



2023 Solid Waste Management Plan Progress Report



Making a difference...together

TERRITORIAL ACKNOWLEDGEMENT

The CRD conducts its business within the traditional territories of many First Nations, including but not limited to BOKEĆEN (Pauquachin), MÁLEXEŁ (Malahat), P'a:chi:da?aht (Pacheedaht), Pune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, STÁUTW (Tsawout), T'Sou-ke, WJOŁEŁP (Tsartlip), WSIKEM (Tseycum), and x*sepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.



Terms and Abbreviations

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

Organizational Overview

The Capital Regional District (CRD) delivers regional, sub-regional and local services to 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. Governed by a 24-member Board of Directors, the CRD works collaboratively with First Nations and all levels of government to enable sustainable growth, foster community well-being, and develop cost-effective infrastructure, while continuing to provide core services to residents throughout the region.

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



Aerial view of the active face at Hartland Landfill.

Overview

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

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

Regulations and Commitments

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

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

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

Solid Waste Management Planning

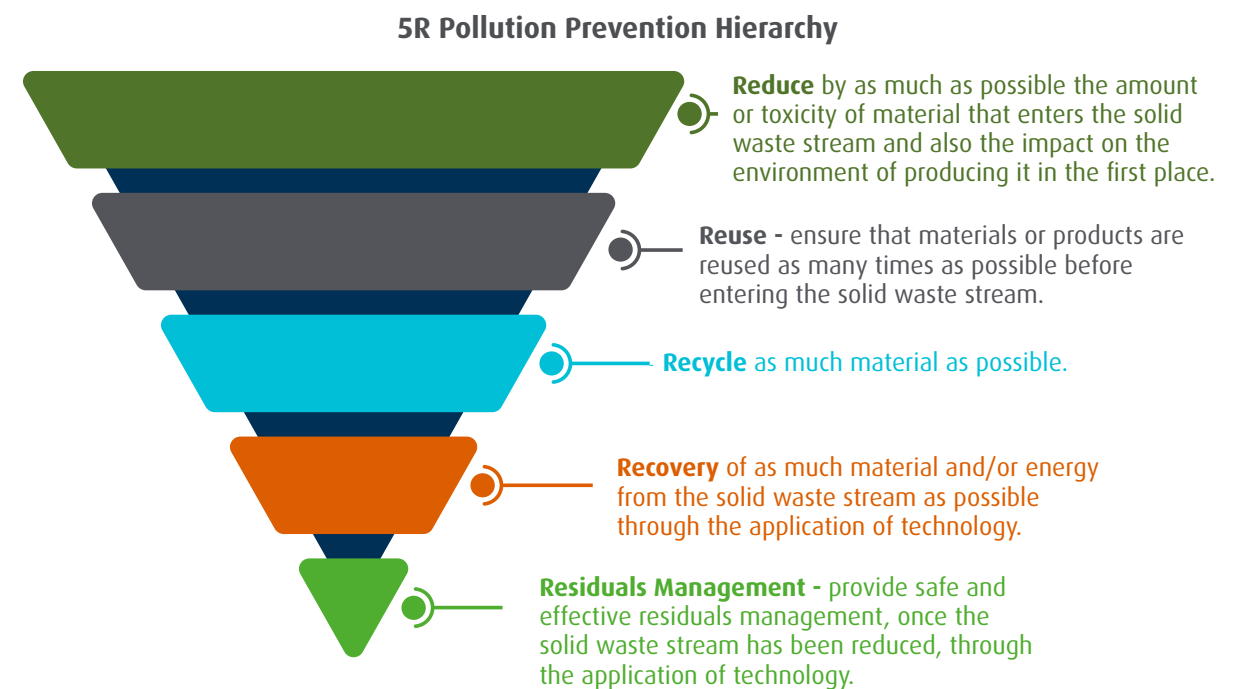
The *Environmental Management Act* requires all regional districts in BC to develop plans for the management of MSW and recyclable materials. Solid waste management planning is a proven way to reduce the amount of solid waste requiring disposal in a region, contributing to the protection of the environment.

Landfill Operating and Monitoring Requirements

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

Solid Waste Management Plan

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



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

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

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

Goals

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

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

Focus Areas

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

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

- Reduce and Reuse
- Recycling
- Recovery and Residuals Management

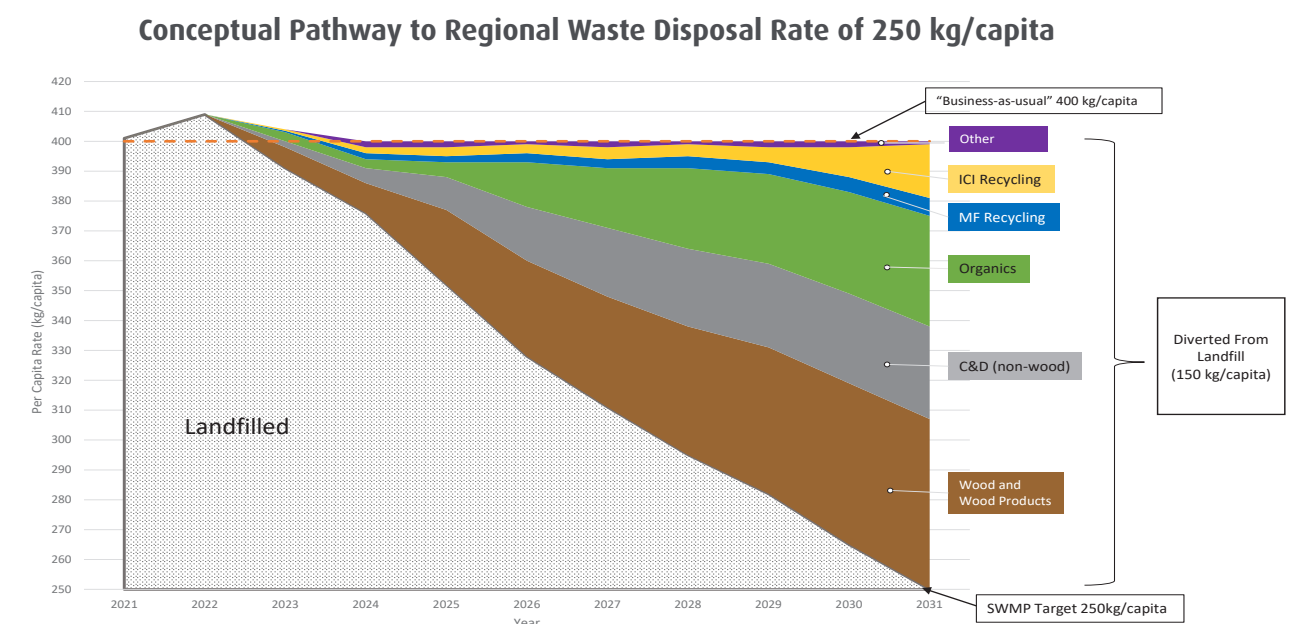
For more details on the SWMP's 15 strategies, consult *Appendix A: SWMP Report Card*.



Targets and Tracking

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

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



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

Per Capita Disposal

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

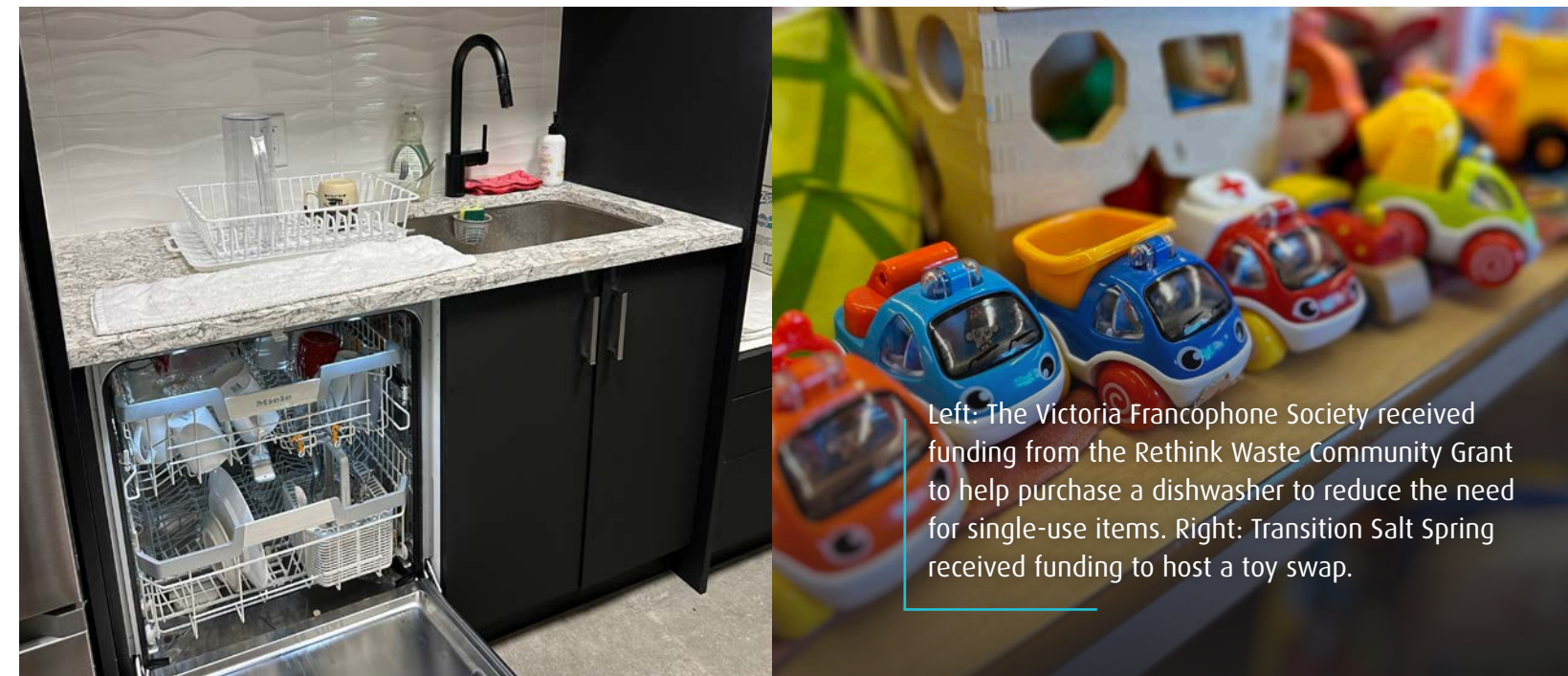
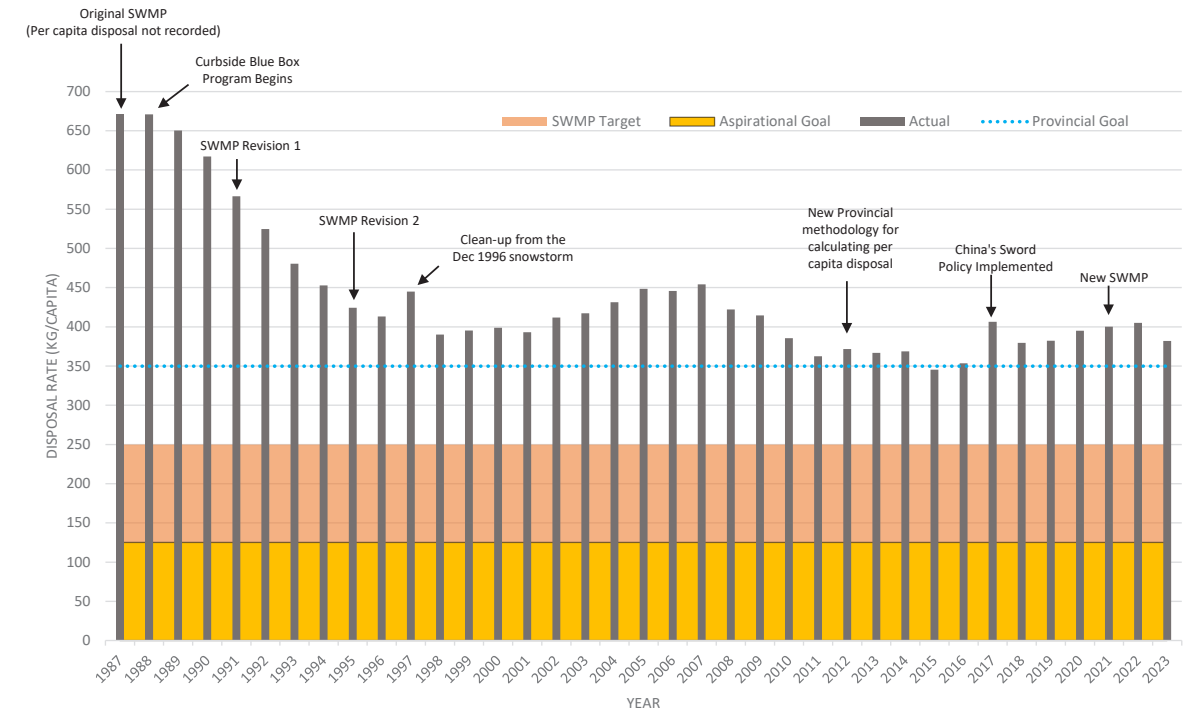
In the SWMP, the per capita waste disposal rate is used to help the CRD and residents of the region understand progress towards the plan’s waste reduction goals and targets. The per capita disposal rate reported below excludes blended biosolids, as this material stream is not included within the SWMP.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

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

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

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

CRD Historic Per Capita Disposal Rate



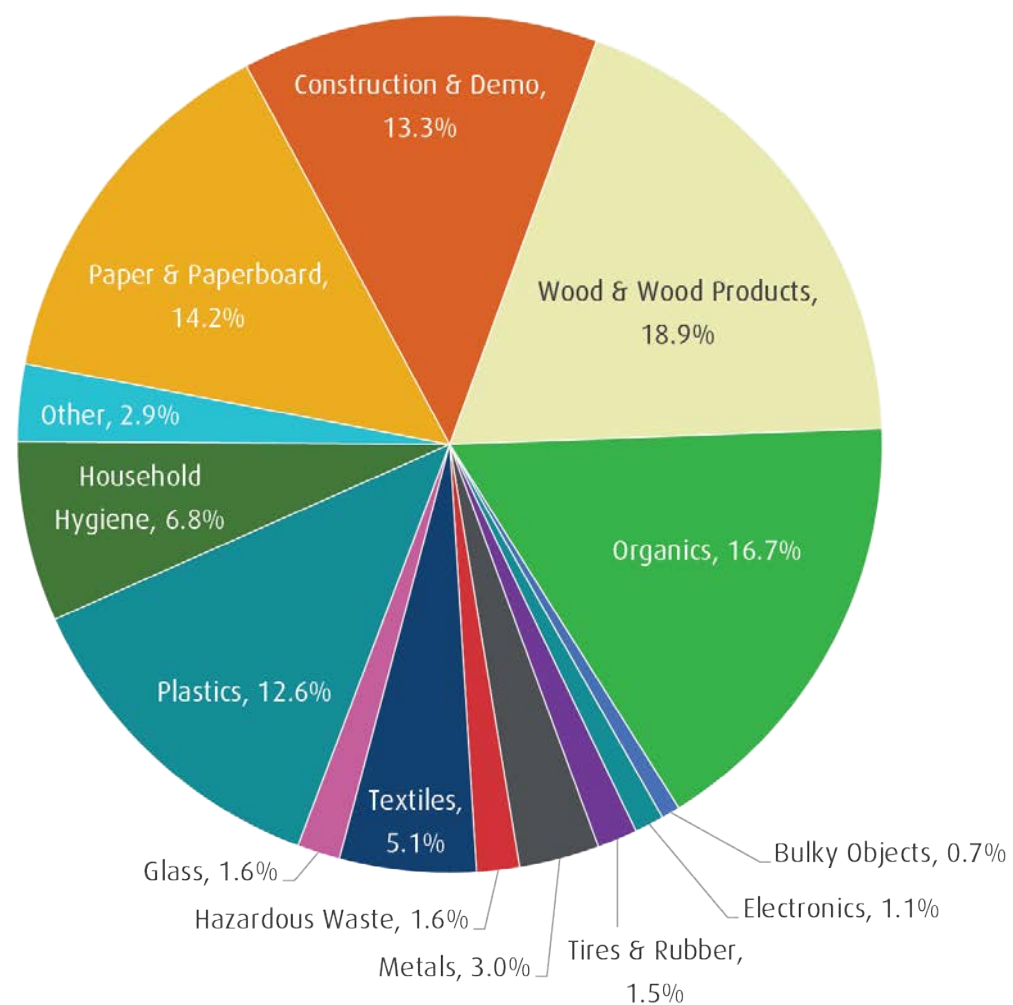
Left: The Victoria Francophone Society received funding from the Rethink Waste Community Grant to help purchase a dishwasher to reduce the need for single-use items. Right: Transition Salt Spring received funding to host a toy swap.

Solid Waste Stream Composition Study

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

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

2022 Solid Waste Stream Composition Study Results



Solid Waste Market Research and Engagement Study

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

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

Waste Generator Study

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

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

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

Diversion Programs Funded or Administered by the CRD

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



Challenges and Opportunities

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

Solid Waste Roles and Responsibilities

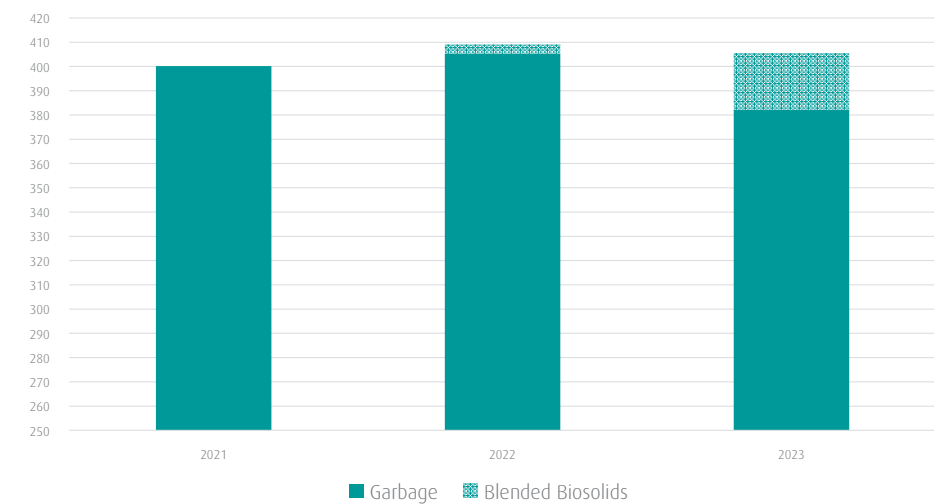


The main policy levers the CRD has control of, outside of solid waste, are limited to what is accepted at Hartland Landfill. In 2023, the CRD Board approved bylaw changes at Hartland Landfill, including new material bans, adjusted tipping fee structure and increased bylaw fines. The changes are intended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

Blended Biosolids at Hartland Landfill

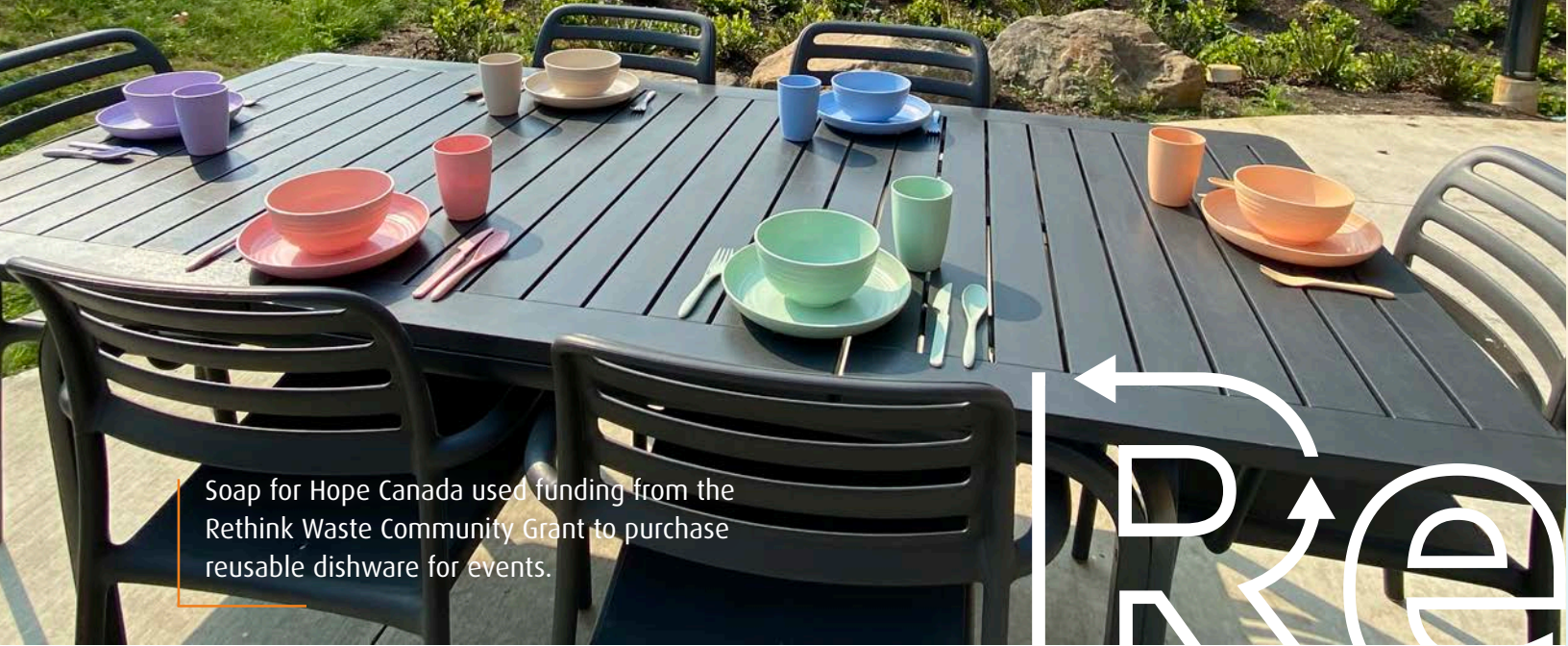
The CRD's short-term plan for Class A Biosolids beneficial use relies primarily on incineration at a cement production facility, and when the cement kiln is unable to receive biosolids, the contingency is to create biosolids growing medium (BGM) for use on engineered cover systems at Hartland Landfill.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

General Refuse Landfilled (kg per capita)



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

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



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

Progress Summary

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

Goals

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

Focus Areas

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

- Reduce and Reuse
- Recycling
- Recovery and Residuals Management

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






2023 Overall SWMP Progress

On track

Goal Areas

-  **Goal 1:** To surpass the provincial per capita waste disposal target (350kg/capita/year) and aspire to achieve a disposal rate of 125 kg/capita/year.
-  **Goal 3:** To have informed citizens that participate effectively in proper waste management practices.
-  **Goal 2:** To extend the life of Hartland Landfill to the year 2100 and beyond.
-  **Goal 4:** To ensure that the CRD's solid waste services are financially sustainable.




Focus Areas

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

Focus Area Icon Legend











-  **On Track:** 75% or greater of yearly target progress
-  **Opportunity for Improvement:** 50%-75% of yearly target progress
-  **Attention Required:** less than 50% of yearly target progress
-  **Future Action**











Goal Area Icon Legend











-  **On Track**
-  **Opportunity for Improvement**
-  **Attention Required**











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

 Goal Area Progress Summary

| | | | | |
|--|---|--|--|--|
|  Opportunity for Improvement | <p>Indicators and Inputs Summary:</p> <ul style="list-style-type: none"> Calculated a disposal rate of 382 kg/capita, an decrease of 4.43% or 18 kg/capita from when the plan began in 2021. 2022 Solid Waste Stream Composition study indicated 47% of the garbage sent to Hartland Landfill could have been diverted through reuse, recycling or energy recovery. In 2025, the CRD will complete a waste generator study to further analyze where and how waste is generated. | | | |
| <p>Goal 1</p> <p>To surpass the provincial per capita waste disposal target (350kg/capita/year) and aspire to achieve a disposal rate of 125 kg/capita/year.</p> | | | | |
| <p>Icon Definitions</p> <table border="0"> <tr> <td style="text-align: center;">  Community is trending towards a per capita disposal rate to be less than 350 kg/capita over the life of the plan. </td> <td style="text-align: center;">  Community is trending towards a per capita disposal rate of 350 kg/capita over the life of the plan </td> <td style="text-align: center;">  Community is trending towards a per capita disposal rate above 350 kg/capita over the life of the plan. </td> </tr> </table> | |  Community is trending towards a per capita disposal rate to be less than 350 kg/capita over the life of the plan. |  Community is trending towards a per capita disposal rate of 350 kg/capita over the life of the plan |  Community is trending towards a per capita disposal rate above 350 kg/capita over the life of the plan. |
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|---|--|--|--|--|
|  Opportunity for Improvement | <p>Indicators and Inputs Summary:</p> <ul style="list-style-type: none"> Achieved a compaction density rate of 0.98 tonnes of general refuse per cubic metre*, surpassing the landfill guideline target of 0.85 tonnes per cubic metre by 17.18%, indicating an efficient waste compaction process that utilized the available landfill space more effectively than initially planned. Landfilled 173,975 tonnes of general refuse at Hartland Landfill, an increase of 1,089 tonnes (0.63%) from when the plan began in 2021. Additionally, 10,591 tonnes of blended Class A Biosolids were landfilled at Hartland as general refuse as a Long-Term Biosolids Plan is developed in 2024. <p><small>* Compaction density data is from 2022</small></p> | | | |
| <p>Goal 2</p> <p>To extend the life of Hartland Landfill to the year 2100 and beyond.</p> | | | | |
| <p>Icon Definitions</p> <table border="0"> <tr> <td style="text-align: center;">  Air space utilization is on track to extend the life of Hartland Landfill to the year 2100 and beyond. </td> <td style="text-align: center;">  Air space utilization is only trending to extend the life of Hartland Landfill to the year 2100. </td> <td style="text-align: center;">  Air space utilization will not extend the life of Hartland Landfill to the year 2100. </td> </tr> </table> | |  Air space utilization is on track to extend the life of Hartland Landfill to the year 2100 and beyond . |  Air space utilization is only trending to extend the life of Hartland Landfill to the year 2100 . |  Air space utilization will not extend the life of Hartland Landfill to the year 2100 . |
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|  On Track | <p>Indicators and Inputs Summary:</p> <ul style="list-style-type: none"> Provided \$244,265.44 in funding for non-profit waste reduction organizations, organics diversion education and the Rethink Waste Grant, a 20.64% increase from when the plan began in 2021. Delivered 8,574 waste reduction workshops and tours (landfill tours, 3Rs, composting) to children and adults in the capital region, a 70.63% increase from when the plan began in 2021. In 2024, the CRD will complete a Solid Waste Awareness and Engagement Market Research Study to further evaluate the CRD's programming and behaviour change initiatives. | | | |
| <p>Goal 3</p> <p>To have informed citizens that participate effectively in proper waste management practices.</p> | | | | |
| <p>Icon Definitions</p> <table border="0"> <tr> <td style="text-align: center;">  Engagement and participation in proper waste management practices is higher than previous years. </td> <td style="text-align: center;">  Engagement and participation in proper waste management practices is equivalent to previous years. </td> <td style="text-align: center;">  Engagement and participation in proper waste management practices is less than previous years. </td> </tr> </table> | |  Engagement and participation in proper waste management practices is higher than previous years. |  Engagement and participation in proper waste management practices is equivalent to previous years. |  Engagement and participation in proper waste management practices is less than previous years. |
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|  On Track | <p>Indicators and Inputs Summary:</p> <ul style="list-style-type: none"> Solid waste service continues to be a self-funded and achieves a surplus. | | | |
| <p>Goal 4</p> <p>To ensure that the CRD's solid waste services are financially sustainable.</p> | | | | |
| <p>Icon Definitions</p> <table border="0"> <tr> <td style="text-align: center;">  Solid waste service self-funding model is financially sustainable for the remainder of the plan. </td> <td style="text-align: center;">  Solid waste service self-funding model is trending in the wrong direction, adjustments may be necessary. </td> <td style="text-align: center;">  Solid waste service self-funding model is trending in the wrong direction and is currently not sustainable for the remainder of the plan. </td> </tr> </table> | |  Solid waste service self-funding model is financially sustainable for the remainder of the plan. |  Solid waste service self-funding model is trending in the wrong direction , adjustments may be necessary. |  Solid waste service self-funding model is trending in the wrong direction and is currently not sustainable for the remainder of the plan. |
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Reduce and Reuse

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



Overall Status
On Track

CRD Roles

- Municipal collaboration
- Provincial and Federal Government advocacy
- Funding and supporting non-profits
- Education and outreach

This focus area includes

6

SWMP strategies

Progress Summary

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



Salt Spring Island Printmaker Society



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



Recycling

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



Overall Status
On Track

CRD Roles

Hartland Depot

Landfill bans

Provincial and Federal
Government advocacy

Curbside recycling contract

Recycling in Electoral Areas

Education and outreach

This focus
area includes

7

SWMP strategies

Progress Summary

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

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



Hartland Depot





Recovery and Residuals Management

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



Overall Status
Opportunity for Improvement

CRD Roles

Landfill bans and enforcement

Hartland Landfill

Technology research

Landfill Gas Management

This focus area includes

2

SWMP strategies

Progress Summary

- Calculated a disposal rate of 382 kg/capita, a decrease of 6.02% or 23 kg/capita from 2022.
- Received Board approval to increase Hartland Landfill's general refuse tipping fee from \$110 to \$150/tonne.
- Initiated the procurement process to design, build, operate and maintain a Material Diversion Transfer Station at Hartland Landfill to process wood (clean, treated and salvageable), asphalt shingles and carpet and underlay before it's transferred offsite for reuse, recycling or energy recovery.
- Issued 715 tickets and 37 warnings primarily related to banned materials in garbage.
- Completed design of Cell 4 Liner and procured and awarded Cell 4 Liner Construction Contract and began construction activities.
- Conducted additional shredding trials, with specific material streams, to manage incoming volumes and further densify material.
- Removed 30,000 m³ of overburden and 197,000 m³ of in-situ rock to prepare the new landfilling cell to receive future garbage.
- Provided the Township of Esquimalt with \$50,000 to further explore an Integrated Resource Management approach for managing municipal solid waste, kitchen scraps and yard and garden waste using thermal technologies.
- Achieved a gas collection efficiency of 64% based on the ENV model, and a 74% gas collection efficiency based on the UBCi model in 2023.



Active Face



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

Looking Ahead

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

Some activities planned for 2024 include:

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



Compost Education Centre workshop

Appendix A: Solid Waste Management Plan Report Card

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

Methodology

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

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



Hartland Public Drop-off Depot



2023 Overall SWMP Progress

On track

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

Focus Areas



Reduce and Reuse



Recycling



Recovery and Residuals Management

Focus Area Icon Legend



On Track: 75% or greater of yearly target progress



Opportunity for Improvement: 50%-75% of yearly target progress

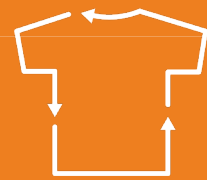


Attention Required: less than 50% of yearly target progress



Future Action

| Status | Strategy | Update |
|-------------------------------|--|---|
| Progress on Strategies | | |
| | 1 Continue and enhance education programs | <ul style="list-style-type: none"> Developed and circulated 6 issues of the CRD's Rethink Waste Newsletter to 379 residents and businesses Responded to 19,597 Infoline inquiries via phone and email and received 215,276 visits to myrecyclopedica.ca Delivered 103 3R programs to 3,567 students, and sent 3 Educator Newsletters to 556 teachers Delivered 8 public landfill tours to 231 residents, 11 community group tours to 263 residents and 15 technical landfill tours to 400 industry partners CEC delivered 136 composting workshops to 2,690 K-12 students and 26 composting workshops to 467 adults on behalf of the CRD Conducted 5 solid waste public education campaigns, including advertorials, movie theatre pre-roll, digital advertising, print advertising and bus advertising Hired a social media assistant, which led to increased social engagement for solid waste public education campaigns across all CRD social platforms (LinkedIn, Facebook, Instagram) CRD staff attended 16 community events with solid waste messaging, including Love Food Hate Waste, household hazardous waste and Rethink Waste/3Rs display; CEC staff attended 31 community events on behalf of the CRD to promote at home composting and organics diversion Received 8,588 new RecycleCRD app installs and received 6,620 Ready, Set, Sort! game plays by residents Added 12,725 residents to receive reminders and alerts via RecycleCRD app, email, voicemail and mobile calendar for the curbside recycling program Continued participation in Coast Waste Management Association communications/educators working group Continued sponsorship of Ecostar awards Refreshed and updated the solid waste webpages, including adding a dedicated education page crd.bc.ca/rethinkwaste to communicate to a broader audience (e.g., MFD, ICI) Updated PowerPoint template, educational campaigns, video, website and infosheet to include the Rethink Waste brand; further updates to solid waste collateral will take place in 2024 Received funding approval to conduct a Solid Waste Market Research and Engagement Study every 3 years beginning in 2024 to evaluate the effectiveness of the CRD's waste reduction programming and behaviour change initiatives |
| | 2 Encourage waste prevention | <ul style="list-style-type: none"> Continued to provide funding under the Rethink Waste Community Grant and supported 20 projects (\$57,175) Produced and promoted 4 videos on Rethink Waste Community Grant recipients, to highlight how individuals and organizations are coming together to reduce waste Town of Sidney - Single Use Plastics Bylaw 2231 came onto effect January 1, 2023 City of Victoria - Single-Use Items Reduction Bylaw council readings completed in April, and it has since been awaiting approval by the Province before final adoption |



Reduce and Reuse

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



Overall Focus Area Status
On track



Reduce and Reuse

| Status | Strategy | Update |
|-------------------------------|---|--|
| Progress on Strategies | | |
| | 3 Support reduction of avoidable food waste | <ul style="list-style-type: none"> Conducted a fall Love Food Hate Waste education campaign, which featured movie theatre ads, social media, local print and digital media ads Provided \$94,738 in funding to the CEC to deliver waste diversion and composting programs to adults and children in the region Updated and renewed the Organics Diversion and Compost Education Partnership for 2024-2025 with the CEC Participated in the City of Victoria's Circular Economy Speaker Series: Reducing Food Waste event |
| | 4 Support reuse activities in the region | <ul style="list-style-type: none"> Continued to provide support (\$68,000) for 10 local non-profit reuse organizations to assist them in managing unusable donations Collected 37 tonnes of reusable goods at Hartland Depot for redistribution by local non-profit reuse organizations Supported 8 reuse projects through the CRD's Rethink Waste Community Grant |
| | 5 Support local governments in working towards zero waste and a circular economy | <ul style="list-style-type: none"> Continued leading the Local Government Waste Reduction Working Group; 12 municipalities participated, 7 meetings held in 2023 Continued work with WSANEC Leadership Council/CRD Solid Waste Working Group Continued discussions with Pacheedaht First Nation on future, mutually beneficial long-term waste management for the broader Port Renfrew community CRD Board endorsed the Vancouver Island and Coastal Communities Committee's Terms of Reference and appointed the Environmental Services Committee Chair as the CRD's elected representative Conducted jurisdictional scan to review BC/other landfills 'pay as you throw' systems to learn more about disposal fee structures in surrounding areas, informing staff on best practices for increasing fees for waste disposal |
| | 6 Continue and enhance policy development | <ul style="list-style-type: none"> Received approval from the ENV for the SWMP in July 2023 Received Board approval to amend Hartland Landfill Tipping Fee and Regulation Bylaw No. 3881 and Ticket Information Authorization Bylaw No. 1857 in 2024 to include new material bans, adjustments to the tipping fee structure and increased bylaw fines Effective January 2024, clean wood will be banned from general refuse; the general refuse tipping fee will increase from \$110 to \$150/tonne; segregated clean wood will be accepted at a tipping fee of \$80/tonne and will be transferred offsite for recycling or energy recovery; rates for various offences will increase (some up to \$500) Effective July 2024, treated wood, salvageable wood, carpet and underlay and asphalt shingles will be banned from being accepted at the landfill as general refuse but will be accepted as segregated materials at a reduced tipping fee Developed the Waste Stream Collector Incentive program to offer Hartland account customers a \$25/tonne rebate beginning in 2024 on general refuse for those who provide multi-stream collection services (source-separated food scraps, general refuse, and recyclables including glass) and voluntarily report waste collection data Created a communications plan to educate and inform the public about the 2022 Solid Waste Stream Composition Study and the 2024 policy and bylaw changes at Hartland Landfill Continued administration of the solid waste local service for the Port Renfrew community, including securing grant funding for site upgrades and efficiencies, as well as a business case study for the future operation of the service Participated in a Disaster Debris Management Planning workshop with the City of Victoria to understand best practices for disaster debris management planning and provided information on collaboration opportunities with the City of Victoria and other agencies Initiated the development of a Request for Expressions of Interest for Disaster Debris Management Planning in collaboration with the City of Victoria |



Recycling

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



Overall Action Status
On Track

| Status | Strategy | Update |
|-------------------------------|--|---|
| Progress on Strategies | | |
| | 7 Increase residential diversion | <ul style="list-style-type: none"> Partnered with Recycle BC for local collection of 19,162 tonnes of residential PPP through the Hartland Depot, the curbside single-family home recycling program and depot services for rural/island residents Received 4,637 tonnes of recyclable material and 69 tonnes of orphan household hazardous waste as the Hartland Depot Continued to support the Southern Gulf Islands Recycling Coalition as they deliver waste reduction and diversion services for their communities Participated in Recycle BC's Five-Year Program Plan consultation and provided feedback to both Recycle BC and ENV in 7 key areas, including the need to provide adequate per household funding that meets the actual costs of collection of PPP from single family homes, as well as concerns around maintaining support for existing depots, the need to establish new depots and potential to broaden PPP collectors' access to processing and marketing services The SWAC directed CRD staff to set aside funding to conduct a Waste Generator Study every 3 years, beginning in 2025, to understand how much waste is recycled, composted or put in the garbage at the waste generator level (single-family home, MFD, ICI) |
| | 8 Increase multi-family diversion | <ul style="list-style-type: none"> Piloted the MFD Waste Diversion Project by hiring 2 term outreach assistants to conduct site visits to offer advice, signage and resources on best practices and setup for the waste collection area; 50 buildings totalling 2,499 units across 8 municipalities participated Developed signage and education materials for MFDs, including sorting guides, move-in and move-out guides and signage to promote proper waste disposal; resources available to download from website Presented on MFD Waste Diversion: Challenges & Solutions at the Coast Waste Management Associate Virtual Panel & Roundtable Discussion event Participated in Recycle BC's Five-Year Program Plan consultation and provided feedback to both Recycle BC and ENV in 7 key areas, including the need to invest and work with industry to enhanced service levels in all areas, particularly for MFD residents City of Victoria - In June 2023, Council directed staff to develop and report back on options for a MSW collection service model for MFD and explore design regulations or guidelines for solid waste storage facilities in MFD and commercial developments |
| | 9 Increase diversion from industrial, commercial and institutional facilities | <ul style="list-style-type: none"> Performed a jurisdictional scan on Space, Access and Source Separation for MFD and ICI to help inform staff with policy options Initiated internal business case to hire a new staff position in 2024 that will focus on shifting disposal ban enforcement to generator, rather than hauler. |
| | 10 Support existing and new extended producer responsibility programs | <ul style="list-style-type: none"> Continued to partner with 12 EPR stewards for local collection of 20,681 tonnes of provincially-regulated recyclables through the Hartland Depot, Gulf Islands and Port Renfrew Depot and the Curbside Blue Box Program Added single-use and packaging-like products to the CRD's Blue Box Program and depot programs to align with Recycling Regulation changes and subsequent expansion of Recycle BC's list of accepted items January 1, 2023 Conducted a pilot project with Major Appliance Recycling Roundtable (MARR) at the Hartland Depot that tested hard plastics from refrigerators for use in waste to energy Continued to engage in opportunities to refine the EPR system in BC by participating on the BC Product Stewardship Council, working with program stewards to support and enhance their services offered in the capital region and providing feedback on the five-year EPR program plan reviews |



Recycling

| Status | Strategy | Update |
|-------------------------------|---|---|
| Progress on Strategies | | |
| | 11 Increase organics diversion and processing capacity | <ul style="list-style-type: none">• Provided consolidation, transfer and processing services for 11,249 tonnes of kitchen scraps collected by municipalities and private service providers• Provided transfer and processing services for 2,088 tonnes of yard and garden material received at Hartland Depot• Continued to plan and design for a new kitchen scraps transfer station• Continued to support restoration activities by offering reduced tipping fees for safe disposal of source-separated invasive species material• Evaluated and reported to Board on pathways to support mandatory separation of curbside collection and diversion of organics |
| | 12 Increase construction, renovation and demolition material diversion | <ul style="list-style-type: none">• Hired a full-time permanent Waste Diversion Coordinator• Retained a technical advisor and issued a Request for Expressions of Interest to understand the processing and marketing capacity to determine landfill material bans• Conducted a jurisdictional scan to learn about other landfills' waste acceptance criteria and associated bylaw fines• Investigated other jurisdictions C&D strategies; started with District of North Vancouver C&D checklist and other resources provided• Received Board approval to ban wood (clean, treated and salvageable), asphalt shingles, and carpet and underlay from general refuse in 2024• Received Board approval to accept mixed C&D waste (garbage mixed with wood, asphalt shingles and/or carpet and underlay) for \$300/tonne beginning in 2024 to encourage source separation at the waste generator level• Hosted a webinar for private and public solid waste industry partners on the 2024 changes at Hartland Landfill and the Waste Stream Collector Incentive program• Hosted a Diversion and Deconstruction Workshop with the City of Victoria at Hartland Landfill to learn about best practices in deconstruction and waste diversion from local experts• Conducted characterization of shredded construction and demolition waste to determine potential alternative end uses• Diverted 1,402 tonnes of clean wood for off-site use to produce energy for pulp operations• WorkSafe BC announced new regulations around training and certification for workers involved in asbestos abatement beginning in 2024. Hartland staff affected will take the Foundational Awareness Course and the Surveying Safety Course in 2024.• The ENV has new regulations around the need for contingency plans in relation hazardous waste and stewardship programs. Hartland is working towards improving their plans for Stewards in 2024.• City of Victoria - Following the enactment of the Demolition and Deconstruction Bylaw, the city worked with the homebuilding and construction industry on an approach to salvage valuable wood from house demolitions that aligns with regional market capacity for material reuse |
| | 13 Encourage proper public space waste management activities | <ul style="list-style-type: none">• Conducted an education campaign on illegal dumping/abandoned waste, highlighting how residents can dispose of unwanted items according to the 5R Pollution Prevention Hierarchy• Provided \$1,252 in funding for the Community Clean-up Program• Participated in Recycle BC's Five-Year Program Plan consultation and provided feedback to both Recycle BC and the ENV in 7-key areas, including the need to enhance streetscape programming in urban areas• Supported Pacheedaht First Nation as they completed removal of debris associated with illegal dumping activity in their community• Responded to 8 inquiries regarding illegal dumping activity in Electoral Areas |



Recovery and Residuals Management

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



Overall Action Status

Opportunity for improvement

| Status | Strategy | Update |
|----------------------------|--|---|
| Progress on Actions | | |
| | 14 Optimize landfill gas management | <ul style="list-style-type: none"> Achieved a gas collection efficiency of 64% (ENV model) 74% (UBCi model) Produced 7.9 megawatts of green power Broke ground on construction of new methane to RNG facility Continued to implement strategies to improve gas collection and mitigate fugitive emissions. Continued annual installation of landfill gas collection infrastructure Continued to partner with the University of Victoria on the fugitive emissions study |
| | 15 Enhance Hartland disposal capacity | <ul style="list-style-type: none"> Calculated a disposal rate of 382 kg/capita, a decrease of 6.02% or 23 kg/capita from 2022 Received Board approval to increase Hartland Landfill's general refuse tipping fee from \$110 to \$150/tonne, ban clean wood from general refuse and increase bylaw fines beginning January 1, 2024 Received Board approval to ban treated wood, asphalt shingles, and carpet and underlay from general refuse beginning July 1, 2024 Used the results of the 2022 Solid Waste Stream Composition Study to help inform the 2024 policy changes at Hartland Landfill Initiated the procurement process to design, build, operate and maintain a Material Diversion Transfer Station at Hartland Landfill to process wood (clean, treated and salvageable), asphalt shingles and carpet and underlay before it's transferred offsite for reuse, recycling, or energy recovery Continued with onsite beneficial use opportunities, with 5,100 tonnes of select waste material streams processed and utilized onsite in place of virgin material, as per the ENV guidelines. Conducted additional shredding trials, with specific material streams in an effort to manage incoming volumes and further densify material Achieved a landfill utilization factor of 0.66 t of refuse/m³ of airspace Removed 30,000 m³ of overburden and 197,000 m³ of in-situ rock to prepare the new landfilling cell to receive future garbage Completed design of Cell 4 Liner, awarded Cell 4 Liner Construction Contract and began construction Produced and applied biosolids growing medium as a topsoil alternative, as outlined in the approved Biosolids Beneficial Use Contingency Plan Landfilled 10,591 tonnes of blended biosolids at Hartland as general refuse as Long Term Biosolids Planning solutions are developed in 2024 Received 21,124 tonnes of controlled waste and 2,957 tonnes of asbestos-containing material Issued 715 tickets and 37 warnings, primarily related to recyclable material being found commingled in the garbage Conducted feasibility work on the thermal pilot to study disposal alternatives for managing C&D material Initiated work on a jurisdictional scan of municipal solid waste processing technologies, including investigating incineration with energy recovery, gasification, and pyrolysis thermal processing systems Provided the Township of Esquimalt with \$50,000 to conduct biochar testing to explore an Integrated Resource Management approach to manage municipal solid waste, kitchen scraps and yard and garden waste using thermal technologies |



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