of the Solid Waste Management Plan (Step 2). Between November 2018 and May 2019, SWAC worked with a consultant, Tetra Tech, to develop options, strategies, actions and targets to meet these guiding principles, objectives and goals, and refer these for inclusion in the draft plan. In September 2019, based on this work, the ESC and CRD Board endorsed 15 strategies and actions and a waste reduction target of 250 kg/capita/year by 2030, and directed staff to proceed to public consultation (Step 3).

Public consultation was undertaken, and results were reviewed through SWAC and presented to the ESC and CRD Board in August 2020. The consultation included 21 open houses and meetings, a social media reach of over 19,000, and received more than 1,000 feedback forms. Participants were asked to indicate their level of support and provide feedback on three plan elements: target and timelines; guiding principles, goals and objectives; and strategies and actions. Respondents were also able to provide general feedback. Overall, there was a high level of support for all plan elements, and 82% of respondents either strongly agreed (60%) or agreed (22%) with the proposed waste reduction target of 250 kg/capita/year by 2030 (a 1/3 reduction from present levels), 4% disagreed, and 3% strongly disagreed. Specific stakeholder topics were identified as potentially requiring further consideration during the draft plan stage of consultation. These include:

- impacts on mountain bike trails within the landfill property
- rerouting traffic to the north end of the Hartland site (Willis Point Road entrance), including potential environmental and recreational impacts of landfill footprint expansion to extend the life of Hartland to 2100
- cruise ship waste
- human/wildlife conflicts

The guiding principles, objectives, goals, targets, strategies and consultation results (Steps 1-3 of the planning process) have been compiled into a draft Solid Waste Management Plan (Appendix B) (Step 4). At its July and August meetings, SWAC considered the draft plan and, through a round table process, identified proposed additions to the draft plan. A summary of the feedback received through the roundtable process can be found in Appendix C, and the presentation in Appendix D. SWAC passed the following motion:

> *That the additions to the draft plan under the four headings* Municipal Waste Management, Illegal Dumping, Household Hazardous Waste, Finance*, be incorporated into the draft plan including the background information on how the targets were developed.*

SWAC also identified a desire to strengthen the target that was set by SWAC and endorsed by the ESC and Board in 2019. This would require going back to Step 2 in the planning framework and invalidate the current draft plan and above motion. The following motion was passed:

That a new target of 2/3 waste reduction by 2030 (relative to 2019/2020) be approved to guide the development of the new Solid Waste Management Plan, and that staff undertake work, with feedback from the Solid Waste Advisory Committee, to update the draft plan which includes strategies as required to meet the new target.

The CRD is currently in Step 4 of the four-step *Guide to Solid Waste Management Planning* framework. Per the framework, next steps include additional consultation on the draft plan, preparing a final draft for submission, Ministry of Environment and Climate Change Strategy (ENV) review and approval, and final adoption. This report identifies next steps for solid waste management planning following the provincial planning framework, as well as preliminary implications associated with setting a new target at Step 4 in the planning process, as proposed by SWAC.

ALTERNATIVES

Alternative 1

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

1. That the waste reduction target remain at 250 kg/capita/year by 2030 but goal 1 be changed to read "To surpass the provincial per capita waste disposal target and achieve 125 kg/capita/year";
2. That the Solid Waste Advisory Committee's recommended additions be added to the draft Solid Waste Management Plan; and
3. That staff proceed with community and local government consultation on the draft Solid Waste Management Plan, including targeted stakeholder consultation with residents in the areas of Hartland Landfill, Prospect Lake, Willis Point and Highlands.

Alternative 2

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

That staff proceed with analysis to understand strategies, including waste flow management, waste stream bans, and costs and funding sources, to meet an enhanced target of 2/3 waste reduction from current levels (125 kg/capita/year) by 2030, and review these strategies through the Solid Waste Advisory Committee before returning to the Environmental Services Committee for direction.

Alternative 3

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

IMPLICATIONS

Technical

Between 1989 and 2019, the CRD's per capita waste disposal went down from approximately 671 kg/capita to 382 kg/capita/year (43%). This reduction was the result of a variety of CRD initiatives, including the blue box program, recycling depots, as well as the introduction of Extended Producer Responsibility programs regulated by the provincial government, and landfill bans on materials when viable alternatives exist (processing systems and end markets).

The draft Solid Waste Management Plan has been developed following the process included within the *Guide to Solid Waste Management Planning*. This plan includes a waste reduction target of 250 kg/capita/year by 2030, approximately a 1/3 reduction from current levels. This ambitious target significantly exceeds the provincial target of 350 kg/capita/year, and was set based on a comprehensive technical analysis of what could be achieved, given the role of the Regional District under the current regulatory and policy framework, and considering the 15 strategies developed by SWAC, and endorsed by the ESC and CRD Board.

Increasing the target to a 2/3 reduction by 2030 (Alternative 2) would seek to bring the per capita disposal rate down to 125 kg/capita. Table 2 identifies potential strategies that could achieve further reductions. Additional technical analysis would be necessary to determine how much waste reduction each strategy could achieve and if the target is achievable. Many of the 'low hanging fruit' actions the CRD has authority over have already been completed and achieving further reductions will be incrementally more difficult. It is likely the CRD would need to implement a waste flow management policy, as provided for in the *Environmental Management Act*, along with bans on flows of material types to the landfill and consider new funding sources for waste management, such as tax requisition. The term "flow control" refers to the CRD's authority to control the movement and disposal of solid waste within the region. It is an important regulatory tool to support the implementation of solid waste management plans and to help ensure the long-term financial sustainability of the waste system by stopping waste and associated tipping fees from leaving the region. In June 2014, the issue of waste flow management was discussed by the ESC and CRD Board members at a workshop on the Solid Waste Management Plan. Workshop participants did not endorse the assumption that waste flow management should be considered as part of the new Solid Waste Management Plan. The policy option was reviewed for a second time by the Integrated Resource Management Advisory Committee and CRD Board in 2017.

Table 2

	Short-term (3 years)	**Medium-term (5 years)**	**Long-term (10+ years)**
Endorsed Disposal Target (kg/capita/year)	340[1]	285	250[2]
Targeted Sectors/ Materials	• Construction, renovation and demolition materials • Organics material 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 textiles and Industrial, Commercial and Institutional generated paper and packaging • Refine programs to increase performance for all sectors
SWAC Proposed New Disposal Target (kg/capita/year)	**125 kg/capita/year (2030)**		

Potential additional actions required to achieve 2/3 waste reduction by 2030	**Ministry/Private Sector** • Extended Producer Responsibility for large plastics, furniture, mattresses and building materials (e.g., wood, carpet, composite products) • Improvements in processing technology and end markets for multi-family and Industrial, Commercial and Institutional recyclables • Innovative technologies for managing plastics • Ban on distribution and sale of single use items (cups, diapers, etc.) **CRD** • Waste flow management • Implementing landfill ban enforcement at source • Local processing facility and increasing subsidy for food waste processing regional materials sorting facility • Region-wide residential organics collection **Municipal** • Increase number of collection facilities (e.g., eco depots) • Streetscape collection of recyclables and compostables • Mandate recycling and organics collection programs at multi-family and Industrial, Commercial and Institutional properties

Note: 1. Assumes that disposal bans for construction, renovation and demolition materials would be implemented.
2. Assumes new Extended Producer Responsibility program will be implemented by Ministry of Environment and Climate Change Strategy.

Goal 1 of the draft Solid Waste Management Plan currently reads "To surpass the provincial per capita waste disposal targets." Under the *Guide for Solid Waste Management Planning*, it is possible to set aspirational goals. One approach to capture the intent of the SWAC recommendation regarding a much lower target without necessitating years of new planning work is to modify Goal 1 to read "To surpass the provincial per capita waste disposal target and achieve 125 kg/capita/year." By modifying this overarching goal to include an aspirational target while keeping the 2030 target intact at 250 kg/capita/year, the strategies and technical work supporting the draft Solid Waste Management Plan as written do not need to be redone. Furthermore, the CRD Board could submit a plan amendment to update and strengthen the strategies and targets in the Plan at a future date, once the Plan is implemented and performance is measured.

Through the public consultation process, the rerouting of traffic to the north end of the Hartland site (Willis Point Road entrance), and potential environmental and recreational impacts of landfill footprint expansion to extend the life of Hartland to 2100 were identified as specific topic areas of interest. In its round table review of the draft plan and recommended draft plan amendments, SWAC did not identify or recommend any changes to the draft plan relating to these topic areas; however, at other SWAC meetings, these were topics discussed as requiring further consultation.

Service Delivery Implications

Per the *Guide for Solid Waste Management Planning* framework, next steps include additional consultation on the draft plan (Alternative 1), preparing a final draft for submission, ENV review and approval, and final adoption.

Establishing new targets (Alternative 2) would require the CRD to go back to Step 2 of the Solid Waste Management Planning Process. This will require further technical evaluation, assessment of financial and administrative implications, consultation with the public and interested parties on

options and target, and obtaining necessary referral, endorsement and decisions by SWAC, ESC and CRD Board. This work is expected to take 2-3 years.

Financial Implications

The CRD has spent approximately $170,000 plus staff time on completing technical analysis and consultation associated with the current targets to date. Establishing new targets (Alternative 2) would require the CRD to go back to Step 2 of the Solid Waste Management Process and redo this work at an equivalent cost. Further analysis is required to understand the full cost implications and funding strategies for achieving the waste reduction target in Alternative 2; however, it is anticipated that a new tax requisition would likely be required.

CONCLUSION

The CRD is currently in Step 4 of the four-step *Guide for Solid Waste Management Planning* framework to develop a new Solid Waste Management Plan. Public consultation found overall a high level of support for all plan elements, and 82% of respondents either strongly agreed (60%) or agreed (22%) with the proposed waste reduction target of 250 kg/capita/year by 2030 (equivalent to a 1/3 reduction from present levels). SWAC recommends strengthening plan targets to 2/3 reduction by 2030. This change in target is anticipated to delay plan approval by 2-3 years, cost $170,000 plus staff time, and require the CRD to reconsider its stance on implementing a waste flow management policy and would likely require funding through tax requisition.

RECOMMENDATION

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

1. That the waste reduction target remain at 250 kg/capita/year by 2030 but goal 1 be changed to read “To surpass the provincial per capita waste disposal target and achieve 125 kg/capita/year”;
2. That the Solid Waste Advisory Committee’s recommended additions be added to the draft Solid Waste Management Plan; and
3. That staff proceed with community and local government consultation on the draft Solid Waste Management Plan, including targeted stakeholder consultation with residents in the areas of Hartland Landfill, Prospect Lake, Willis Point and Highlands.

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: Chronology – Solid Waste Management Planning – 2011-2020
Appendix B: Draft Solid Waste Management Plan – June 2020
Appendix C: Solid Waste Advisory Committee Roundtable Feedback – July 2020
Appendix D: Solid Waste Advisory Committee – Presentation – August 7, 2020

APPENDIX A

SOLID WASTE MANAGEMENT PLANNING
CHRONOLOGY
2011-2020

Date	Content
February 23, 2011	Environmental Services Committee (ESC) directs staff to: • proceed with Revision 3 of the Capital Regional District (CRD) Solid Waste Management Plan (SWMP) • report to committee in May 2011 with a strategy to scope public feedback on current programs and identify options
January 25, 2012	ESC is advised that it will act as the Steering Committee for the new plan. ESC is advised that Revision 3 will be called the Integrated Solid Waste and Resource Management Plan. ESC recommends to the CRD Board that: • the Terms of Reference for the Public and Technical Advisory Committee (PTAC) be approved • staff be directed to advertise for members for the new PTAC to develop the SWMP and bring appointment recommendations to the ESC in March 2012 • the Solid Waste Advisory Committee (SWAC) be maintained to continue its current role of providing input on operational issues
April 25, 2012	Closed Meeting and Rise and Report ESC appoints the recommended candidates to the PTAC for the development of the SWMP
May to September 2012	PTAC is formed and meets 4 times
October 24, 2012	Staff report presents: • Stage 1 Summary Report, which concludes that the CRD has a complex and mature solid waste management system • Public Survey Results with 755 respondents who identified a demand for increased organics collection services and education • Issues Memorandum, which identified 36 issues to be addressed during Stage 2 ESC: • receives Stage 1 Summary Report for information • recommends to CRD Board that the Stage 1 Summary Report be received for information
July 24, 2013	Staff report presents technical memos 1, 2 & 3: 1. Reduce, Reuse and Electronic Producer Responsibility (EPR) (including education) 2. Recycling (including garbage, recycling and compost) 3. Construction & Demolition Materials ESC receives the staff report for information.

Date	Content
March 26, 2014	Staff report presents technical memos 4, 5 & 6: 4. Resource Recovery 5. Residual Management 6. Regulatory & Community Issues ESC receives the staff report for information.
April 23, 2014	Staff report presents technical memo 7: 7. Financial Management ESC recommends to CRD Board that: • the staff report be received for information • staff be directed to organize a workshop for all Board members in May or June 2014 to review the seven technical memorandums and provide direction on drafting the new SWMP • staff distribute a summary of all technical memos to Board members prior to the workshop
June 24, 2014	Workshop content consists of Stage 1 report, survey results, list of 36 issues/challenges, and summary of 7 technical memorandums. Workshop participants discuss 11 assumptions: • There is general support for education and EPR programs • The CRD will not get involved in garbage collection in the region • There is a general shift of recycling programs to EPR • A long-term kitchen scraps processing strategy will be in place by 2015 • The private sector will continue to play a major role in construction, renovation and demolition materials diversion • Waste to Energy will only be considered conceptually in this Integrated Solid Waste Resource Management Plan (ISWRMP) • The new proposed diversion goal is 70% by 2020 • The goal is never to have another landfill in the region • There is support in principle to expand Hartland landfill, as required • Waste flow management will be considered as part of the ISWRMP • The solid waste function requires new funding mechanisms Workshop participants supported the above assumptions with the following two exceptions: • Workshop participants asked to revise “support to expand Hartland landfill” to “support greatest use” or “support change in design” of Hartland landfill • Workshop participants did not endorse waste flow management to be considered as part of the SWMP and felt that they needed more information and room for more conversation.

Date	Content
October 23, 2014	Last PTAC Meeting: Members reviewed a technical memorandum called "Gap Analysis – What's left to do" and discussed next steps. PTAC supported maintaining/enhancing existing programs and exploring additional diversion programs in the context of costs and diversion potential. Next steps were for staff to prepare a short list of strategies from the long list in the various technical memorandums in the context of their potential for diversion and associated cost.
February 11, 2015	**Staff Report to Core Area Liquid Waste Management Committee:** • Motion to engage a sole source consultant to complete a comprehensive market sounding of emerging technologies and best practices for wastewater treatment, including an evaluation of the possibility of integration with other waste streams • Committee members/Board were advised that the SWMP process would be put on hold, pending the outcome of the market sounding study
February 25, 2015	Staff Report with update on SWMP: • Provided summary of all work to date • Pointed out that workshop participants wanted more information on flow management and advised that Minister of Environment did not approve Metro Vancouver's proposed flow management bylaw in October 2014. • Advised committee that Province has switched to per capita disposal rate as the new solid waste metric • Advised that work on SWMP may be delayed to allow for liquid and solid waste integration opportunities to the explored in the market sounding study ESC recommends to Board that the staff report be received for information.
Sept. 30, 2015	Staff Report to inform of proposed changes to the provincial solid waste management planning process with Intentions Paper appended. ESC recommends to Board to receive the staff report for information.
October 7, 2015	Integrated Resource Management Workshop – Committee of the Whole

Date	Content
November 4, 2015	Staff Report on follow up to Workshop ESC recommends that the Board receive the Workshop Report for information and that the Board appoint a task force to prepare recommendations for governance roles and responsibilities for Integrated Resource Management (IRM), making recommendations to the Board by February 2016. https://www.crd.bc.ca/project/management-plan/developing-the-new-plan Link to webpage includes all 2012 to 2014 memos, plus June 2014 workshop, plus 2018 Existing System Report
November 23, 2015	Last staff e-mail update to PTAC members
September 2016	Province of BC publishes the new *Guide to Solid Waste Management Planning*
Jan. 2018	Board decides to conclude the IRM procurement process and pursue individual resource recovery
March 2018	Board appoints new SWAC members
May 2018	SWAC: Maura Walker & Associates present 2018 Existing System Report
June 2018	SWAC: Maura Walker & Associates present Guiding Principles, Objectives, Goals K. Hamilton presents Consultation Plan Outline
October 2018	Board approves 2018 Existing System Report and Guiding Principles, Objectives, Goals and Consultation Plan
November 2018 to May 2019	SWAC Works with Tetra Tech to develop long and short list of options
July 2019	SWAC Judith Cullington & Associates present Consultation Plan Outline
September 2019	ESC/Board Approve 15 Strategies & Actions and waste reduction target Direct staff to proceed to public consultation https://www.crd.bc.ca/docs/default-source/crd-document-library/committeedocuments/capitalregionaldistrictboard/20190911/2019-09-11agendapkgrb.pdf?sfvrsn=6a218eca_4 Link to staff report that includes all Tetra Tech memos
October 18 to December 1, 2019	Public Consultation https://www.crd.bc.ca/project/management-plan Link to webpage includes all New Plan Resources (4 documents) and 2 videos
June 5, 2020	Phase One Public consultation results were presented to SWAC

Capital Regional District

Solid Waste Management Plan

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Draft for Discussion

Prepared by:
MWA Environmental Consultants Ltd.

Draft Report Date: June 28, 2020
Final Report Date:
Date approved by Ministry of Environment:

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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 close-loop system, minimizing the use of resource inputs and the creation of waste, pollution and carbon emissions
Controlled 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, demolition and renovation
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 and Climate Change Strategy
MSW	Based on BC's Environmental Management Act, municipal solid waste is refuse that originates from residential, commercial, institutional, demolition, land clearing or construction sources, or refuse specified by a 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, Product Care, Recycle BC)
Recycle BC	Formerly MMBC (Multi-Material BC), the producer responsibility organization established to manage the residential printed papers and packaging EPR program
Residuals / Residual waste	Residual waste refers to discarded materials that are not diverted to reuse, recycling or composting and therefore require landfilling
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, 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 or rearranged and stored for subsequent transfer off-site for further processing or final disposal.

1 Introduction

In British Columbia, regional districts develop solid waste management plans under the provincial Environmental Management Act that are long term visions of how the regional district would like to manage its solid wastes in accordance with the pollution prevention hierarchy. This plan will 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 solid waste management plan 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 the CRD. 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 Plans and were prepared by the CRD's Solid Waste Advisory Committee (SWAC) in June 2018 to enhance their clarity and were subsequently 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 goals for this SWMP were established by the SWAC 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 goals for this plan are:

1. To surpass the provincial per capita waste disposal targets.
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.

1.3 Pollution Prevention Hierarchy

This plan adopts the 5 R 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, and result in achievement of the following regional targets. These targets are discussed further in Section 6.

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

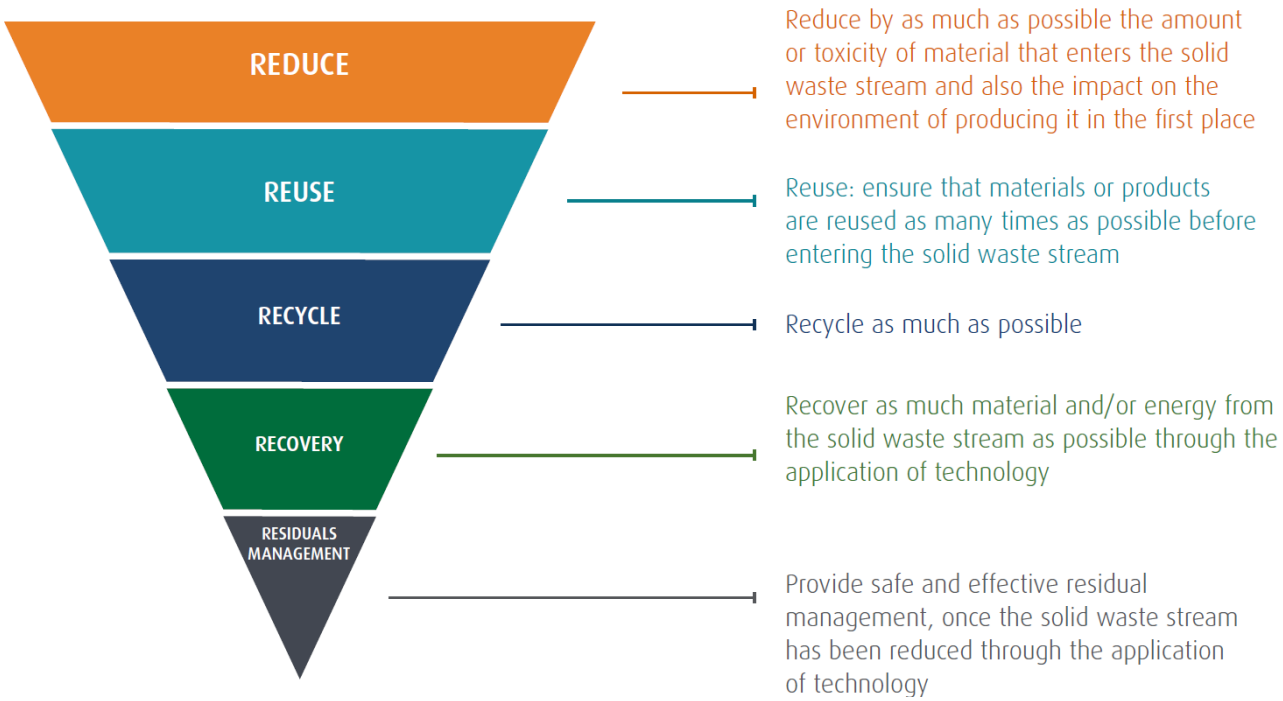


Figure 1-1: 5R Pollution Prevention Hierarchy

1.4 Climate Change and the Solid Waste Management Plan

When organic matter decomposes within the landfill it produces landfill gas which is mainly made up of carbon dioxide and methane, a very potent greenhouse gas. Landfills are one of the largest contributors of greenhouse gas emissions in the community and the Hartland Landfill generates approximately 9% of the greenhouse gas emissions in the region[1]. The CRD has a responsibility to ensure we have done everything we can to reduce the greenhouse gas emissions generated by the landfill and to channel them into something that benefits the community.

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. CRD's regional climate action strategy sets a climate action goal to minimize waste generation and transform remaining waste into a resource. By reducing waste, we reduce the GHG emissions produced by the landfill. The Solid Waste Management Plan has been developed in alignment with this goal.

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.

1.6 Alignment with Provincial Targets

The Province has two solid waste performance targets:

1. Lower the provincial 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.

[1] Source: Regional Climate Action Strategy

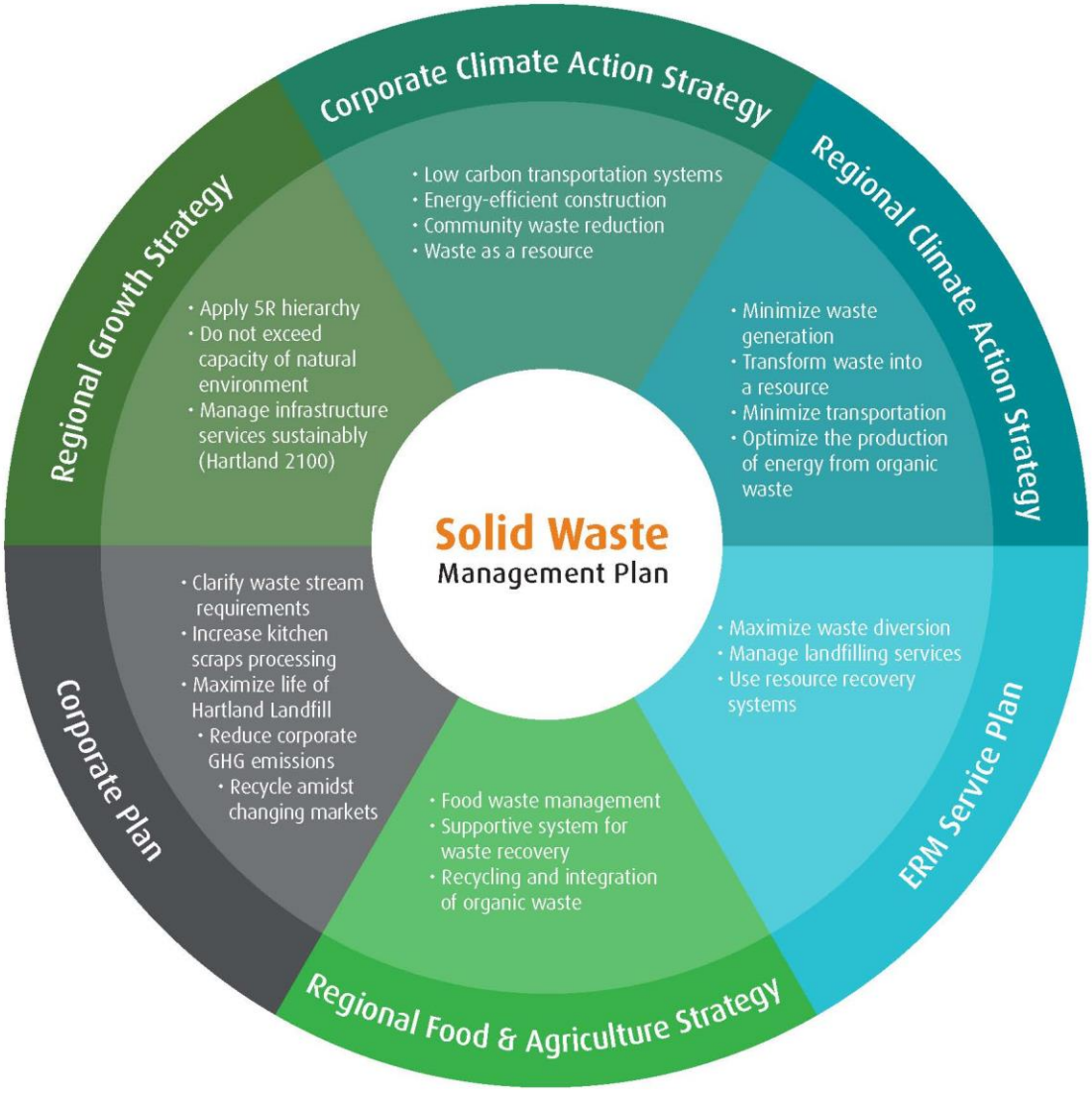


Figure 1-2 Alignment with CRD Strategies and Plans

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)	Implementation Status
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.*	Bylaw implemented
Amendment 2 (2001)	**Implementation Status**
To allow the Capital Regional District (CRD) to regulate transfer stations on Salt Spring Island through the adoption of a regulatory bylaw.	Bylaw implemented
Amendment 3 (2004)	**Implementation Status**
To modify the legal description of Hartland Landfill to include additional land that was acquired as a buffer strip.	Implemented
Amendment 4 (2004)	**Implementation Status**
Add a new Section 16.0 that outlines the CRD's public review process for solid waste related matters.	Implemented
Amendment 5 (2004)	**Implementation Status**
Establishes procedures for resolving conflicts associated with the Hartland Landfill.	Implemented
Amendment 6 (2007)	**Implementation Status**
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.	Implemented
Amendment 7 (2007)	**Implementation Status**
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."*	Implemented
Amendment 8 (2013)	**Implementation Status**
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.	In development

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 a number of reports prepared by consultants, including a 2012 Existing System Report and technical memoranda 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 Environmental Services Committee (ESC) for the SWMP update process. This new committee is called the Solid Waste Advisory Committee (SWAC) and it also serves as an advisory body on current solid waste management initiatives in the CRD referred to it by ESC. This committee will also be the Plan Monitoring Advisory Committee upon completion of the SWMP update process. Terms of Reference for SWAC are included as Appendix A.

The members of SWAC represent a diversity of backgrounds, interests and geographical locations and includes technical and non-technical members. The composition of SWAC is provided in Table 2-2.

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 representative	1
District of Highlands representative	1

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

The public consultation process 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. Staff created a dedicated web page where people could sign up for project updates, review background information, and fill out a feedback form. In general, public feedback for the proposed strategies and actions was positive. The results of the consultation were presented to SWAC in June 2020, with no resulting changes to any of the Plan's strategies and actions.

3 Plan Area

The Capital Regional District (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:

- Central Saanich
- Colwood
- Esquimalt
- Highlands
- Langford
- Metchosin
- North Saanich
- Oak Bay
- Saanich
- Sidney
- Sooke
- Victoria
- 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 East Sooke, 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.

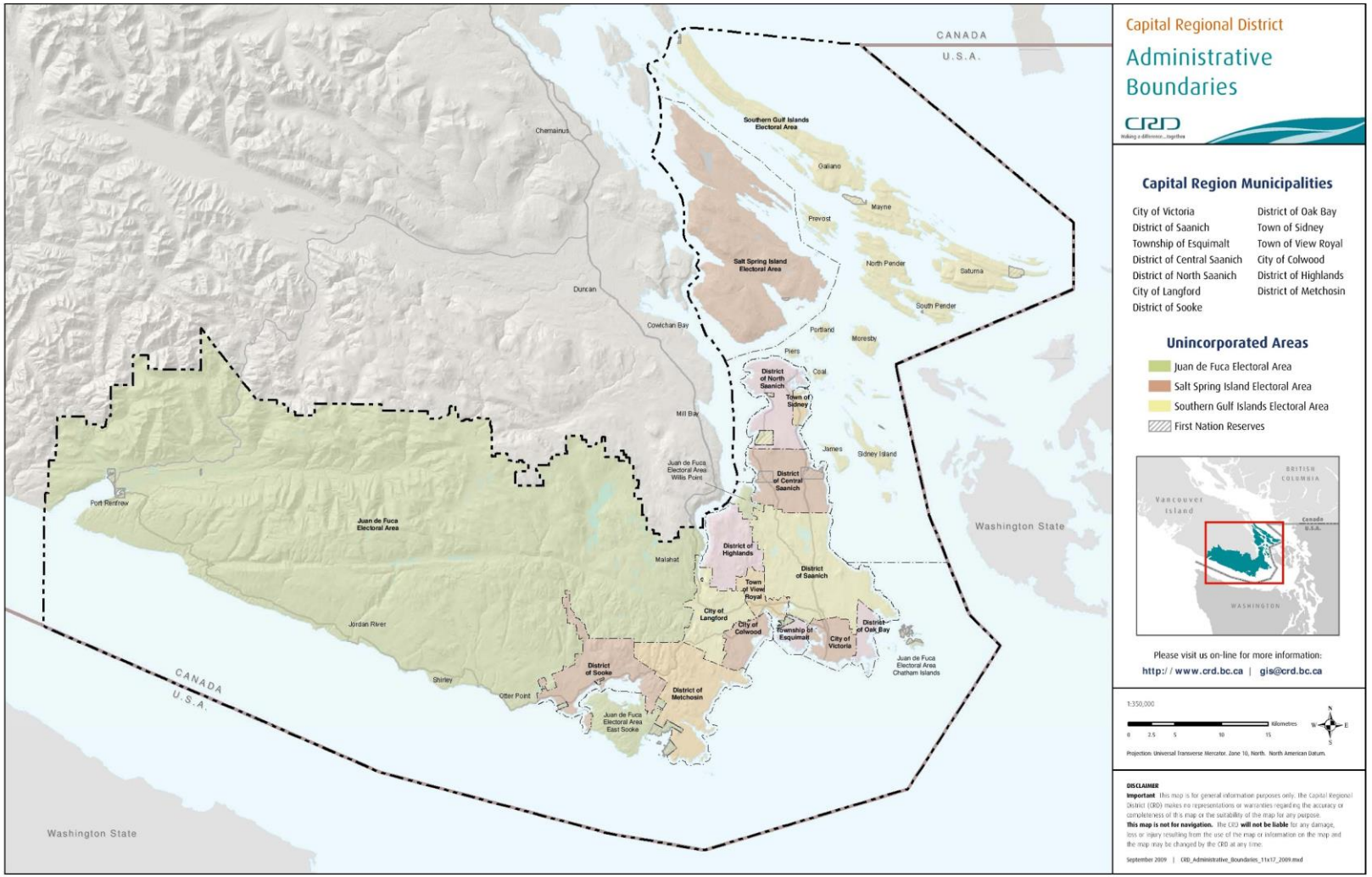


Figure 3-1: Map of Capital Regional District

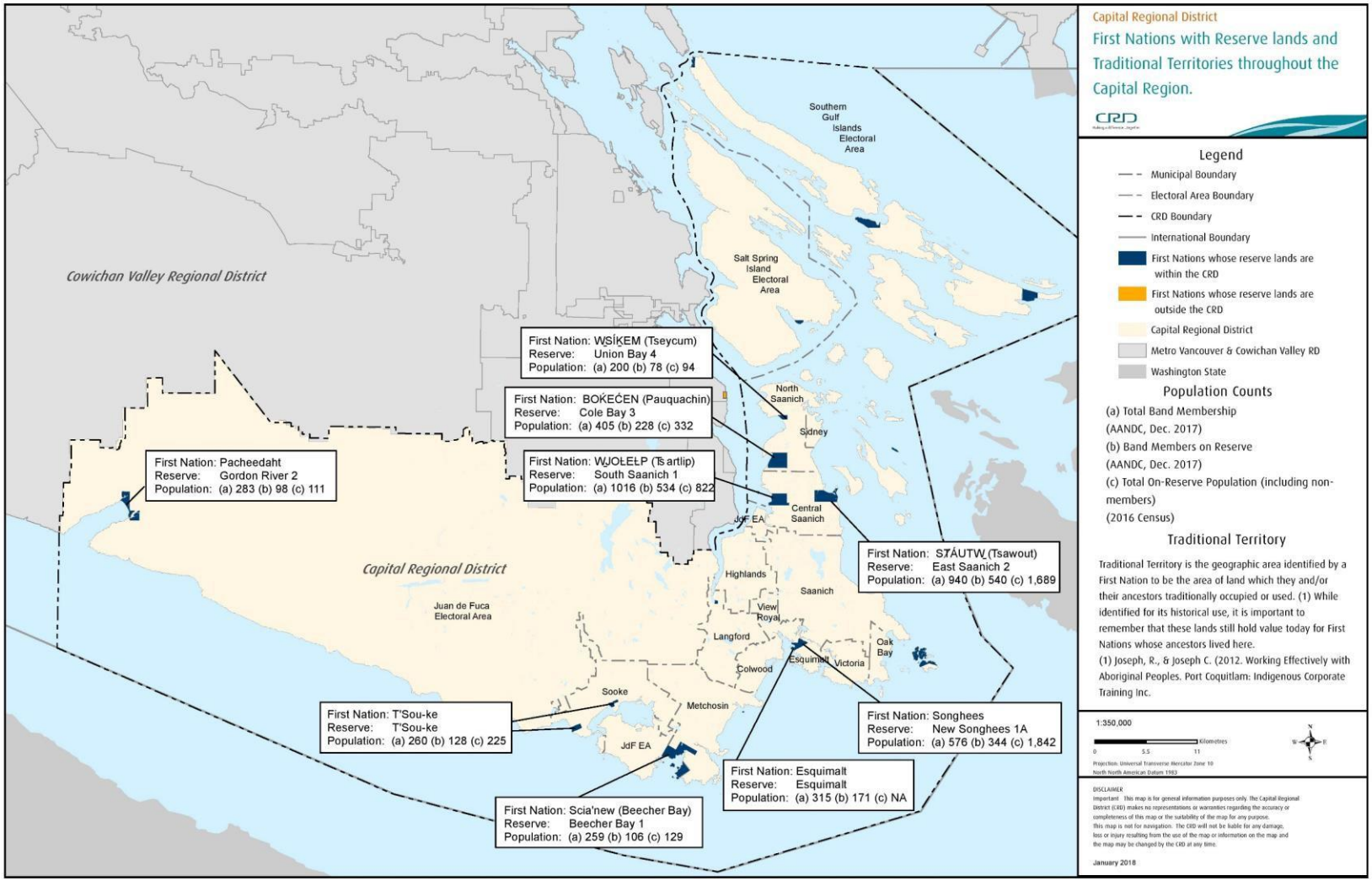


Figure 3-2: First Nations Reserves in the Region

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	**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: CRD 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, universities and colleges and military installations 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.

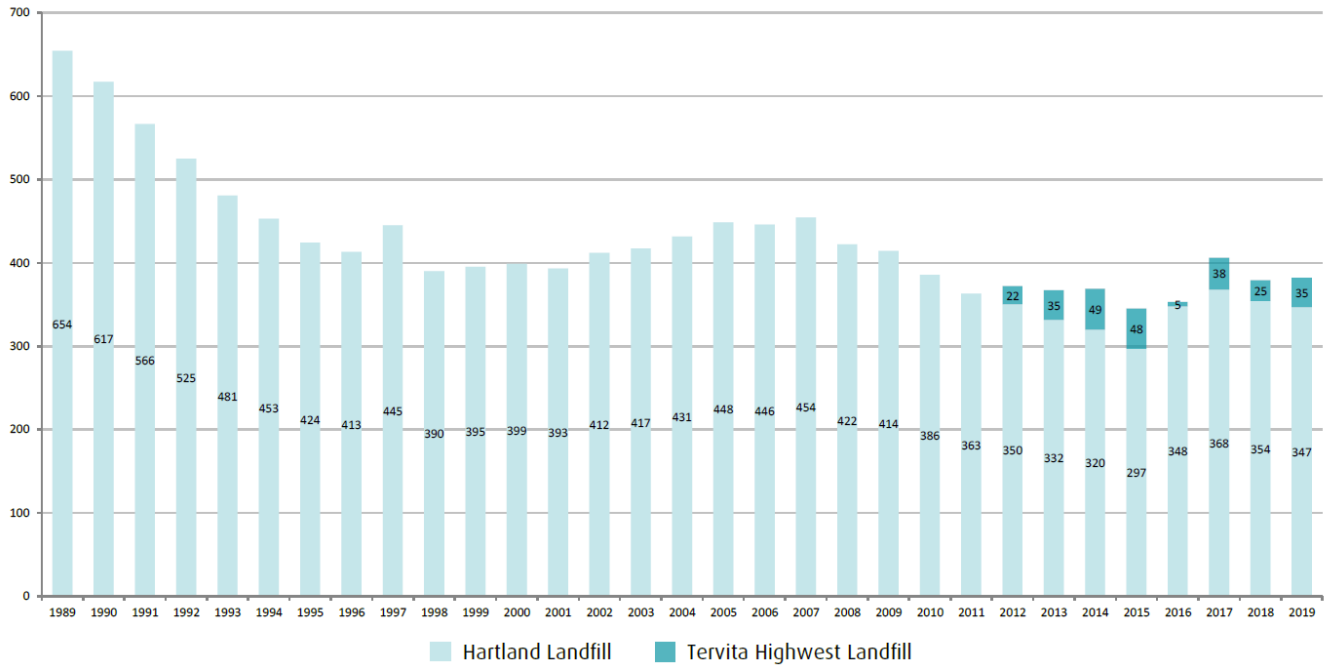


Figure 4-1: CRD Disposal (1989 – 2018)

[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%).

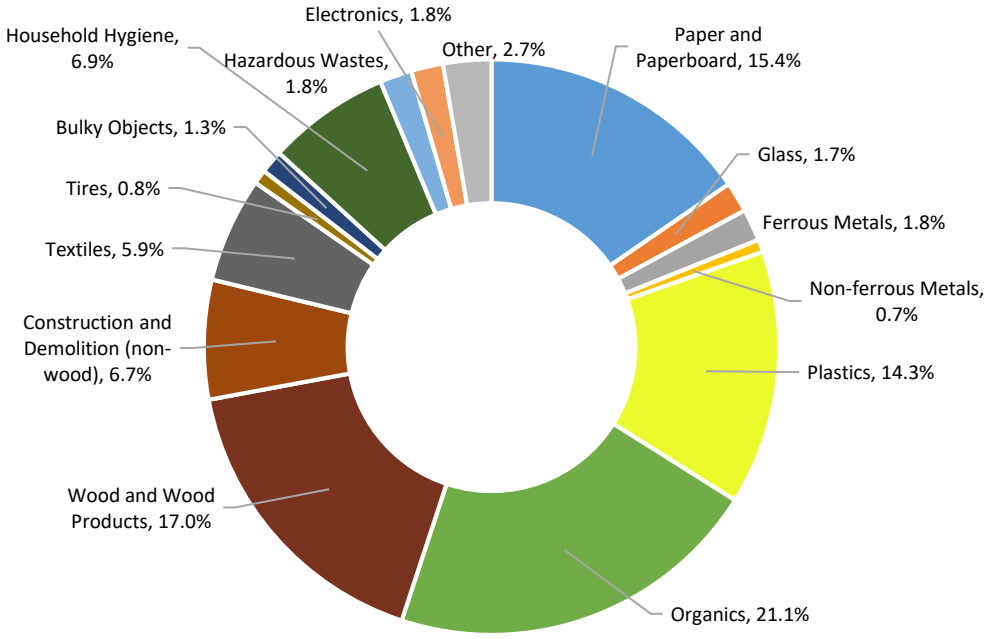


Figure 4-2: Estimated Composition of All Waste Landfilled at Hartland (By Weight), 2016

Figure 4-3 shows the proportion of waste sent to Hartland 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).

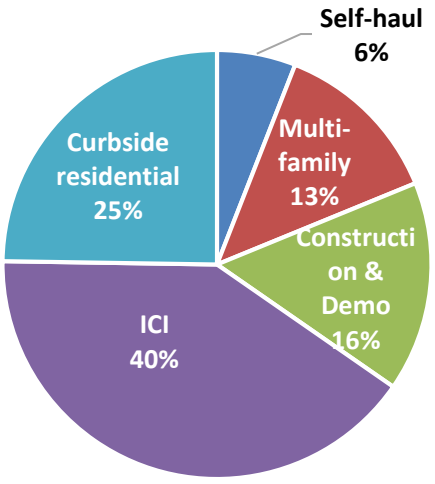


Figure 4-3: Sectors Contributing to Waste Disposed at Hartland (2019)

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 landfills authorized by the Province of BC: Hartland and Highwest. Both of these landfills have Operating Certificates issued by the Province 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 Landfill. 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

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

Hartland landfill is located 14 km northwest of Victoria and is the only sanitary landfill in the Capital region. The 125-hectare site, which includes 48 hectares of landfill area, 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.

Figure 4-5 shows the property boundaries 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 acquisition to further increase the buffer (not to expand the area for landfilling) is also under consideration and may be acquired during the lifespan of this SWMP. Both the 2013 land acquisition and the potential acquisition are shown in Figure 4-5.

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

- Disposal and landfill service for residential and commercial customers;
- Disposal facility for controlled waste[6];
- Recycling depot;
- Collection of Product Stewardship materials
- Household hazardous waste collection
- Salvage area for reusable goods;
- Yard and garden waste drop-off; and
- Kitchen scraps transfer station.

Over the years, the CRD has sought to ensure the conservation of Hartland 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).

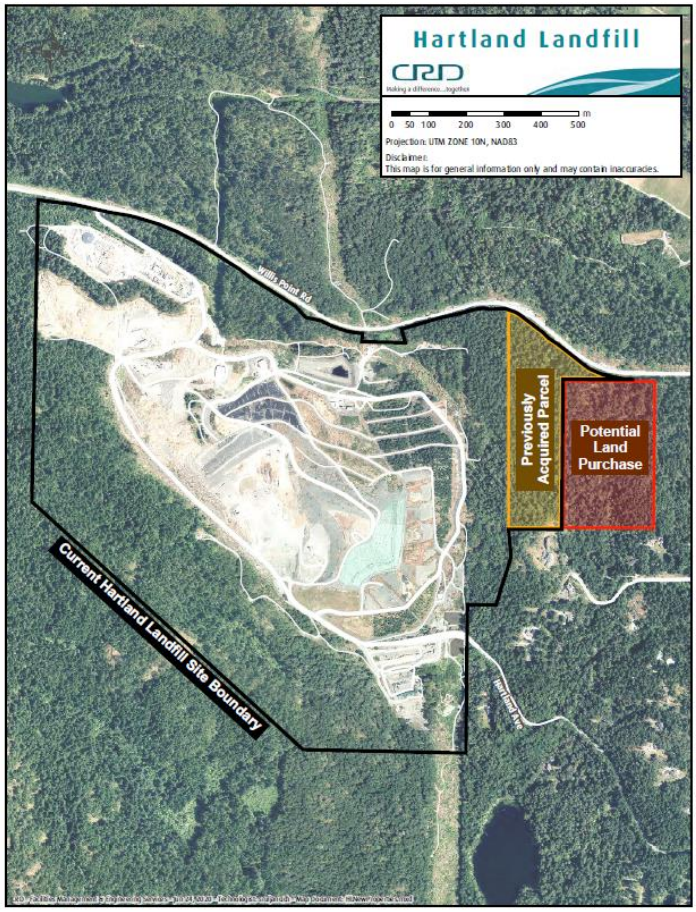


Figure 4-5: Hartland Landfill Boundaries

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. It operates under an Operational Certificate #100193 issued by the Province of BC.

4.2.3 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 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.

4.2.4 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 and bicycles are redistributed through a variety of networks operated by these non-profit associations.

4.2.5 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 (reduce, reuse, recycle, recovery, residuals management) and promote resident awareness and participation in waste reduction and disposal services, including.

- **A school outreach program:** 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 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 handling
  - 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.

4.2.6 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, 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 packaging and paper products at these depots. In addition to receiving packaging and paper products, most depots offer additional services such as scrap metal and electronics recycling.

4.2.7 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 level that ensures the protection of environmental and community health.

4.2.8 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 Landfill:

- Beverage Containers
- Electronics, Electrical Products, Batteries 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

4.2.9 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 the Cowichan Valley Regional District and on the lower mainland.

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 at a discounted tipping fee in an effort to reduce their proliferation.

4.2.10 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 • 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 • Provides education and outreach associated with local solid waste services • 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
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 good for sale in thrift stores and distribution in social support programs

4.2.11 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 bylaw supplements existing provincial regulations under the Organic Matter Recycling Regulation (OMRR), by specifying that restricted organic matter requires in-vessel composting; requiring leachate, nuisance odour, vector, litter and dust management plans, and establishing a regulatory system for enforcing the requirements. The bylaw also deals with issues related to inspection, enforcement, storage and abandonment of materials.

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.

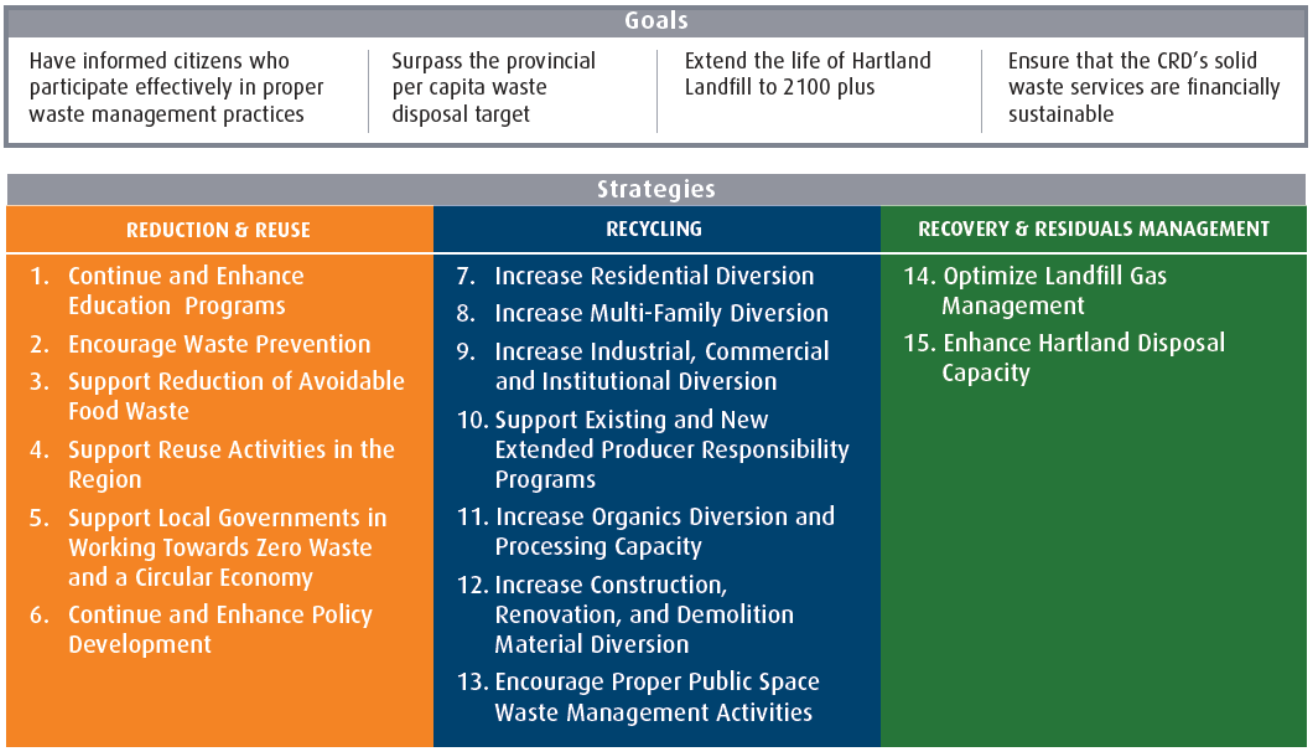


Figure 5-1: Plan Goals and Strategies

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

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

This evaluation is provided in Appendix B. Appendix B also provides additional details on each of the actions listed below.

All of the actions will be implemented by the CRD except where noted in italics. This does not preclude the option of member municipalities, local businesses, institutions or non-profit organizations of undertaking their own initiatives, which may be the same or similar to the actions listed below.

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 (e.g., community-based social marketing); using a variety of education and communication strategies and tools, including digital marketing tools (e.g., social media).
C. Expand education programs to Multi-Family and ICI sector.
D. Enhance K-12 school program to include concepts of circular economy.
E. Collaborate with stakeholders on education campaigns (*a partnership with local governments 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 (could include food waste prevention projects).
C. Support 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 or sale of single use items and non-recyclable materials.
F. Advocate provincially and federally for sustainable product design (e.g., standardized packaging that is reusable, recyclable, or compostable).

Strategy #3: Support Reduction of Avoidable Food Waste

Actions:

A. Support residential food waste reduction, for example, by continuing “Love Food Hate Waste Canada” program.
B. Support ICI food waste reduction, for example, by encouraging stores to donate edible food.
C. Continue to support food recovery organizations.
D. Advocate for regulation to clarify use-by versus Best Before dates and educate accordingly.

Strategy #4: Support Reuse Activities in the Region

Actions:

A. Continue to provide funding to non-profits to help offset garbage tipping fees for unusable donated items.
B. Continue to support and promote donations to reuse establishments.
C. Support reuse, renting and sharing programs, such as tool libraries, repair cafes, and sewing hubs, and other materials exchange activities.
D. Investigate free store at Hartland landfill 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, OCPs, and Economic Development strategies for use by local governments using research and collaboration to guide this process. *To be done in partnership with member 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 debris from extreme weather, such as community chipping days or special burning allowances in electoral areas

5.2 Recycling

Strategy # 7: Increase Residential Diversion

Actions:

A. Continue to promote diversion of recyclable materials (including organics), ensuring that education strives 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 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 (Multi-Family) recycling, for example, by developing standardized education materials.
B. *Work with local governments and private sector service providers* to develop waste source separation requirements.
C. Develop policy guide 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, such as a 'Train-the-Trainer' Program.

Strategy # 9: Increase ICI 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 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 generator, rather than hauler.

Strategy #10: Support Existing and New EPR Programs

Actions:

A. Advocate to the province to expand EPR programs. (Note: The Province is currently conducting an EPR gap analysis and considering adding new materials.)
B. *Collaborate with stewards t*o 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 diversion.
B. Develop an organic waste processing facility at the Hartland Landfill site to receive and process kitchen scraps. Additional information on the process to develop this facility is provided 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. Increase Construction, Renovation and Demolition (CR&D) Material Diversion
B. Investigate beneficial uses of CR&D waste, including a clean wood waste ban.
C. Investigate banning or surcharging mixed CR&D loads at the landfill to encourage source separation.
D. Further develop programs for managing hazardous materials, like 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 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 capture landfill gas for beneficial use. (Note: 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. FortisBC will pay a fixed price per gigajoule for the renewable natural gas and will be responsible for the costs associated with injecting it in to the natural gas distribution system. The agreement could allow for FortisBC to purchase between 140,000 gigajoules to 280,000 gigajoules each year for 25 years, starting in late 2021. The project is expected to reduce the region's greenhouse gas (GHG) emissions by approximately 264,000 tonnes of carbon dioxide equivalent over the 25-year project life.)
B. Investigate collaboration opportunities with educational institutions to research new beneficial uses and technologies.

Strategy #15: Enhance Hartland Disposal Capacity

Actions:

A. Review ban enforcement levels, subject to recycling market conditions.
B. Continue to operate Hartland landfill using best practices.
C. Develop design options to maximize disposal capacity until 2100 and beyond. (Note: A new fill plan is in development. Design and aggregate management options could extend landfill life significantly.)
D. Continue to conduct research and investigate emerging technologies.

6 Organic Processing Facility Decision Process

Strategy #11 is to increase organics diversion and processing capacity and to achieve this, one of the key actions is to establish an organic waste processing facility at the Hartland Landfill site to receive and process kitchen scraps and other organic materials such as yard waste. This section provides additional detail on the process to establish this facility.

The CRD implemented a kitchen scraps disposal ban at Hartland Landfill in 2015. In recognition of a lack of local processing capacity for kitchen scraps, the CRD installed a kitchen scraps transfer area at Hartland landfill to receive kitchen scraps collected within the region. The kitchen scraps are then hauled and processed at facilities on southern Vancouver Island and on the mainland. This approach requires extensive transportation and is inconsistent with the Region's long term objective of managing the kitchen scraps locally to the extent possible. Consequently, in 2018 the CRD Board approved a motion directing staff to pursue an in-region or near in-region organics (kitchen scraps/yard and garden) processing facility and initiate a procurement process. The CRD subsequently issued a Request for Expressions of Interest for Kitchen Scraps and Organics Residuals Processing Facility and received a number of responses for a variety of processing methods.

As part of the next stage of this process, the CRD will engage the public to understand what the community's values are regarding organics processing (e.g. odour, climate impact, collection methods) to inform the establishment of a processing facility at Hartland landfill.

All CRD residents are primary stakeholders in the consultation process. Specific secondary stakeholder groups include municipalities and electoral areas as well as related stewardship, education and advocacy groups. First Nations will be engaged by CRD First Nations Relations staff. This consultation will be undertaken in alignment with the requirements outlined within the Guide for Solid Waste Management Planning and will be used to develop a plan to establish a facility at Hartland Landfill.

CRD's process for establishing an Organics Processing Facility within the Capital Region will follow the process outlined below:

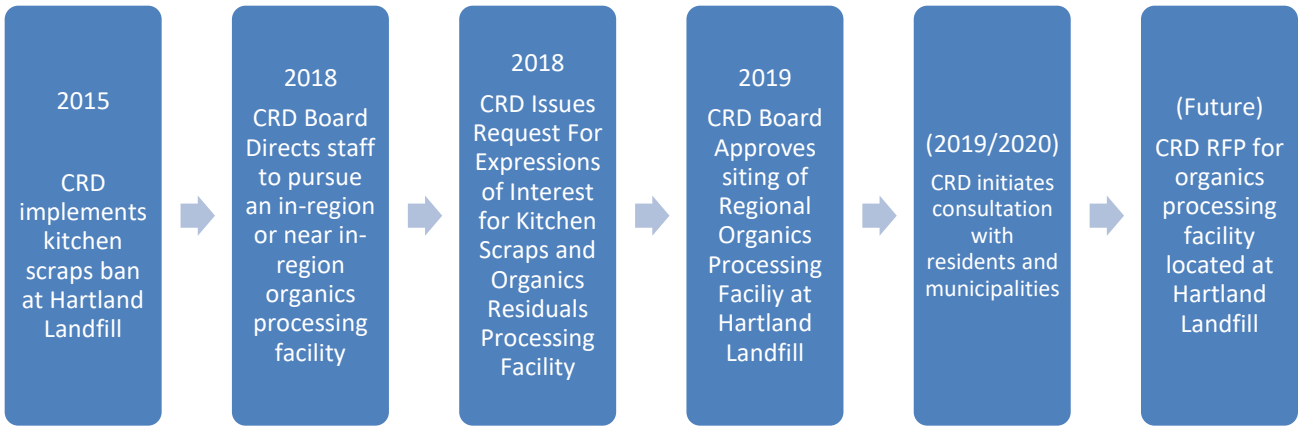


Figure 6-1: Organic Processing Facility Decision Process

Until the time that local processing capacity is established, the CRD intends to continue operation of a kitchen scraps transfer facility at Hartland Landfill.

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 (years 4-5), 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.

Appendix D 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 7-1.

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 • ICI	▪ Recyclables and organic waste from: ▪ Single-family ▪ Multi-family ▪ ICI	▪ EPR for ICI-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 outline 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%.

Table 9-1: New Costs Associated with SWMP 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 ICI Diversion	$50,000
12	Increase Construction, Renovation and Demolition (CR&D) 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 the current tipping fees ($110/tonne) and other projected revenues (including Renewable Natural Gas) without the need for tax requisition or debt. Table 9-2 shows the estimated impact of the projected expenditures and decreasing per capita disposal on the CRD's Environment Resource Management (i.e. solid waste management) reserves.

Table 9-2: Estimated ERM Reserves Balance (2020-2031)

2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
36,484,055	21,378,327	7,524,757	9,800,701	11,660,083	12,759,595	13,937,403	14,186,509	13,199,630	11,427,223	9,299,829	6,612,462

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
b. Waste import / export options which would significantly impact the CRD's or neighbouring 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
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. Annual measurement and monitoring allows for course corrections to be made in a timely manner.

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 (SWAC). This will maintain the linkage between the development of the plan and its implementation. The terms of reference for the SWAC are included in this Plan as Appendix A.

2. **Annual Reporting**: On an annual basis, CRD staff will continue to prepare 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 SWAC and the Board.

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. A Plan renewal will be undertaken after ten years.

5. **Waste Composition Study:** The CRD has been undertaking waste composition studies roughly 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 assist with 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 defined by the CRD Board;
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 any complaints or concerns that occur during plan development or implementation.

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

- Administrative decisions made by regional district staff
- 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.

Appendix 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

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.

Appendix B: Detailed Evaluation of the Plan's Strategies and Actions

1.0 REDUCTION AND REUSE

B-1: Strategy Evaluation - 1. Continue and Enhance Education Programs

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
1. Continue and Enhance Education Programs 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 (e.g., community-based social marketing); using a variety of education and communication strategies and tools, including digital marketing tools (e.g., social media). C. Expand education programs to MF and ICI sector. D. Enhance K-12 school program to include concepts of circular economy. E. Collaborate with stakeholders on education campaigns, e.g. local governments, product stewards. F. Continue supporting environmental stewardship recognition. G. Continue to engage residents on solid waste matters; using the appropriate level of consultation.	▪ **Action 1A** is in accordance with current practice and should be simple to implement and maintain. Consistent messaging throughout the CRD will aid in public understanding and use of diversion services throughout the community and support the goal of having informed citizens that participate effectively in proper waste management practices. ▪ **Action 1B** will use techniques such as Community-based social marketing (CBSM). CBSM is an approach to program promotion and education that encourages high rates of effective participation and long-term behavior change. The CBSM process centres on uncovering barriers that inhibit individuals from engaging in sustainable behaviours, identifying tools that have been effective in fostering and maintaining behaviour change, then piloting takes place on a small portion of the community followed by ongoing evaluation once the program has been implemented community-wide. ▪ A significant bank of resources exist (within and beyond British Columbia) of sample education materials and guides for rolling out educational programs for different sectors, which could be used as a foundation for **Action 1C**. Initiating education programs for MF and ICI sectors now sets the CRD up for success when rolling out additional diversion programming or making changes to existing programs. ▪ Educating youth (**Action 1D**) is a critical key to long-term behaviour change in recycling[1,2]. It influences not just recycling habits at home but builds a foundation for youth to develop positive diversion habits to continue throughout life. A myriad of resources exist on integrating zero waste education for youth which the K-12 could consider adapting for the K-12 program[3] ▪ Interested stakeholders exist throughout the CRD (e.g., universities, local governments, and private sector service providers) who are open to collaboration (**Action 1E**); this collaboration may bolster the success of education programs. ▪ **Actions 1F through 1G** are in accordance with current practice and should be simple to implement and maintain.	▪ **Actions 1A through 1H** are expected to enhance rates of participation, though little environmental impact is anticipated as a *direct* result of these initiatives. Additional material capture and participation is typically attributed to emerging/improving collection and diversion programs, thus direct impact is hard to measure. This strategy contributes to creating culture and systems change that may ultimately reduce disposal in the CRD. ▪ This strategy is a priority to ensure effective participation the CRD waste management system.	▪ **Actions 1A through 1H** will increase overall engagement with waste management systems in the CRD. They may result in an overall growth in the waste reduction movement ▪ Confusion among residents can be often widespread in diversion programs, leading to general frustration among the public (i.e., “Why is recycling so confusing?”) Receiving information and active engagement through CRD programs (**Actions 1A through 1H**) may improve public perception. ▪ Collaborating with stakeholders (**Action 1E)** may result not only in improved education programs but also improved relationships with all stakeholders interested in waste management, thus creating a more resilient waste management system in the CRD. Furthermore, collaborating with local governments on education programs would likely result in consistent messaging and more harmony between initiatives within the CRD.	▪ This strategy may have a moderate direct impact on disposal capacity. ▪ This strategy contributes to creating culture and systems change that may ultimately reduce disposal in the CRD.	▪ $100,000 annually to enhance education programs. ▪ Additional funding may be required for special campaigns, initiatives, and/or consultation (e.g. new bans).
Score (High- 5, Medium – 3, Low – 1)	High	Medium	High	Medium	

[1] Call 2 Recycle. Recycling is Important at Any Age. https://www.call2recycle.ca/recycling-is-important-at-any-age/
[2] City of Boroondara. Schools as gateways to community behaviour change on consumption and waste. https://www.mwrrg.vic.gov.au/assets/resource-files/Smart-school-MF-R1-Final-Report-Bo.pdf
[3] Sustainability Victoria. Waste Smart Schools: A practical ‘how to’ guide for Victorian schools, January 2016. https://www.sustainability.vic.gov.au/-/media/SV/Publications/Schools/Modules/Waste/RSS-waste-how-to-guide-PDF-version.pdf

Table B-2: Strategy Evaluation - 2. Encourage Waste Prevention

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
2. Encourage Waste Prevention A. Promote less consumption and advocate for consumer responsibility. B. Establish a community- based waste reduction grant program (could include food waste prevention projects). C. Support 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 or sale of single use items and non-recyclable materials. F. Advocate provincially and federally for sustainable product design (e.g., standardized packaging that is reusable, recyclable, or compostable).	▪ It is recommended that **Action 2B** grant criteria for projects eligible for funding including food waste prevention and recycling initiatives. This Action complements the existing Recycle BC Community Champions funding program[4] for waste reduction initiatives in communities. ▪ Efforts similar to **Action 2C** in BC municipalities (e.g., City of Victoria, City of Vancouver) have proven successful at increasing engagement. ▪ Sustainable and/or packaging-free purchasing options (**Action 2D**) have gained popularity in recent years. One Zero Waste grocery store exists in Victoria and others exist throughout BC. These types of stores mainly reach 'early adopters' – that is, environmentally-minded individuals who care and think deeply about waste. ▪ **Actions 2E and 2F** tackle issues that are outside of the CRD's jurisdiction. Advocating provincially and federally about these issues is currently the most feasible way to address them.	▪ Strategy 2 is at the top of the pollution prevention hierarchy as it deals with reduction, therefore, it has potential for environmental impacts. Waste *reduction* (as opposed to recycling) results in reduced embodied energy for materials that were not created in the first place (or were created in a less wasteful way).	▪ The intention of **Action 2A** creates widespread understanding of the importance of reducing waste at the top of the pollution prevention hierarchy. This understanding is positive as it empowers residents to make positive and impactful choices about the way that they consume. ▪ **Actions 2B, 2C, and 2D** engage with early adopters of the zero-waste movement and have the potential to create a strong community. ▪ **Action 2B** provides mechanism for the community to act on its own initiatives / take ownership for improvements in reduction. ▪ **Action 2C** directly engages with something that is highly visible and many residents feel strongly about. ▪ **Action 2D** supports organizations that have the potential to create a widespread community of residents who care deeply about zero waste. This is already happening in the CRD at the Zero Waste Emporium in the City of Victoria, where waste reduction events are hosted. Another excellent example of how these businesses can create community is Nada[5] in Vancouver, BC, a zero-waste grocery store which additionally functions as a hub for the zero-waste community in Vancouver and hosts regular events including zero waste cooking workshops and monthly meetups for interested individuals. ▪ **Actions 2E and 2F** indirectly have the potential to address residents' 'Recycling is confusing' complaints by simplifying product design and ensuring materials are clearly recyclable, compostable, or reusable. However, because this can only be done through advocacy, this positive social impact will likely not be realized in the near future.	▪ **Action 2C** (and, to a small extent, **2D**) have some potential to reduce waste disposal. ▪ Other Actions (**2A, 2B, 2E, and 2F)** are not expected to have a direct impact on waste disposal but work to create culture and systems change that may ultimately reduce disposal in the CRD.	▪ The CRD has initially proposed that the total grant funding for **Action 2B** would be $50,000. ▪ In general, Strategy 2 is in line with current practice, therefore new resources required would be minimal to moderate.
Score (High- 5, Medium – 3, Low –1)	Medium	Medium	High	Low	

[4] Recycle BC. Community Champions. https://recyclebc.ca/education/commununity/community-champions/
[5] https://www.nadagrocery.com/

Table B-3: Strategy Evaluation - 3. Support Reduction of Avoidable Food Waste

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
3. Support Reduction of Avoidable Food Waste A. Support residential food waste reduction, for example, by continuing Love Food Hate Waste Canada program. B. Support ICI food waste reduction, (e.g., encouraging stores to donate edible food). C. Continue to support food recovery organizations. D. Advocate for regulation to clarify use-by versus Best Before dates and educate accordingly.	▪ Nationwide efforts exist to reduce food waste (**Actions 3A through 3D)**, especially as data on the enormous quantity of food being wasted comes into public view (recent estimates show that more than half of all food in Canada is being wasted).[6] ▪ Research has shown that avoidable household food waste can be reduced by up to 15% with an intensive Love Food Hate Waste campaign **(Action 3A)**.[7] ▪ Several Canadian retailers (e.g., Save On Foods and Walmart) have committed to reducing food waste and partners may exist (e.g., FoodMesh Food Recovery Program[8]) to catalyze food waste reduction in the ICI sector **(Action 3B and 3C)**. ▪ Research has shown that restaurants can save up to $7 in operating costs for every $1 invested to reduce kitchen food waste, thus providing a powerful incentive to build upon **(Action 3B)**.[9] ▪ The National Zero Waste Council, a leadership initiative advocating for waste prevention in Canada, advocates regulating for clarity around Best Before dates. Date labelling guidance exists from organizations such as ReFed in the US and WRAP in the UK **(Action 3D)**.[10]	▪ Wasted food embodies significant amounts of wasted resources (energy, water, etc.) that were required to grow, produce, and distribute that food. Reducing the amount of food wasted by one tonne has the equivalent effect on CO_2 emissions as taking one car off the road for a year **(Actions 3A through 3D)**.[13] ▪ According to 2016 waste composition results, 12% of the material disposed at Hartland is edible food waste.[11] Food waste disposed in landfills is a significant source of greenhouse gas emissions. However, much of the landfill gas is currently captured (68% in 2018)[12] and turned into electricity or flared, and the landfill gas system may be upgraded, which would likely increase the capture rate **(Actions 3A through 3D)**.	▪ Residents directly benefit financially when they reduce food waste. Estimates of money spent on wasted food per household in Canada range from $1,100[13] to nearly $1,800[6] annually. **Action 3A** directly encourages residents to waste less food, thereby encouraging consumer savings in their food budgets. Strategy 3d may indirectly result in cost savings to residents, as residents will waste less food and money if they understand when an item is truly no longer edible. ▪ Local non-profits benefit twofold from this strategy: **Action 3B** encourages local businesses to donate edible food, which results in an influx of food to local charities. **Action 3C** supports food recovery organizations in the region directly.	▪ Edible food waste makes up a large proportion of the materials disposed at Hartland (12%)[11]. One study demonstrated that an intensive Love Food Hate Waste campaign reduced household food waste by up to 15%. With **Action 3A**, similar results in the CRD (a 'best-case scenario') could yield a disposal reduction of approximately 1,400 tonnes (a 1% reduction). ▪ ICI food waste reduction **(Action 3B)** could have a more significant impact on tonnage: each year, the ICI sector disposes of over 9,000 tonnes of edible food.	▪ This strategy requires minimal additional funding due to actions that will require additional staff time. ▪ Funding may be required to continue Love Food Hate Waste program (or similar initiative).
Score (High- 5, Medium – 3, Low – 1)	High	Medium	High	Medium	

[6] Second Harvest, 2019 (https://secondharvest.ca/wp-content/uploads/2019/01/Avoidable-Crisis-of-Food-Waste-The-Roadmap-by-Second-Harvest-and-VCMI.pdf)
[7] WRAP UK, 2012 (http://www.wrap.org.uk/sites/files/wrap/hhfdw-2012-main.pdf.pdf)
[8] Food Mesh (https://foodmesh.ca/)
[9] Champions 12.3 (https://champions123.org/wp-content/uploads/2019/02/Report_The-Business-Case-for-Reducing-Food-Loss-and-Waste_Restaurants.pdf)
[10] National Zero Waste Council, 2018 (http://www.nzwc.ca/focus/food/national-food-waste-strategy/Documents/NZWC-FoodLossWasteStrategy.pdf)
[11] Capital Regional District, 2016 (https://www.crd.bc.ca/docs/default-source/recycling-waste-pdf/WasteCompositionStudy2016.pdf?sfvrsn=4) [12] Maura Walker and Associates, Capital Regional District Solid Waste Management Plan Existing Solid Waste Management System, 2018. [13] Love Food Hate Waste, 2017 (https://lovefoodhatewaste.ca/about/food-waste/)

Table B-4: Strategy Evaluation - 4. Support Reuse Activities in the Region

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
4. Support Reuse Activities in the Region A. Continue to provide funding to non-profits to help offset garbage tipping fees for unusable donated items. B. Continue to support and promote donations to reuse establishments. C. Support reuse, renting and sharing programs, such as tool libraries, repair cafes, and sewing hubs, and other materials exchange activities. D. Investigate establishing a free store at Hartland landfill or other facilities.	▪ **Actions 4A and 4B** are in accordance with current CRD practices and should be simple to implement and maintain. ▪ An existing groundswell of community reuse organizers exists, which the CRD can build on with **Actions 4C**. ▪ Free Stores (**Action 4D**) can be a successful and low-cost model to raise awareness of a) high value goods being disposed of and b) availability of finding 'another person's treasure' for oneself. ▪ Free Store (**Action 4D**) feasibility is dependent on availability of appropriate space, and potentially, a local organization to run the program.	▪ Strategy 4 is near the top of the pollution prevention hierarchy as it deals with reuse, therefore, it has potential for environmental impacts. Material reuse results in reduced embodied energy for materials that were not created in the first place.	▪ **Actions 4A through 4D** improve access to reused goods, which can save residents money, as they don't need to purchase new materials. Furthermore, promotion of reuse organizations may improve social acceptability of reusing items, which is a positive social impact as residents become aware of costs savings that could be realized and the environmental benefits of buying used materials. ▪ **Actions 4A through 4C** build trust and deepen relationships with organizations essential for exchange of reused materials. Promotion of these programs is a key part of the Strategy's success. ▪ Renting and sharing programs **(Action 4D)** have the potential to become community hubs for environmentally-minded individuals. The Victoria Tool Library is an existing example of this. By supporting these initiatives, the CRD will be supporting the waste reduction community.	▪ This strategy is expected to have only a small (and nearly impossible to measure) impact on disposal but work to create culture and systems change that may ultimately reduce disposal in the CRD. ▪ **Action 4D** will enable a small reduction in disposal by encouraging reuse of materials at Hartland.	▪ **Actions 4A through 4C** do not require any additional new funding.
Score (High- 5, Medium – 3, Low – 1)	High	Medium	High	Medium	

Table B-5: Strategy Evaluation - 5. Support Local Governments in Working Towards Zero Waste and a Circular Economy

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
5. Support Local Governments in Working Towards Zero Waste and a Circular Economy A. Develop model language for bylaws, best practices, OCPs, and Economic Development strategies for use by municipalities and electoral areas using research and collaboration to guide this process. B. Work with municipalities and electoral areas to identify the need for solid waste facilities and zoning for waste management activities. 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).	▪ Local governments in the CRD value waste reduction and would likely be open to support from the CRD in language for bylaws, best practices, OCPs, and Economic Development strategies (**Action 5A and 5B**). ▪ Disposal bans for material categories that have processing opportunities and markets can be effective to enable local recycling infrastructure (**Action 5C**). ▪ **Action 5D** would require a study by the CRD to help municipalities understand concepts of 'Pay-As-You-Throw' (PAYT) and approaches that they could incorporate into their municipal waste collection systems. Local governments typically administer waste collection. Municipalities with collection in the CRD already have a 'User Pay' system which limits the number of containers at the curb. Residents have to purchase tags to put out additional bags. This Action would involve investigating weight-based and/or frequency-based approaches. ▪ **Action 5E** would require a study to investigate an approach for using clear bags to improve diversion rates. This has been implemented in several Canadian jurisdictions (mostly in Nova Scotia and Ontario[14]) and typically relies on manual collection systems, where discarded materials are put into clear bags so that collection staff can visually inspect the contents before being placed in the collection truck. The study would help the CRD to assess whether this type of approach would be feasible for CRD municipalities to adopt.	▪ **Actions 5A through 5C** do not have directly associated environmental impacts, however, they contribute to creating a culture and systems change that may ultimately reduce disposal in the CRD. ▪ **Action 5C and 5D** could, if implemented, reduce the amount of material disposed and encourage proper diversion of materials.	▪ **Action 5A** strives to improve alignment of local governments and the CRD. This may ultimately lead to greater harmony between the local governments. Furthermore, regionally aligned programs may lead to less resident confusion, thereby supporting effective participation in CRD programs and initiatives. ▪ **Action 5C** encourages local recycling where options are available, which could in turn boost the local economy. ▪ PAYT programs (**Action 5D**) create awareness of disposal habits. These programs can save low waste generators money, thus aligning monetary incentives with waste reduction. However, these programs could lead to increased inappropriate disposal of household waste for 'free' (for example in park litter bins). However, as discussed in the 'Technical Feasibility and Effectiveness' comment for Action 5D, it is not expected that implementing PAYT for residential collection would be feasible or practical in the CRD. ▪ Use of clear bags (**Action 5E)** creates a social incentive for generators to sort waste properly.	▪ **Actions 5A through 5C** do not have directly associated impact on disposal, however, they contribute to creating a culture and systems change that may ultimately reduce disposal in the CRD. ▪ **Action 5D and 5E** will provide more information on potential effects on waste disposal that the programs described could have.	▪ **Action 5A, 5B, and 5C** are significant undertakings for a CRD staff member but would not require any capital funding.
Score (High- 5, Medium – 3, Low – 1)	High	Low	High	Low	

[14] Background Research on Clear Garbage Bag Programs Across North America, https://www.niagararegion.ca/government/committees/pdf/Quinte%20Clear%20Bag%20Report.pdf

Table B-6: Strategy Evaluation - 6. Continue and Enhance Policy Development

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
6. Continue and Enhance Policy Development 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 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 extreme weather debris such as community chipping days or special burning allowances in electoral areas.	▪ Examples of procurement policies exist for many regions within BC that could be adapted for CRD use (**Action 6A**). ▪ Since the CRD has existing material bans, it should be relatively straightforward to adapt the existing process material ban procedure for any materials that are added (**Action 6B**). Waste generators in the CRD also already have familiarity with existing bans, which lends itself to greater adherence to future bans. ▪ Several regional districts in BC, including Regional District of Nanaimo and Cowichan Valley Regional District have the ability to license waste management facilities **(Action 6C)**. This action would involve the CRD studying the requirements to establish a licensing system and understanding the positive and negative impacts. ▪ **Action 6D** would involve the CRD studying regulatory tools and mechanisms to manage materials in the region. ▪ **Action 6E** would involve the CRD studying measures to deal with debris from extreme weather events.	▪ Developing model procurement policies (**Action 6A**) could indirectly decrease disposal or encourage contractors to use other more sustainable practices. A sustainable or "green" procurement policy provides guidance to employees and departments to make purchasing decisions. Through this kind of policy, the CRD can encourage policies that prioritize the reduction of consumption, use of durable goods, or choosing items with 100% recycled content. ▪ **Action 6B** would likely lead to decreased disposal and could help to manage any materials that are identified as hazardous. ▪ **Actions 6C, 6D, and 6E** would investigate possible environmental implications of the programs described.	▪ **Actions 6A and 6B** would have an underlying impact on the system but direct social impacts would not likely be present. ▪ Programs resulting from **Actions 6C, 6D, and 6E** would also not be likely to have direct social implications – these actions describe investigations, which would include investigating social implications of any programs to be implemented.	▪ **Action 6B** has the potential for significant disposal reduction, depending on which materials are banned. However, this is a high-level maintenance action that may not result in disposal bans in the near future. ▪ **Actions 6C, 6D, and 6E** would investigate waste disposal implications of the programs described.	▪ **Actions 6A and 6B** would require minimal to moderate CRD staff resources. ▪ **Actions 6C and 6D** may require significant funding if CRD pursues licensing or regulatory mechanism, including funding for consultation.
Score (High- 5, Medium – 3, Low – 1)	High	Medium	Low	Medium	

2.0 RECYCLING

Table B-7: Strategy Evaluation - 7. Increase Residential Diversion

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
7. Increase Residential Diversion A. Continue to promote diversion of recyclable materials (including organics). 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 recyclables. D. Develop tools, such as a guide, to support event recycling.	▪ **Action 7A through 7D** can be developed and implemented by CRD staff in partnership with local governments and other stakeholders. ▪ Local processing options (**Action 7C)** exist for some materials currently, such as concrete and asphalt, yard waste, and metal. The CRD should stay abreast of recycling opportunities for various materials in the CRD so that opportunities can be identified and promoted. ▪ The CRD staff can investigate approaches and tools such as City of Vancouver's Green Events Planning Guide[15] and the Downtown Victoria Business Association Green Events Guide[16] to assist with developing tools for the CRD (**Action 7D**).	▪ **Action 7A** creates positive environmental impacts by diverting materials from landfill. ▪ Given the increasing instability of international markets for recyclable materials, improving local recycling markets (**Action 7C**) can enhance long-term stability and resiliency of recycling programs.	▪ Overall, 38% of the waste produced in the CRD is produced by residential sources. Programs should continue to educate the residents about the materials that they discard, because these programs are far-reaching in that they make residents more generally conscientious about waste. This makes **Action 7A** important. ▪ Encouraging local markets for recyclables **Action 7C**, instead of shipping recyclables overseas, can provide a boost the local economy. ▪ Event recycling (**Action 7D**) is important because though the overall amount of materials diverted at events may not be significantly large, events are an excellent opportunity to educate the public in what materials can be recycled, which improves the strength and resiliency of residential recycling.	▪ Recyclable materials from residential sources represent 9% of the overall material disposed at Hartland Landfill. These actions, especially **Action 7A and 7B** support programs to divert recyclable materials that are disposed at Hartland Landfill. ▪ **Action 7D** may result in a small decrease in waste disposal, as events can create a significant amount of waste.	▪ **Actions 7A through 7D** would require minimal to moderate CRD staff resources. ▪ The CRD has initially proposed that the total support funding for **Action 7B** would be $25,000 annually for two years and evaluate effectiveness after two years.
Score (High- 5, Medium – 3, Low – 1)	Medium	Medium	Medium	Low	

[15] https://vancouver.ca/doing-business/greening-your-event.aspx
[16] https://downtownvictoria.ca/app/uploads/2018/07/Green-Events-Guide-final.pdf

Table B-8: Strategy Evaluation - 8. Increase Multi-Family Diversion

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
8. Increase Multi-Family Diversion A. Allocate resources to support MF recycling, for example, by developing standardized education materials. B. Work with local governments and private sector service providers to develop waste source separation requirements. C. Develop policy guide for recycling, composting and garbage space and access in multi-family developments. D. Collaborate with stakeholders (e.g., private haulers who service MF buildings or MF property managers) to implement support for MF recycling, such as a 'Train-the-Trainer' Program.	▪ Allocating additional staff to support multi- family diversion would be a start to improving MF waste diversion (**Action 8A)**. This staff member could research approaches from other jurisdictions, such as the standardized educational materials for multi-family recycling exist in other nearby jurisdictions, such as Metro Vancouver.[17] ▪ Requiring source separation **(Action 8B)**, for example by developing bylaws, is feasible, as has been demonstrated by municipalities throughout BC. Municipalities in the CRD support MF diversion measures. Having the CRD work with local governments and the private sector to develop source separation requirements for the MF sector should be feasible. ▪ **Action 8C** is feasible; the CRD should consider the resources required to develop this policy guide. ▪ **Action 8D** is feasible and implementation examples exist throughout BC, including the City of Vancouver's Multi-Family Ambassador Program and the Zero Waste Coach in the City of North Vancouver.	▪ The multi-family sector disposed approximately 13% of the total materials disposed at Hartland. Of this, approximately 75% of these materials could be diverted.[18] **Actions 8A through 8D** may have a modest impact on disposal by reducing the amount disposed from the MF sector. It should be considered that the MF sector will likely grow faster than the SF sector, and therefore the quantity of materials consumed by this sector will increase.	▪ This strategy (especially **Actions 8A and 8B**) would lead to enhanced standardization across buildings and potentially municipalities, leading to improved buy-in and participation in recycling programs. Multi-family residents often report feeling 'left out' of recycling programs or are confused about what can be recycled because each building's recycling system is different. This is especially exaggerated because there tends to be a higher turnover of residents in multi-family housing than in single-family housing. This leads to frustration with the overall recycling system.	▪ **Actions 8A to 8D** would likely have the potential for a moderate effect on multi- family diversion.	▪ The CRD has initially proposed that the total allocation for **Action 8A** would be $50,000 annually for education and to implement actions.
Score (High- 5, Medium – 3, Low – 1)	High	Medium	High	Medium	

[17] http://www.metrovancouver.org/services/solid-waste/apartments-condos/apartment-recycling-toolkit/Pages/default.aspx#

Table B-9: Strategy Evaluation - 9. Increase ICI Diversion

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
9. Increase ICI Diversion 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 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 generator, rather than hauler.	▪ Allocating additional staff resources to support ICI sector diversion would be a start to improving ICI waste diversion **(Action 9A)**. This resource could also undertake **Actions 9C, 9D, and 9E.** ▪ Other regional districts have been advocating for an ICI PPP EPR program (**Action 9B**). ▪ Researching and identifying source separation approaches for ICI sector **(Action 9F)** with the intent to develop future bylaws is feasible. ▪ **Action 9G** would involve the CRD studying approaches for shifting the disposal ban enforcement to generators. It is feasible because it could be undertaken by the FTE identified 9A.	▪ The ICI sector is the largest waste-generating sector in the CRD, representing 41% of the waste disposed at Hartland. Of this, up to 74% has diversion potential. **Actions 9A through 9G** could decrease the disposal rate.	▪ **Actions 9A, 9C, 9D and 9G** may have a positive social impact, as they will create engagement between local businesses and the CRD. ▪ Shifting disposal ban enforcement to the generator (**Action 9G**) may have a negative impact on businesses who are not interested in recycling or reducing their waste.	▪ Because the ICI sector generates so much waste, this strategy has the potential to reduce waste disposal considerably. ▪ Of special note is Strategy 9B. Though the CRD does not have direct jurisdiction over an ICI PPP EPR program, if this was implemented, if could have a large impact on disposal.	▪ The CRD has initially proposed that the total allocation for **Action 8A** would be $50,000 annually for education and to implement actions.
Score (High- 5, Medium – 3, Low – 1)	High	High	Medium	High	

Table B-10: Strategy Evaluation - 8. Support Existing and New EPR Programs

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
10. Support Existing and New EPR Programs A. Advocate to the province to expand EPR programs. *Note: The Province is currently conducting an EPR gap analysis and considering adding new materials.* 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.	▪ EPR programs must be informed by the needs of regions and constituents. Providing feedback as in **Actions 10A through 10D** are critical to build resilient and foundational EPR programming.	▪ No direct environmental impact is expected for this strategy; the increased relevance and practicability of EPR programs will indirectly improve diversion rates and participation. ▪ If the province proceeds with EPR for mattresses, textiles, plastics, CR&D materials this could have a high environmental impact.	▪ **Action 10B** will improve communication and the understanding of EPR within the communities impacted by it. This can assist with greater community ownership and adherence to EPR programs.	▪ No direct impact on waste disposal is expected for this strategy; the increased relevance and practicability of EPR programs could indirectly impact disposal rates in the future. ▪ If the province implements additional EPR programs this could reduce tonnage significantly.	▪ Funding may be required to educate the public if new disposal bans for EPR materials take effect at Hartland landfill.
Score (High- 5, Medium – 3, Low – 1)	High	Medium	Medium	Medium	

Table B-11: Strategy Evaluation 11. Increase Organics Diversion and Processing Capacity

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
11. Increase Organics Diversion and Processing Capacity A. Continue to promote organics waste diversion. B. Investigate developing a resilient local organics processing infrastructure. *Note: The CRD Board has directed staff to issue a RFEOI for an in-region or near-region organics processing facility.* 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.	▪ **Action 11A** is ongoing and feasible. ▪ **Action 11B** is continuing to proceed. Processing capacity is required for organics collected. ▪ The CRD can work with municipalities to support procurement of composted materials from local processors **(Action 11C)**. ▪ **Action 11D** requires coordination by CRD staff to develop guidelines and is feasible.	▪ Organics are currently diverted in the CRD – this has resulted in decreased disposal and reduction in GHG emissions from landfills. **Action 11A and 11B** is a continuation of existing efforts. ▪ Purchasing compost from local processors **(Action 11C)** supports principles of circular economy.	▪ Organics processing infrastructure supports organics diversion programs **(Action 11B)**. CRD residents support diverting organics over disposal at landfill. ▪ A resilient local organics processing infrastructure should appropriately manage odours from processing facilities which have the potential to create significant community impacts **(Action 11B)**. ▪ Supporting composting markets by purchasing compost (**Action 11C**) may have a positive social impact by improving the relationships between organics processing facilities and the CRD. ▪ **Action 11D** may have a positive social impact by creating engagement between key stakeholders, such as local businesses, and the CRD.	▪ 27% of the material disposed at Hartland is organic materials[19]. **Action 11A** may have a modest impact on reducing the quantity of organic material disposed. ▪ **Actions 11B through 11D** do not have a direct impact on disposal capacity.	▪ Additional required costs will be determined through the RFEOI process. ▪ Funding may be required to educate about use of compostable products and packaging.
Score (High - 5, Medium – 3, Low – 1)	High	High	High	High	

Table B-12: Strategy Evaluation - 12. Increase Construction, Renovation and Demolition (CR&D) Material Diversion

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Cost Considerations
12. Increase Construction, Renovation and Demolition (CR&D) Material Diversion 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 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, like asbestos.	▪ This strategy is feasible however represents significant effort and resources for CRD staff. ▪ It is known that markets exist in the CRD for CR&D materials, however, **Action 12A** needs to be undertaken to understand the state of CR&D waste management in the region, characteristics of the waste stream, best practices from other jurisdictions, and approaches to enhance CR&D diversion. This is a first step to completing other Actions outlined in this strategy, including **Action 12B and 12G.** ▪ **Actions 12E and 12F** involve investigating disposal bans on CR&D materials. Other jurisdictions have implemented similar bans; thus, this is a feasible approach. Since the CRD has existing material bans, it should be relatively straightforward to adapt the existing disposal ban process for any materials that are added.	▪ **All actions** in this strategy support the goal to decrease the CRD's overall disposal. ▪ Green building standards (**Action 11C)** such as LEED typically require diversion and the use of sustainable materials. ▪ **Action 11E and 11F** require studying the environmental impacts of potential CR&D disposal bans. If such a ban was implemented, it would have significant implications, including a decreased disposal rate.	▪ Many CRD residents recognize that CR&D materials represent a large quantity of waste and are expected to be supportive of reuse and recycling efforts for this sector.	▪ The CR&D waste sector contributes 16% of the regional garbage**.** ▪ CR&D diversion rate in other jurisdictions is typically 60-75%. ▪ **All actions** in this strategy support the goal to decrease the CRD's overall disposal.	▪ Strategy 12 will require an additional $50,000 per year for two years. ▪ Additional funding may be required to investigate beneficial uses of CR&D waste and banning or surcharging mixed CR&D loads at the landfill.
Score (High- 5, Medium – 3, Low – 1)	High	High	Medium	High	

Table B-13: Strategy Evaluation - 13. Encourage Proper Public Space Waste Management Activities

Strategy And Associated Actions	Technical Feasibility and Effectiveness	Environmental Impact and Benefits	Social Impact	Effect on Waste Disposal	Score	Cost Considerations
13. Encourage Proper Public Space Waste Management Activities 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 illegal dumping. D. Investigate developing regionally- aligned bylaws. E. Develop and pilot methodologies to 'observe, record, and report' on abandoned materials and illegal dumping incidents throughout the CRD. F. Investigate options for large bulky item disposal, e.g., free drop-off days or large item pick-up days	▪ **Actions 13A through 13C** are feasible and should be ongoing programs. ▪ **Action 13D** is feasible and would require the CRD to coordinate with local governments to develop regionally-aligned bylaws. ▪ **Action 13E** is feasible if partners are found to collaborate with to assist in reducing illegal dumping. ▪ **Action 13F** would involve the CRD studying options for bulky item disposal.	▪ Illegal dumping and abandoned waste are more related to community issues and to the community's perception of the local environment.	▪ This strategy strives to reduce abandoned waste and illegal dumping, which are important social issues. **All Actions** should contribute to this goal. ▪ **Action 13F** would investigate possible social implications of the programs described.	▪ Theoretically, waste disposal would slightly increase if abandoning materials and illegal dumping was decreased, however, this is expected to be extremely minimal. ▪ **Actions 13F** would investigate waste disposal implications of the programs described.	**12**	▪ $20,000 for annual illegal dumping campaign for two years; evaluate effectiveness after two years.
Score (High- 5, Medium – 3, Low – 1)	High	Low	High	Low		

Appendix C: 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:	
Solid Waste Advisory Committee	Parties involved in the dispute will have opportunity to speak to the Committee Committee will review, consider and provide recommendations to the Board
If this is unsuccessful, then:	
Board	Parties involved in the dispute will have opportunity to speak to the 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 the 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

Appendix D: Implementation Schedule

	Ongoing
	Planning/Design Phase
	Implementation Phase

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 education programs to Multi-Family and ICI sector.										
D. Enhance K-12 school program to include concepts of circular economy.										
E. Collaborate with stakeholders on education campaigns										
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 (medium term, 5 year goal)										
A. Promote less consumption and advocate for consumer responsibility.										
B. Establish a community-based waste reduction grant program (could include food waste prevention projects).										
C. Support 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 or sale										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
of single use items and non-recyclable materials.										
F. Advocate provincially and federally for sustainable product design (e.g., standardized packaging that is reusable, recyclable, or compostable)										
Strategy #3: Support Reduction of Avoidable Food Waste (short-term, 3 year goal)										
A. Support residential food waste reduction										
B. Support ICI food waste reduction										
C. Continue to support food recovery organizations.										
D. Advocate for regulation to clarify use-by versus Best Before dates and educate accordingly.										
Strategy #4: Support Reuse Activities in the Region (medium term, 5 year goal)										
A. Continue to provide funding to non-profits to help offset garbage tipping fees for unusable donated items.										
B. Continue to support and promote donations to reuse establishments.										
C. Support reuse, renting and sharing programs, such as tool libraries, repair cafes, and sewing hubs, and other materials exchange activities.										
D. Investigate free store at Hartland landfill 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 bylaws, best practices, OCPs, and Economic Development strategies for use by local governments										
B. Work with local governments to identify the need for solid waste facilities and zoning for waste management activities.										
C. Use policy tools to enable local recycling infrastructure.										
D. Investigate 'Pay-As-You-Throw' principles										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
E. Investigate use of clear bags for garbage or 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. 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 debris from extreme weather, such as community chipping days or special burning allowances in electoral areas										
Recycling										
Strategy # 7: Increase Residential Diversion (medium term, 5 year goal)										
A. Continue to promote diversion of recyclable materials (including organics), ensuring that education strives to minimize contamination in these streams										
B. Support depot diversion efforts in the region for non-curbside materials										
C. Encourage local processing and markets for recyclables										
D. Develop tools to support event recycling s										
Strategy #8: Increase Multi-Family Diversion (medium term, 5 year goal)										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
A. Allocate resources to support Multi-Family (Multi-Family) recycling, for example, by developing standardized education materials										
B. Develop waste source separation requirements										
C. Develop policy guide for recycling, composting and garbage space and access in multi-family developments										
D. implement support for Multi-Family recycling, such as a 'Train-the-Trainer' Program										
Strategy #9: Increase ICI Diversion (medium term, 5 year goal)										
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 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 generator, rather than hauler.										
Strategy #10: Support Existing and New EPR Programs (medium term, 5 year goal)										
A. Advocate to the province to expand EPR programs										
B. 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 (short term, 3 year goal)										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
A. Continue to promote organics waste diversion										
B. Develop an organic waste processing facility at the Hartland Landfill site to receive and process kitchen scraps.										
C. Support compost markets by purchasing back materials										
D. Develop guidelines for use of compostable products and packaging										
Strategy #12: Increase CR&D Material Diversion (short term , 3 year goal)										
A. Increase CR&D material diversion										
B. Investigate beneficial uses of CR&D waste										
C. Investigate banning or surcharging mixed CR&D loads at the landfill to encourage source separation										
D. 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.										
B. Continue promoting alternatives to abandoned materials and illegal dumping by educating about proper management and disposal.										
C. Develop a regional approach to prevention of illegal dumping										
D. Investigate developing regionally-aligned bylaws										
E. Investigate options for large bulky item disposal										
Recovery and Residuals Management										
Strategy #14: Optimize Landfill Gas Management										

Plan Strategies & Actions	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
A. Continue to capture landfill gas for beneficial use										
B. Investigate collaboration opportunities with educational institutions to research new beneficial uses and technologies										
Strategy #15: Enhance Hartland Disposal Capacity										
A. Review ban enforcement levels, subject to recycling market conditions										
B. Continue to operate Hartland landfill using best practices										
C. Develop design options to maximize disposal capacity until 2100 and beyond										
D. Continue to conduct research and investigate emerging technologies										

SOLID WASTE ADVISORY COMMITTEE – ROUNDTABLE FEEDBACK

Feedback Item #	Strategy	Comment (from July 3, 2020 SWAC Meeting)	Proposed Action / Next Steps
Education Related			
1	1	How do we push the education/awareness for the public now that the plan is drafted	The Plan provides high level direction on how education efforts will be enhanced. The specific tools to be employed will be determined as part of the plan's implementation, as staff evaluate their annual work plan and identify opportunities to maximize resources (through collaborations, using proven materials prepared by other organizations, etc.).
6	1	Awareness of general public and understanding regarding where products go and what to do with them	This is important, particularly considering the increasing skepticism about the validity of recycling. This information/messaging can be incorporated into the implementation of the actions listed in Strategy #1.
17	1	Confusion is a challenge – align recycling methods so it is the same everywhere (i.e., colours, bins, etc.) – consistent messaging throughout	Agreed. This is something to be addressed/included as part of program design, and could be promoted by the CRD as part of its support for the Industrial, Commercial & Institutional (ICI) sector and municipalities (streetscape, municipal facilities, events). For example, in recent years, many waste management organizations are promoting a standard for colour coding of containers/signage. The more this standard is used consistently (at home, work, locally, abroad), the better it will be for everyone. We are fortunate in BC that as of 2014 we have a province-wide residential recycling program that has moved us much closer to having a consistent program across the province.
25	1	Strategy 3 (education) is of utmost importance	Agreed
28	1	Recycling/Reuse – more awareness on *how* you do it; education is essential	Agreed. "How" needs to be incorporated into how Strategy #1 is implemented.
Finance Related			
11	All	Table of proposed capital operating expenditures over the decade needed	**Plan modification recommended.** A summary of Revenue and Expenses will be inserted into the financial section of the draft Solid Waste Management Plan (SWMP).

Feedback Item #	Strategy	Comment (from July 3, 2020 SWAC Meeting)	Proposed Action / Next Steps
12	All	Is $350,000 for new initiatives laid out in SWMP sufficient? Budgets for streetscape and illegal dumping too little.	The cost estimates were provided by Tetratech and are amounts *in addition to* the budget that we currently spend on these items. However, an Environmental Services budget is developed annually, and this will allow us to adjust the budget for these items at the time they are implemented, if needed.
14	2	Review of budget to explore increasing tipping fees – is it enough?	As shown in Table 9-2, maintaining our current tipping fees for the next 10 years and achieving the waste reduction targets will diminish the reserves but not deplete them.
			There are many factors that will need to play out to determine whether these financial predictions will come true: our ability to reduce per capita disposal (not fully in our hands), the strength/weakness of the economy (correlates to waste generation), and what happens to tipping fees in other jurisdictions.
			The Board can assess the financial sustainability of the solid waste system as the plan is implemented and decide if adjusting the tipping fee is prudent. At this time and for the next 10 years, given current conditions, the CRD has the funds to implement this solid waste management plan and maintain its current financial model.
39	All	Is the current budget going to be enough?	See response to Item #12.
41	General	Provide more details on the budget, such as capital investment; where does the 15M go in 2021 and 2022?	**Plan modification recommended.** A summary of Revenue and Expenses will be inserted into the financial section of the draft SWMP.
Municipal Waste Management			
7	13	Convenience to recycling access points in public space	**Plan modification recommended.** We can add a section in the draft plan in Section 4.2 on streetscape waste management saying, "Public space litter and recycling collection 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."
8	13	Municipality description needs: litter, street scape sanitation, collection of materials in the public realm.	**Plan modification recommended.** This can be incorporated into Table 4-1 (participants in the waste management system) and into the new section on public space/ streetscape waste management noted above.

Feedback Item #	Strategy	Comment (from July 3, 2020 SWAC Meeting)	Proposed Action / Next Steps
9	5	Municipal Waste planning, working towards zero waste.	**Plan modification recommended.** We can add this to Table 4-1. In terms of support for municipal waste planning, CRD staff are able participate on municipal advisory committees, provide technical assistance and undertake solid waste management initiatives of mutual interest/benefit with municipalities, such as collaborating on regional/municipal communication campaigns.
15	13	More support for municipalities (from CRD) for illegal dumping and street sanitation – i.e., staffing resources or financial/community grants	CRD currently supports municipalities with illegal dumping in public spaces and non-profits with waste materials they receive as donations. Since 1997, the CRD's Community Clean-up Program has been supporting non-profit groups that organize community clean-ups. The funding provided supports: • collection, processing and marketing of recyclables recovered during clean-up • container rental for transportation and disposal of non-recyclable material • supplies, such as rubber gloves and collection bags In 2019, the CRD provided funding to nine community groups. Also in 2019, the CRD used funds received through the Transport Canada Abandoned Boat Program to work with a community partner, the Dead Boats Disposal Society, to assess and remove approximately 70 boats from the region's harbours. An awareness and reporting campaign was included in this initiative, as well. As part of the CRD's Marine Debris Program, funding is provided to municipalities to dispose of marine debris (wharves, docks, flotation, fishing gear, etc.) that is not covered by the Abandoned Boat funding. In 2019, 4.45 tonnes of debris was disposed of at the landfill through this program. While the CRD does not have a role in street sanitation, it supports municipalities through regional education/awareness campaigns (anti-littering, promoting reusable containers, etc.), as included in Strategy 1 and 13. **Plan modifications recommended.** As recommended earlier in this document, street sanitation is a municipal responsibility and should be added to *Table 4 1: Participants in the Solid Waste Management System*. In addition, a section on streetscape recycling will be added to the plan noting that streetscape recycling is part of the Extended Producer Responsibility (EPR) program for packaging and printed papers. A section on the CRD's continuing initiatives associated with illegal dumping could be added to Section 4 of the draft plan, which describes the existing solid waste management system.
16	13	Implementation – new innovative ways for local government to support municipalities.	Initiative 13C is all about collaboration. Innovative approaches identified through this collaboration would be welcome. Collaborating should ultimately result in a better use of local government resources (staff and budget).

Feedback Item #	Strategy	Comment (from July 3, 2020 SWAC Meeting)	Proposed Action / Next Steps
34	1,2,7,8,9	Mandatory clear bags for all refuse loads	This is addressed in Action 5E.
Targets			
10	11,12	Prioritization of organics diversion and construction materials	These items are the top priority as identified in Section 8 on targets.
23	General	Need a target that is easy to understand	Per capita disposal is easy for us to measure at Hartland and convey. We have been tracking this data annually, and all regional districts in BC are now tracking their disposal data and reporting it to the Province, so we can readily benchmark ourselves against other BC regional districts. As it is a per capita metric, it also accounts for population growth.
24	All	Will the strategies and actions get us to the targets?	Tetra Tech developed the targets based on the specific strategies and actions listed in the draft plan. They stated that they are aggressive, and this is noted in the draft plan. However, the short- and mid-term targets are within the CRD's purview to achieve. The long-term target requires new EPR programs to be introduced, which is outside of the CRD's control.
26	General	Per capita must be calculated with the growing population	Understood. Because the total quantity of waste disposed is typically correlated to population, we look at waste disposed per person (per capita) rather than total tonnes as a means to compare one year to another. This allows an "apples to apples" comparison. Also, as it is a per capita metric, it accounts for population growth.

Illegal Dumping			
35	5	Illegal dumping – would an increase in Hartland hours help? More accessibility to Hartland in general is needed.	Illegal dumping is an issue in areas with waste facilities accessible 24/7, and without tipping fees. Hartland is currently accessible Monday to Friday (9-5) and Saturday (7-2). Not open Sundays and stat holidays. These hours provide extensive access to the facility. Further increasing the hours is not likely to improve illegal dumping behaviours. There are also a number of private transfer stations that accept garbage and recyclables throughout the region.
36	1,13	Enhancement of Community Clean-up program	The actions listed in Strategy 13 are intended to enhance community clean-ups, and hopefully reduce the need for them over time.
37	10	Abandoned boats remains an issue for the region	We can add in a section to the draft SWMP, as part of a section on illegal dumping, about abandoned boats, adding that the CRD will continue to identify funding and collaboration opportunities to address this issue.
Industrial, Commercial Institutional			
20	6,9	Strategies will be hard to implement for some businesses – ease of use is crucial	Agreed. This will need to be considered when developing educational materials, policies, programs, etc. It will be important to engage/test drive ideas with those affected prior to full development of an initiative.
21	9	Need a toolkit for business waste reduction	Included as action 9C.
22	9	DND: Federal and provincial targets set; hard to monitor and meet both. Hard to align with the CRD's per capita target	DND's waste management activities and plans contribute to meeting the CRD's and province's target, but DND is not required to adopt or meet either target. They will need to do what's right for their operation, and be able to adjust their waste management operations to meet local disposal requirements (e.g., organic waste disposal ban).
30	12	Strategy 12 (ICI) – new buildings should be constructed with materials that are easily reusable and/or recyclable	Ideally yes. This idea can be discussed/incorporated into the implementation of Actions 12 A, B and C.
Incentives			
13	7,8,9	Consider community grants for hard to recycle materials	In 1995, the CRD developed a diversion credit program as a means of encouraging the recycling of materials that did not have a robust recycling market. The diversion credit program recognized that there was value in preserving landfill space, and therefore the CRD encouraged proposals from the private and non-profit sector to collect and recycle materials that were not currently being managed by the existing solid waste management system in the CRD. The program was eventually ended due to lack of interest from the private sector in the program.

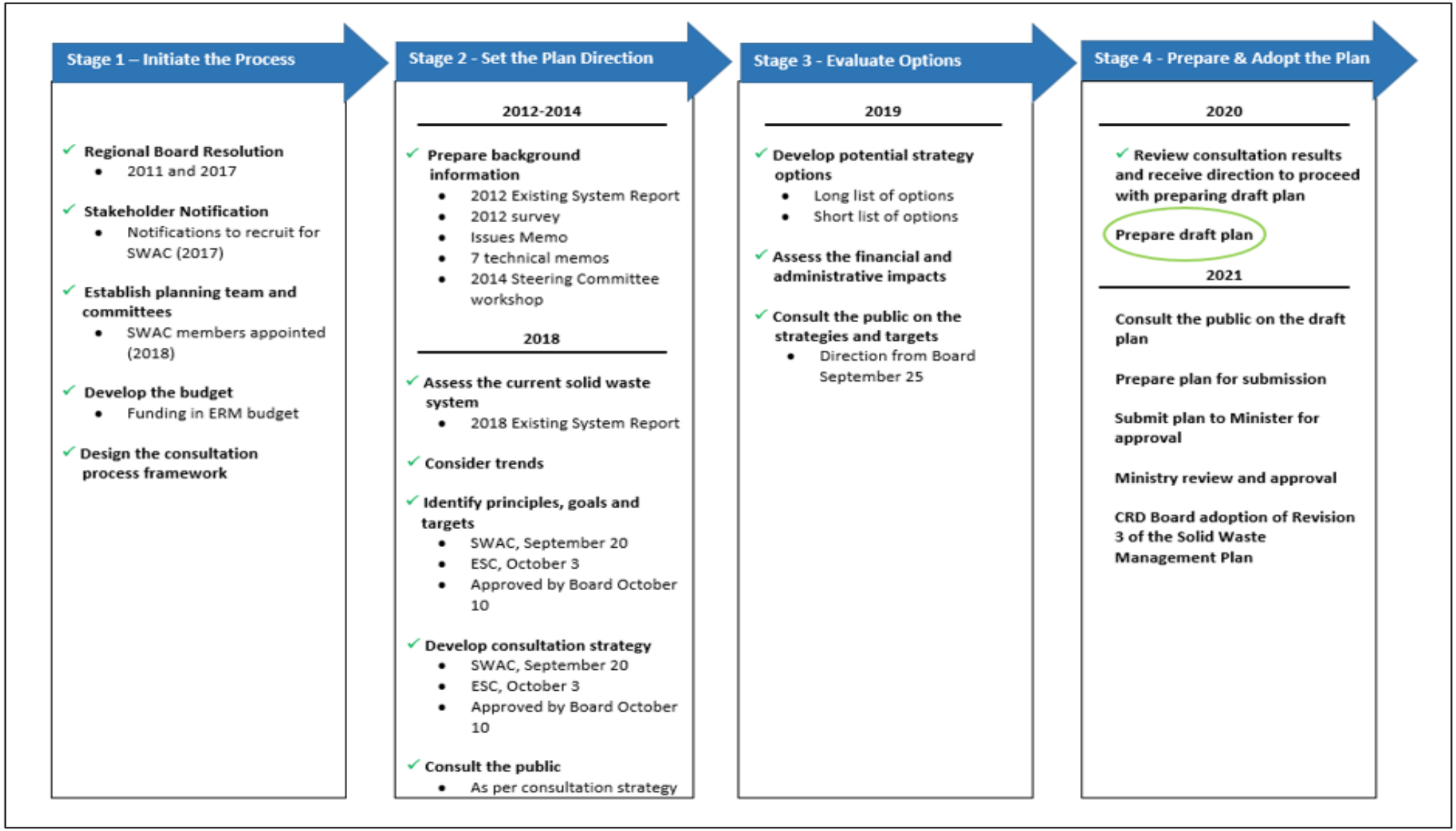
			Since then, EPR has put the onus on industry to resolve (or at least pay for) the management of many hard to recycle materials. Given the success of the CRD model (pricing of disposal, disposal bans on items with established markets and supporting the expansion of EPR) AND the demise of the diversion credit program, revisiting intervention in the marketplace may not be warranted.
38	7,8,9,10	More support/incentives for communities to recycle	There are several tools identified within each strategy to drive waste diversion. Through the application of community-based social marketing approaches, the CRD will look for successful models that could be applied here, then "test drive" them for two years before assessing them for effectiveness. With this approach, the CRD can refine the tool, choose an alternate approach, and opt to increase or decrease its use. This also allows for an assessment of the need for other forms of support or incentives.
40	7,8,9	Consider a budget for direct investment in local recycling	The CRD supports the local recycling industry through the imposition and enforcement of disposal bans on divertible materials, plus having contracts to recycle materials collected at Hartland. Disposal bans are a low-cost policy approach to supporting local recycling activities, while allowing the local market (i.e., the collectors, recyclers and generators) to innovate in response to the policy.
Miscellaneous			
2		Integration of comments that have shifted things along the way	Our consultants have used the input from each PTAC/SWAC meeting to help select the options to the ones best suited to the CRD or refine the options to make them better suited to our needs. Our consultation efforts with the general public helped us determine if we were on the right path in terms of the selected strategies and actions, or if any alterations are required.
3	7,8,9	More access to depots on the gulf islands	Depot hours are set by the local operators to optimize service levels to meet the needs of local residents. Operational details to this level of specificity are not intended to form part of the SWMP.
4	10	Household hazardous waste on the gulf islands	There is collection of household hazardous waste (HHW) materials (collected on behalf of an EPR program) at each of the Salt Spring Island and Southern Gulf Island depots. • **Salt Spring**: batteries, light bulbs/fixtures, fuels, pesticides, paint, electronics, thermostats, smoke and CO detectors • **Mayne**: batteries, electronics, paint • **Pender**: batteries, light bulbs/fixtures, paint, electronics, smoke and CO detectors • **Galiano**: household batteries, paint, electronics, smoke and CO detectors • **Saturna**: batteries, light bulbs/fixtures, paint, motor oil In addition to depot collection, some HHW may also be returned to local retailers. Finally, there is one HHW depot for all residents of the region at Hartland that is open year round and accepts the full range of EPR products free of charge. There is no plan to extend this service to other parts of the regional district.

5	10	HHW management in general was also mentioned by two other members	**Plan modification recommended.** We will add in a section on HHW into the SWMP indicating: • that the majority of HHW collection is handled through EPR programs • not all HHW is covered by EPR programs, and as a result, the CRD has a HHW depot at Hartland that receives non-EPR HHW. This will remain available as long as there is a need for the service. However, this is a cost to the CRD solid waste service. • The CRD will continue to encourage the province to expand the list of HHW products covered by EPR.
18	7,8,9	Recycling needs to be convenient and easy to find	Agreed. Convenience is important for successful participation in recycling. The pursuit of consistency across the region and province should improve proper participation, but it will take time and effort.
19	7,8,9	How do we stay on top of the changing markets (i.e., plastics, etc.) – what is recyclable – what is garbage?	The CRD's Environmental Resource Management staff keep up on what's happening in the recycling marketplace locally and globally through their membership in several waste management associations and attending relevant conferences and webinars. Additionally, CRD staff have regular contact with the waste management companies, EPR organization partners and contractors that are directly involved in marketing recyclable materials.
27	14B	Technologies/new approaches – needs to be expanded	Action 14B is to "Investigate collaboration opportunities with educational institutions to research new beneficial uses and technologies". This option is intended to be high-level to allow for the CRD to consider a broad range of collaboration opportunities, if the CRD Board deems a research opportunity to be in the best interest of the region.
29	11	Strategy 11 (organics) – needs more clarification on what will be done, what are the end-markets for finished compost?	At this point in time, the CRD Board has committed to a process to develop local organic waste processing capacity as described in Section 6. Action 11C indicates that municipal uses are intended to be one of the markets for the finished compost (and possibly the most significant market). Establishing markets and market value for the end products will be an essential component of assessing technologies and the ultimate operating cost of the processing system. Understanding the market(s) for the end products will play a critical role in the decision making process. At this time, additional details are not available to be included in the SWMP.
31	10	Electronic waste (i.e., electric cars) will represent a large waste stream in the near future	Thankfully, electronics and batteries (including vehicle batteries) are already under an EPR program and the technology for recycling the batteries from electric cars is improving. The CRD will continue to liaise with the Province and the battery extended producer responsibility organizations to ensure there is local capacity to manage these material flows as they emerge over the coming years.
32	7	Waste that is diverted, is it properly recycled? Consider the end-markets for diverted materials	The extended producer responsibility organizations that are responsible for collecting EPR materials (including residential PPP) must track and demonstrate to the Province that they have legitimate markets. The CRD also incorporates market reporting into its recycling contracts they engage with outside of provincial EPR programs to ensure that there are legitimate uses for the products collected. This is ultimately an operational item more than a SWMP item, but if it is important to make a statement about how the CRD engages with its recycling contractors in the future by requiring proof of end use/market—this is something we could add in.

33	14B	Consider novel ways to manage Greenhouse gases and utilize coming from the landfill	The CRD Board acknowledges the current climate emergency. Managing our landfill gas in the most effective way is the driver for the RNG agreement with Fortis. The CRD is interested in maximizing the value of the LFG and ensuring that its impact on the environment is minimized.
42	n/a	How much freedom do we have as an advisory committee	The Solid Waste Advisory Committee's (SWAC) Terms of Reference (associated with the SWMP) are to advise the Steering Committee (Environmental Services Committee) on the development of Revision 3 of the SWMP. It is up to the Chair to ensure that the discussions at the table serve this purpose. The process to develop a new SWMP has been underway for some time, with the input of a multi-stakeholder advisory committee and consultants. Much work has been done and input received to bring us to the draft plan stage. The process to develop the plan has been designed as linear so that it moves us towards completion of the plan. That being said, the committee can make recommendations to the Environmental Services Committee (ESC) to revisit an aspect of the plan if it deems it appropriate to do so. It will be up to the ESC to consider the recommendation.
43	General	Cruise ship waste is calculated in the per capita disposal	If the waste is disposed at Hartland, then it is included as part of the per capita disposal, the same as other tourism-related waste.

Review of SWMP Planning Process

APPENDIX D



Finalising the Draft Plan

CRD Solid Waste Management Plan

SWAC Feedback from July Meeting

- Review of input received from roundtable exercise
  - Response to each comment
  - 3 general types of response
    i. The draft plan incorporates the comment, e.g.,
    Mandatory clear bags for all refuse loads is addressed in Action 5E: *Investigate use of clear bags for garbage or recyclables collection to encourage proper recycling of materials…*

    ii. The comment will be addressed as part of implementing the plan, e.g.,
    Awareness of general public and understanding regarding where products go and what to do with them.
    This information / messaging can be incorporated into the implementation of the actions listed in Strategy #1.

    iii. The comment warrants an addition/edit to the draft plan

Recommended Plan Additions

- **Municipal waste management:**
  - Expand the description of the role of municipalities to include litter collection, streetscape sanitation, waste collection from public spaces and municipal waste planning (may include the development of Zero Waste plans)
  - Add new section under the Existing System (Section 4) on streetscape waste management saying, "Public space litter and recycling collection 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."

Recommended Plan Additions

- **Illegal Dumping**
  - Add new section under the Existing System (Section 4) describing the CRD's illegal dumping mitigation measures
    - Communication campaigns
    - Funding to non-profit associations to conduct clean-up events in public places
    - Funding for the removal of abandoned boats and marine debris
    - Supports non-profit organizations involved in recycling clothing and used household goods
      - funding towards the disposal and recycling of unusable materials received as donations
      - providing safe disposal of abandoned hazardous materials
    - Maintaining a web page on illegal dumping on the CRD website that provides information on how to reduce illegal dumping and abandonment

Recommended Plan Additions

- **Household Hazardous Waste**
  - Add in a section indicating:
    - That the majority of HHW collection is handled through EPR programs
    - Not all HHW is covered by EPR programs, and as a result, CRD has a HHW depot at Hartland that receives non-EPR HHW. This will remain available as long as there is a need for the service. However, this is a cost to the CRD solid waste service.
    - CRD will continue to encourage the province to expand the list of HHW products covered by EPR.

Recommended Plan Additions

- **Finance**:
  - Include more detailed Revenue / Expense table in the plan

Highlights

- Base Capital $3-4MM per year (no debt)
- Large capital (no debt)
  - Renewable Natural Gas - $23.5MM (from reserves in 2020 -22)
  - Organics Processing – anticipated to be procured as a DBFO (no CRD Capital)
  - Hartland 2100 – funded through base Capital Regional District
- CRD Education / Diversion spending
  - Current budget - $2.5M / year
- Proposed education/diversion spending increase with new SWMP
  - $350,000 / year

Summary

- Recommended additions fill in information gaps
- No new actions or costs
- No requirement for additional consultation (beyond what is already planned)

Thank you.