

Solid Waste Market Research & Engagement Study

Final Report
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EXECUTIVE SUMMARY

This report outlines the key insights from an evaluation of Goal 3 (to have informed citizens that participate effectively in proper waste management practices) of the CRD’s 2021 Solid Waste Management Plan (SWMP). The evaluation examined behaviours, attitudes, programs, resources, and communication strategies. The analysis incorporated data from the Resident Survey, the Business Survey, the Hartland Public Drop-off Depot Survey, and is supplemented by historical data from various sources. This evaluation aimed to establish baseline data of current waste management practices, identify areas for improvement, and gauge the effectiveness of existing engagement activities. Additionally, it offers actionable insights to refine communication strategies and programs in order to significantly enhance waste reduction efforts in both the short and long term.

This report is the first step in developing a foundational and ongoing framework for long-term evaluation of community participation and the impact of the CRD’s solid waste management initiatives. Ultimately, the findings in this study serve as a baseline for future iterations of this study and other research activities to be compared to.

The table below presents the key performance indicators collected in 2024, establishing a baseline for future iterations of this study. Tracking these indicators over time will enable the CRD to assess the impact of its waste reduction programs and observe shifts in public attitudes, knowledge, and behaviours.

Key Performance Indicators (2024 Baseline)

KPI	Baseline (2024)
Residents reporting positive behaviours and attitudes toward waste management practices (see Section 4)	74%
Residents reporting <u>no</u> barriers to disposing of...	General refuse: 98% Recyclable materials: 96% Organics: 95% Other materials: 38%-64%
Businesses reporting <u>no</u> barriers to properly disposing of waste	53%
Residents disposing of plastic products as general refuse	26%

Behaviour & Attitudes (Resident Survey)

- **High Support for Community Initiatives and Circular Economy¹:** Residents show strong agreement with behaviours supporting *Community Initiatives* (76%) and a *Circular Economy* (78%), both scoring 0.52 on a scale that ranges from -1 to 1.
- **Lower Confidence in Knowledge and Composting Behaviours¹:** *Confidence in Knowledge* and *Composting* scored lower than other domains, at 0.40 (71% agreement) and 0.27 (61% agreement) respectively, indicating areas for educational improvement.
- **Single-Family Dwellings Lead in Positive Behaviours:** Residents of single-family homes exhibit the highest overall composite scores in waste management behaviours, particularly in *Confidence in Knowledge* and following practices that *Reduce Waste Generation*. This is attributed to structural advantages these residents have in terms of access to resources and services. Looking for differences across demographic groups may highlight where structural advantages exist or where certain groups could benefit from additional education or resources.
- **Barriers to Proper Disposal:** While most residents report no barriers in disposing of general refuse, recycling, and organic waste, significant barriers exist for “Other recycling” (e.g., Styrofoam, soft plastics) (64%) and “Other” materials (e.g., textiles, electronics) (38%). These barriers include a lack of knowledge on where and how to dispose of these materials and difficulty in transporting materials to disposal sites. By monitoring the percentage of residents reporting these barriers, the CRD can make informed decisions to prioritize resources and services that will support residents in knowing how to dispose of these other materials and increase the accessibility of disposal options.
- **Disposal of Certain Materials as General Refuse:** A wide range of materials and their frequency of disposal as general refuse were identified. Of these, textiles/clothing (46%) and plastic products (26%) are highlighted as having high frequency. By monitoring materials that could have better disposal methods (e.g., plastic products), the CRD can infer where additional resources or support are needed. In the case of textiles or clothing, it may be that residents are unaware that these are considered general refuse as there are limited opportunities to recycle textiles that cannot be reused.

¹ Behaviours and attitudes towards solid waste management were assessed using a converted 5-point agreement scale ranging from -1 to 1 within 5 different domains. Positive values indicate favourable traits and values close to 0 indicate neutrality. Please refer to **Section 4**.

Programs & Resources (Resident Survey)

- **Preference for Virtual and Online Resources:** The CRD website (56%) and the Recycle CRD App (31%) are the most frequently used waste management resources among residents, suggesting fewer barriers to access and use.
- **Effectiveness of Resources:** Though not the most frequently used, resources provided by the Compost Education Centre (97% effective), the Recycle CRD App (96% effective), and Hartland Landfill Public Tours (94% effective) are perceived as being effective to highly effective in improving waste reduction knowledge among users. Both single-family and multi-family homes reflect similar benefits from these resources.
- **Limited Awareness of Programs:** A significant portion (30%) of residents have never accessed any of the waste management programs or resources listed in the survey, pointing to a need for increased outreach or different outreach strategies that may reach an audience that has not been previously engaged.

Hartland Public Drop-off Depot Survey

- **High Usage Among Residents:** 58% of residents report using the Hartland Public Drop-off Depot for disposing of recyclable materials (33%), garbage (25%), and other materials (33%).
- **Materials Disposed:** Materials commonly disposed at the depot include plastic products (63%), metal (59%), foam packaging (55%), electronic devices (54%), and household hazardous waste (53%).
- **Increase in Visits:** Since 2017, resident visits to dispose of general waste have increased by about 5% annually, slightly higher than population growth.
- **Significant Rise in Recycling Visits:** Visits related to recyclables have increased by an average of 20% annually, with a notable spike in 2022 following the introduction of the Express & Go drop-off option.

Business Survey Insights

- **Waste Types and Disposal Methods:** Most businesses produce paper (92%), plastic (75%), and organic waste (62%). Materials that businesses are less likely to produce tend to have fewer disposal methods available (e.g., electronics, wood and wood products).
- **Reliance on Third-Party Waste Collectors:** A majority (77%) of businesses contract third-party waste collectors and are largely satisfied with the reliability of these services (84%). Most of the businesses who reported not using a third-party waste collector were small (i.e., fewer than 10 employees).
- **Challenges with Local Regulations:** About half of the businesses experience challenges complying with local waste management regulations (47%), citing limited disposal options (32%) and high costs (18%).
- **Suggestions for CRD Support:** Businesses suggest increasing disposal options (60%), providing clearer guidelines (32%), and offering more training resources (22%) to aid compliance.
- **Lack of Impact Measurement:** A majority (61%) of businesses do not measure the impact of their waste management practices, despite having waste reduction goals (90%).

Informing a Communication Strategy

- **Primary Sources of Information:** Residents primarily rely on local government publications or websites (60%) and word of mouth (54%) for waste management information.
- **Preferred Communication Channels:** Websites and online platforms (56%), email (41%), and letter mail (36%) are the preferred methods for receiving information about waste management practices.
- **Content Preferences for Residents:** Practical information on disposing of waste that cannot be reused or recycled (74%) and how to recycle waste (68%) is more sought after than educational content.
- **Content Preferences for Businesses:** Businesses prioritize updates on new regulations (73%), incentive programs (62%), and detailed guidelines for specific waste types (61%).

Summary of Recommendations

Addressing Resident Gaps in Knowledge

Consider enhancing resources available to residents to target gaps in knowledge of solid waste management.

Addressing Barriers Related to Residents

Solid Waste Management

Residents may benefit from strategies or tips for transporting materials, and greater awareness of options for private waste collection and disposal of large materials or those that are difficult to transport.

If possible, it may be worth considering how the CRD can continue to work with municipalities to offer services to folks in multi-family dwellings.

Engaging Residents in CRD Programs and Resources

Consider ways to engage residents of the Gulf Islands, such as by focusing on brand awareness. Increased visibility of CRD's impact may encourage program utilization, improving waste management.

Informing a Communication Strategy for Residents

Consider expanding the Rethink Waste Newsletter. Promote ways for residents to receive emails from the CRD with information and resources related to the CRD's solid waste management programs.

Newsletter content should include practical information on how to dispose of soft plastics, foam packaging, and electronics; tips for transporting materials, and lists of locations where various materials can be dropped off.

Supporting Businesses

There may be an opportunity for the CRD to develop training resources that local businesses could tailor to meet their needs.

Informing a Communication Strategy for Businesses

Businesses in the CRD could benefit from detailed disposal guidelines by specific waste types, and updates on new or changing regulations.

Enhancing Future Evaluations

1. Consider focus groups or sub-surveys to explore specific areas in more detail (e.g., resident composting behaviours, needs of small businesses).
2. Consider refinement of tracking systems for Infoline email and phone inquiries.

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1 PROJECT BACKGROUND

The Capital Regional District (CRD) encompasses thirteen municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands and is responsible for service delivery to these areas on regional, sub-regional and local levels.

The Environmental Resource Management (ERM) division of the CRD is responsible for municipal solid waste management, including waste reduction, recycling programs and the operation of Hartland Landfill. Environmental resource management in the capital region is based on the 5R hierarchy of Reduction, Reuse, Recycling, Resource Recovery and Residuals Management, with the goal of extending the life of Hartland Landfill by minimizing waste disposal and maximizing diversion opportunities.

The 2021 Solid Waste Management Plan (SWMP), approved by the CRD Board in May 2021, and by the Province of British Columbia in July 2023, identifies the following goals:

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

The CRD identified a need for current information on public attitudes, knowledge of and behaviours toward solid waste reduction, in order to achieve Goal 3 of the SWMP. As such, the CRD commissioned R.A. Malatest and Associates Ltd. (Malatest) to conduct this Market Research and Engagement Study.

The objectives of the Market Research and Engagement Study were to evaluate the effectiveness of current CRD waste reduction and behaviour change strategies and to understand the public's attitudes, knowledge and behaviours in relation to the SWMP, and the general waste system and available services within the CRD. The data gathered as part of this study will serve as a baseline to monitor how public perception and engagement with CRD waste reduction programming and behaviour change initiatives evolve over time.

The data collected in this study was also used to develop key performance indicators to measure progress against Goal 3 of the SWMP. The key performance indicators will identify any challenges, limitations, or gaps within current CRD waste reduction and behaviour change initiatives and guide the development of future programming.

2 METHODOLOGY

2.1 Engagement Strategy

A Community Engagement Strategy was developed to help guide engagement with various stakeholders. The Engagement Strategy was provided to the CRD, along with other pertinent components of our outreach methodology and timeline, in a comprehensive Engagement Plan document.

Malatest completed several scoping research activities to develop a fulsome understanding of the parameters and objectives of the project. The scoping research activities also allow for subsequent stages of the research design to focus on additional and explanatory information that builds on the available information, and for any gaps in the data to be filled through other research activities.

2.1.1 Document Review

Malatest completed a review of background documents, which allowed us to understand what baseline data was already available, and to ensure that information was not duplicated in subsequent research activities. The CRD was able to provide Malatest researchers with the information necessary for the document review, which included:

- 2021 Solid Waste Management Plan;
- Solid Waste Management Plan (annual) Progress reports;
- 3Rs Education Program statistics (2013-2024);
- Examples of program communication, performance, and outreach materials;
- Feedback received through Infoline Inquiries;
- Analytics from Recollect Systems; and
- The Hartland Landfill scales data and Tonnage Reports.

2.1.2 Scoping Interviews

Malatest completed scoping interviews with key stakeholders from the CRD Environmental Resource Management (ERM) Division. The key stakeholder scoping interviews were conducted to identify the information needs of those involved. The information collected in the scoping interviews allowed for further development of the research design, data collection tools, and key performance indicators. Interviews were conducted in May 2024 via videoconference.

2.1.3 Focus Group with Members of the Solid Waste Advisory Committee

Malatest conducted a focus group session with members of the CRD’s Solid Waste Advisory Committee (SWAC) on June 7th, 2024. The SWAC was established to provide input on solid waste management matters and consists of members from diverse backgrounds, interests, and geographical locations, representing a balance between technical and non-technical members as well as industry and public members.

Through this focus group, the Malatest research team gained insights into the values, expectations and needs of the SWAC. Additionally, this focus group offered Malatest researchers an opportunity to receive feedback on the proposed research design.

2.2 Survey Instruments

Three survey instruments were developed by Malatest, targeting three key demographics: residents of the CRD (**Appendix A**), Hartland Public Drop-off Depot users (**Appendix B**), and businesses located in the CRD (**Appendix C**).

The survey instruments were designed to ensure that the deliverables and outcomes were aligned with the project objectives, and that the data collected met the specific information needs and goals outlined by the CRD during the scoping research activities.

Table 2.1: Overview of Survey Instruments

Audience	Method	Target Completions	Final Completions	Sample
Residential	Survey	600-800	1,097	Address-based sampling
Businesses	Survey	200	205	Developed from businesses directories
Hartland Public Drop-off Depot	Survey	100	103	CRD Staff handing postcards out to residents with a link to the survey for them to complete at home. Posters containing survey invitations were also available throughout the drop-off areas.

2.2.1 Survey of CRD Residents

A survey of citizens whose primary residence² was located within the capital region was developed to collect data on key attitudes, knowledge, and behaviours related to their household's solid waste management practices.

Survey Sampling and Administration

The CRD Resident survey was administered from July 17th, 2024 to August 31st, 2024. The survey was distributed to citizens whose primary residence was located in the region. An address-based sampling approach was used, with mailing information comprising addresses, municipalities, postal codes, and when available, resident names and phone numbers. A proportional sampling approach of all municipalities and electoral areas within the CRD's jurisdiction ensured that survey completions were proportional to the region's population size.

Letters notifying residents of the survey and inviting them to participate either online or by phone were distributed by mail. Surveys were primarily completed online (n = 995), with some surveys completed by telephone (n = 102). To encourage survey completions, participants were offered the option to enter into a prize draw to win either one \$100 e-gift card or one of two \$50 e-gift cards. The total sample developed for the survey comprised 9,000 addresses.

To provide residents with information about the survey and the evaluation project, Malatest developed a website containing frequently asked questions and researcher contact information. A survey helpline was also established, which was used by residential respondents with additional questions or who required assistance in completing the survey with the support of a trained Malatest surveyor. While the survey had an expected target of between 600-800 completions, it ultimately surpassed that target. When weighted, the survey data are proportionally representative of the capital region in terms of region, age, gender, dwelling type, and household income. For more details on the weighting methodology used in this survey, please refer to **Section 2.3.1**.

Survey Completions

In total, 1,097 residents completed the survey, which represented a 12% overall response rate and 0.2% of the population (see **Table 2.1**).

² A primary residence is the place where an individual lives for a longer period in the calendar year than any other place (Government of British Columbia, 2024).

Table 2.2: Residential Survey Completions

Study Area	Survey Completions	Percentage of Survey Completions	Percentage of the CRD
Saanich	160	15%	25%
Victoria	149	14%	27%
Central Saanich	91	8%	4%
Sidney	77	7%	3%
Langford	72	7%	10%
Salt Spring/Gulf Islands	72	7%	6%
Colwood	70	6%	4%
View Royal/Highlands	66	6%	3%
Esquimalt	65	6%	5%
North Saanich	63	6%	3%
Oak Bay	62	6%	4%
Sooke	60	5%	3%
Juan De Fuca	47	4%	1%
Metchosin	43	4%	1%
<u>Total</u>	<u>1,097</u>		

2.2.2 Hartland Public Drop-off Depot Survey

A survey tailored to the users of the Hartland Public Drop-off Depot was developed to collect data on key attitudes, knowledge, and behaviours related to solid waste management practices. Our approach to surveying is described in the sub-sections below.

Survey Administration

The Hartland Public Drop-off Depot Survey launched on July 24th, 2024 and closed on August 31st, 2024. The survey employed passive recruitment methods, comprising posters and postcards advertising the survey posted around multiple locations at the drop-off site.

To bolster completions, CRD outreach staff conducted recruitment at the Hartland Public Drop-off Depot, by distributing post cards and encouraging the public to complete the survey. In total, 103 surveys were received (see **Table 2.3**).

Table 2.3: Hartland Public Drop-off Depot Survey Completions

Completions	Partial Completions
103	6

2.2.3 Survey of CRD Businesses

A survey of businesses in the capital region was developed to collect data on key attitudes, knowledge, and behaviours related to solid waste management practices. Our approach to surveying is described in the sub-sections below.

Survey Sampling and Administration

The Business Survey was administered from July 17th, 2024 to August 16th, 2024. The survey was distributed to businesses operating in the region using a sample that was developed by searching business directories with the North American Industry Classification System (NAICS) codes found on Statistics Canada. It should be noted that this sample was not exhaustive of all businesses and stakeholders operating within the capital region. Malatest also accessed a variety of search engines to further supplement the sample. Survey completions are proportionate to the distribution of business sizes (i.e., number of employees) and industries within the region. Malatest delivered emails notifying businesses of the survey and inviting them to participate either online or by phone with a trained Malatest surveyor. To bolster completions, Malatest surveyors conducted telephone outreach to businesses who had not responded to the initial invitation email between July 22nd, 2024 and August 15th, 2024 to ask that they complete the survey. Surveys were primarily completed by telephone (n = 148), with some surveys completed online (n = 57). The total sample developed for the Business Survey comprised 2,804 businesses.

Survey Completions

In total, 205 businesses fully completed the survey (**Table 2.3**).

Table 2.4: Business Survey Completions

Employee Range	Telephone	Web	All Completions	Partial Completions
1 to 9 employees	68	23	91	9
10 to 49 employees	53	28	81	11
50 to 199 employees	20	3	23	3
200+ employees	6	2	8	1
Other (preferred not to answer)	1	1	2	-
<u>Total</u>	<u>148</u>	<u>57</u>	<u>205</u>	<u>24</u>

2.3 Data Analysis

Quantitative survey data were analyzed primarily by generating summary statistics (e.g., frequencies, proportions). Where possible, data were stratified by demographic variables (e.g., region, age, dwelling type) to ensure that results reflect differences and similarities across various groups. We calculated proportions to summarize the data and present these as percentages. It is important to note that the percentages presented might not always add up to 100% due to rounding and the nature of multiple response questions which allow respondents to select more than one answer. Qualitative survey data was analyzed using a thematic approach where results are summarized and grouped by emerging themes.

2.3.1 Data Weighting

The CRD Resident survey aimed to gather opinions from a variety of residents; however, not everyone is equally likely to respond to surveys, and certain demographic groups, such as apartment residents, were less represented in the survey data. These survey data, when weighted and expanded, proportionally reflect the whole community. 2021 Census data was used to understand the actual makeup of the region and survey data were adjusted accordingly. By doing this, we can ensure that the results better match the true diversity of the CRD population and address some of the limitations outlined in **Section 2.4** below. We also measured the effect of our adjustments to confirm that they improved the survey's accuracy without skewing the data. The adjustments allowed us to confidently report on the opinions from different areas, even those that had fewer responses.

2.4 Limitations

Sampling Constraints

The surveys conducted represent a sub-sample of the CRD population. There were calculated efforts to ensure proportional representation across all municipalities and electoral areas by carefully following a stratified sampling plan. However, our design did not have the capacity to guarantee proportionate representation of other variables such as dwelling type or age groups. This limitation implies that certain demographic groups may be underrepresented in our sample. To mitigate this, strategies such as the weighting design in the Resident survey were employed. By applying appropriate weights based on Census data, we adjusted for underrepresented groups, which effectively allows us to extrapolate the findings to the majority of households in the capital region, as long as we interpret the results with caution.

Typical Variance Associated with Survey Data

As with any survey-based research, there is inherent variability and potential for error. Factors such as population variance, sampling error, non-response bias, and measurement inaccuracies (i.e., respondents' interpretation of the questions) can affect the reliability of the results.

Social Desirability

Participants may have provided responses they believe are socially acceptable rather than their true feelings or behaviours. This social desirability bias can lead to over-reporting of positive behaviours (e.g., recycling) and underreporting of negative behaviours (e.g., improper disposal of materials). Such bias can affect the validity of self-reported measures and should be taken into account when analyzing the data.

Inability of Respondents to Report on Unrecognized Challenges and Barriers

For a few specific questions, respondents may be unaware of certain challenges or barriers affecting their solid waste management practices. This unawareness limits the depth of insights into underlying issues influencing behaviour. Consequently, for these particular questions (i.e., Q4 and Q8 in **Appendix A**), the data may not fully capture all factors contributing to waste management practices within the region, especially those challenges that respondents themselves do not recognize or understand. It's important to note that this limitation is confined to a small subset of questions and does not significantly impact the overall findings of the study.

Self-Selection Bias

Participation in the surveys was voluntary, leading to potential self-selection bias. Individuals or businesses that chose to participate might have different attitudes or behaviours compared to those who did not. For example, those more interested or engaged in environmental issues may be overrepresented.

3 EVALUATION FRAMEWORK

The focus of this evaluation framework is on Goal #3 of the SWMP: *To have informed citizens that participate effectively in proper waste management practices*. The evaluation framework was developed to identify data sources and key performance indicators that can be tracked over time; and aims to provide insight into the CRD's progress towards their goal of having informed citizens that participate effectively in proper waste management practices. Data collected in 2024 primarily serves a baseline to compare to in the future. This study is expected to follow a 3 year cycle, and will allow for a longitudinal comparison of the key performance indicators.

The Evaluation Framework for this study has been developed to address several key objectives:

- Allow for comparison between years to determine whether the CRD's waste reduction programs are effective;
- Identify and address challenges, limitation, and gaps within each program area;
- Help the CRD to better understand the public's attitudes, knowledge, and behaviours in relation to the CRD's waste reduction programming; and,
- Determine the effectiveness of waste reduction programming by monitoring how attitudes, knowledge, and behaviours evolve over time.

3.1 Data Sources

The evaluation framework relies on several data sources, including survey data and administrative data. The CRD Resident Survey (**Section 2.2.1**) and Hartland Public Drop-off Depot Survey (**Section 2.2.2**) provide insight into resident behaviours, attitudes, and knowledge related to solid waste management and the CRD's waste reduction programming and goals. The CRD Business Survey (**Section 2.2.3**) for local businesses complements the Resident Survey to provide an understanding of areas of success and challenges for commercial business operators in the region.

Select administrative data was also available to support the evaluation. These data sources include **historical Hartland tonnage data**, **CRD Solid Waste Stream Composition Study**, **CRD website analytics**, and **CRD community and school 3Rs Program participation data**.

For future evaluation cycles, the CRD may consider adding focus groups with residents to better understand areas of success and challenges related to the CRD's waste reduction programs and goals, including a more in-depth understanding of the barriers and challenges residents face when trying to comply with local regulations and best practices.

3.2 Key Performance Indicators

The Evaluation Matrix (see **Appendix D**) provides a summary of the key evaluation areas, associated data sources, and key performance indicators. While the matrix identifies a number of performance indicators, several key indicators are highlighted below.

1. CRD Resident Survey

- **The percentage of residents reporting positive behaviours and attitudes toward waste management practices.** This is composed of the five key areas listed below and is complemented by domain composite scores.
 - Reduce waste generation
 - Support for a circular economy
 - Support for community initiatives
 - Composting
 - Confidence in knowledge
- **The percentage of residents reporting no barriers** to disposing of various recyclable materials, organics, and general refuse.
- **The percentage of residents disposing of recyclables or other materials as general refuse.**

2. CRD Business Survey:

- **Discrepancy between waste produced vs bins/disposal options provided** (identified as a percentage).
- **The percentage of businesses challenges** complying with local waste management regulations.
 - Suggestions from businesses regarding how the CRD can support the business in complying with local regulations

4 FINDINGS: **BEHAVIOUR & ATTITUDES**

The following section summarizes findings related to behaviours and attitudes towards solid waste management and reduction as reported by the CRD Resident Survey respondents. Behaviours and attitudes were measured using a 5-point agreement scale ranging from strongly disagree (1) to strongly agree (5). Respondents would rate the waste management or reduction actions that they, or members of their household do, on this 5-point scale, which was then converted to a score that ranges from -1 to 1. Positive numbers on this scale indicate a positive valence towards these domains, meaning that as the scores approach 1, they reflect the most ideal behaviours or attitudes. Conversely, values closer to 0 can be interpreted as neutral attitudes or behaviours, indicating neither strong agreement nor disagreement with the statements. This scoring system helps address social desirability biases, as participants are often reluctant to show low levels of agreement. By interpreting higher positive values as stronger agreement and more desirable actions, and values near zero as neutrality, we can better understand the participants' true attitudes while mitigating the impact of their tendency to present themselves favourably.

Measuring agreement in this manner also allows for comparison of behaviours and attitudes across different topics, as well as the calculation of a composite index, which is a single figure that can be used for longitudinal comparisons during future iterations of the study. This framework of assessing behaviour and attitudes can also be used to identify areas of opportunity within demographic variables (e.g., resident's region or dwelling type).



4.1 Behaviour Domains

The survey assessed five domains of behaviours and attitudes:

- **Reduce waste generation:** The extent to which households work to minimize or reduce the waste they produce, such as avoiding single-use items and purchasing only what they need (e.g., avoiding single-use items and careful purchase considerations).
- **Support for a circular economy:** The extent to which households seek opportunities to repurpose or reuse materials or extend the life of items by donating unwanted household items (e.g., actively seeking opportunities to repurpose or reuse materials, frequent visits to second-hand stores or efforts to donate unwanted items).
- **Support for community initiatives:** The extent to which households endorse community initiatives aimed at reducing waste (e.g., eagerness to participate in community waste initiatives).
- **Composting:** The extent to which households participate in composting their organic or kitchen scraps (e.g., active participation in organics diversion at home).
- **Confidence in knowledge:** The level of confidence households expressed in their knowledge of how to recycle various materials (e.g., confidence in recycling various materials, knowledge of proper disposal of hazardous waste).

Across survey questions, **74% of respondents reported positive behaviours and attitudes towards waste management**. When converted to composite scores, the highest scoring domains were *Support for Community Initiatives*, followed closely by *Support for a Circular Economy*, which both feature composite scores of 0.52. The domain of *Reducing Waste Generation* followed with a score of 0.47. The lowest scoring areas were *Confidence in Knowledge* of recommended waste management behaviours, which scored 0.40, and participation in *Composting*, which had a composite score of 0.27

Table 4.1 provides a detailed breakdown of each survey element measured to analyze the behaviours and attitudes of residents in the capital region. It illustrates the distribution of response percentages across the agreement scale and their corresponding composite scores. Notably, the percentage of respondents with neutral attitudes can be viewed as a potential audience for targeted education and engagement efforts. These individuals may be more easily persuaded to improve their waste management behaviours, as they haven't formed strong opinions either way.

Table 4.1: Behaviours and Attitudes Reported by Residents

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Composite Score (n=1028)
Composting						0.27
My household participates in composting organic waste at home	14%	17%	8%	23%	38%	0.27
Confidence in Knowledge						0.40
My household feels confident in our knowledge of how to properly dispose of hazardous waste	5%	12%	20%	39%	23%	0.31
My household feels confident in our knowledge of the best practices for recycling a variety of materials	2%	4%	16%	54%	25%	0.48
Reduce Waste Generation						0.47
My household adopts practices that reduce waste generation	2%	6%	20%	45%	28%	0.45
My household eats all the food we buy and we only put unavoidable food waste in the compost	3%	9%	11%	45%	33%	0.48
Support for Community Initiatives						0.52
My household is eager to participate in community initiatives aimed at reducing waste	1%	3%	20%	42%	34%	0.52
Support for a Circular Economy						0.52
My household makes conscious efforts to donate unwanted household items	1%	1%	4%	41%	52%	0.71
My household seeks opportunities to repurpose or reuse materials from products we have purchased	2%	5%	21%	45%	26%	0.44
My household visits second-hand stores and/or repair shops to extend the life of items	4%	12%	14%	41%	29%	0.4

Source: Resident Survey (Q8)

Some differences in attitudes and behaviours were observed by dwelling type (as shown in **Figure 4.1**). We see that residents of single-family dwellings demonstrate the highest overall composite score, with the highest domains being *Support for a Circular Economy* (0.53) followed closely by *Support for Community Initiatives* (0.52).

Other dwellings with high overall composite scores include apartments or condominiums in low-rise buildings (fewer than 5 storeys). Apartments or condominiums in both high- and low-rise buildings demonstrate low scores in their confidence regarding waste management knowledge (0.30 and 0.34 respectively) in relation to other dwelling types.

Figure 4.1: Composite Scores Across Dwelling Types

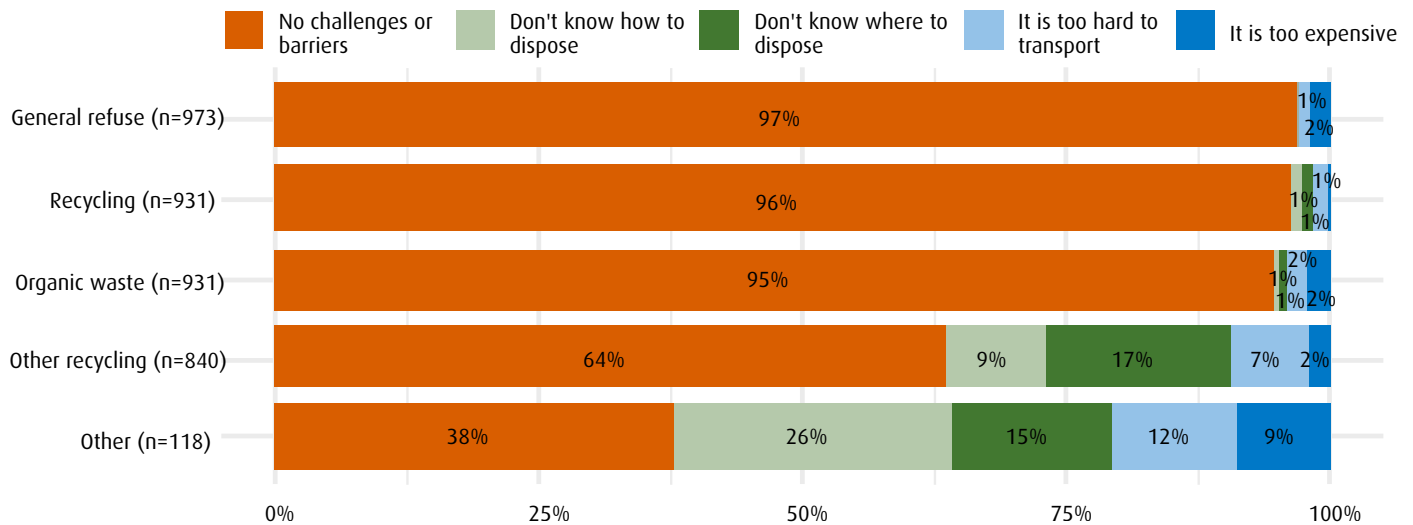
	Composite Index (Average)	Composting	Confidence in Knowledge	Reduce Waste Generation	Support for a Circular Economy	Support for Community Initiatives
Single-detached house (n = 734)	0.40	0.30	0.45	0.48	0.53	0.52
Semi-detached house (n = 143)	0.35	0.14	0.42	0.47	0.51	0.52
Apartment or condominium in a low-rise building (n = 119)	0.38	0.26	0.34	0.45	0.53	0.56
Apartment or condominium in a high-rise building (n = 50)	0.34	0.32	0.30	0.42	0.41	0.46
Other* (n = 51)	0.30	0.14	0.21	0.52	0.55	0.48

Source: Resident Survey (Q8)

*Includes: "A secondary suite in a house", "Mobile home / movable dwelling", and "Other"

4.2 Barriers

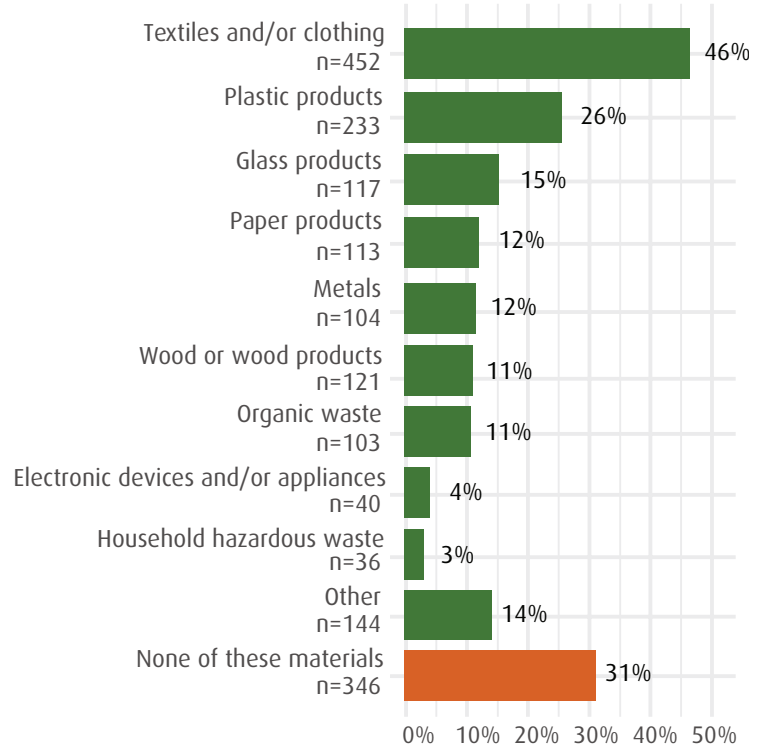
Overall, most residents reported that they do not face any barriers in the disposal of general refuse, recycling, and organic waste, at 97%, 96%, and 95% respectively. Given the high proportion of residents reporting no barriers, it is likely that this will remain stable over time. "Other recycling" which encompassed materials such as Styrofoam and soft plastics, and "Other" which included materials such as textiles, electronics, and wood waste, are the waste categories where respondents reported encountering the most barriers. Reported barriers associated with "Other recycling" include not knowing where to dispose of these materials (17%), not knowing how to dispose of these materials (9%), and difficulty transporting the materials (7%). Similarly, reported barriers associated with "Other" materials include not knowing how (26%) or where (15%) to dispose of waste materials, as well as difficulty in transporting (12%) and prohibitive costs (9%) associated with the disposal of these materials.

Figure 4.2: Main Barriers in Disposing of Waste

Source: Resident Survey (Q4)

4.3 Disposal Habits

The following items are those which respondents regularly dispose of as general refuse. Items demonstrating a high disposal rate signal opportunities for further engagement on proper or alternative disposal methods. In cases where a better disposal option is available (e.g., soft plastics), residents may benefit from education and information on where to dispose of these materials. **Figure 4.3** shows that textiles and clothing are the materials most commonly disposed of as general refuse (46%) followed by plastic products (26%). It should be noted that the survey did not provide a definition of what constitutes "plastic products," and therefore, this term should be interpreted broadly to potentially include items such as plastic bags, packaging materials, plastic containers, disposable cutlery, and other single-use plastics. Additionally, "Other" materials frequently mentioned by respondents included contaminated waste, and mixed packaging.

Figure 4.3: Items Disposed as General Refuse by Residents

Source: Resident Survey (Q5)

5 FINDINGS: PROGRAMS & RESOURCES

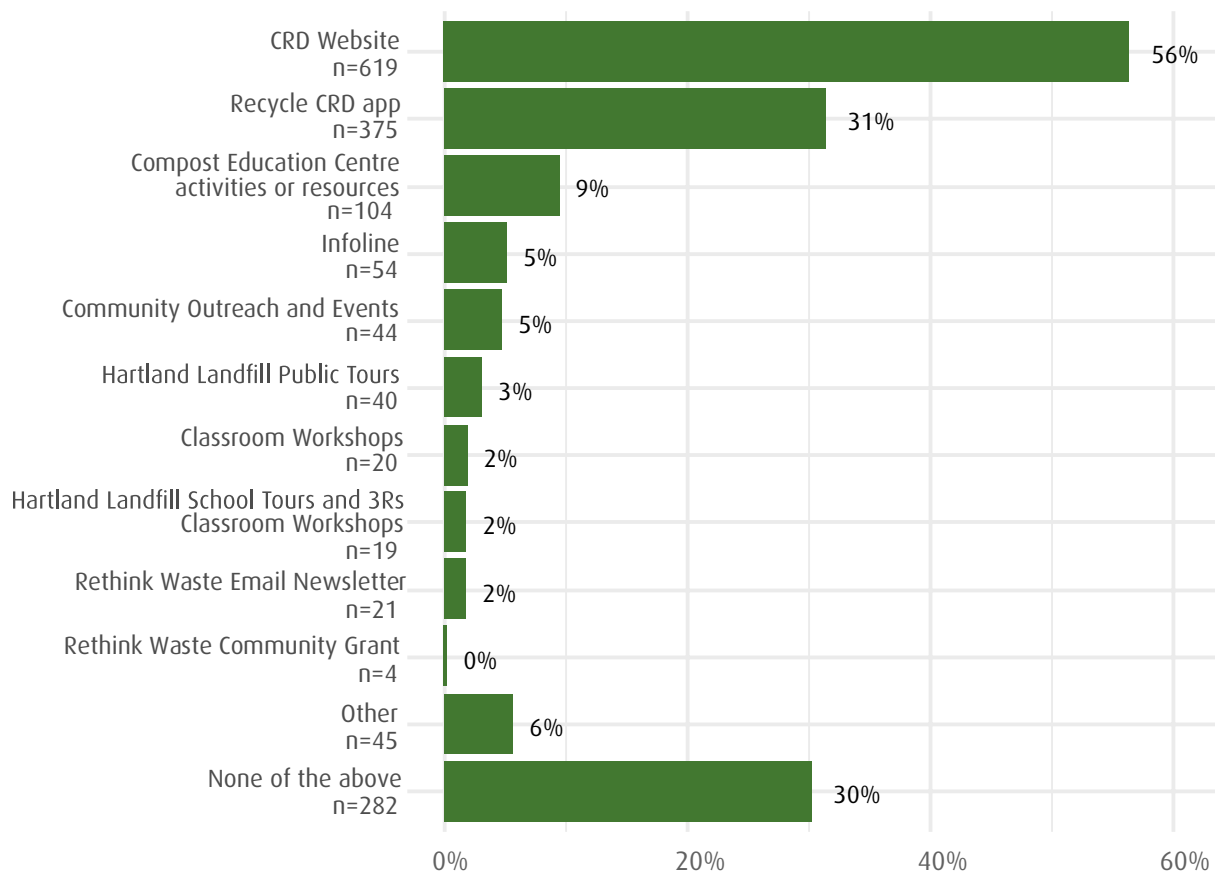


This section of the report explores the various programs and resources available for waste management in the capital region, as utilized by residents. It focuses on the accessibility and effectiveness of these resources, providing insights into how residents interact with these services. This analysis offers a snapshot of the current landscape of waste management educational tools and can be utilized in further research. Furthermore, it evaluates the perceived impact of these resources on enhancing residents' knowledge about waste reduction strategies.

5.1 Resources Accessed by Residents

Virtual and online waste management programs or resources currently offered by the CRD are the most frequently used among residents. More than half of respondents reported that they have used the CRD Website (56%), and about one-third (31%) reported using the Recycle CRD App. This may indicate that virtual or online waste management programs or resources pose significantly fewer barriers related to access and use. Resources and activities available through the Compost Education Centre are the third most commonly reported resource to be accessed by CRD residents (9%), however, participation in these and other in-person resources are much lower than virtual or online tools. It is worth noting that 30% of residents who completed the survey reported never having accessed any of the listed programs and resources. Other resources included local government portals, neighbourhood committees, and employers.

Figure 5.1: Resources Accessed by Residents

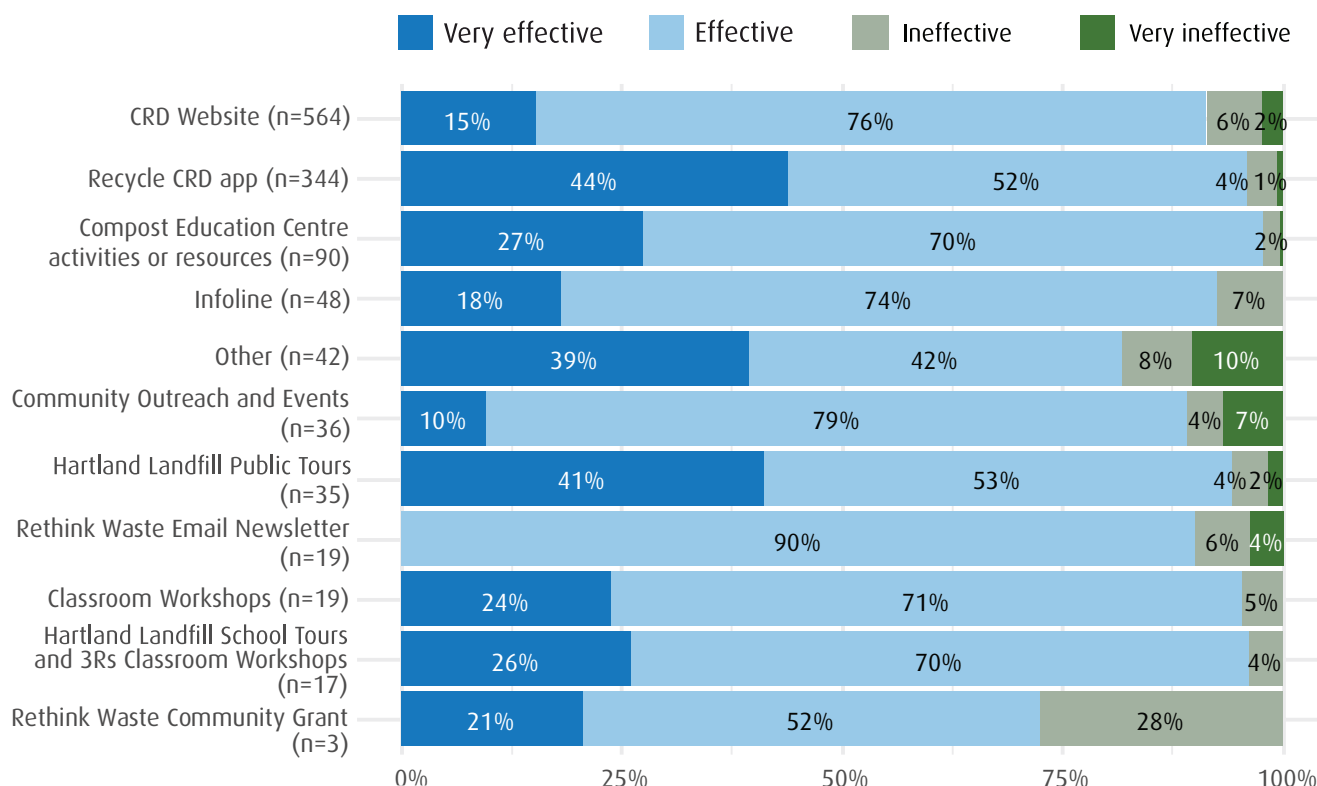


Source: Resident Survey (Q9)

Overall, most resources were deemed effective by respondents who had reported using them. Resources that respondents most frequently identified as being effective include the resources provided by the Compost Education Centre (97%), and the Recycle CRD App (96%); these items are the second and third most common reportedly used waste management programs or resources currently offered by the CRD. Hartland Landfill Public

Tours were also identified as being very effective (94%), although the number of respondents who indicated having accessed this resource is substantially lower.

Figure 5.2: Effectiveness of Resources in Increasing Knowledge



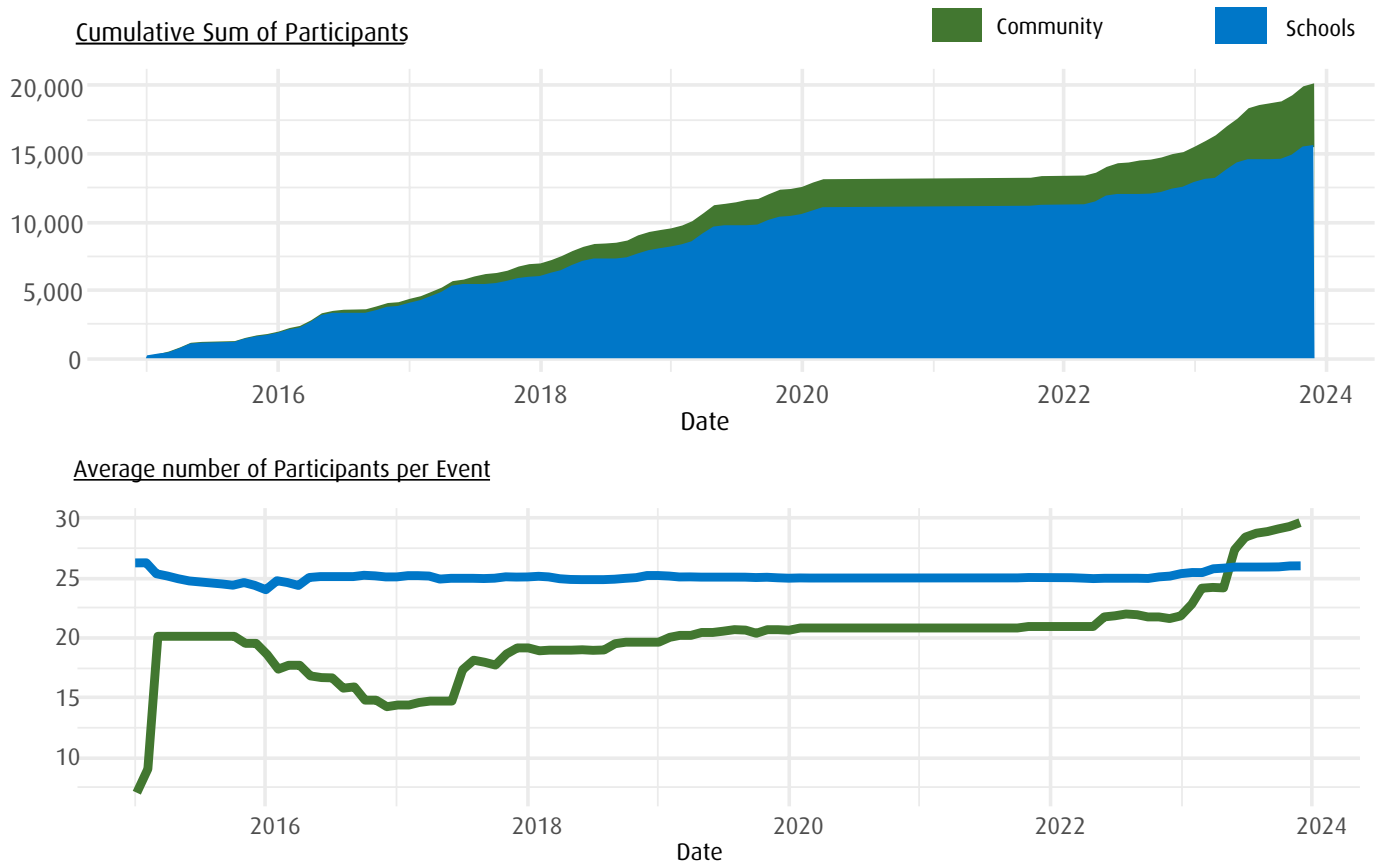
Source: Resident Survey (Q11)

5.2 Historical Performance of 3R Programs

The CRD's 3Rs Program, which includes interactive school and community workshops and landfill tours, have been tracked using historical data to discern key performance trends. Since 2015, these programs have engaged over 20,000 participants, representing approximately 5% of the CRD population³ (see **Figure 5.3**). It's important to note, however, that this figure may include repeated participants.

In 2023, there was a significant increase in requests for 3R community and school programming, likely due to people seeking activities outside of their home following the COVID-19 pandemic. During this time, there was also a shift in the CRD's strategy to lead more 3R booth events and keep a clear record of the number of participants and other interactions.

³ Source: Statistics Canada 2021 Census of Canada

Figure 5.3: Historical Attendance of 3R Programs

Source: CRD 3R Program Data

5.3 Other Resources & Trends

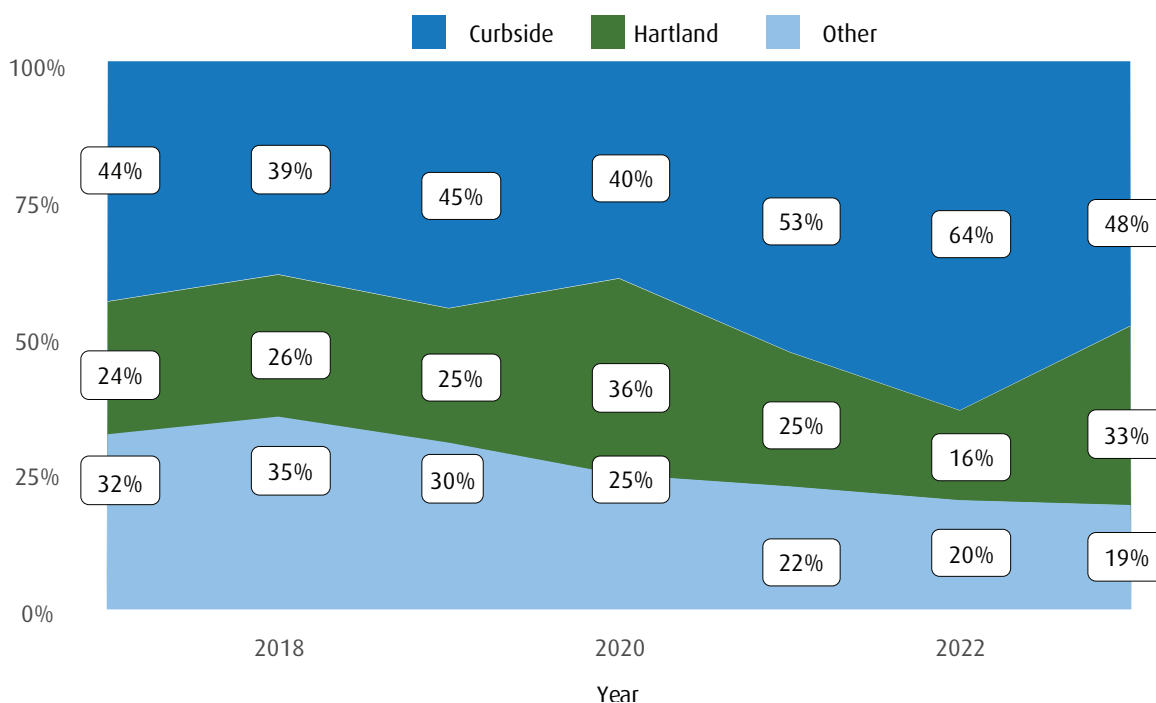
The CRD hosts an Infoline and MyRecyclopedia website that residents can consult with questions about solid waste management. Examining user patterns to identify common questions can provide insight as to where CRD residents encounter barriers or have gaps in knowledge about how and where to properly dispose of different materials.

Infoline

The composition of Infoline inquiries has remained relatively stable over recent years, demonstrating a consistent pattern in the types of questions received. Inquiries concerning the curbside program consistently represent approximately 50% of all queries. These frequently involve questions about oversized bins, sorting and preparation advice for new residents, inquiries regarding the fate of disposed paper, and requests for curbside pickup of specific materials like plastic bags. Additionally, about 30% of the inquiries relate to

Hartland, where common questions focus on recycling processes, methods for disposing of household waste, and addressing complaints. The remaining 20% of inquiries fall into the “Other” category, which typically includes questions about kitchen scraps, composting, app reminders, service requests, and issues related to abandoned waste. This breakdown highlights the community's engagement with and reliance on these essential waste management services.

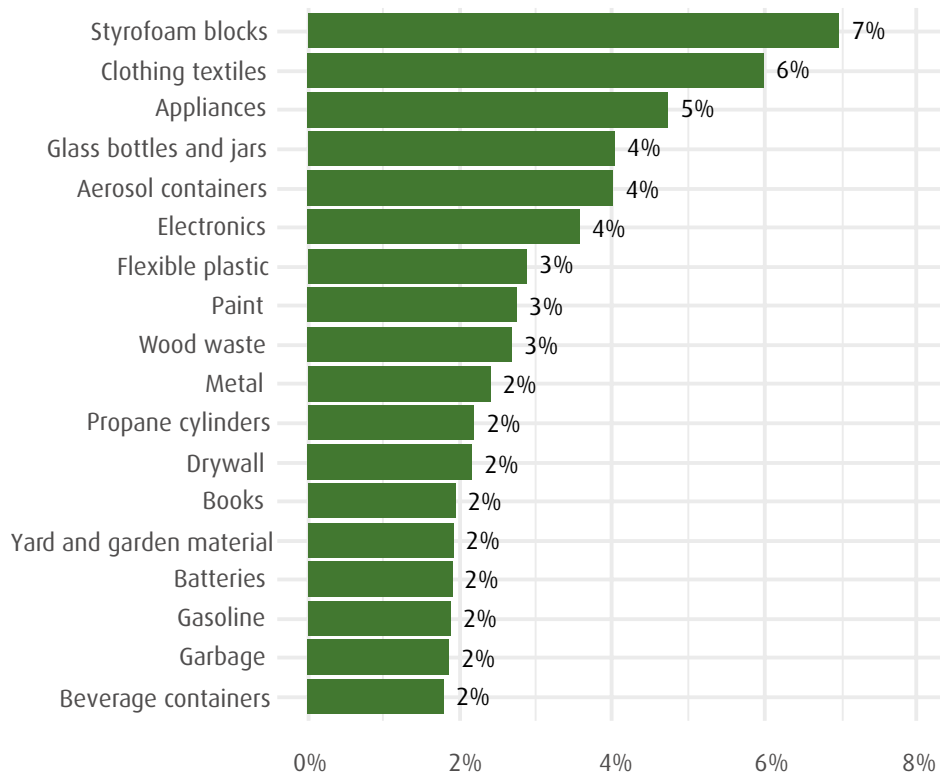
Figure 5.4: Percentage of Infoline Inquiries by Topic



Source: CRD Infoline Records

MyRecyclopedia (Web Analytics)

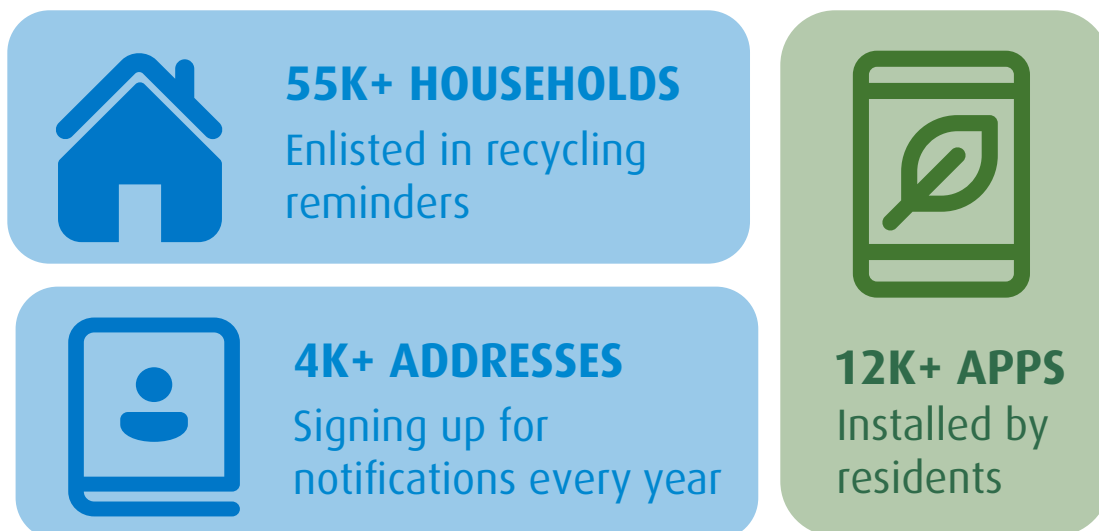
MyRecyclopedia is a platform that guides users on how to reuse or recycle various materials and provides information on facility drop-offs. Web analytics reveal that Styrofoam blocks are the most frequently searched items, capturing 7% of total inquiries, indicating a significant public interest in recycling options for this material. Following closely, clothing/textiles and household appliances are also highly sought after, with 6% and 5% of searches respectively, highlighting the community's commitment to sustainable handling of these items. This data can help prioritize resources and tailor public education efforts to address the materials that users are most concerned about, and potentially track changes in consumer-searching behaviour across time.

Figure 5.5: Percentage of Total Inquiries Regarding Materials in MyRecyclopedia

Source: MyRecyclopedia Analytics

Reminders Through ReCollect Systems (CRD Recycle App & Website)

The ReCollect services cater to residents on the curbside program with smartphones by offering a convenient way to receive reminders about their collection day. Currently, it is estimated that 60% of single-family dwellings in the capital region have enlisted in these reminder services.



Source: ReCollect Systems Analytics

6 FINDINGS: HARTLAND PUBLIC DROP-OFF DEPOT

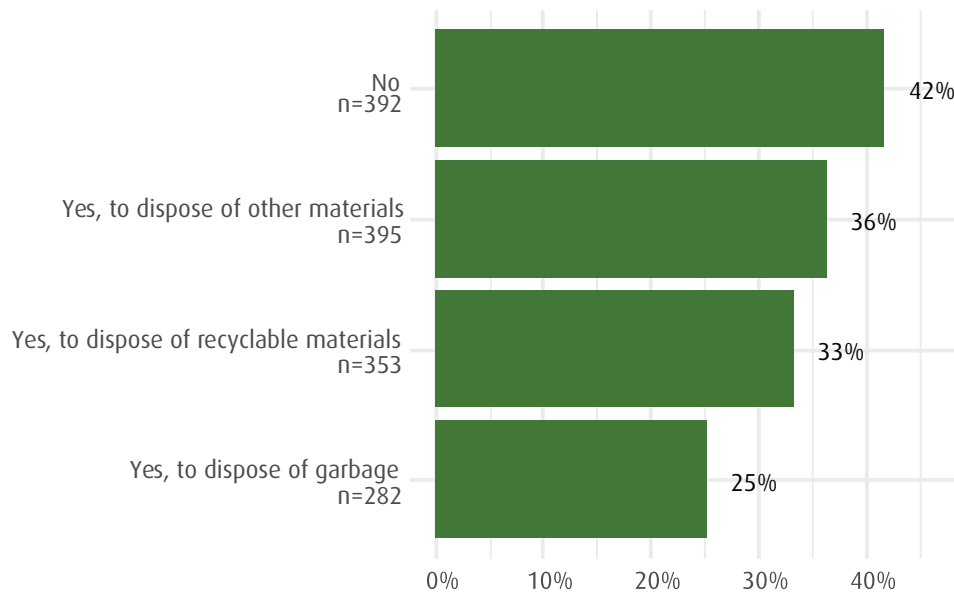
This section summarizes findings from the Hartland Public Drop-off Depot Survey and highlights trends in Historical Hartland Tonnage data.



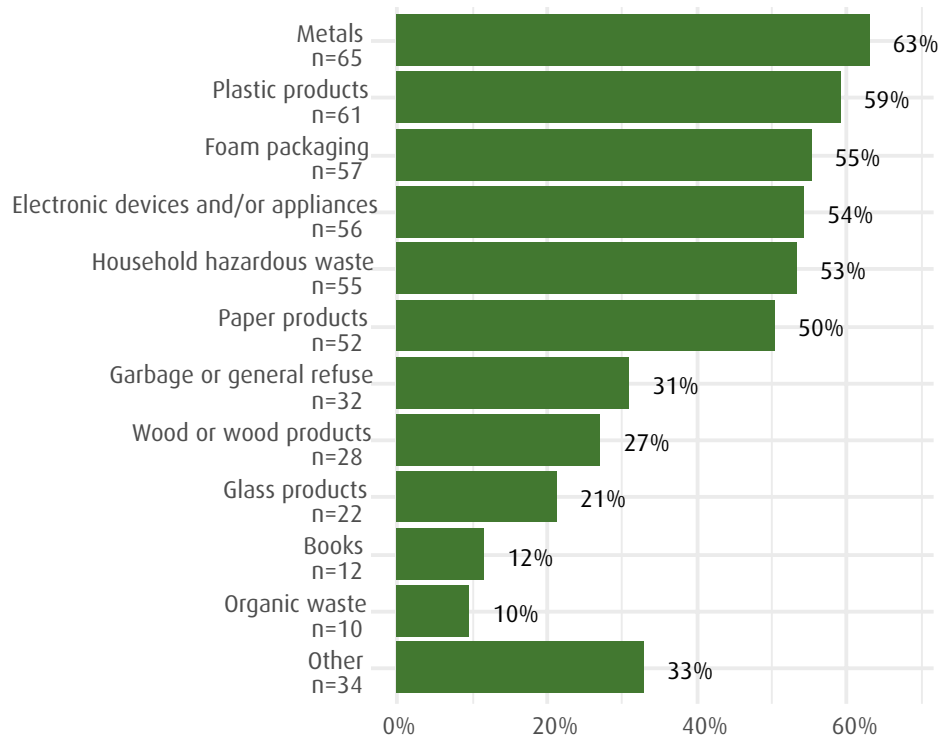
6.1 Usage of the Hartland Public Drop-off Depot

Most capital region residents surveyed (58%) report using the Hartland Public Drop-off Depot to dispose of recyclable materials (33%), garbage (25%), or other materials like household waste or electronics (33%) (see **Figure 6.1**). Results from the Hartland Public Drop-off Depot Survey provide a snapshot of what types of materials residents are disposing of (see **Figure 6.2**). Depot users most commonly reported disposing of metal (63%) and plastic products (59%), followed by foam packaging (55%), electronic devices (54%), household hazardous waste (53%), and paper products (50%)⁴.

⁴It should be noted that the volume or quantity of materials was not captured in this survey. Because of this, percentages will not align with the 2022 Solid Waste Stream Composition Study.

Figure 6.1: Usage of the Hartland Public Drop-off Depot

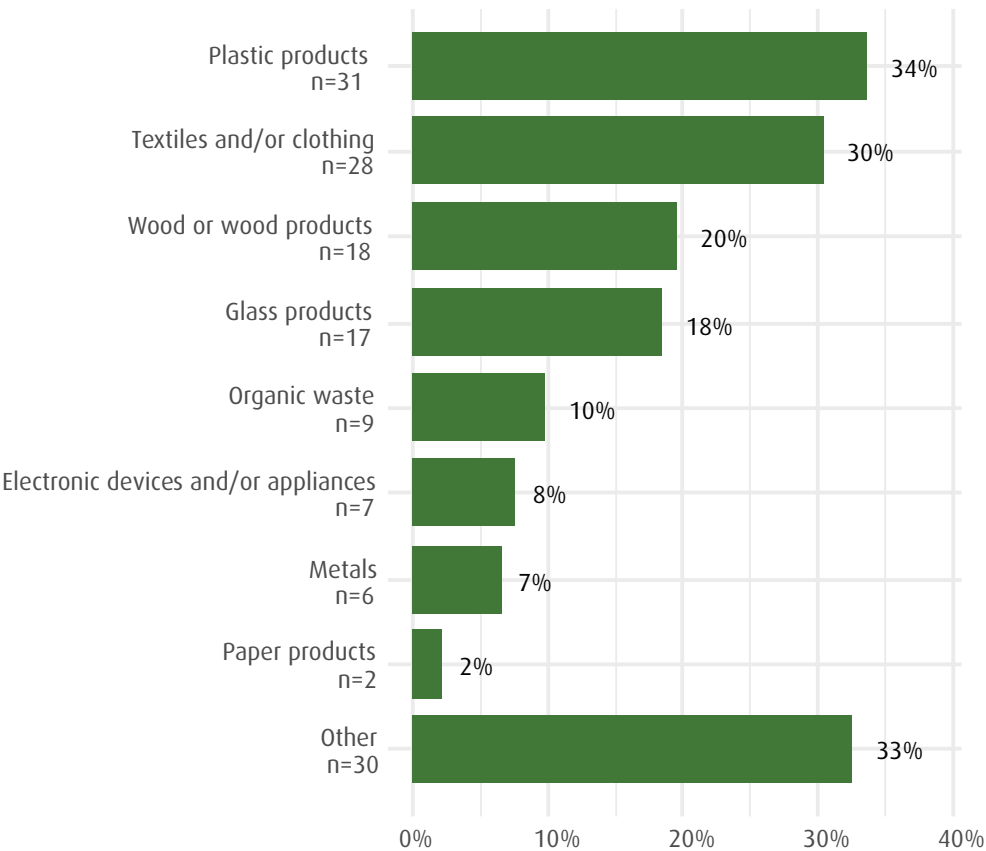
Source: Resident Survey (Q16)

Figure 6.2: Materials Dropped-off at Hartland Public Drop-off Depot

Source: Hartland Public Drop-off Depot Survey (Q3)

Figure 6.3 shows that, similar to what residents reported on the CRD Resident Survey, Depot users were unsure of how to dispose of some plastic products (34%) (i.e., soft plastics) and textiles or clothing (30%). Other materials (33%) often included Styrofoam, construction waste, and various kinds of plastic.

Figure 6.3: Materials that Hartland Public Drop-off Depot Users Do Not Know How to Recycle



Source: Hartland Public Drop-off Depot Survey (Q4)

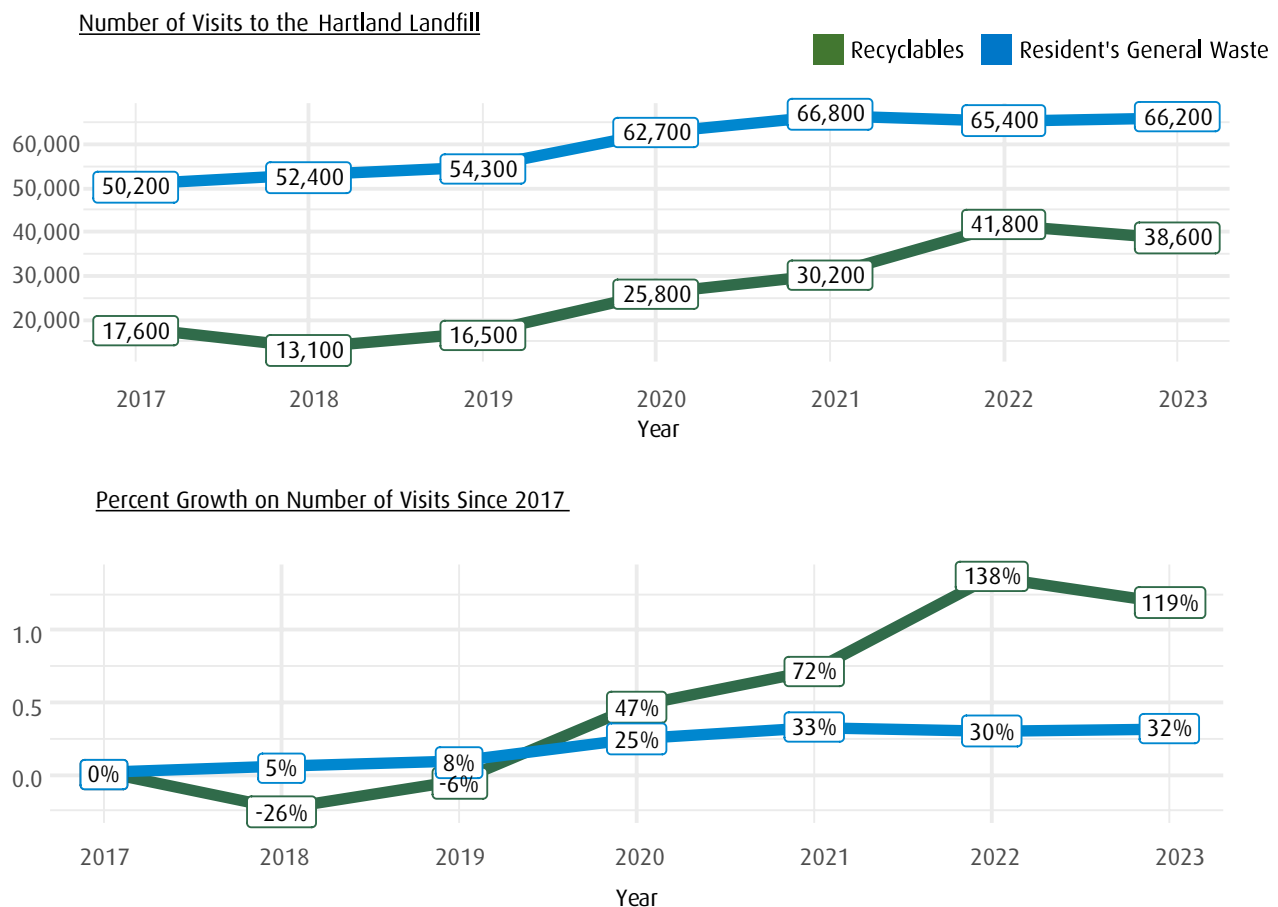
6.2 Historical Tonnage Data

Historical Hartland tonnage data were reviewed to determine the average number of trips by residents of the region (i.e., excluding commercial customers) to drop off recyclables or general refuse. To ensure we did not capture any commercial customers who might not have a registered account, only visits with a net weight of less than 1,000 kg were recorded for the disposal of general refuse. It is important to note that due to the way visits were recorded, by transaction, there may be instances where the same visit is counted twice if a resident used both the landfill and dropped off recyclables. However, this method still allows us to measure how the number of visits to each part of the facility has changed over time.

Since 2017, the average number of visits made by residents to dispose of general waste has grown about 5% each year. This figure is just slightly higher than the average population growth (about 3% per year as per the population estimates made by BC Stats) suggesting that the increase in visits to the landfill can largely be explained by the growing population.

As shown in **Figure 6.4**, there was a significant increase in the number of residents visiting Hartland to drop off recyclables. The number of visits that were related to recyclables increased on average by 20% each year (since 2017). A notable spike in visits was observed in 2022 when the Express & Go drop off option was introduced.

Figure 6.4: Historical Visits and Tonnage Data



Source: Hartland Landfill Scale Data

7 FINDINGS: **BUSINESS SURVEY INSIGHTS**

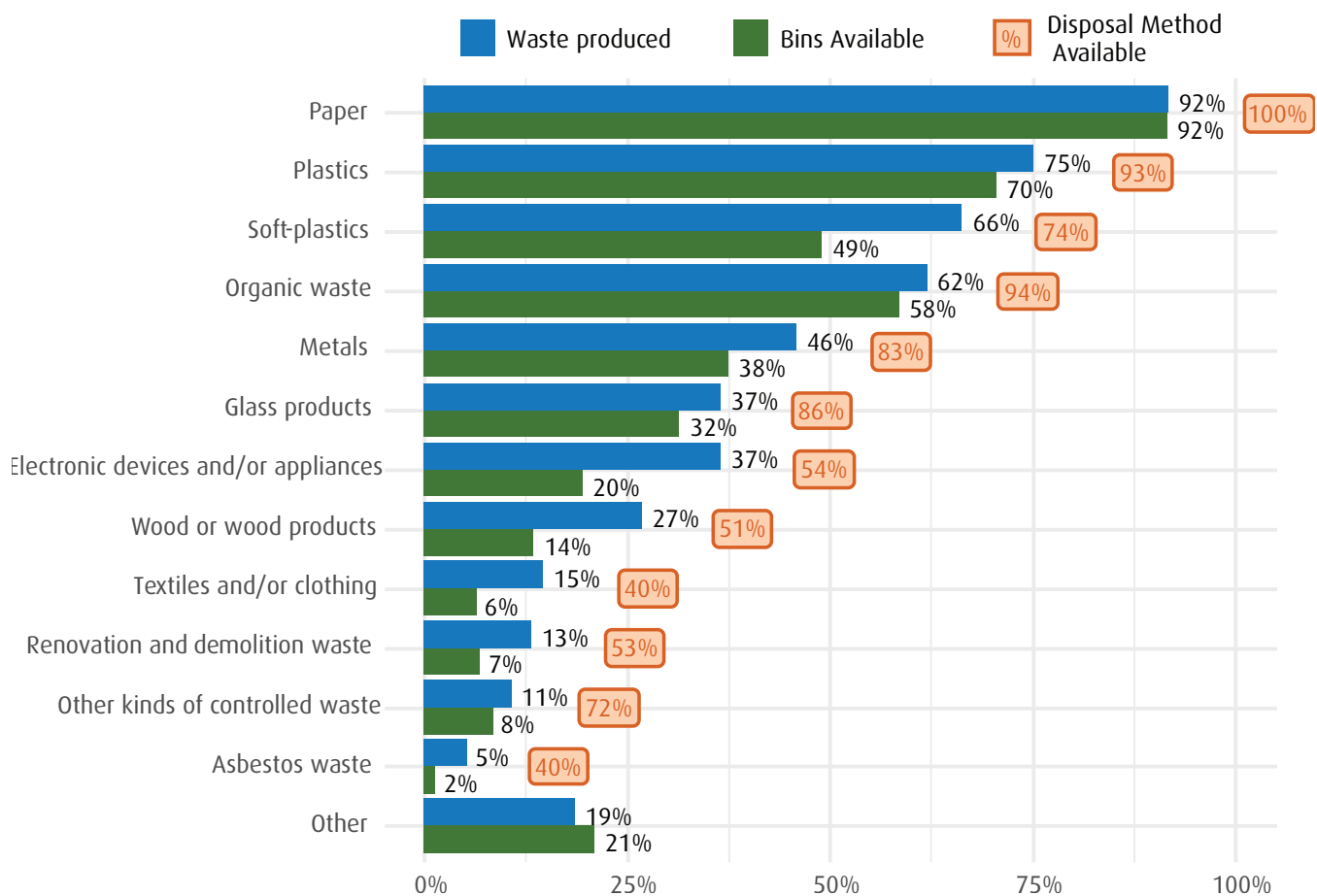


This section summarizes key findings from the CRD Business Survey. Results include a summary of various types of waste produced by businesses and whether businesses have a method to dispose of those materials, barriers and challenges complying with local regulations, as well as an assessment of business goals and staff training related to solid waste management.

7.1 Waste Produced and Disposal Options

Businesses across the capital region are responsible for establishing their own waste management practices. Most businesses report producing a variety of different types of waste (see **Figure 7.1**). Most commonly, businesses reported regularly having paper (92%), plastic (75%), soft plastic (66%), and organic waste (62%) to dispose of. Over 90% of businesses that reported producing these types of waste also reported having a designated disposal bin or method, except for soft plastic waste, where we see that only 74% of businesses have a disposal process for these materials. Other materials that are produced by fewer businesses but were less likely to have a designated disposal process include electronic devices, wood or wood products, textiles, and renovation or demolition waste. Other kinds of waste mentioned by participants mostly included different kinds of hazardous materials.

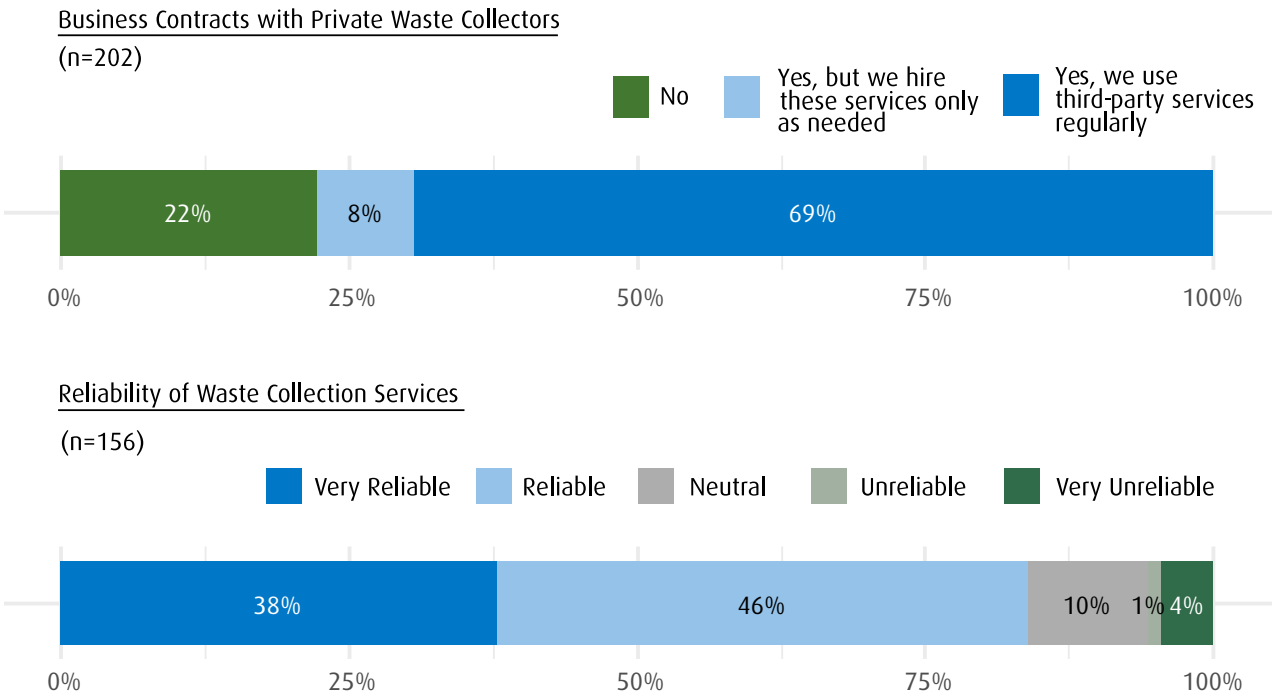
Figure 7.1: Waste Produced by Businesses & Bins Provided to Staff and Customers



Source: Business Survey (Q5; Q6)

Most businesses (77%) reported that they contract private waste collectors to haul waste from their business to an appropriate drop off location, and that they are satisfied with the reliability of those services (**Figure 7.2**). Businesses that did not report using a private waste collection service tended to be service or administration oriented and were smaller in size (fewer than 10 employees) compared to businesses that reported using a private waste collection service. These businesses were also less likely to use the Hartland Public Drop-off Depot. It is unclear what these businesses are doing to dispose of their waste.

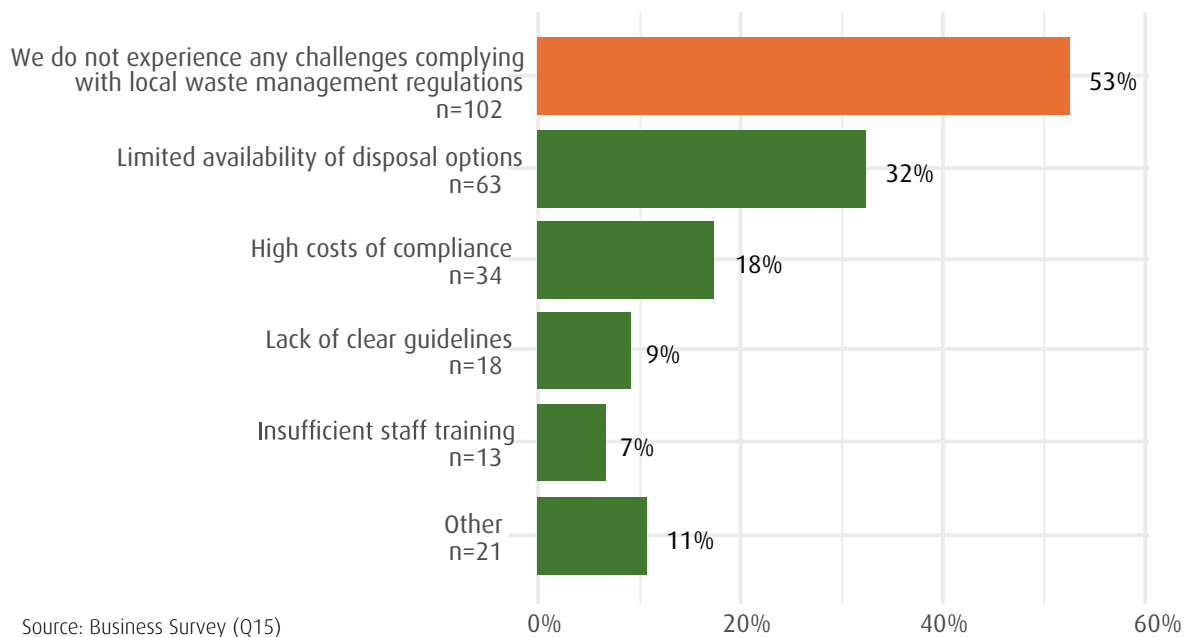
Figure 7.2: Attitudes Towards Private Waste Collectors



Source: Business Survey (Q13; Q12)

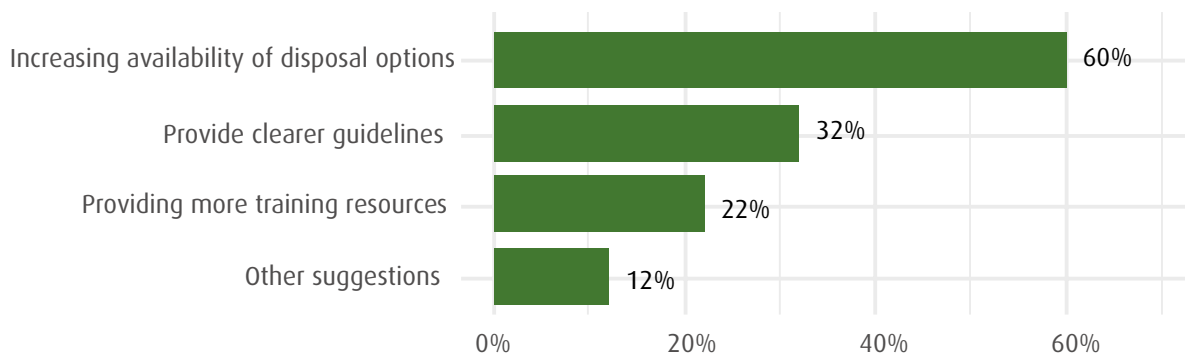
7.2 Local Regulations

Approximately half of businesses in the region report no challenges complying with local waste management regulations. The most commonly reported challenges include a limited number of disposal options (32%) followed by the high-cost of disposal options that comply with local regulations (18%). **Figure 7.3** summarizes additional barriers reported by smaller proportion of businesses. Other challenges included illegal dumping, tourists being confused with local regulations, and changing guidelines.

Figure 7.3: Challenges in Following Local Waste Management Regulations

7.3 CRD Support & Suggestions

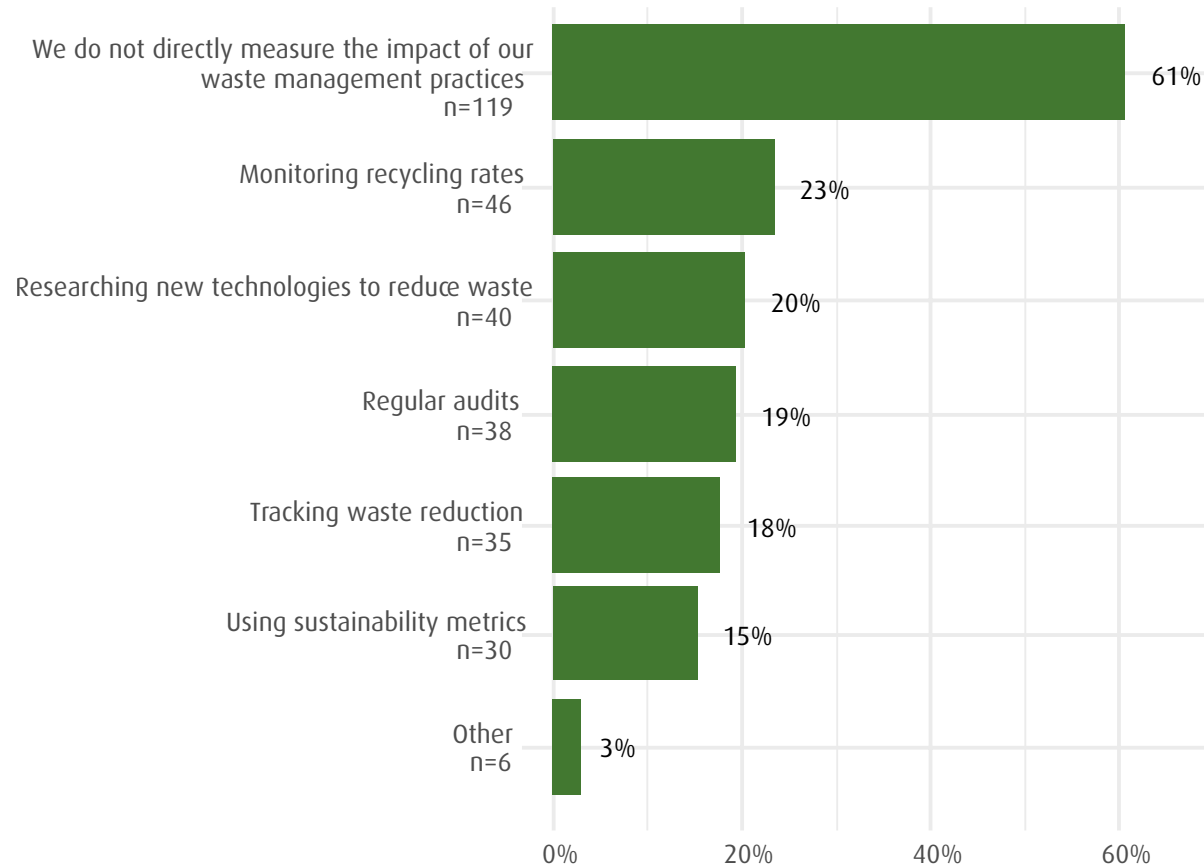
Businesses suggested that the CRD could help support them to comply with local regulations by working to increase the availability of disposal options (60%), providing clearer guidelines (32%), and providing more training resources to help businesses understand how to comply with local regulations (22%). Other suggestions included allowing businesses to opt-in to curbside recycling and garbage and organics/kitchen waste collection provided to residents of the region, and providing incentives to help offset the cost of disposal (e.g., tax credits or grants).

Figure 7.4: Supports Businesses Would Like to Receive From the CRD

7.4 Goals, Training, and Staff Engagement

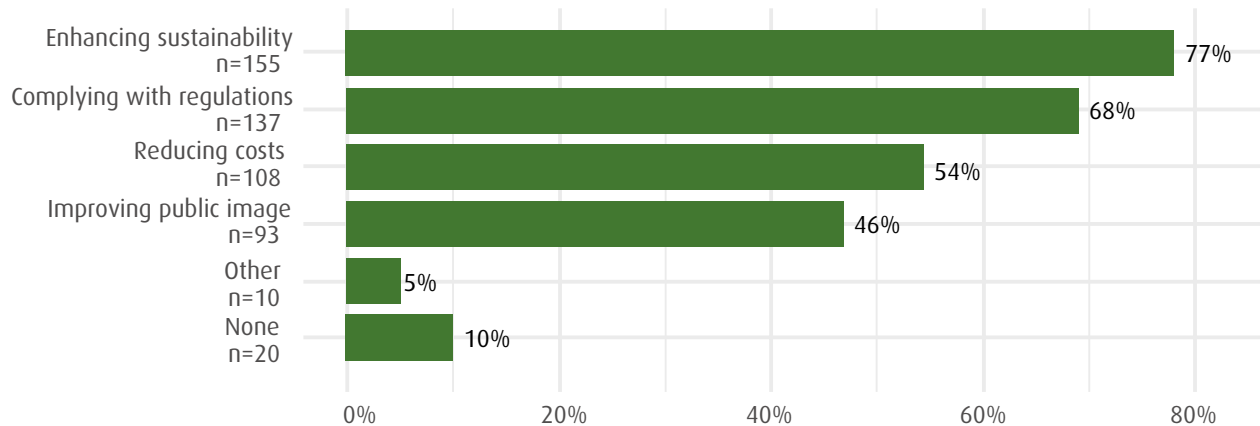
A majority of businesses reported not measuring the impact of their waste management practices (61%) despite also having goals related to waste reduction. Small proportions of businesses reported monitoring their recycling rates, researching new technology to reduce waste, or conducting regular audits of their waste management procedures (see **Figure 7.5**).

Figure 7.5: Measures for Impact of Waste Reduction Practices



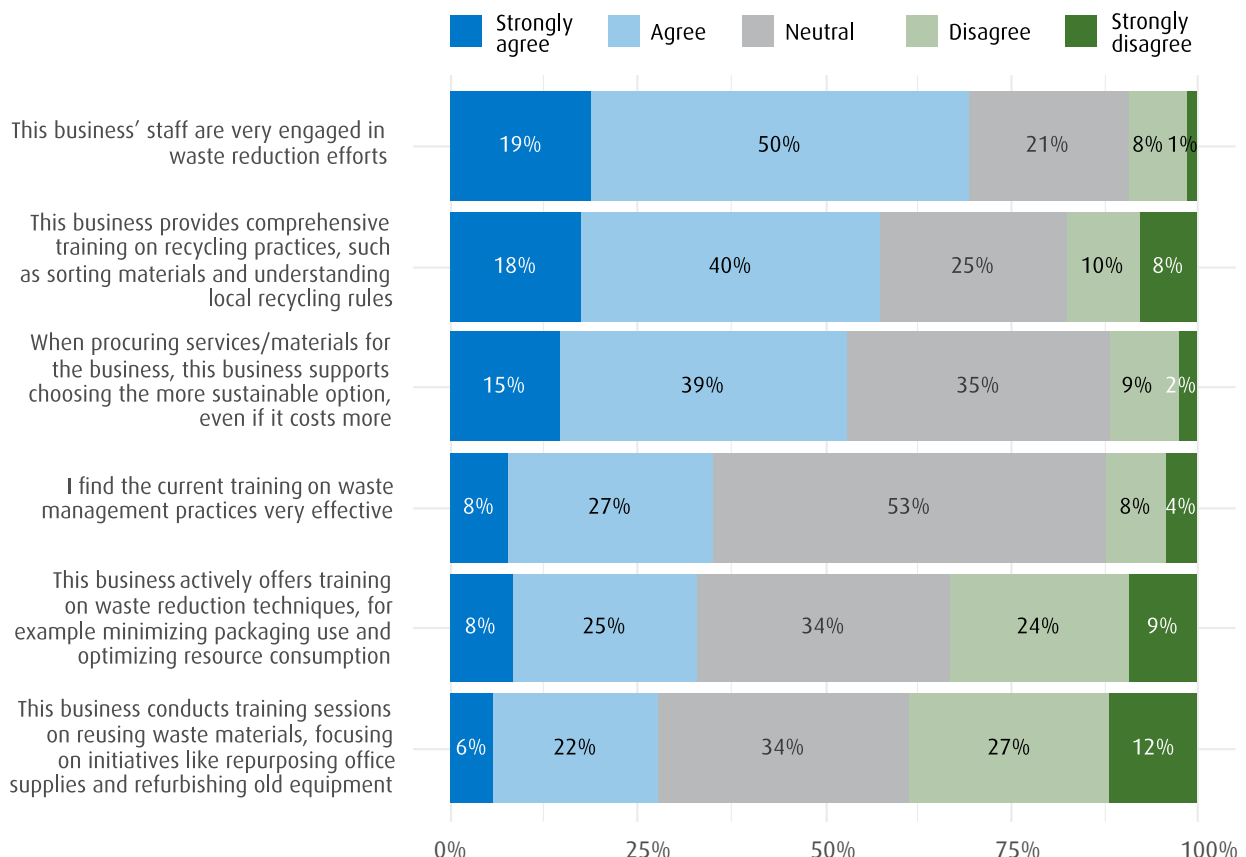
Source: Business Survey (Q8')

When asked about their waste reduction goals (**Figure 7.6**), most businesses agreed that they have goals to reduce the amount of waste produced to enhance sustainability (77%) and comply with local regulations (68%). Over half of businesses reported that their waste reduction goals were related to reducing costs associated with waste management or disposal and slightly under half reported a desire to improve their public image.

Figure 7.6: Businesses Waste Reduction Goals

Source: Business Survey (Q7)

As shown in **Figure 7.7**, businesses were likely to report having staff that were engaged in waste reduction efforts (69%) but were unlikely to have current training on waste management practices that they considered to be effective (35%). It is interesting to note that about one-quarter of businesses requested training materials to help understand how to comply with local regulations when asked what support the CRD could provide.

Figure 7.7: Attitudes Towards Staff Training & Equipment

Source: Business Survey (Q10)

8 FINDINGS: INFORMING A COMMUNICATION STRATEGY

This section of the report addresses findings related to developing an effective communication strategy for waste management in the capital region. It investigates the main sources from which residents obtain their waste management information and analyzes the content preferences of various audiences. The insights from this analysis can be directly leveraged to create targeted and engaging messages that connect effectively with different demographic groups, thereby enhancing the overall effectiveness of the CRD's communication strategies.



8.1 Sources of Information

Residents reported that local government publications or websites are their primary sources of information for best practices regarding reducing, reusing, and recycling waste, with 60% utilizing these resources, closely followed by word of mouth at 54%. Traditional media, television or radio broadcasts, and modern platforms like social media ads also play significant roles, with usage rates of 24% and 20%, respectively. Environmental organizations and public transit advertisements are less frequently used sources. Schools and community workshops are minimally utilized, at 6% and 5% respectively, reflecting their focused yet limited reach. Moreover, 8% of respondents did not use any of the listed sources, which may indicate either alternative channels or a lack of engagement (see **Figure 8.1**).

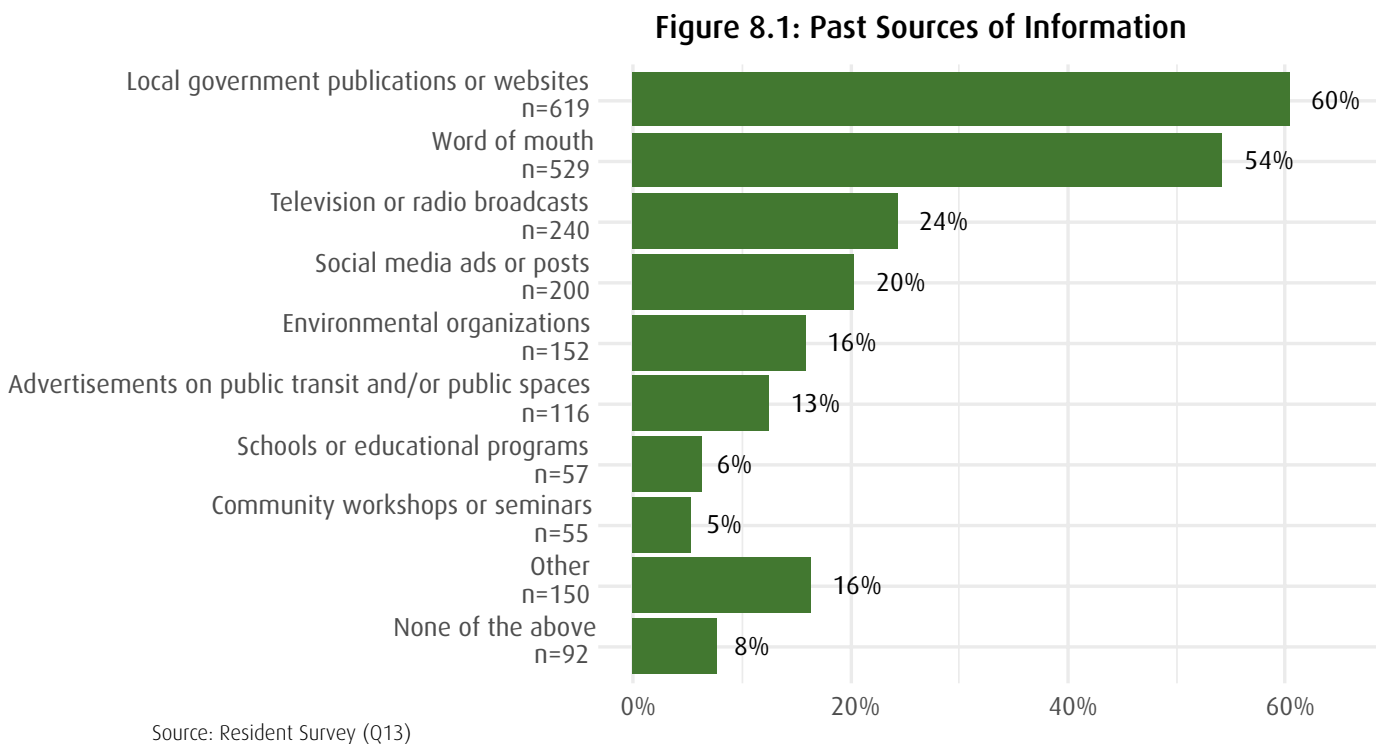
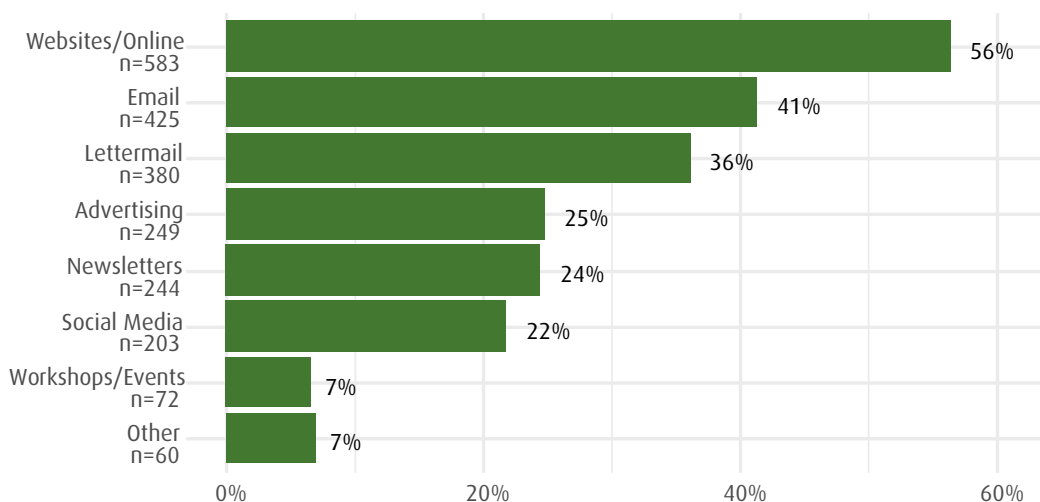


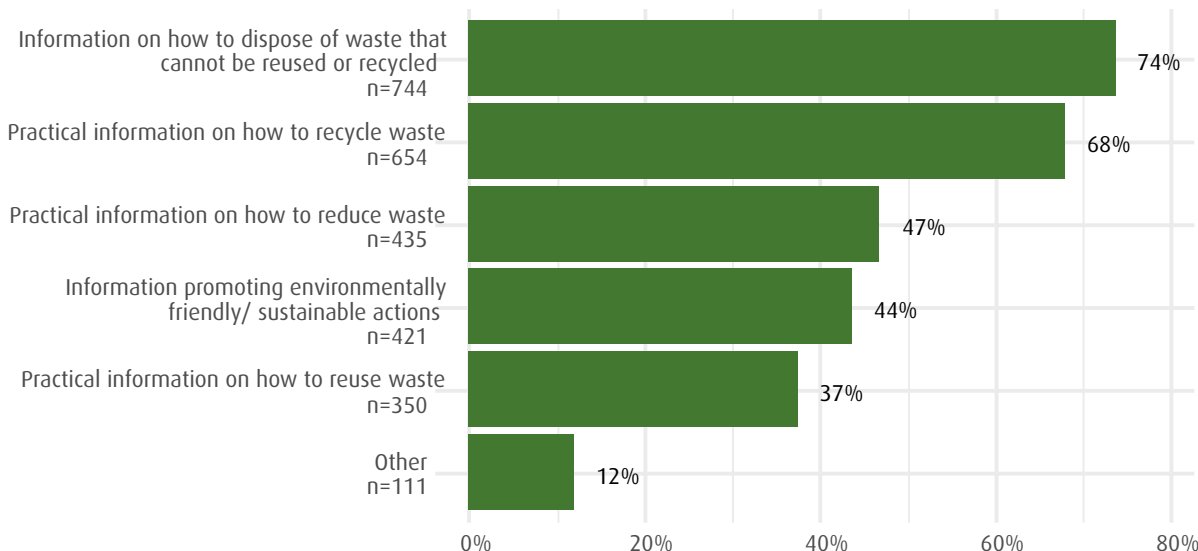
Figure 8.2 shows CRD residents' preferences for receiving information about waste management practices, with websites and online platforms leading at 56%, followed by email at 41%. Letter mail remains a relatively popular method, requested by 36% of respondents across all age groups. Advertising and newsletters also play substantial roles, preferred by 25% and 24% of individuals, respectively. Social media is another key channel, chosen by 22% of the population. Workshops and other unspecified methods are less favoured, each noted by 7% of respondents, suggesting their more specialized or limited appeal.

Figure 8.2: Preferred Mediums of Information

Source: Resident Survey (Q17)

8.2 Content for Residents

Residents expressed a stronger preference for practical content related to waste management over purely educational materials (**Figure 8.3**). Information on how to dispose of waste that cannot be reused or recycled was most sought after, with 74% of individuals showing interest. Similarly, 68% are keen on practical information on how to recycle waste. There is still a significant interest in reducing waste and reusing materials, as seen from 47% and 37% of the surveyed residents expressing interest. The demand for content promoting environmentally friendly or sustainable actions is also considerable and just slightly lower at 44%. Some of the 'Other' responses captured residents' interest in learning more about the Hartland Landfill.

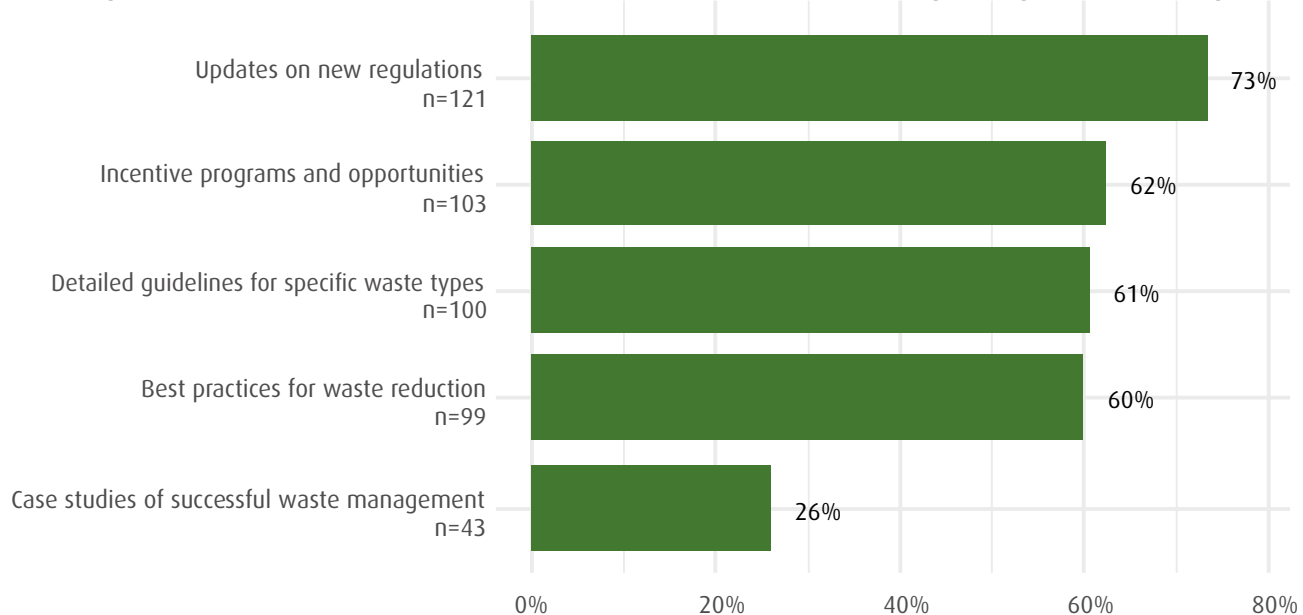
Figure 8.3: Content Citizens are Most Interested in Seeing

Source: Resident Survey (Q15)

8.3 Content for Businesses

Businesses indicated distinct preferences for content that aids in managing their waste more effectively (see **Figure 8.4**). Updates on new regulations are the most sought-after information, with 73% of businesses emphasizing its importance, indicating a high demand for staying compliant and informed on legal changes. Incentive programs and opportunities attract considerable interest from 62% of businesses, highlighting a proactive approach to leveraging benefits for better waste management. Detailed guidelines for specific waste types are also important, with 61% of businesses seeking such information, which suggests a need for clear, actionable steps tailored to different kinds of waste. Best practices for waste reduction are valued by 60% of businesses, underscoring a general commitment to sustainability. However, case studies of successful waste management are less in demand, with only 26% of businesses showing interest, possibly due to a preference for direct, practical guidance over anecdotal evidence.

Figure 8.4: Content Businesses Would Find the Most Useful Regarding Waste Management



Source: Business Survey (Q19)

9

SUMMARY OF FINDINGS & RECOMMENDATIONS

This section summarizes key findings related to capital region residents’ behaviours and attitudes around solid waste management, their use of resources, and use of the Hartland Public Drop-off Depot; key insights from the CRD Business Survey; and communication preferences of both residents and businesses.

The table below summarizes the key performance indicators gathered from the 2024 data collection activities, which serve as a baseline for future iterations of this study. By tracking these indicators over time, the CRD will be able to evaluate the effectiveness of its waste reduction programs and monitor changes in public attitudes, knowledge, and behaviours.

Key Performance Indicators (2024 Baseline)

KPI	Baseline (2024)
Residents reporting positive behaviours and attitudes toward waste management practices (see Section 4)	74%
Residents reporting <u>no</u> barriers to disposing of...	General refuse: 98% Recyclable materials: 96% Organics: 95% Other materials: 38%-64%
Businesses reporting <u>no</u> barriers to properly disposing of waste	53%
Residents disposing of plastic products as general refuse	26%

9.1 Summary of Findings

Behaviour & Attitudes (Resident Survey)

Capital region residents demonstrate strong support for community waste initiatives and a circular economy, showing high levels of endorsements for associated behaviours and attitudes. Despite this, there is a notable gap in confidence regarding proper waste management knowledge and behaviours related to composting. Single-family dwellings exhibit more positive waste management behaviours and attitudes, likely due to better access to resources and services. This finding is unsurprising given the structural advantages provided to single-family homes, most notably curbside garbage and recycling pick up. While barriers to disposing of typical household waste are generally low, significant challenges remain in recycling less common materials like foam packaging, soft plastics, and electronics, primarily due to insufficient knowledge of disposal methods and transportation issues. Plastic products, in particular, were reported to be improperly disposed of more often than other materials.

Programs & Resources (Resident Survey)

Residents of the capital region show a strong preference for virtual and online resources for waste management, with the CRD website and the Recycle CRD App being the most frequently utilized, indicating ease of access and use. These resources, along with the resources given by the Compost Education Centre and the Hartland Landfill Public Tours, are perceived as highly effective in enhancing waste reduction knowledge among users, benefiting both single-family and multi-family dwellings alike. Despite the availability and effectiveness of these resources, a significant portion of residents have not engaged with these programs.

Hartland Public Drop-off Depot

CRD residents frequently use the Hartland Public Drop-off Depot, primarily for disposing of recyclable materials, garbage, and other types of waste. The depot sees a high number of residents dropping off metal, plastic products, foam packaging, electronic devices, household hazardous waste, and paper products. Since 2017, there has been a consistent annual increase in resident visits to dispose of general waste, with these visits growing slightly more than the population itself. Moreover, visits for recycling have seen a significant rise each year, particularly after the introduction of the Express & Go drop-off option in 2022.

Business Survey Insights

Most businesses reported producing waste in the form of paper, plastic, and organic materials, with proper disposal methods generally available. However, businesses were less likely to have a disposal method for materials such as electronics, wood or wood products, and textiles. A large proportion of these businesses rely on private waste collectors, with a high level of satisfaction reported regarding the reliability of these services.

Business Survey Insights Cont.

Despite this, about half of the businesses encounter challenges in complying with local waste management regulations, with a substantial amount also noting limited disposal options and high costs associated with compliance. In response, businesses reported high agreeance with various forms of support such as: increasing disposal options, providing clearer guidelines, and offering enhanced training resources to support compliance efforts. Despite setting waste reduction goals, the majority of businesses who participated in this study do not measure the impact of their waste management practices, highlighting a gap in monitoring and evaluating the effectiveness of their environmental strategies.

Informing a Communication Strategy

Residents in the capital region primarily gather waste management information from local government publications or websites and word of mouth, reflecting a strong reliance on official sources and community communication. The preferred methods for receiving this information include websites, online platforms, email, and letter mail, illustrating a broad spectrum of ways to pursue public engagement. Residents particularly seem to value practical information on how to properly dispose of waste, indicating a preference for actionable guidance over purely educational content. Similarly, businesses expressed interest in receiving updates about new regulations, incentive programs, and specific guidelines for different types of waste, highlighting their preference for practical information.

9.2 Recommendations

The findings summarized above have yielded a number of recommendations. The CRD may consider these recommendations when planning next steps and potential engagement initiatives that support progress towards Goal 3 of the SWMP: have informed citizens that participate effectively in proper waste management practices considering stakeholders' capabilities, motivations and resources required.

1 Addressing CRD Resident Gaps in Knowledge

The CRD may consider enhancing resources available to residents to target gaps in knowledge of solid waste management. Survey findings revealed some gaps in resident knowledge, such as: best practices and proper disposal methods for recyclable materials and strategies for reducing waste generation.

2 Addressing Barriers Related to Residents Solid Waste Management

Residents may benefit from strategies or tips for transporting materials, and greater awareness of options for private waste collection and disposal of large materials or those that are difficult to transport. Residents reported significant barriers to disposing of materials like foam/Styrofoam, soft plastics, and electronics. These barriers included a lack of knowledge on where and how to dispose of these materials and highlighted some difficulty in transporting materials to disposal sites. Additionally, these materials also align with those that residents reported throwing in the garbage because they did not know how or were unable to dispose of properly.

If possible, it may be worth considering how the CRD can continue to work with municipalities to offer services to residents of multi-family dwellings. Compared to residents with curbside pick-up options, residents in apartment buildings and those in municipalities/regions without access to curbside pick-up may benefit from additional, targeted information about how to properly dispose of materials, like kitchen scraps or recycling.

3 Engaging Residents in CRD Programs and Resources

To enhance engagement with CRD programs and resources in the Southern Gulf Islands, a strategic focus on brand awareness is recommended. The CRD allocates significant funding to local initiatives such as Gulf Islands depots, repair cafes, and non-profit events. By highlighting the CRD's contributions, residents may better recognize and engage with its resources, addressing the current issue where about 30% of residents have not accessed any of the waste management programs or resources listed in the Resident Survey. Targeted communication campaigns, joint branding with local partners, and island-specific workshops may improve the reach and awareness of these resources. Increasing brand visibility and showcasing the CRD's impact on local sustainability may help residents feel more connected to and more likely to utilize CRD programs, ultimately leading to better waste management practices across the Southern Gulf Islands.

4 Informing a Communication Strategy for Residents

The CRD may wish to consider expanding the Rethink Waste Newsletter and to promote ways for residents to receive emails from the CRD with information and resources related to the CRD's solid waste management programs. CRD residents, regardless of region or age expressed a desire for communication online (i.e., through the CRD's website) or by emails or letter mail. Newsletters were deemed to be effective resources by most residents – these could be distributed email or letter mail, and also compiled online so residents have access regardless of whether they are on a CRD mailing list. A significant number of residents expressed a preference for receiving information through letter mail. While this can be an effective way to reach a broad audience, it is important to consider the costs and environmental implications of sending physical mail, especially when the message pertains to waste reduction and management.

4 Informing a Communication Strategy for Residents

Desired content was similar across age groups and regions, with most residents requesting practical information on how to dispose of waste that cannot be recycled or reused, and practical information on how to recycle materials. Based on barriers reported and materials that residents reported disposing of as general refuse, the CRD may consider information or education campaigns related to proper disposal of soft plastics, foam/Styrofoam, and electronics; tips for transporting materials, and lists of locations where various materials can be dropped off or disposed of.

5 Support for Businesses

There may be an opportunity for the CRD to develop training resources that local businesses could tailor to meet their needs. Such resources could be provided online so that businesses can easily access and download the materials. Training materials could also encompass clear guidelines and outline disposal options for businesses. Most businesses reported a desire to reduce waste and comply with local waste management regulations, but very few had adequate training resources for employees.

It was noted in this report that small businesses were less likely to report using a private waste collection service and less likely to use Hartland Public Drop-off Depot compared to larger businesses. It is unclear what these smaller businesses are doing in terms of solid waste management. Smaller businesses were also more likely to report challenges related to cost and limited availability of disposal options. As such, there may be opportunity for small business to work together and collectively high private waste collection services to reduce costs and concerns related to storing waste until pick-up.

Additional supports that the CRD may consider include allowing businesses to opt-in to curbside pick-up if available in their jurisdictions, and incentive programs to help businesses manage the cost associated with solid waste management.

6 Informing a Communication Strategy for Businesses

Businesses in the region could benefit from practical information on solid waste management practices in the form of detailed guidelines by specific waste types to help manage waste for effectively and efficiently. The CRD may also consider a procedure to communicate updates on new or changing regulations.

7 Enhancing Future Evaluations

In future evaluations of Goal 3 of the SWMP, the CRD may consider focus groups or sub-surveys to explore specific areas in more detail (e.g., resident composting behaviours, needs of small businesses). Focus groups allow an opportunity to hear directly from a small proportion of residents in-depth about a specific topic and would provide an opportunity to follow-up on survey findings (e.g., to more fully understand why residents are reporting certain barriers).

Additionally, the CRD may consider strategies for enhancing secondary data that can be used to support program monitoring and evaluation. Such strategies may include refinement of tracking systems for infoline inquiries. The current recording system contains 893 uniquely coded categories since 2020 among phone and email inquiries, and many of them are repeated instances but with spelling and wording variations. A system that allows for data validation so that themes can be accurately recorded would be recommended. For example, by using a tag system where phone attendants can categorize calls rather than an open field. This would also allow for capturing multiple categories within a single inquiry, which is often necessary.

Continuous review of readily available data (website analytics) may help the CRD to pick-up on any shifts of resident behaviour trends (view searches). The evaluation matrix should be revised and updated as more data becomes available.

APPENDIX A: CRD RESIDENT SURVEY

SCREENING QUESTIONS

1A. Are you over the age of 15? If not, could you please pass this survey to someone in your household who is?

- ☐ Yes
- ☐ No

1B. Please confirm that your principal residence is located within the CRD.

- ☐ Yes
- ☐ No

[IF (Q1A == No) OR (Q1B== No)]

Non-Qualifier Script

Thank you for your interest in this survey. It appears this survey will not be relevant to you. Out of respect for your time, we will end the survey here.

If you have any questions or concerns about this study, please contact Emilio Velazquez at Malatest.

Emilio Velazquez, Research Analyst

R.A. Malatest & Associates Ltd.

SWMPengagement@malatest.com

1-877-276-8800

2. Which of the following best describes the type of residence you live in?

- ☐ Single-detached house (e.g., laneway houses and detached garden suite)
- ☐ Semi-detached house (e.g., townhouse, row house, or side-by-side)
- ☐ A secondary suite in a house (e.g., basement apartment or upstairs apartment)
- ☐ Apartment or condominium in a high-rise building (5 or more storeys)
- ☐ Apartment or condominium in a low-rise building (fewer than 5 storeys)
- ☐ Mobile home / movable dwelling
- ☐ Other, please specify: _____ [100 characters]

BEHAVIOUR & ATTITUDES

3. When answering these questions, please think about the behaviours that you, some, or all the members of your household do. Household members can be a spouse, dependents, or other individuals who normally live with you.

	More than once per week	Once a week	Once every two weeks	Every two weeks or more	I am not sure	Prefer not to answer
3A. Recyclable items (e.g., cardboard, plastic, tin)						
3B. Returnable items (e.g., drink containers)						
3C. Organic waste (e.g., food scraps or yard and garden materials)						
3D. Hazardous waste						
3E. General refuse (i.e., garbage)						
3F. Other. Please specify: _____ [500 characters]						

4. Does your household experience any barriers or challenges when disposing any of the following materials?
Please select all that apply.

	No challenges or barriers.	Don't know how to dispose	Don't know where to dispose	It is too hard to transport	It is too expensive	Other, please explain	Prefer not to answer
4A. Recycling (e.g., paper, plastic, tin, glass)							
4B. Other recycling (e.g., soft plastics, Styrofoam)							
4C. Organic waste (e.g., food scraps or yard and garden materials)							
4D. General refuse (i.e., garbage)							

	No challenges or barriers.	Don't know how to dispose	Don't know where to dispose	It is too hard to transport	It is too expensive	Other, please explain	Prefer not to answer
4E. Other. Please specify: _____ [500 characters]							

5. Does your household put any of the following materials in the garbage?

- ☐ Paper products
- ☐ Plastic products
- ☐ Metals
- ☐ Wood or wood products
- ☐ Organic waste
- ☐ Electronic devices and/or appliances
- ☐ Glass products
- ☐ Textiles and/or clothing
- ☐ Household hazardous waste
- ☐ Other, please specify: _____ [500 characters]
- ☐ Prefer not to answer

6. Has your household ever used the Hartland Public Drop-off Depot/Landfill to dispose waste? Please select all that apply

- ☐ Yes, to dispose of garbage
- ☐ Yes, to dispose of recyclable materials
- ☐ Yes, to dispose of other materials. Please specify: _____ [500 characters]
- ☐ No
- ☐ Don't know/prefer not to answer

[IF Q6 == Yes, to dispose of garbage]

6A_1. What was the main reason for disposing garbage at the Hartland Public Drop-off Depot/Landfill?

- ☐ Convenience of waste disposal
- ☐ No curbside pickup
- ☐ I don't know where else to dispose of waste
- ☐ Main waste disposal method was unavailable or overfilled
- ☐ Following regulation for disposing of renovation debris, asbestos, and/or a controlled substance
- ☐ Other, please specify: _____ [500 characters]
- ☐ Don't know/prefer not to answer

[IF Q6 == Yes, to dispose of recyclable materials]

6A_2. What was the main reason for recycling materials at the Hartland Public Drop-off Depot/Landfill?

- ☐ Convenience of waste disposal
- ☐ No curbside pickup
- ☐ I don't know where else to dispose of waste
- ☐ Main waste disposal method was unavailable or overfilled
- ☐ Other, please specify: _____ [500 characters]
- ☐ Don't know/prefer not to answer

[IF Q6 == Yes, to dispose of other materials]

6A_3. What was the main reason for disposing of other materials at the Hartland Public Drop-off Depot/Landfill?

- ☐ Convenience of waste disposal
- ☐ No curbside pickup
- ☐ I don't know where else to dispose of this waste
- ☐ Main waste disposal method was unavailable or overfilled
- ☐ Other, please specify: _____ [500 characters]
- ☐ Don't know/prefer not to answer

[IF Q6 == No]

6B. Why has your household never used the Hartland Public Drop-off Depot/Landfill to dispose waste?

- ☐ Open-end response _____ [1,000 characters]
- ☐ Don't know/prefer not to answer

7. Which of these materials does your household know how to recycle?

- ☐ Paper products
- ☐ Plastic products
- ☐ Metals
- ☐ Wood or wood products
- ☐ Organic waste
- ☐ Electronic devices and/or appliances
- ☐ Glass products
- ☐ Textiles and/or clothing
- ☐ Household hazardous waste
- ☐ Other, please specify: _____ [500 characters]
- ☐ Prefer not to answer

8. Please select your level of agreement to the following statements

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8A. My household adopts practices that reduce waste generation (e.g., purchasing in bulk, avoiding single-use items)					
8B. <u>My household eats all the food we buy and we only put unavoidable food waste</u> (eggs shells, coffee grounds, vegetable peelings) in the compost <u>Note for hover-link:</u> More can be found at Love Food Hate Waste Canada					
8C. My household participates in composting organic waste at home.					
8D. My household seeks opportunities to repurpose or reuse materials from products we have purchased.					

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8E. My household visits second-hand stores and/or repair shops to extend the life of items.					
8F. My household makes conscious efforts to donate unwanted household items.					
8G. My household feels confident in our knowledge of the best practices for recycling a variety of materials.					
8H. My household feels confident in our knowledge of how to properly dispose of hazardous waste.					
8I. My household is eager to participate in community initiatives aimed at reducing waste.					

ENGAGEMENT

9. Have you accessed any of the following waste management programs or resources currently offered by the CRD? Please select all that apply. _

☐ CRD Website

☐ Infoline

☐ Compost Education Centre activities or resources

☐ Classroom Workshops

☐ Community Outreach and Events

☐ Rethink Waste Community Grant

☐ Hartland Landfill Public Tours

☐ Hartland Landfill School Tours and 3Rs Classroom Workshops

☐ Recycle CRD app (curbside collection reminders)

☐ Rethink Waste Email Newsletter

☐ Other, please specify: _____ [500 characters]

☐ None of the above

10. When did you last access this program/resource?

	In the last 4 weeks	1 month – 6 months ago	6 months to a year ago	1 – 5 years ago	5 + years ago
[Populate from Q9 answers]					

11. How effective was this program/resource at improving your knowledge of Waste Reduction strategies?

	Very effective	Effective	Ineffective	Very ineffective	Not applicable
[Populate from Q9 answers]					

12. After accessing this program/resource, I am more confident in ... (Please select all that apply)

	The proper disposal of organic waste	The proper disposal of recyclable waste (e.g., sorting plastic, paper, tin, or glass)	Using recycling depots effectively	The proper disposal of hazardous household materials
[Populate from Q9 answers]				

COMMUNICATIONS

13. Where does your household learn about best practices for recycling/reducing/reusing solid waste? (Select all that apply)

- ☐ Local government publications or websites
- ☐ Community workshops or seminars
- ☐ Schools or educational programs
- ☐ Social media ads or posts (e.g., Instagram or Facebook)
- ☐ Environmental organizations
- ☐ Word of mouth (e.g., friends or family)
- ☐ Television or radio broadcasts
- ☐ Advertisements on public transit and/or public spaces
- ☐ None of the above
- ☐ Other (please specify): _____ [500 characters]

[IF Q13 ≠ ('Word of mouth (e.g., friends or family)', 'None of the above')]

13B. Was the content from the CRD? If so, what was it about? Select all that apply

- ☐ Practices that reduce waste generation (e.g., purchasing in bulk, avoiding single-use items)
- ☐ Practices that reduce food waste
- ☐ Composting organic waste at home
- ☐ Repurposing or reusing materials from products
- ☐ Visiting second-hand stores and/or repair shops to extend the life of items
- ☐ Donating unwanted household items
- ☐ Recycling a variety of materials
- ☐ How to properly sort recyclable materials for curb-side pick up
- ☐ Properly disposing of hazardous waste
- ☐ Other. Please explain: _____ [500 characters]
- ☐ The content was not from the CRD
- ☐ Unsure / I don't remember
- ☐ Prefer not to answer

14. How often do you see information from the CRD about best practices in waste management?

Note: Information from the CRD about waste management can include promotional advertisements like newsletters, posters, pamphlets, and social media posts, or in-person events and information booths.

- ☐ At least once a month
- ☐ At least once per year
- ☐ I have seen content before, but not on a regular basis
- ☐ I have never seen content from the CRD regarding best practices in waste management

15. What kind of content are you most interested in seeing from the CRD in the future? (Select all that apply)

- ☐ Practical information on how to reduce waste
- ☐ Practical information on how to reuse waste
- ☐ Practical information on how to recycle waste
- ☐ Information promoting environmentally friendly/ sustainable actions
- ☐ Information on how to dispose of waste that cannot be reused or recycled
- ☐ Other, please specify: _____ [500 characters]

16. What kind of waste management information from the CRD do you find most useful? (Select all that apply)

- ☐ Detailed guidelines for specific waste types
- ☐ Updates on new regulations and bylaws
- ☐ Best practices for waste reduction, reuse, and recycling
- ☐ Case studies of successful waste management
- ☐ Incentive programs and opportunities
- ☐ Other, please specify: _____ [500 characters]

17. What are your preferred ways to get information about waste management practices? (Select all that apply)

- ☐ Lettermail (e.g., flyers)
- ☐ Advertising (e.g., newspaper, radio, website)
- ☐ Email
- ☐ Websites/Online
- ☐ Social Media
- ☐ Workshops/Events
- ☐ Newsletters
- ☐ Other, please specify: _____ [500 characters]

HOUSEHOLD DEMOGRAPHICS

18. Do you rent or own your place of residence?

- ☐ Rent
- ☐ Own
- ☐ Prefer not to answer

19. How many people live in your household?

- ☐ ____ Total # adults (18+)
- ☐ ____ Total # children (under the age of 18)
- ☐ Prefer not to answer

20. Which of the following best describes your household's total income last year? (Please consider all sources of income for all household members, before taxes)

Your answers will remain entirely confidential. [Click here to see our Privacy Statement.](#)

- ☐ \$0 to less than \$25,000
- ☐ \$25,000 to less than \$50,000
- ☐ \$50,000 to less than \$75,000
- ☐ \$75,000 to less than \$100,000
- ☐ \$100,000 to less than \$150,000
- ☐ \$150,000 or more
- ☐ Prefer not to answer

PERSON DEMOGRAPHICS

21. Which of the following apply to you? Select all that apply.

- ☐ Work full-time (30 or more hours per week)
- ☐ Work part-time (less than 30 hours per week)
- ☐ Volunteer (not for pay)
- ☐ Student full-time
- ☐ Student part-time
- ☐ Unemployed
- ☐ Looking after home/family
- ☐ Retired
- ☐ Other, specify: _____ [100 characters]

22. What is your age?

- ☐ 15 to 25
- ☐ 26 to 35
- ☐ 36 to 45
- ☐ 46 to 55
- ☐ 56 to 65
- ☐ Over 65
- ☐ Prefer not to answer

23. How do you identify?

- ☐ Woman
- ☐ Man
- ☐ I do not identify as either a man nor a woman (including non-binary, polygender, genderqueer, agender, bigender, and others)
- ☐ Two-spirit
- ☐ Other cultural genders
- ☐ Not listed here
- ☐ Prefer not to answer

END

FLWUP. Would you be interested in participating in follow-up cycles of this study?

- ☐ Yes
- ☐ No

[IF FLWUP == Yes]

FLWUPA. Please provide your contact information. This information will be kept confidential and will only be used to invite you to participate in future cycles of this study.

Name: _____ [100 characters]

Email address: _____ [100 characters]

PRIZED. Prize Draw: Participants in this survey are eligible to enter a prize draw for one of three e-gift cards (one \$100 e-gift card and two \$50 e-gift cards) from a variety of retailers. Would you like to enter the draw?

- ☐ Yes
- ☐ No

[IF PRIZED == Yes]

PRIZEDA. An email address is required to receive a gift card. Your contact information will be kept confidential and will be used only to contact you in the event your name is selected in the prize draw. If you cannot provide an email address, we will attempt to contact you by phone.

Name: _____ [100 characters]

Phone: _____ [100 characters]

Email: _____ [100 characters]

[SURVEY END]

Thank you for participating in the Solid Waste Management Plan: Market Research and Engagement Study. Your feedback is appreciated.

APPENDIX B: HARTLAND DEPOT & PUBLIC DROP-OFF SURVEY

BEHAVIOUR

1. What is your main reason for visiting the Hartland Public Drop-off Depot today?

- ☐ It is convenient to throw away my waste here
- ☐ Had too much waste for my main disposal method(s)
- ☐ Don't know where else I could throw away my waste
- ☐ My main disposal method was not available (e.g., out of order or overfilled, missed my recycling day)
- ☐ I am following the proper regulations for disposing of waste (e.g., throwing away hazardous waste or materials that are not generally picked up by recycling services)
- ☐ Other, please specify _____ [500 characters]
- ☐ Prefer not to answer

2. How often do you visit this drop-off site?

- ☐ Multiple times a day
- ☐ Once a day
- ☐ Few times a week
- ☐ Once a week
- ☐ Few times a month
- ☐ Few times a year
- ☐ Once a year
- ☐ Less than once a year
- ☐ This is my first time visiting the Hartland Drop-off Depot
- ☐ Prefer not to answer

3. What materials did you drop-off today? Please select all that apply.

- ☐ Paper products (e.g., newspapers, magazines, cardboard)
- ☐ Plastic products (e.g., bottles, containers, plastic wrap)
- ☐ Foam packaging (e.g., styrofoam blocks, foam peanuts)
- ☐ Metals (e.g., aluminum cans, metal lids, copper wires)
- ☐ Books (e.g., used textbooks, novels, children's books)

- ☐ Mattresses and box springs (e.g., used, worn out or damaged mattresses)
- ☐ Wood or wood products (e.g., timber, plywood, wooden furniture)
- ☐ Organic waste (e.g., food scraps, yard trimmings, compostable materials)
- ☐ Electronic devices and/or appliances (e.g., mobile phones, refrigerators, microwaves)
- ☐ Glass products (e.g., bottles, jars, broken glass)
- ☐ Textiles and/or clothing (e.g., unwanted clothes, fabric scraps, linens)

[Text to be displayed on hover-link: The Hartland Depot accepts textiles only if they are in reusable condition. Textiles not suitable for reuse should be categorized as garbage.](#)

- ☐ Household hazardous waste (e.g. pesticides, paint, propane tanks, batteries, motor oil)
- ☐ Renovation waste (e.g., drywall, tiles, plumbing fixtures)
- ☐ Garbage or general refuse (e.g., non-recyclable waste, mixed trash)
- ☐ Other, please specify: _____ [500 characters]
- ☐ Prefer not to answer

4. Which of these materials do you want to reuse or recycle but can't? For example, you don't know how to, or there aren't enough places to do it. Please select all that apply.

- ☐ Paper products
- ☐ Plastic products
- ☐ Metals
- ☐ Wood or wood products
- ☐ Organic waste
- ☐ Electronic devices and/or appliances
- ☐ Glass products
- ☐ Textiles and/or clothing
- ☐ Other, please specify: _____ [500 characters]
- ☐ Prefer not to answer

[IF Q4 ≠ 'Prefer not to answer']

Q4A. Why can't you reuse or recycle these materials?

- ☐ Don't know how
- ☐ Service isn't offered at a convenient drop-off location
- ☐ Too expensive to recycle at depot location
- ☐ Other, please specify _____ [500 characters]

5. Where did you first learn about the services offered at Hartland Landfill?

- ☐ Advertisements (e.g., flyers, posters, social media)
- ☐ Web search
- ☐ Community workshops/events
- ☐ CRD programming (e.g., Infoline, Hartland Landfill tours, MyRecyclopedia.ca)
- ☐ Word of mouth (e.g., from friends or family)
- ☐ Other, please specify: _____ [500 characters]

6. How satisfied are you with the services that are being offered at this drop-off site?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Unsatisfied
- ☐ Very unsatisfied

[IF Q6 == 'Unsatisfied' OR 'Very Unsatisfied']

6a. Why were you not satisfied with the services offered at Hartland Public Drop-off Depot?

- ☐ _____ [1,000 characters]
- ☐ Prefer not to answer

7. In your opinion, should Hartland Landfill's extended hours on Saturdays (from 2pm to 5pm) become permanent?

Text to be displayed on hover-link: The CRD is seeking feedback on its one-year Hartland Landfill Expanded Hours Pilot. Beginning Saturday, June 15, 2024, Hartland will be open from 7 am to 5 pm on Saturdays for both residential and commercial customers.

- ☐ Yes
- ☐ No
- ☐ Not sure/Undecided

8. Please share any additional comments or feedback regarding your experience at the Hartland Landfill.

Your opinion is your personal information. Please do not include any information which identifies you or others in your response.

- ☐ Open-ended responses [1,000 characters]
- ☐ no comment

DEMOGRAPHICS

9. Which of the following best describes your primary residence?

Within the Capital Regional District:

- ☐ Victoria
- ☐ Saanich
- ☐ Langford
- ☐ Esquimalt
- ☐ Oak Bay
- ☐ Colwood
- ☐ Central Saanich
- ☐ Sooke
- ☐ Sidney
- ☐ Salt Spring Islands or Southern Gulf Islands
- ☐ North Saanich
- ☐ View Royal
- ☐ Juan de Fuca
- ☐ Metchosin
- ☐ Highlands

Outside the Capital Regional District

- ☐ Please specify _____ [100 characters]
- ☐ Prefer not to answer

[SURVEY END]

Thank you for participating in the Solid Waste Management Plan: Market Research and Engagement Study. Your feedback is appreciated.

APPENDIX C: CRD BUSINESS SURVEY

BUSINESS CHARACTERISTICS

1. How many people does this business employ (approximately)?
 - ☐ 1 to 9 employees
 - ☐ 10 to 49 employees
 - ☐ 50 to 199 employees
 - ☐ 200 plus employees
 - ☐ Prefer not to answer

2. Which of the following best describes the operations of this business?
 - ☐ Resource Extraction and Utilities
 - Agriculture, forestry, fishing and hunting; Mining, quarrying, and oil and gas extraction; Utilities
 - ☐ Industrial and Construction Sectors
 - Manufacturing; Construction
 - ☐ Trade
 - Wholesale trade; Retail trade
 - ☐ Services and Administration
 - Transportation and warehousing; Information and cultural industries; Professional, scientific, and technical services; Management of companies and enterprises; Administrative and support, waste management and remediation services; Educational services; Health care and social assistance; Arts, entertainment and recreation; Other services (except public administration); Public administration; Finance and insurance; Real estate and rental and leasing
 - ☐ Accommodation and food services

[IF Q2 == 'Services and Administration']

2A. Please specify which industry this business specializes in.

- ☐ Transportation and warehousing
- ☐ Information and cultural industries
- ☐ Professional, scientific, and technical services
- ☐ Management of companies and enterprises
- ☐ Administrative and support, waste management and remediation services
- ☐ Educational services
- ☐ Health care and social assistance

- ☐ Arts, entertainment, and recreation
- ☐ Other services (except public administration)
- ☐ Public administration
- ☐ Finance and insurance
- ☐ Real estate and rental and leasing
- ☐ Other, please specify [100 characters]
- ☐ Prefer not to answer

3. Where is this business located, or, what areas does this business operate in? (select all that apply)

Within the Capital Regional District:

- ☐ Victoria
- ☐ Saanich
- ☐ Langford
- ☐ Esquimalt
- ☐ Oak Bay
- ☐ Colwood
- ☐ Central Saanich
- ☐ Sooke
- ☐ Sidney
- ☐ Salt Spring Islands or Southern Gulf Islands
- ☐ North Saanich
- ☐ View Royal
- ☐ Juan de Fuca
- ☐ Metchosin
- ☐ Highlands

Other

- ☐ Please specify _____ [100 characters]
- ☐ Prefer not to answer

4. How many sites/franchises does this business operate within the CRD?

- ☐ 1 site
- ☐ 2-5 sites
- ☐ More than 5 sites
- ☐ Prefer not to answer

INVOLVEMENT IN SUSTAINABLE WASTE MANAGEMENT PRACTICES

5. What types of waste does this business produce? (Select all that apply)

- ☐ Paper
- ☐ Plastics
- ☐ Soft-plastics
- ☐ Metals
- ☐ Wood or wood products
- ☐ Organic waste
- ☐ Electronic devices and/or appliances
- ☐ Glass products
- ☐ Textiles and/or clothing
- ☐ Renovation and Demolition Waste
- ☐ Asbestos Waste
- ☐ Other kinds of controlled waste
- ☐ Other, please specify: _____ [500 characters]
- ☐ Prefer not to answer

6. Which type of waste receptacles/bins does this business provide staff/customers? (Select all that apply)

- ☐ Paper
- ☐ Plastics
- ☐ Soft-plastics
- ☐ Metals
- ☐ Wood or wood products
- ☐ Organic waste
- ☐ Electronic devices and/or appliances
- ☐ Glass products
- ☐ Textiles and/or clothing
- ☐ Renovation and Demolition Waste
- ☐ Asbestos Waste
- ☐ Other kinds of controlled waste
- ☐ Other, please specify: _____ [500 characters]
- ☐ Prefer not to answer

7. What are this business's primary goals for reducing waste production? (Select all that apply)
- ☐ Reducing costs
 - ☐ Enhancing sustainability
 - ☐ Complying with regulations
 - ☐ Improving public image
 - ☐ Other (please specify) [500 characters]
 - ☐ None
 - ☐ Prefer not to answer
8. What methods does this business use to measure the impact of its waste management practices? (Select all that apply)
- ☐ Regular audits
 - ☐ Researching new technologies to reduce waste
 - ☐ Tracking waste reduction
 - ☐ Monitoring recycling rates
 - ☐ Using sustainability metrics
 - ☐ We do not directly measure the impact of our waste management practices
 - ☐ Other (please specify) [500 characters]
 - ☐ Prefer not to answer
9. Which technologies does this business currently use to manage waste? (Select all that apply)
- ☐ Waste tracking systems
 - ☐ Compaction technology
 - ☐ Recycling sorting systems
 - ☐ None
 - ☐ Other (please specify) [500 characters]
 - ☐ Prefer not to answer

STAFF TRAINING AND ENGAGEMENT

10. Please select your level of agreement to the following statements

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
10A. This business provides comprehensive training on <u>recycling practices</u> , such as sorting materials and understanding local recycling rules.					
10B. This business actively offers training on <u>waste reduction techniques</u> , for example minimizing packaging use and optimizing resource consumption					
10C. This business conducts training sessions on <u>reusing waste materials</u> , focusing on initiatives like repurposing office supplies and refurbishing old equipment.					
10D. I find the current training on waste management practices very effective.					
10E. This business' staff are very engaged in waste reduction efforts.					
10F. When procuring services/materials for the business, this business supports choosing the more sustainable option, even if it costs more.					

11. What format would you prefer for additional training resources? (Select all that apply)

- ☐ In-person workshops
- ☐ Online webinars
- ☐ Training manuals
- ☐ Interactive online courses
- ☐ Onsite training sessions
- ☐ Other (please specify) [[500 characters]]
- ☐ Prefer not to answer

SERVICES

12. How reliable are the waste collection services available to this business?

- ☐ Very Reliable
- ☐ Reliable
- ☐ Neutral
- ☐ Unreliable
- ☐ Very Unreliable
- ☐ Prefer not to answer

13. Does this business rely on any private waste collector for its waste management needs?

- ☐ Yes, we use third-party services regularly.
- ☐ Yes, but we hire these services only as needed.
- ☐ No
- ☐ Prefer not to answer

[IF Q13 = ('Yes, we use third-party services regularly' , 'Yes, but we hire these services only as needed']

13B. What is the name of the private collector services this business uses?

- ☐ Open text-box [100 characters]
- ☐ Prefer not to answer

14. How often does this business use the Hartland Landfill for waste disposal?

- ☐ About once a week
- ☐ About once a month
- ☐ About once a quarter
- ☐ About once a year
- ☐ Less frequently than once a year
- ☐ Never
- ☐ Prefer not to answer

[IF Q14 ≠ Never]

14B. How satisfied is this business with the services provided at the Hartland Landfill?

- ☐ Very Satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Dissatisfied
- ☐ Very Dissatisfied
- ☐ Prefer not to answer

15. What challenges does this business face in following local waste management goals or regulations? (Select all that apply)

- ☐ We do not experience any challenges complying with local waste management regulations
- ☐ Lack of clear guidelines
- ☐ High costs of compliance
- ☐ Limited availability of disposal options
- ☐ Insufficient staff training
- ☐ Other (please specify) [500 characters]
- ☐ Prefer not to answer

16. How can the CRD support this business in meeting local waste management goals or regulations? (Select all that apply)

- ☐ Providing clearer guidelines
- ☐ Increasing availability of disposal options
- ☐ Providing more training resources
- ☐ Other (please specify) [500 characters]
- ☐ Prefer not to answer

17. What suggestions do you have for improving waste collection services to better meet this business' needs? (Open-ended)

- ☐ Open textbox [1000 characters]
- ☐ Prefer not to answer

COMMUNICATION PREFERENCES

18. What kind of information would this business be most interested in receiving from the CRD?

- ☐ Practical knowledge in how to reduce, recycle or reuse waste
- ☐ Information that promotes environmental consciousness on waste
- ☐ Information on how waste gets processed by the CRD
- ☐ Other, please specify [500 characters]
- ☐ Prefer not to answer

19. What additional information would this business find useful regarding waste management? (Select all that apply)

- ☐ Detailed guidelines for specific waste types
- ☐ Updates on new regulations
- ☐ Best practices for waste reduction
- ☐ Case studies of successful waste management
- ☐ Incentive programs and opportunities
- ☐ Prefer not to answer

20. What is this business' preferred method for receiving information about waste management regulations and practices? (Select all that apply)

- ☐ Letter mail
- ☐ Email
- ☐ Websites/online
- ☐ Workshops/Events
- ☐ Newsletters
- ☐ Prefer not to answer

21. How often would this business like to receive updates or content on waste management regulations and practices?

- ☐ Weekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Annually
- ☐ Only as when there are changes in regulations
- ☐ Prefer not to answer

22. How clear and helpful is the current communication from the CRD regarding waste management?

- ☐ Very clear and helpful
- ☐ Clear and helpful
- ☐ Neutral
- ☐ Unclear and unhelpful
- ☐ Very unclear and unhelpful
- ☐ Prefer not to answer

[SURVEY END]

Thank you for participating in the Solid Waste Management Plan: Market Research and Engagement Study. Your feedback is appreciated.

APPENDIX D: EVALUATION MATRIX

To meet the objectives of Goal 3 of the Solid Waste Management Plan (SWMP), the Capital Regional District (CRD) requires up-to-date information on public attitudes, knowledge, and behaviours towards solid waste reduction. This data is essential for ensuring that citizens are well-informed and can engage effectively in proper waste disposal and management practices.

The purpose of the following Evaluation Matrix is to outline a systematic approach for comparing data across different years to assess the effectiveness of the CRD's waste reduction programs. Additionally, it aims to identify and address any challenges, limitations, or gaps within each program area. By understanding public attitudes, knowledge, and behaviours in relation to the CRD's waste reduction programming and behaviour change initiatives, the study will enhance the CRD's ability to manage waste more effectively within the capital region.

The objectives of the Evaluation Matrix are inline with the purpose of this study, and are as follows:

1. Evaluate the effectiveness of the current CRD waste reduction programming and behaviour change initiatives.
2. Develop baseline information for ongoing monitoring and comparison.
3. Enhance understanding of the knowledge held by residential, industrial, commercial, and institutional communities regarding the SWMP, general waste systems, and available services.
4. Provide insights to inform existing programs and guide the development of future programming.

Resident Survey Business Survey Administrative Data

Intermediate Goal	Topic Area	Survey Question or Administrative Data Source	Indicators	Baseline (2024)
Gain a better understanding of behaviours and attitudes across the population	Waste Disposal Frequency	Q3. Disposal frequency.	% of households regularly (once every two weeks or more often) sorting and disposing of various materials	<ul style="list-style-type: none"> Recyclable items (94%) Food/organic waste (94%) Returnable items (62%) General refuse (89%) Hazardous waste (13%)
	Barriers	Q4. Barriers to disposing of various materials.	Percentage of households facing no barriers Percentages describing the most frequent barriers	<ul style="list-style-type: none"> General refuse (97%) Recycling (96%) Organic waste (95%) Other recycling (64%) Other (38%)
		Q5. Items disposed of as general refuse.	Most common materials being disposed of as general refuse	<ul style="list-style-type: none"> Plastic products (26%) Textiles (46%) None of these materials (31%)
		CRD Waste Composition Study	% waste composition of various materials that could be diverted from the landfill (e.g., paper, glass, textiles).	<ul style="list-style-type: none"> Organics (23% - 25%) Paper (17% - 20%) Plastics (15 - 17%)
			% diversion potential from single-family and multi-family dwellings.	<ul style="list-style-type: none"> Compost (33% - 34%) Recycling (10% - 12%) Depot/Drop off (18% - 19%) Garbage (36% - 38%)
			Percentage of households agreeing	<ul style="list-style-type: none"> 73%
Behaviours and Attitudes (Composite Index: overall measure of agreement with statements supporting desirable attitudes and behaviours. Ranges from -1 to +1, higher scores indicating higher levels of agreement.)	Reduce waste generation	Q8. My household adopts practices that reduce waste generation.	Percentage of households agreeing	
		Q8. My household eats all the food we buy and we only put unavoidable food waste in the compost.	Percentage of households agreeing	<ul style="list-style-type: none"> 78%
		Composite score.		<ul style="list-style-type: none"> 0.47

Intermediate Goal	Topic Area	Survey Question or Administrative Data Source	Indicators	Baseline (2024)
Gain a better understanding of behaviours and attitudes across the population	Behaviours and Attitudes (Composite Index: overall measure of agreement with statements supporting desirable attitudes and behaviours. Ranges from -1 to +1, higher scores indicating higher levels of agreement.)	Composting	Q8. My household participates in composting organic waste.	- 61%
			Composite score.	- 0.27
		Support for a circular economy	Q8. My household seeks opportunities to repurpose or reuse materials.	- 71%
			Q8. My household visits second-hand stores and/or repair shops to extend the life of items.	- 70%
			Q8. My household makes a conscious effort to donate unwanted household items.	- 93%
			Composite score.	- 0.52
		Support for community initiatives	Q8. My household is eager to participate in community initiatives aimed at reducing waste.	- 76%
			Composite score.	- 0.52
		Confidence in knowledge	Q8. My household feels confident in our knowledge of the best practices for recycling a variety of materials.	- 79%
			Q8. My household feels confident in our knowledge of how to properly dispose of hazardous waste.	- 62%
			Composite score.	- 0.40
Gain a better understanding of the usage of public services	Hartland Landfill	Overall composite score.		- 0.38
		The percentage of residents reporting positive behaviours and attitudes toward waste management practices.		- 74%
		Q6. Use of Hartland Landfill.	Percentage of households who use the Hartland Landfill	- To dispose of garbage (25%) - To dispose of recyclables (33%) - To dispose of other materials (36%)

Intermediate Goal	Topic Area	Survey Question or Administrative Data Source	Indicators	Baseline (2024)
Gain a better understanding of the usage of public services	Hartland Landfill	Historical tonnage data.	Number of visits per year * Monitor yearly to track progress during non-evaluation years	<ul style="list-style-type: none"> - Recyclables (66,200) - Garbage (38,600)
	Recycling Facilities	Q7. Knowledge of how to recycle or dispose of various materials.	Percentages describing familiarity/understanding of best recycling practices for common household waste products	<ul style="list-style-type: none"> - Paper (98%) - Plastic (94%) - Metals (79%) - Organics (92%) - Electronic devices or appliances (85%) - Glass (87%) - Textiles (43%) - Household hazardous waste (59%)
Gain a better understanding of the role of programs/ resources	Historical Performance	Feedback from program participants.	Summary of recommendations or areas of improvement suggested by participants * Monitor yearly to track progress during non-evaluation years	
		Q9. Resources accessed by CRD residents.	Percent of respondents who have accessed each resource	<ul style="list-style-type: none"> - CRD website (56%) - Recycle CRD app (31%) - Compost Education Centre (9%) - None (30%)
	Effect of Programs/ Resources	Q11. Effectiveness of resources in increasing knowledge.	Percentage agreeing	<ul style="list-style-type: none"> - CRD website (91%) - Recycle CRD app (96%) - Compost Education Centre (97%)
		Q12. Effectiveness of resource in increasing confidence in how to dispose of materials properly (organics or recyclables).	Percentage agreeing	<ul style="list-style-type: none"> - CRD website (40%) - Recycle CRD app (36%) - Compost Education Centre (75%)
		Infoline Inquiries and Feedback Forms.	Frequency of inquiries by key topic area * Monitor yearly to track progress during non-evaluation years	<ul style="list-style-type: none"> - Curb side recycling (50%) - Hartland (30%)

Intermediate Goal	Topic Area	Survey Question or Administrative Data Source	Indicators	Baseline (2024)
Gain a better understanding of the role of programs/ resources -Recycling Depots -MyRecyclopedica.ca -Infoline -Compost Education Centre activities or resources -Hartland Landfill School Workshops or tours -School Outreach Programs -Community Outreach and Events -Other Public Education Campaigns	Reach of Programs and CRD Resources	Historical outreach program performance.	Average number of attendees per event, per year * Monitor yearly to track progress during non-evaluation years	- 25-30 per event
		CRD Website analytics.	MyRecyclopedica - most common inquiries * Monitor yearly to track progress during non-evaluation years	- Styrofoam (7%) - Textiles (6%) - Appliances (5%)
		Q14. Frequency of citizens receiving information on SWM from the CRD.	ReCollect System user data	- 25% of private dwellings in the region enlisted
			% reporting they see CRD content at least once per month and once per year	- 9%
	Training on 3Rs	Q10. Business provides training on proper recycling practices.	% reporting they have never seen this from the CRD	- 18%
		Q10. Business provides training on waste reduction techniques.	Percent agreeing	- 58%
		Q10. Business conducts training sessions related to reusing or repurposing waste.	Percent agreeing	- 32%
		Q10. Effectiveness of training.	Percent agreeing	- 28%
	Training Effectiveness	Q10. Level of staff engagement.	Percent agreeing training is effective	- 35%
		Q11. Preferred training resources format.	Percent agreeing engaged is high	- 69%
Gain a better understanding of current staff training practices across businesses in the CRD	Training Formats		Percent indicating preference for various formats	- In-person workshops (15%) - Onsite training (23%) - Online courses (35%) - Online webinars (44%) - Training manuals (35%)

Intermediate Goal	Topic Area	Survey Question or Administrative Data Source	Indicators	Baseline (2024)
Gain a better understanding of the status of sustainable waste management practices across businesses in the CRD	Disposal Methods	Q5. Types of waste produced. Q6. Disposal method provided by type of waste.	Percent of businesses with disposal method	<ul style="list-style-type: none"> - Paper (100%) - Plastics (93%) - Soft plastics (74%) - Organics (94%) - Metal (83%) - Glass (86%) - Other materials (40% - 54%)
	Goal tracking on Sustainable Waste Management	Q7. Business waste reduction goals.	Percent indicating their business has waste reduction goals	<ul style="list-style-type: none"> - Reducing costs (54%) - Enhancing sustainability (77%) - Complying with regulations (68%) - Improving public image (46%) - No goals (10%)
	Impact Measurement	Q8 Assessment of impact of waste management procedures/goals.	Percent indicating that they monitor impact of waste management procedures	<ul style="list-style-type: none"> - Do not measure impact (61%) - Monitoring recycling rates (23%) - Researching new technologies to reduce waste (20%) - Regular audits (19%) - Tracking waste rates/reduction (18%) - Using sustainability metrics (15%)
	Technologies	Q9. Technologies used to manage waste.	Percent reporting use of various technologies	<ul style="list-style-type: none"> - Waste tracking systems (8%) - Compaction technology (4%) - Recycling sorting systems (63%) - None (34%)

Intermediate Goal	Topic Area	Survey Question or Administrative Data Source	Indicators	Baseline (2024)
Gain understanding of the experience of businesses receiving waste management services	Waste Collection Services	Q13. Use of private collection service.	Percent using private collection services	– 78%
		Q12. Reliability of services.	Percent indicating reliable services	– 83%
		Q14. Businesses use of Hartland Landfill.	Percent using or not using Hartland	– Weekly (9%) – Monthly (8%) – Quarterly (8%) – Once per year or less (28%) – Never (43%)
		Q14. Satisfaction with Services provided at Hartland.	Percent satisfied	– 63%
	Challenges	Q15. Challenges following local SWM regulations.	Percent describing the challenges in complying with local waste management regulations	– High cost (18%) – Limited disposal options (32%) – Lack of clear guidelines (9%) – Insufficient staff training (7%) – No challenges (53%)
Communication Practices	Opportunities	Q16. Support the CRD could provide.	Percent indicating areas of support for businesses	– Providing clearer guidelines (32%) – Increasing availability of disposal options (60%) – Providing more training resources (22%)
	Feedback On Current Communication Practices	Q22. Satisfaction with communication from CRD.	% reporting very clear or clear and helpful	– 33%